tested...

igus.eu ... chainflex® cables ... 2019 ... motion? plastics! ...

... 36 month guarantee

36...

From stock. From 1m. No cutting charges.

chainflex®

chainflex® works: Worldwide No. 1 in cable tests

... and in variety ... and with 36 month guarantee ... and with more than 25 years experience ... and 100 million EUR annual sales

Available from stock.
Ready for delivery in 24–48h, earlier upon request.
The delivery times indicated correspond to the average time until the ordered goods are dispatched.

No minimum order value! No surcharges!
No minimum order value with igus®. Just order the amount you need – no cutting charges (up to 10 cuts of the same type).

From 1 metre
Because chainflex® cables are high quality you only need to order the length you require. We appreciate every order from 1 m. In addition they can be planned in 0.5 m units.

36 month guarantee
We give a 36 month guarantee on every chainflex® cable. Up to 10 million double strokes guaranteed. Due to our tests in the largest lab for moved e-chain® cables, we are able to give a unique and reliable 36 month guarantee on our cables.

"7 to 8 plus Saturday" service

Monday to Friday	7.00 am to 8.00 pm
Saturday	8.00 am to 12.00 pm

Order hotline

Phone	+49-2203 9649-800
Fax	+49-2203 9649-222

Onlineshop www.chainflex.eu
Our complete product range incl. product finder, lifetime calculator and much more. Order around-the-clock!

Lifetime calculator www.igus.eu/chainflexlife
With the help of the chainflex® service life calculator, you can quickly and easily calculate the expected service life of chainflex® cables specifically for your application.

Do you have any questions?
If you have any questions, simply call us or use our online tools at www.chainflex.eu

www.chainflex.eu

Classification of chainflex® cables according to basic requirements, travel distance, oil-resistance and torsion

The chainflex® class is composed of 4 parts:

Basic requirements	Travel distance	Oil resistance	Torsion
1 to 7	1 to 6	1 to 4	1 to 4

1	Basic requirements	low	1	2	3	4	5	6	7 highest
2	Travel distance	unsupported	1	2	3	4	5	6	400 m +
3	Oil-resistance	none	1	2	3	4	highest		
4	Torsion	none	1	2	3	4	±360°		

1 Basic requirements

1: Flexible cables
2: Highly flexible cables
3: Cables without special structure (e.g. winding in layers) for use in e-chains®.
4: Cables with special structure for continuous movement in e-chains® for medium duty applications and radii from 7.5 x d, speed up to 3 m/s.
5: Cables for continuous movement in e-chains® for heavy duty applications and radii from 6.8 x d, speed up to 10 m/s.
6: Cables for continuous movement in e-chains® for heaviest duty applications and radii from 5 x d, speed up to 10 m/s.
7: Cables for continuous movement in e-chains® for heaviest duty applications and smallest radii, indoor and outdoor, radii from 4 x d, speed up to 10 m/s and more.

2 Travel distance

1: Unsupported travel up to 10 m
2: Gliding travel up to 10 m
3: Gliding travel up to 20 m
4: Gliding travel up to 50 m
5: Gliding travel up to 100 m
6: Gliding travel up to 400 m and more

3 Oil resistance

1: No oil resistance
2: Oil-resistant (following DIN EN 50363-4-1)
3: Oil-resistant (following DIN EN 50363-10-2)
4: Oil-resistant (following DIN EN 60811-2-1), bio-oilresistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA)

4 Torsion

1: No torsion
2: ± 90°, with 1 m cable length
3: ± 180°, with 1 m cable length
4: ± 360°, with 1 m cable length

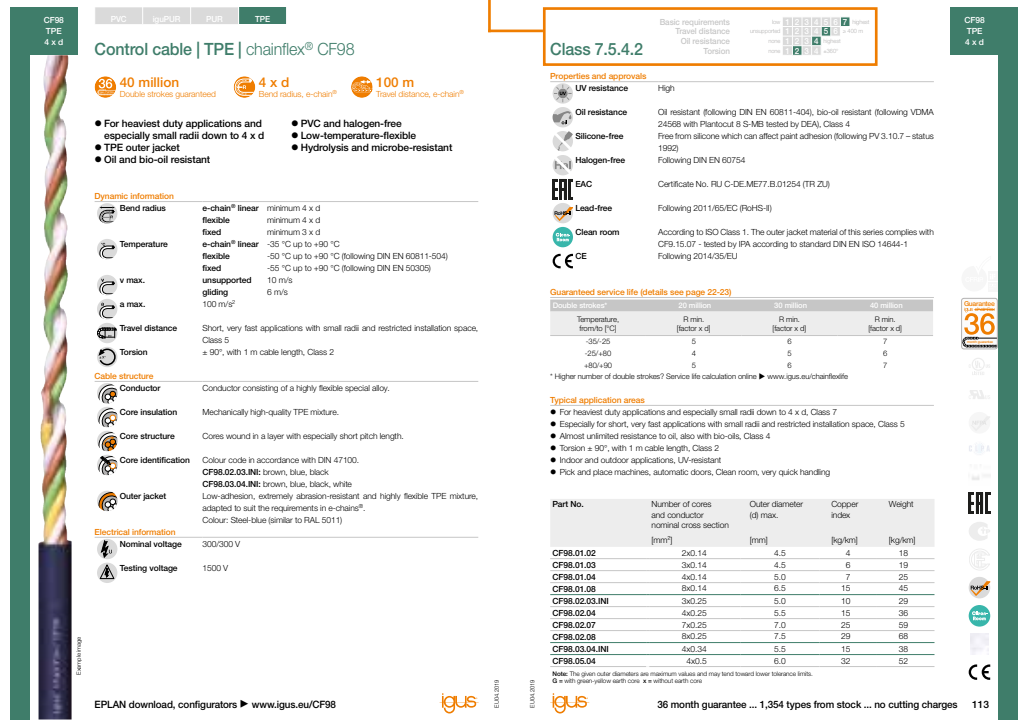
To make selection easier, we have classified all chainflex® cables according to 4 criteria: basic application requirements, travel distance, oil resistance and torsion. The higher the number the better the cable.

Example: If you are looking for a cable which is suitable for the highest mechanical load, travel distance up to 100 m for unsupported and gliding applications and oil-resistant following DIN EN 60811-2-1.

Choose from the classification overview:

Basic requirements: 7
Travel distance: 5
Oil resistance: 4
Torsion: 2

This results in the cable classification – here "Class 7.5.4.2". This can be found on every product page.



CF98 TPE 4 x d

PVC | igusPUR | PUR | TPE

Control cable | TPE | chainflex® CF98

40 million Double strokes guaranteed | 4 x d Bend radius, e-chain® | 100 m Travel distance, e-chain®

- For heaviest duty applications and especially small radii down to 4 x d
- TPE outer jacket
- Oil and bio-oil resistant
- PVC and halogen-free
- Low-temperature-flexible
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	e-chain® linear	minimum 4 x d
	flexible	minimum 4 x d
	fixed	minimum 3 x d
Temperature	e-chain® linear	-35 °C up to +90 °C
	flexible	-50 °C up to +90 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +90 °C (following DIN EN 50305)
v max.	unsupported	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		Short, very fast applications with small radii and restricted installation space, Class 5
Torsion		± 90°, with 1 m cable length, Class 2

Cable structure

Conductor	Conductor consisting of a highly flexible special alloy.
Core insulation	Mechanically high-quality TPE mixture.
Core structure	Cores wound in a layer with especially short pitch length.
Core identification	Colour code in accordance with DIN 47100. **CF98.02.03.INI:** brown, blue, black **CF98.03.04.INI:** brown, blue, black, white
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Steel-blue (similar to RAL 5011)

Electrical information

Nominal voltage	300/300 V
Testing voltage	1500 V

Example image

EPLAN download, configurators ▶ www.igus.eu/CF98

igus

EU4S.2019

Class 7.5.4.2

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	20 million	30 million	40 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	5	6	7
-25/+80	4	5	6
+80/+90	5	6	7

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications and especially small radii down to 4 x d, Class 7
- Especially for short, very fast applications with small radii and restricted installation space, Class 5
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ± 90°, with 1 m cable length, Class 2
- Indoor and outdoor applications, UV-resistant
- Pick and place machines, automatic doors, Clean room, very quick handling

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF98.01.02	2x0.14	4.5	4	18
CF98.01.03	3x0.14	4.5	6	19
CF98.01.04	4x0.14	5.0	7	25
CF98.01.08	8x0.14	6.5	15	45
CF98.02.03.INI	3x0.25	5.0	10	29
CF98.02.04	4x0.25	5.5	15	36
CF98.02.07	7x0.25	7.0	25	59
CF98.02.08	8x0.25	7.5	29	68
CF98.03.04.INI	4x0.34	5.5	15	38
CF98.05.04	4x0.5	6.0	32	52

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core

igus

36 month guarantee ... 1,354 types from stock ... no cutting charges

In theory the following classes would be possible:
Lowest "Class 1.1.1.1", highest "Class 7.6.4.3"

Tested, tested, tested
chainflex® test lab
from page 22

chainflex®
Control cables
from page 44

chainflex®
Data/Coax cables
from page 116

chainflex®
Bus cables
from page 156

chainflex®
Fibre Optic Cables
from page 190

chainflex®
Measuring system cables
from page 212

chainflex®
Servo cables
from page 250

chainflex®
Motor cables
from page 286

chainflex®
Twistable cables
from page 352

chainflex®
Special cables
from page 392

chainflex®
Pneumatic hoses
from page 410

chainflex® selection according to "Class"

chainflex® series	Basic requirements	Travel distance	Oil resistance	Torsion
CF880	3	1	1	1
CF881	3	1	1	1
CF8821	3	1	1	1
CFLG88	3	1	1	1
CF884	3	1	1	1
CF885	3	1	1	1
CF885.PE	3	1	1	1
CF886	3	1	1	1
CF887	3	1	1	1
CF888	3	1	1	1
CF890	3	1	3	1
CF891	3	1	3	1
CF894	3	1	3	1
CF895	3	1	3	1
CF896	3	1	3	1
CF897	3	1	3	1
CF898	3	1	3	1
CF210.UL	4	2	2	1
CF210.UL (Motor)	4	2	2	1
CF211 (Mess) New	4	2	2	1
CF220.UL.H	4	2	2	1
CF111.D New	4	2	3	1
CF270.UL.D	4	2	3	1
CF270.UL.D (Motor)	4	2	3	1
CF280.UL.H	4	2	3	1
CFBUS.PVC New	4	3	2	1
CFBUS.PUR New	4	3	3	1
CF140.UL	4	4	1	1
CF130.UL New	4	4	1	2
CF240	4	4	2	1
CF240.PUR New	4	4	3	1
CF77.UL.D (Robot) New	5	1	3	3
CFLK	5	3	3	1
CFTHERMO	5	4	3	1
CF6	5	5	2	1
CF21.UL New	5	5	2	1
CF211 (Data)	5	5	2	1
CF31 New	5	5	2	1
CF5	5	5	2	2
CF30 New	5	5	2	2
CF78.UL	5	5	3	1
CF211.PUR (Data)	5	5	3	1
CF77.UL.D New	5	5	3	3
CFROBOT2	6	1	3	3
CFROBOT3	6	1	3	3
CFROBOT4	6	1	3	3

chainflex® series	Basic requirements	Travel distance	Oil resistance	Torsion
CFROBOT7	6	1	3	3
CFROBOT8	6	1	3	3
CFROBOT9	6	1	3	3
CFROBOT8.PLUS New	6	1	3	4
CFROBOT	6	1	4	3
CFROBOT5	6	1	4	3
CFROBOT6	6	1	4	3
CF2	6	5	3	1
CF112	6	5	3	1
CFLG.LB.PUR	6	5	3	1
CF113.D New	6	5	3	1
CF27.D New	6	5	3	1
CF27.D (Motor) New	6	5	3	1
CFCRANE	6	6	3	1
CFCRANE.PUR	6	6	3	1
CF10.UL	6	6	4	1
CF11	6	6	4	1
CF12	6	6	4	1
CFKoax	6	6	4	1
CFBUS New	6	6	4	1
CF11.D New	6	6	4	1
CF35.UL New	6	6	4	1
CF310.UL	6	6	4	1
CFBRAID	6	6	4	1
CF9.UL	6	6	4	2
CF34.UL.D New	6	6	4	2
CF300.UL.D	6	6	4	2
CFPE	6	6	4	2
CFSOFT1	7	1	2	2
CFSOFT2	7	1	2	2
CF99	7	5	4	1
CF299	7	5	4	1
CFLG.LB	7	5	4	1
CFFLAT	7	5	4	1
CF98	7	5	4	2
CF298	7	5	4	2
CFBUS.LB	7	6	4	1
CFLG.G	7	6	4	1
CF10	7	6	4	1
CF29.D New	7	6	4	1
CF38 New	7	6	4	1
CF340	7	6	4	1
CF9	7	6	4	2
CF37.D New	7	6	4	2
CF330.D	7	6	4	2

chainflex® for
Video/vision/bus technology
from page 414

chainflex® for
Network technology
from page 428

Harnessed Fibre Optic Cables
FOC
from page 466

CF.INI
Sensor/actuator cables
from page 472

chainflex® cables with
Industrial connectors
from page 490

Harnessed dress packs and cables
for robots
from page 500

Harnessed cables for drive technology
readycable®
from page 514

Connectors
from page 688

Strain relief systems
chainfix
from page 742

Ready-to-install assembled e-chain systems®
readychain®
from page 770

Facts, figures and data
Technical appendix
from page 782

Control cables ... chainflex® types

	chainflex® cable	Jacket	Shield	Minimum bend radius, e-chain® [factor x d]	Temperature, e-chain® from/to [°C]	Price index	Approvals and standards	Flame retardant	Oil resistant	Halogen free	UV resistant	Torsion resistant	v max. unsupported [m/s]	v max. gliding [m/s]	a max. [m/s²]	chainflex® Class	page
Control cables																	44
Exclusive! Guaranteed lifetime for this series according to the guarantee conditions ▶ Page 22-23																Selection table ▶ Page 46	
	CF880	PVC		12.5	+5/ +70	●○○		✓					3		20	3.1.1.1	48
	CF881	PVC	✓	12.5	+5/ +70	●○○		✓					3		20	3.1.1.1	52
	CF130.UL New	PVC		7.5	+5/ +70	●○○		✓				✓	3	2	20	4.4.1.2	56
	CF140.UL	PVC	✓	7.5	+5/ +70	●○○		✓					3	2	20	4.4.1.1	60
	CF5	PVC		6.8	+5/ +70	●●○		✓	✓		✓	✓	10	5	80	5.5.2.2	64
	CF6	PVC	✓	6.8	+5/ +70	●●○		✓	✓		✓		10	5	80	5.5.2.1	68
	CFSOFT1	PVC		5	+5/ +70	●●○		✓	✓		✓		10	5	80	7.1.2.1	72
	CFSOFT2	PVC	✓	5	+5/ +70	●●○		✓	✓		✓		10	5	80	7.1.2.1	74
	CF890	iguPUR		12.5	-20/ +80	●○○		✓	✓		✓		3		20	3.1.3.1	76
	CF891	iguPUR	✓	12.5	-20/ +80	●○○		✓	✓		✓		3		20	3.1.3.1	80
	CF77.UL.D New	PUR		6.8	-25/ +80	●○○		✓	✓	✓	✓	✓	10	5	80	5.5.3.3	84
	CF78.UL	PUR	✓	6.8	-25/ +80	●○○		✓	✓	✓	✓		10	5	80	5.5.3.1	88
	CF2	PUR	✓	5	-20/ +80	●●○		✓	✓		✓		10	5	80	6.5.3.1	92
	CF9	TPE		5	-35/ +100	●●◐			✓	✓	✓	✓	10	6	100	7.6.4.2	96
	CF10	TPE	✓	5	-35/ +100	●●◐			✓	✓	✓		10	6	100	7.6.4.1	100
	CF9.UL	TPE		5	-35/ +100	●●◐		✓	✓		✓	✓	10	6	100	6.6.4.2	104
	CF10.UL	TPE	✓	5	-35/ +100	●●◐		✓	✓		✓		10	6	100	6.6.4.1	108
	CF98	TPE		4	-35/ +90	●●◐			✓	✓	✓	✓	10	6	100	7.5.4.2	112
	CF99	TPE	✓	4	-35/ +90	●●◐			✓	✓	✓		10	6	100	7.5.4.1	114

These values are based on real applications or tests. These values do not represent the limit of what is technically feasible.

chainflex® types mentioned in the catalogue as “resistant to bio oil“ have been tested by DEA according to VDMA 24568 with Plantocut 8 S-MB.

Download the eplan-library for any type of cable ▶ www.igus.eu/EPLAN-download

Get online and use all of the tools and data ▶ www.chainflex.eu

36 month chainflex® guarantee

Guaranteed lifetime for predictable reliability

▶ Selection table page 46

With the help of the chainflex® service life calculator, you can quickly and easily calculate the expected service life of chainflex® cables specifically for your application:

www.igus.eu/chainflexlife

... Data ... Special ... chainflex® types

Guarantee igus chainflex 36 month guarantee

	chainflex® cable	Jacket	Shield	Minimum bend radius, e-chain® [factor x d]	Temperature, e-chain® from/to [°C]	Price index	Approvals and standards	Flame retardant	Oil resistant	Halogen free	UV resistant	Torsion resistant	v max. unsupported [m/s]	v max. gliding [m/s]	a max. [m/s²]	chainflex® Class	page
Data cables																	116
Exclusive! Guaranteed lifetime for this series according to the guarantee conditions ▶ Page 22-23																	Selection table ▶ Page 118
	CF8821	PVC	✓	12.5	+5/ +70	●○○		✓					3		20	3.1.1.1	120
	CF240	PVC	✓	10	+5/ +70	●○○		✓	✓				3	2	20	4.4.2.1	122
	CF240.PUR New	PUR	✓	10	-25/ +80	●●○		✓	✓	✓	✓		3	2	20	4.4.3.1	126
	CF211	PVC	✓	7.5	+5/ +70	●○○		✓	✓				5	3	50	5.5.2.1	130
	CF211.PUR	PUR	✓	7.5	-25/ +80	●○○		✓	✓	✓	✓		5	3	50	5.5.3.1	134
	CF11	TPE	✓	6.8	-35/ +100	●●○			✓	✓	✓		10	6	100	6.6.4.1	138
	CF112	PUR	✓	10	-25/ +80	●○○		✓	✓	✓	✓		10	5	80	6.5.3.1	142
	CF12	TPE	✓	10	-35/ +100	●●◑			✓	✓	✓		10	6	100	6.6.4.1	146
	CF298	TPE		4	-35/ +90	●●○			✓	✓	✓	✓	10	6	100	7.5.4.2	148
	CF299	TPE	✓	4	-35/ +90	●●○			✓	✓	✓		10	6	100	7.5.4.1	150
Coax cables																	
	CFKoax	TPE		10	-35/ +100	●●○			✓		✓		10	5	100	6.6.4.1	152
Special cables																	392
	CFTHERMO	PUR	✓	12.5	-25/ +80	●●○			✓	✓	✓		2	1	20	5.4.3.1	394
	CFFLAT	TPE		5	-35/ +90	●●○			✓	✓	✓		10	6	100	7.5.4.1	396
	CFBRAID	TPE	✓	7.5	-35/ +70	●●○		✓	✓		✓		-	6	80	6.6.4.1	398
	CFSPECIAL.182	PUR	✓	10	-25/ +80	●●○		✓	✓	✓	✓		10	6	100	-	400
	CFSPECIAL.414			7.5	-20/ +80	●●◑		✓	✓	✓	✓		10	-	20	-	402
	CFSPECIAL.484		✓	12.5	-20/ +80	●○○		✓	✓	✓	✓		10	-	20	-	404
	CFSPECIAL.792	PUR	✓	10	-25/ +80	●○○		✓	✓	✓	✓		3	2	20	-	406

These values are based on real applications or tests. These values do not represent the limit of what is technically feasible.

chainflex® types mentioned in the catalogue as “resistant to bio oil“ have been tested by DEA according to VDMA 24568 with Plantocut 8 S-MB.

Bus ... Ethernet ... FOC ▶▶ chainflex® types ▶▶

	chainflex® cable	Jacket	Shield	Minimum bend radius, e-chain® [factor x d]	Temperature, e-chain® from/to [°C]	Price index	Approvals and standards	Flame retardant	Oil resistant	Halogen free	UV resistant	Torsion resistant	v max. unsupported [m/s]	v max. gliding [m/s]	a max. [m/s²]	chainflex® Class	page
Bus cables																	156
Exclusive! Guaranteed lifetime for this series according to the guarantee conditions ▶ Page 22-23																Selection table ▶ Page 158	
	CF888	PVC	✓	15	+5/ +70	●●●		✓					3		20	3.1.1.1	164
	CFBUS.PVC New	PVC	✓	12.5	+5/ +70	●●●		✓	✓		✓		3	2	30	4.3.2.1	168
	CF898	iguPUR	✓	15	-20/ +70	●●●		✓	✓		✓		3		20	3.1.3.1	172
	CFBUS.PUR New	PUR	✓	12.5	-20/ +70	●●●		✓	✓	✓	✓		3	2	30	4.3.3.1	176
	CFBUS New	TPE	✓	10-12.5	-35/ +70	●●●		✓	✓		✓		10	6	100	6.6.4.1	180
	CFBUS.LB New	TPE	✓	7.5	-35/ +70	●●●			✓	✓	✓		10	6	100	7.6.4.1	186
Fibre Optic Cables																	190
Exclusive! Guaranteed lifetime for this series according to the guarantee conditions ▶ Page 22-23																Selection table ▶ Page 194	
	CFLK	PUR		12.5	-20/ +60	●●●			✓	✓	✓		10	5	20	5.3.3.1	196
	CFLG88	PVC		7.5	+5/ +70	●●●		✓					3		20	3.1.1.1	198
	CFLG.LB.PUR	PUR		5-7.5	-35/ +80	●●●		✓	✓	✓	✓		10	6	20	6.5.3.1	200
	CFLG.LB	TPE		5	-35/ +80	●●●			✓	✓	✓		10	6	20	7.5.4.1	204
	CFLG.G	TPE		10	-40/ +80	●●●			✓	✓	✓		10	6	20	7.6.4.1	208

These values are based on real applications or tests. These values do not represent the limit of what is technically feasible.

chainflex® types mentioned in the catalogue as “resistant to bio oil“ have been tested by DEA according to VDMA 24568 with Plantocut 8 S-MB.

Download the eplan-library for any type of cable ▶ www.igus.eu/EPLAN-download

Get online and use all of the tools and data ▶ www.chainflex.eu

Guarantee igus chainflex 36 month guarantee

36 month chainflex® guarantee

Guaranteed lifetime for predictable reliability

▶ Selection table page 158 (Bus) and page 194 (FOC)

With the help of the chainflex® service life calculator, you can quickly and easily calculate the expected service life of chainflex® cables specifically for your application:

www.igus.eu/chainflexlife

... Measuring ... Servo ... chainflex® types

	chainflex® cable	Jacket	Shield	Minimum bend radius, e-chain® [factor x d]	Temperature, e-chain® from/to [°C]	Price index	Approvals and standards	Flame retardant	Oil resistant	Halogen free	UV resistant	Torsion resistant	v max. unsupported [m/s]	v max. gliding [m/s]	a max. [m/s²]	chainflex® Class	page
Measuring system cables																	212
Exclusive! Guaranteed lifetime for this series according to the guarantee conditions ▶ Page 22-23																Selection table ▶ Page 214	
	CF884	PVC	✓	15	+5/ +70	●●●		✓					3		20	3.1.1.1	218
	CF211 New	PVC	✓	10	+5/ +70	●●●		✓	✓				5	3	30	4.2.2.1	222
	CF894	iguPUR	✓	15	-20/ +80	●●●		✓	✓		✓		3		20	3.1.3.1	228
	CF111.D New	PUR	✓	10	-25/ +80	●●●		✓	✓	✓	✓		5	3	30	4.2.3.1	232
	CF113.D New	PUR	✓	7.5	-25/ +80	●●●		✓	✓	✓	✓		10	5	50	6.5.3.1	238
	CF11.D New	TPE	✓	7.5	-35/ +90	●●●			✓	✓	✓		10	6	100	6.6.4.1	244
Servo cables																	250
Exclusive! Guaranteed lifetime for this series according to the guarantee conditions ▶ Page 22-23																Selection table ▶ Page 252	
	CF887	PVC	✓	15	+5/ +70	●●●		✓					3		20	3.1.1.1	256
	CF210.UL	PVC	✓	10	+5/ +70	●●●		✓	✓		✓		10	2	50	4.2.2.1	258
	CF220.UL.H	PVC	✓	10	+5/ +70	●●●		✓	✓		✓		10	2	50	4.2.2.1	262
	CF21.UL New	PVC	✓	7.5	+5/ +70	●●●		✓	✓		✓		10	5	80	5.5.2.1	266
	CF897	iguPUR	✓	15	-20/ +80	●●●		✓	✓		✓		3		20	3.1.3.1	270
	CF270.UL.D	PUR	✓	10	-25/ +80	●●●		✓	✓	✓	✓		10	2	50	4.2.3.1	272
	CF280.UL.H	PUR	✓	10	-25/ +80	●●●		✓	✓	✓	✓		10	2	50	4.2.3.1	276
	CF27.D New	PUR	✓	7.5	-25/ +80	●●●		✓	✓	✓	✓		10	5	80	6.5.3.1	280
	CF29.D New	TPE	✓	6.8	+35/ +100	●●●			✓	✓	✓		10	5	80	7.6.4.1	284

These values are based on real applications or tests. These values do not represent the limit of what is technically feasible.

chainflex® types mentioned in the catalogue as “resistant to bio oil“ have been tested by DEA according to VDMA 24568 with Plantocut 8 S-MB.

Download the eplan-library for any type of cable ▶ www.igus.eu/EPLAN-download

Get online and use all of the tools and data ▶ www.chainflex.eu

36 month chainflex® guarantee

Guaranteed lifetime for predictable reliability

▶ Selection table page 214 (Measuring system) and page 252 (Servo)

With the help of the chainflex® service life calculator, you can quickly and easily calculate the expected service life of chainflex® cables specifically for your application:

www.igus.eu/chainflexlife

Guarantee igus chainflex 36 month guarantee

chainflex® cable	Jacket	Shield	Minimum bend radius, e-chain® [factor x d]	Temperature, e-chain® from/to [°C]	Price index	Approvals and standards	Flame retardant	Oil resistant	Halogen free	UV resistant	Torsion resistant	v max. unsupported [m/s]	v max. gliding [m/s]	a max. [m/s²]	chainflex® Class	page
Motor cables																286
Exclusive! Guaranteed lifetime for this series according to the guarantee conditions ▶ Page 22-23																Selection table ▶ Page 288
CF885	PVC		15	+5/ +70	●○○		✓					3		20	3.1.1.1	292
CF886	PVC	✓	15	+5/ +70	●○○		✓					3		20	3.1.1.1	294
CF210.UL	PVC	✓	10	+5/ +70	●○○		✓	✓		✓		10	2	50	4.2.2.1	296
CF30 New	PVC		7.5	+5/ +70	●○○		✓	✓		✓	✓	10	5	80	5.5.2.2	298
CF31 New	PVC	✓	7.5	+5/ +70	●○○		✓	✓		✓		10	5	80	5.5.2.1	302
CF895	iguPUR		15	-20/ +80	●○○		✓	✓		✓		3		20	3.1.3.1	306
CF896	iguPUR	✓	15	-20/ +80	●○○		✓	✓		✓		3		20	3.1.3.1	308
CF270.UL.D	PUR	✓	10	-25/ +80	●○○		✓	✓	✓	✓		10	2	50	4.2.3.1	310
CF27.D New	PUR	✓	7.5	-25/ +80	●○○		✓	✓	✓	✓		10	5	80	6.5.3.1	314
CF34.UL.D New	TPE		7.5	-35/ +90	●●◐		✓	✓		✓	✓	10	6	80	6.6.4.2	318
CF35.UL New	TPE	✓	7.5	-35/ +90	●●◐		✓	✓		✓		10	6	80	6.6.4.1	322
CF37.D New	TPE		7.5	-35/ +90	●●◐			✓	✓	✓	✓	10	6	80	7.6.4.2	326
CF38 New	TPE	✓	7.5	-35/ +90	●●◐			✓	✓	✓		10	6	80	7.6.4.1	328
Spindle cables/Single cores																
CF885	PVC		15	+5/ +70	●○○		✓					3		20	3.1.1.1	330
CF885.PE	PVC		15	+5/ +70	●○○		✓					3		20	3.1.1.1	332
CF886	PVC	✓	15	+5/ +70	●○○		✓					3		20	3.1.1.1	334
CF270.UL.D	PUR	✓	10	-25/ +80	●○○		✓	✓	✓	✓		10	2	50	4.2.3.1	336
CF300.UL.D	TPE		7.5	-35/ +90	●●○		✓	✓		✓	✓	10	6	100	6.6.4.2	338
CFPE	TPE		7.5	-35/ +90	●●○		✓	✓		✓	✓	10	6	100	6.6.4.2	340
CF310.UL	TPE	✓	7.5	-35/ +90	●●○		✓	✓		✓		10	6	100	6.6.4.1	342
CF330.D	TPE		7.5	-35/ +90	●●○			✓	✓	✓	✓	10	6	100	7.6.4.2	344
CF340	TPE	✓	7.5	-35/ +90	●●○			✓	✓	✓		10	6	100	7.6.4.1	346
Medium voltage cables																
CFCRANE.PUR	PUR	✓	10	-20/ +80	●●○			✓	✓	✓		10	6	50	6.6.3.1	348
CFCRANE	igupren	✓	10	-20/ +80	●●●		✓	✓		✓		10	6	50	6.6.3.1	350

These values are based on real applications or tests. These values do not represent the limit of what is technically feasible.

chainflex® types mentioned in the catalogue as “resistant to bio oil“ have been tested by DEA according to VDMA 24568 with Plantocut 8 S-MB.

Guarantee igus chainflex 36 month guarantee

	chainflex® cable	Jacket	Shield	Minimum bend radius, e-chain® [factor x d]	Torsion angle [°/m]	Temperature, e-chain® from/to [°C]	Price index	Approvals and standards	Flame retardant	Oil resistant	Halogen free	UV resistant	Torsion resistant	v max. twisted [°/s]	a max. twisted [°/s²]	chainflex® Class	page
Twistable cables																	352
Exclusive! Guaranteed lifetime for this series according to the guarantee conditions ▶ Page 22-23																	Selection table ▶ Page 356
Control cables																	
	CF77.UL.D New	PUR		6.8	±180	-25/ +80	●○○		✓	✓	✓	✓	✓	180	60	5.1.3.3	358
	CFROBOT2	PUR	✓	10	±180	-25/ +80	●●◐		✓	✓	✓	✓	✓	180	60	6.1.3.3	362
Data cable																	
	CFROBOT3	PUR	✓	10	±180	-25/ +80	●●◐		✓	✓		✓	✓	180	60	6.1.3.3	364
Measuring system cable																	
	CFROBOT4	PUR	✓	10	±180	-25/ +80	●●○		✓	✓	✓	✓	✓	180	60	6.1.3.3	366
Fibre Optic Cable																	
	CFROBOT5	TPE		10	±180	-35/ +80	●●○			✓	✓	✓	✓	180	60	6.1.4.3	370
Motor cables																	
	CFROBOT6	PUR		10	±180	-25/ +80	●●◐		✓	✓	✓	✓	✓	180	60	6.1.3.3	372
	CFROBOT7	PUR	✓	10	±180	-25/ +80	●●◐		✓	✓	✓	✓	✓	180	60	6.1.3.3	374
Spindle cables/Single cores																	
	CFROBOT	TPE	✓	10	±180	-35/ +90	●●◐		✓	✓		✓	✓	180	60	6.1.4.3	378
Bus cable																	
	CFROBOT8	PUR	✓	10	±180	-25/ +70	●○○		✓	✓		✓	✓	180	60	6.1.3.3	380
	CFROBOT8.PLUS New	PUR	✓	10	±180	-25/ +70	●◐○		✓	✓	✓	✓	✓	360	60	6.1.3.4	384
Hybrid cable																	
	CFROBOT9	PUR	✓	10	±180	-25/ +80	●●○		✓	✓	✓	✓	✓	180	60	6.1.3.3	388

These values are based on real applications or tests. These values do not represent the limit of what is technically feasible.

chainflex® types mentioned in the catalogue as “resistant to bio oil“ have been tested by DEA according to VDMA 24568 with Plantocut 8 S-MB.

... Video ... Network ...

	Cable type		Jacket	Page
Harnessed Bus cables				414
	FireWire	Pre-harnessed cable	TPE	416
	USB 2.0	Pre-harnessed cable	PVC/PUR/TPE	418
	USB 3.0	Pre-harnessed cable	PVC/PUR	420
	GigE	Pre-harnessed cable	PUR-ROBOT/TPE	421
Harnessed coax cables				
	Koax	Pre-harnessed cable (BNC/SMA)	TPE	422
	VGA	Pre-harnessed cable	TPE	425
	DVI-D/HDMI	Pre-harnessed cable	TPE	426
Harnessed Ethernet cables				428
	CAT5 Straight		PVC/PUR/TPE	431
	CAT5e Straight New		PVC/PUR/TPE	432
	CAT5e Straight		PVC/PUR/TPE	435
	CAT5e Cross-Over		PVC/PUR/TPE	436
	CAT5e with 615 connectors		PVC/PUR/TPE	437
	CAT5e with angled connectors (L/T angle)		PVC/PUR/TPE	438
	CAT6 Straight		PVC/PUR/TPE	442
	CAT6 Straight/Cross-Over		TPE	444
	CAT6A with M12 connectors New		PVC/PUR/TPE	445
	CAT7 Straight		PUR/TPE	447
	Industrial Ethernet moulded New		PVC/PUR	448
Harnessed Profibus cables				
	Profibus		PVC/PUR/TPE	452
Harnessed Profinet cables				
	Profinet		PVC/PUR/TPE	458
	Industrial Profinet moulded New		PVC/PUR	462

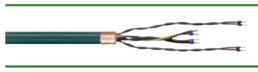
... FOC ... Sensor ... Actuator ...

	Cable type	Jacket	Page
Harnessed Fibre Optic Cables for Video			470
	FOC 2 fibres	PVC/TPE	472
	FOC 4 fibres	TPE	473
Harnessed Fibre Optic Cables for Network			
	FOC 6 fibres	TPE	474
	FOC 12 fibres	TPE	474
Initiators CF9 - CF.INI (minimum bend radius 5 x d)			476
	Connection cable M12 x 1, straight/angled	TPE	479
	Linking cable M12 x 1, straight/angled	TPE	479
	Connection cable M12 x 1, straight/angled, LED	TPE	481
	Connection cable M8 x 1, straight/angled	TPE	483
	Linking cable M8 x 1, straight/angled	TPE	483
	Connection cable M8 x 1, angled, LED	TPE	485
Initiators CF10 – CF.INI (minimum bend radius 5 x d) 360° shielded			
	Connection cable M12 x 1, straight/angled	TPE	487
	Linking cable M12 x 1, straight/angled	TPE	487
Initiators CF98 - CF.INI (minimum bend radius 4 x d)			
	Connection cable M12 x 1, straight/angled	TPE	489
	Linking cable M12 x 1, straight/angled	TPE	489
	Connection cable M8 x 1, straight/angled	TPE	491
	Linking cable M8 x 1, straight/angled	TPE	491
chainflex® cables for actuator/sensor distribution box			
	Connection cable M23, straight	TPE	492
	Linking cable M23, straight/angled	TPE	492
	Connection cable M12, straight	TPE	493

Industrial ... Robots ...

		Cable type	Page
chainflex® cables with industrial connectors			**474**
	Han 6B	Harnessed cable, single locking lever at both ends, straight	476
	Han 6B	Harnessed cable, double locking lever at both ends, angled	476
	Han 10B	Harnessed cable, single locking lever at both ends, straight	478
	Han 10B	Harnessed cable, single locking lever at both ends, angled	478
	Han 10B	Harnessed cable, double locking lever at both ends, straight	478
	Han 10B	Harnessed cable, double locking lever at both ends, angled	478
	Han 16B	Harnessed cable, single locking lever at both ends, straight	480
	Han 16B	Harnessed cable, single locking lever at both ends, angled	480
	Han 16B	Harnessed cable, double locking lever at both ends, straight	480
	Han 16B	Harnessed cable, double locking lever at both ends, angled	480
	Han 24B	Harnessed cable, single locking lever at both ends, straight	482
	Han 24B	Harnessed cable, single locking lever at both ends, angled	482
	Han 24B	Harnessed cable, double locking lever at both ends, straight	482
	Han 24B	Harnessed cable, double locking lever at both ends, angled	482
HARTING Connector sets ("Connectors" chapter ▶ page 664)			
		Connector sets with pin-inserts	706
		Connector sets Premium (pin + socket)	708
Dress packs for robots			**507**
	readychain® Robot	Harnessed dress packs for welding robots	507
Harnessed cables for robots			
	readycable® Kuka	Harnessed cables for Kuka robots	508
	readycable® Fanuc	Harnessed cables for Fanuc robots	511
	readycable® ABB	Harnessed cables for ABB robots New	513
Cables according to AIDA specifications			
	readycable® AIDA	Konfektionierte Leitungen nach AIDA-Spezifikation	516

... Drive technology...

Selection by manufacturer			Mantel	Seite
Harnessed Drive cables				**518**
	Allen Bradley/ Rockwell	Motor/Servo/Hybrid Servo/ Brake/Feedback/Adapter cables	PVC/PUR/TPE	526
	B&R	Motor/Servo/EnDat/Encoder/ Resolver/Bus cables	PVC/PUR/TPE	527
	Baumüller	Servo/Resolver/Pulse encoder cables	PVC/PUR/TPE	527
	Beckhoff	Motor/Servo/Servo-HybridEncoder/Thermal protection/Resolver/Network cables	PVC/PUR/TPE	530
	Berger Lahr	Servo/Resolver cables	PVC/PUR/TPE	530
	Bosch Rexroth	Power/Servo/Encoder cables	PVC/PUR/TPE	530
	ELAU/ Schneider Electric	Servo/Encoder/Hybrid Servo cables	PVC/PUR/TPE	533
	FAGOR	Path measuring cables	PUR/TPE	533
	Fanuc	Power/Servo/Brake/ Encoder/Signal cables	PVC/PUR/TPE	533
	Festo	Servo/Encoder/Data/ Bus/Control cables	PVC/PUR/TPE	534
	Heidenhain	Servo/Adapter cables	PVC/PUR/TPE	534
	Jetter	Motor/Servo/Resolver cables	PVC/PUR/TPE	534
	Kolmorgen/ Danaher Motion	Motor/Servo/Signal cables	PVC/PUR/TPE	535
	Lenze	Servo/Resolver/Encoder/Feedback/ Decoder/Fan cables	PVC/PUR/TPE	537
	LinMot	Motor/Servo/Encoder cables	PVC/PUR	538
	LTi DRiVES	Servo/Encoder cables	PVC/PUR/TPE	538
	Mitsubishi Electric	Motor/Encoder cables	PVC/PUR	538
	Nidec/Control Techniques	Motor/Servo/Encoder cables	PVC/PUR/TPE	539
	NUM	Power/Servo/ Encoder/Fan cables	PVC/PUR/TPE	539
	Omron	Motor/Encoder/Control cables	PVC/PUR/TPE	540
	Parker	Motor/Resolver cables	PVC/PUR/TPE	541
	SEW	Motor/Servo/Encoder/Control/ Hybrid Servo cables	PVC/PUR/TPE	541
	Siemens	Power/Servo/Signal cables	PVC/PUR/TPE	542
	Stöber	Servo/Encoder cables	PVC/PUR/TPE	545

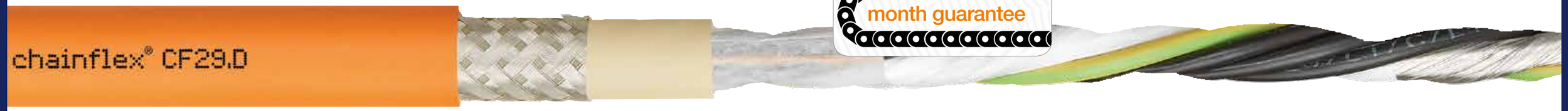
Connectors ... Strain relief

			Page
Connectors			**688**
	SERIE A 623	Signal connector	690
	SERIE B 923	Power connector	695
	SERIE C 940	Power connector	700
	SERIE D 958	Power connector	703
	Serie 615/915	Signal and power connector	705
	SERIE M17 617/917	Signal and power connector	713
	SERIE S 623	Power connector	718
	Custom connector service packs		720
	igus® ibow	Angle adapter for power connector 923 size 1	721
	Tools and accessories		722
	SUB-D	Signal connector	724
	Yamaichi Y-CONKIT		728
	HARTING	Connector sets	730
	Glands		734
chainfix strain relief			**742**
	Clamps, steel or stainless steel – for maximum holding strength		750
	C-profiles		756
	Universal tiewrap clamps screw or clip mounted		758
	Tiewrap plates with clip-on connection for the C-profile		760
	Clips high tensile strength, modular clip-on strain relief		762
	Strain relief separators with integrated teeth		764
	Nuggets for top hat rail and C-profile		766
	Strain relief blocks special strain relief for hoses		767
readychain®			**770**
	igus® readychain® pre-harnessed e-chain systems®		772

... Technical data

	Page
Tested, tested, tested	**22**
36 month guarantee on every chainflex® cable	22
The chainflex® test lab	24
Test methods in detail	28
Technical data	**782**
The tricks and features of the chainflex® design	
Know-how from testing	784
Construction and sectional views through the chainflex® cable types	788
Tested, tested, tested	
Test no. 4876 – Tested at -40°C cold	790
Test no. 4866 – 4 year continuous test; chainflex® Profinet	792
Servo cable structure	794
"Millions of double strokes" in an energy chain	796
CF98 with < 4xd!	798
Light in the cold	800
Completely twisted	802
Container crane with 50 m travel distance	804
Comparison of jacket materials exposed to different oils	806
Completely twisted, take two	807
Data	
DIN 47100 colour code/copper wire dimensions according to AWG numbers	808
Calculation of the copper surcharge	808
Load-carrying capacity of cores	809
Chemical resistance	810
Designing with igus®	
Cables and hoses - General rules for cables and hoses in e-chains®	814
Cables and hoses - Separation in e-chain®	815
Cables and hoses - Further information on the separation of cables	816
Round electrical cables	817
Round electrical cables - Information on assembly and strain relief of round electrical cables	818
Pneumatic hoses	819
Information	
Approvals and standards	820
General conditions	822
User information, Disclaimer, KTG, Product illustrations	822
Technical notes	823
chainflex® online tools	826
Table of contents according to part number	841
Contact igus®	
igus® worldwide - International map	824

36 month guarantee on every chainflex® cable in this catalogue



The chainflex® guarantee – predictable safety through laboratory and field experience

Safety is of utmost importance, operationally, legally and financially. Plant and machine constructors have to make binding statements about operational safety and reliability. However, a guarantee declaration to the end customer always entails a considerable risk. The chainflex® guarantee on igus® cables in e-chains® now makes this risk not only more predictable, but reduces it significantly. With the unique 36 month guarantee on every chainflex® cable in this catalogue, we assume part of the responsibility and create valuable planning security for the manufacturer. Twenty-five years of experience from tried and tested applications and from intensive tests in the world's largest test laboratory for cables and e-chains® allow us to make reliable and verifiable statements about durability and service life. Predictable reliability for every user!

Guarantee instead of just warranty or defects liability expands the assurance in legal terms

The assurance of a guarantee is done voluntarily by the manufacturer, and goes beyond the mandatory assurance or warranty by the seller. For the customer not only receives the promise to obtain a defect-free product, but also the ability to function over a certain period.

"In case of guarantee the buyer is entitled to the rights under the guarantee as per the terms set down in the guarantee statement vis-à-vis the person who has given the guarantee, regardless of the legal claims (§ 443 I BGB)."

In Germany, quality and durability guarantees are used. The latter in particular is of great importance for many customers. A mere extension of the guarantee is not enough for them, they want binding statements on the durability. The chainflex® guarantee based on the reliable data from laboratory and field experience, was created precisely for this purpose.

Analysis of the measured data: igus® "AutΩMeS" system

Direct overview of the service life using the "double strokes" selection tables

For each chainflex® series you will find a selection table called "Double strokes – guaranteed service life" This gives the technical parameters for using the respective chainflex® cable. If the cable is operated in accordance with the operating conditions specified in the selection table, a guaranteed service life of 5, 7.5 or 10 million double strokes is applicable depending on the application. The service life itself, measured by the number of possible double strokes, can even be significantly higher.

❶ Temperature, from/to [°C]

❷ Guaranteed double strokes

❸ Minimum bend radius [factor x d]

Guaranteed lifetime according to guarantee conditions (Page 22-23)

Double strokes*	❷ 5 million	❷ 7.5 million	❷ 10 million
❶ Temperature, from/to [°C]	❸ R min. [factor x d]	❸ R min. [factor x d]	❸ R min. [factor x d]
-35/-25	6.8	7.5	8.5
-25/+90	5	6	7
+90/+100	6.8	7.5	8.5

* Higher number of double strokes? Online lifetime calculation: www.igus-asean.com/chainflexlife

Example: Selection table "Guaranteed service life" for CF9

Example:

A cable with a diameter of 12 mm in an energy chain with a radius of 100 mm results in a bending factor of 8.3 (100 mm/12 mm). In order to determine the guaranteed durability, you set the technical conditions from the data ranges 1 & 2. In data range 3, you can now see that (with an assumed temperature range of -25/+90°C) with 8.3 x d the effective bending factor is above the minimum limit of 7 and therefore for that cable you have a guaranteed operation of 10 million double strokes. Should the temperature become higher or lower, the necessary factor for this guarantee level would be 8.5, meaning that the number of guaranteed double strokes is reduced to 7.5 million. This very clear statement provides reliability and planning safety for your machine and can be further refined with the online service life calculator.

Calculate service life online:
www.igus.eu/chainflexlife

Testing, testing, testing ... Specific tests for specific requirements

Over 25 years of testing experience in the chainflex® laboratory

The chainflex® laboratory specialises in tests which, apart from just theoretical procedures, also investigate real applications as they would occur in the real world of mechanical and production engineering. For more than 25 years, specific data has been collected in the largest test laboratory for moving cables, which is indispensable for determining service life and function. On a laboratory floor area of 3,800 m², 700 tests are currently running in parallel, which help to constantly monitor and improve the interplay of e-chains® and cables in dynamic applications. The combination of e-chains® and chainflex ® cables on the one hand, and of e-chains® and other cables that are sold as "chain-compatible" by a large number of cable providers on the market on the other. However, it is here that questions arise for the customer as to the extent to which these cables are actually suitable for use in energy chains and what is the expected service life. The conventional standard tests give generalised answers to generalised questions. The customer, however, wants a concrete answer and solution for their specific problem, which is often not, or only partially, addressed by the normal standards. It is precisely these individual customer requirements that the igus® laboratory devotes itself to.

A further consequence of our intensive research and laboratory activities is the development of standard tests and production standards for chainflex ® cables for long-term use in e-chains®.

In principle, there are five main focus areas:

1. Tests of materials
In line with customer requirements, new materials for the conductors, insulation and outer jackets are developed. Differences arise that are significant but not obvious, particularly in the case of conductor and jacket materials. To this end, up to eight different chainflex® standards are used in the tests.

2. Tests of the technical design
These tests systematically evaluate new designs, manufacturing methods and the associated influences on service life. As the studies have shown, tiny differences in manufacturing processes can lead to significantly different outcomes in moving applications.

Linear chain tests of all chainflex® cables with different radii and travels

The chainflex® cables must also prove themselves in real applications under extreme conditions

3. Quality tests during production
After production, a random number of cables are subjected to the VDE or UL standard tests, as well as other special igus® tests according to certain selection criteria. The laboratory batch tests up to 20% of all finished cables in a continuous bending test and then carries out the necessary structural examinations afterwards.

4. Long-time tests of service life
These tests have to be carried out over a period of up to 5 years and investigate the actual maximum service life of the selected cables. The focus here is on a continuous monitoring of the electrical and mechanical parameters in order to detect a failure.

Rotary movement tests in very demanding chain applications using igus® twisterchain

5. Customer-specific applications
A special service is offered for customer-specific tests according to the igus® standard. This type of test is based on the customer-specific movement sequences and offers the significant advantage of test-defined limits and the potential for optimisation before the start of mass production.

Test for complex movements by simulating multi-axis applications on robots

chainflex® in the laboratory – the largest test lab for moving cables in the world

Guarantee
igus chainflex
36
month guarantee

Facts and figures:

- Largest test laboratory for moving cables
- 25 years of experience
- 3,800 m² test area
- 64 test set-ups
- 700 tests conducted in parallel
- 2 billion double strokes a year
- 1.4 million electric measurements per year

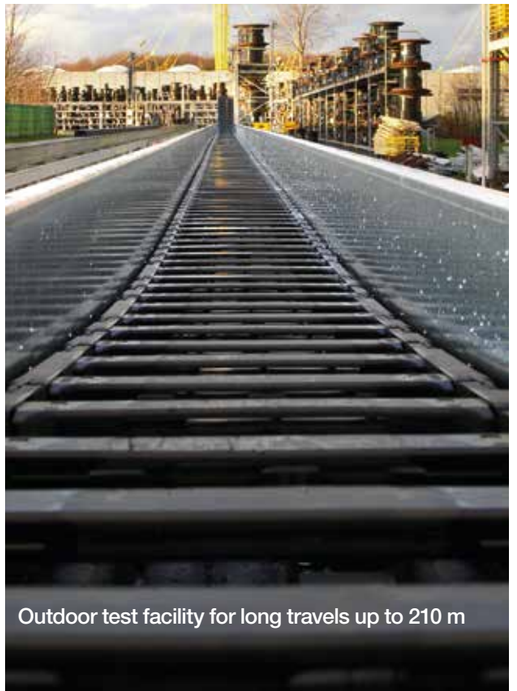
Over 2 billion test strokes every year in the chainflex® lab

Anyone who wants to carry out systematic, comparative and reproducible tests for more than 2 billion double strokes and 1.4 million electrical measurements must provide the necessary space and resources. On a total of 64 test rigs, various test series are carried out according to the igus® test standards. The laboratory team consisting of technically qualified employees tests and monitors thousands of measuring points in e-chains® and cables on a wide range of travel lengths, in horizontal or vertical applications and always under the most real-life conditions possible. Multi-dimensional e-chains® such as the triflex ® series from the robot range are also tested for torsional strength on special test rigs.

In addition to the normal quality and service life tests, special test rigs are also available for custom tests. For example, abrasion and media tests for materials are carried out under considerably more accurate experimental conditions than carried out according to UL or VDE standards for storage and aging.

The optimum matching of igus® outer jacket materials to the materials in the energy supply systems is vital. The influence of thermal factors on moving cables can be analysed in two special climatic containers for a temperature range of -40°C to + 60°C. Both are equipped with a 6 m long travel, which can be operated with different radii and e-chains®. In contrast to the standard winding mandrel test (for details see page 34) according to VDE, one can test the aging in very different temperature profiles during continuous motion in e-chains®.

Long travels up to 210 m ... fast applications up to 50 m/s



Outdoor test facility for long travels up to 210 m

Consistent monitoring and accurate test documentation
A necessary condition for successful and meaningful tests is the systematic and effective monitoring and documentation of the results. Here, monitoring systems developed by igus® are used which, in addition to a permanent online monitoring, ensure documentation with a very high accuracy. In this way wear can also be detected before failure. This early detection – without a destructive test – allows modifications to be made. After each test, all the cables are separated into their elements, examined in detail and their properties documented.

Because of these test programs, good quality data on all chainflex® cables are available and offer the user planning security for their cable selection.

Safe cable selection – the different test methods in detail

The movements carried out by cables in industrial applications range from simple linear strokes to 6-axis robot applications. Systematic, repeated series of tests under realistic conditions are essential in order to be able to predict the service life of cables.
On the following pages, igus® provides an overview of the test methods that are used for chainflex® cables, depending on the requirements and the materials used. The tabular overview enables the speedy selection of cables that meet your requirements.

Fire tests (page 29-32)

Depending on the application and the place of use, there are different requirements regarding the flame-retardant properties of a cable. To meet this, igus® offers a wide variety of tests in order to guarantee the product is appropriate.

Media tests (page 33)

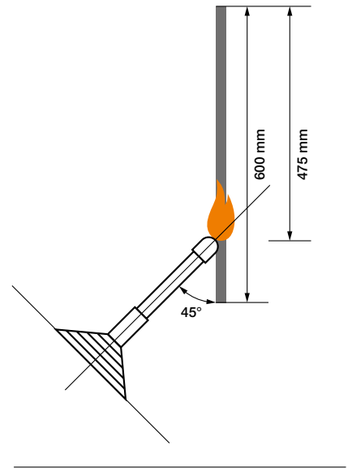
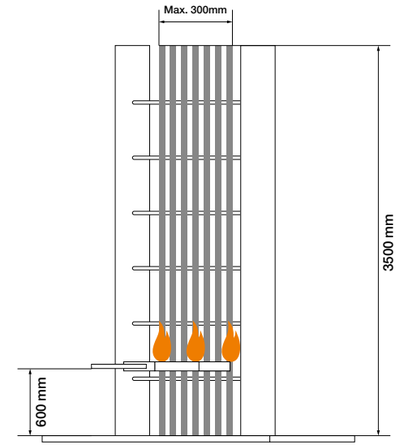
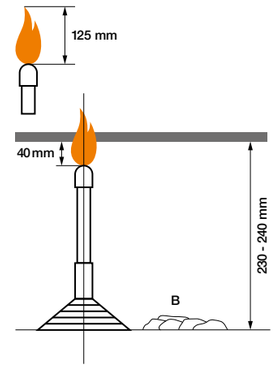
Media resistance is a very important factor when selecting the optimum jacket material. Due to the test series, the properties of the products are clearly defined and, if the correct material is chosen, cost-intensive failures during operation can be avoided.

Temperature tests (page 34-35)

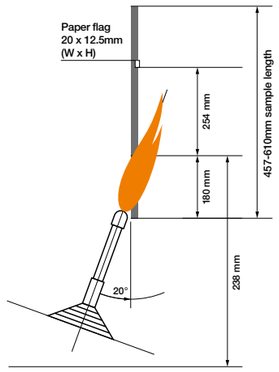
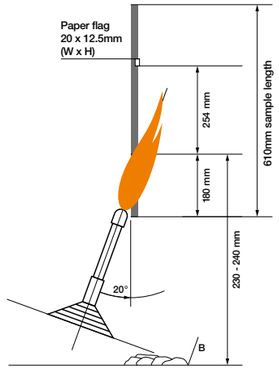
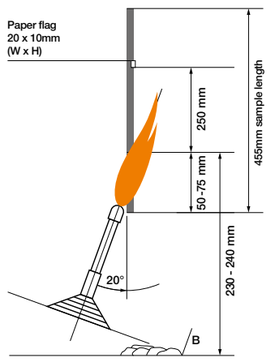
Near the respective temperature limits, moving cables can fail quickly with fractures in the jacket due to the molecular structure of the thermoplastic material used. As a result of multiple test series, igus® has been able to demonstrate that standards based tests do not provide enough adequate information about the use of cables in energy chains as they do not replicate the real stresses and loads that cables are subjected to in the real world. Today, igus® is the only manufacturer in the world, to supply cables with tested jacket materials that are guaranteed to withstand the stresses of movements in e-chains® at the indicated ambient temperatures , because they have been tested under such real conditions.

Motion tests (Page 35)

Though there are many test standards, none of today's standards specify tests that can adequately verify the service life of a cable in an energy chain. In this regard, igus® is the only manufacturer that has more than 30 years of experience testing cables in e-chains® and performs the most comprehensive range of dynamic cable tests in the world. This includes a large number of different test series. This overview shows the igus® range of basic tests for qualifying e-chain® cables.

Test	Specification	Design
IEC 60332-1-2	Test of vertical flame propagation on a core, an insulated wire or a cable, test method 1kW - flame with gas/air mixture Sample length: 600mm Burner: According to IEC 60332-1-1 Test temperature: 1kW flame Position of the sample: Vertical Position of the flame: 45° to the vertical Flame duration: See table below Conditions: The damage or carbonisation must only occur between 50mm and 500mm, measured from the upper attachment point Outer diameter of the sample [mm] / Flame duration [s]: <25 / 60 25-50 / 120 50-75 / 240 >75 / 480	
IEC 60332-3-22/-23/-24/-25	Testing vertical flame propagation of vertically arranged bundles of cables or insulated cables Sample length: 3500mm Burner: Flat burner (Ribbon gas burner of American Gas Furnace Co.) Test temperature: Given by the prescribed gas and air flow rate Position of the sample: Vertical Position of the flame: Horizontal Flame duration: See table below Conditions: The burnt distance should not be more than 2.5m from the lower end of the burner, unless otherwise specified in the relevant standards. Regulation / Flame duration: IEC 60332-3-22 and -23 / 40 minutes IEC 60332-3-24 and -25 / 20 minutes	
FT2 Flame Test	UL 1581, § 1100 (FT2 Flame Test) Sample length: 250mm-300mm Position of the sample: Horizontal Position of the flame: 20° to the vertical Flame duration: 30 seconds Conditions: The burnt distance must not exceed 100mm. Dripping material must not ignite the underlying cotton (B).	

Test method | **Fire tests**

Test	Specification	Design
Vertical Flame and FT1	**UL 1581, § 1060 (Vertical Flame and FT1 Test)** Sample length: 457mm-610mm Burner: Bunsen burner with additional air supply (Tirril gas burner) Ø9.5mm Test temperature: 500 W flame Position of the sample: Vertical Position of the flame: 20° to the vertical Flame duration: 5 x 15 seconds with 15 second flame break each Conditions: - Paper flag up to maximum 25% charred - The sample must continue to burn for maximum 1 minute	
VW-1 Flame	**UL 1581, § 1080 (VW-1 Flame Test)** Sample length: 610mm Burner: Bunsen burner with additional air supply (Tirril gas burner) Ø9.5mm Test temperature: 500 W flame Position of the sample: Vertical Position of the flame: 20° to the vertical Flame duration: 5 x 15 seconds with 15 second flame break each Conditions: - Paper flag up to maximum 25% charred - The sample must continue to burn for maximum 1 minute - Time noted until the flame/sample is extinguished - Dripping material must not ignite the cotton (B) lying under it	
Cable Flame	**UL 1581, § 1061 (Cable Flame Test)** Sample length: 455mm Burner: Bunsen burner with additional air supply (Tirril gas burner) Ø9.5mm Test temperature: 500 W flame Position of the sample: Vertical Position of the flame: 20° to the vertical Flame duration: 3 x 60 seconds with 30 seconds flame break each Conditions: - Paper flag up to maximum 25% charred - The sample must continue to burn for maximum 1 minute - Dripping material must not ignite the cotton (B) lying under it	

Test methods

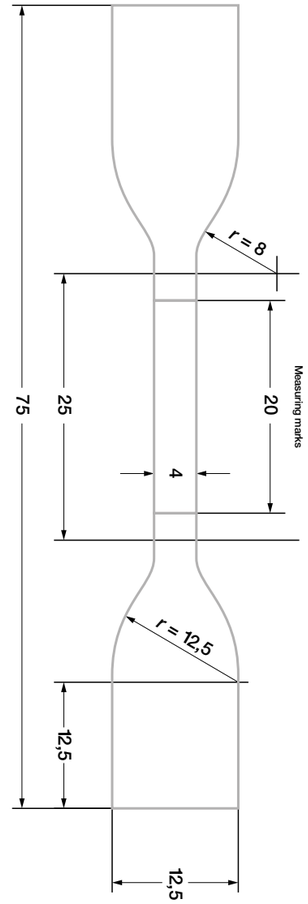
Test method | **Fire tests**

Group	chainflex® cable	Jacket material	IEC 60332-1-2	IEC 60332-3-22/-23/-24/-25	FT2 Flame Test	Vertical Flame and FT1	VW-1 Flame	Cable Flame	Page
Control cables	CF880	PVC	●		●	●	●	●	48
	CF881	PVC	●		●	●	●	●	52
	CF130.UL	PVC	●		●	●	●	●	56
	CF140.UL	PVC	●		●	●	●	●	60
	CF5	PVC	●		●	●	●	●	64
	CF6	PVC	●		●	●	●	●	68
	CF890	iguPUR	●		●	●	●		76
	CF891	iguPUR	●		●	●	●		80
	CF77.UL.D	PUR	●		●	●	●	●	84
	CF78.UL	PUR	●		●	●	●	●	88
	CF2	PUR	●		●	●	●	●	92
	CF9.UL	TPE	●		●	●	●	●	104
	CF10.UL	TPE	●		●	●	●	●	108
Data cables	CF8821	PVC	●		●	●	●	●	120
	CF240	PVC	●		●	●	●	●	122
	CF240.PUR	PUR	●		●	●	●	●	126
	CF211	PVC	●		●	●	●	●	130
	CF211.PUR	PUR	●		●	●	●	●	134
	CF112	PUR	●		●	●	●	●	142
Bus cables	CF888	PVC	●		●	●	●	●	164
	CFBUS.PVC	PVC	●		●	●	●	●	168
	CF898	iguPUR	●		●	●	●	●	172
	CFBUS.PUR	PUR	●		●	●	●	●	176
	CFBUS	TPE	●		●	●	●	●	180
	CFBUS.LB	TPE	●		●	●	●	●	186
FOC	CFLK	PUR	●		●	●	●	●	196
	CFLG88	PVC	●						198
	CFLG.LB.PUR	PUR	●				●	●	200
Measuring system cables	CF884	PVC	●		●	●	●	●	218
	CF211	PVC	●		●	●	●	●	222
	CF894	iguPUR	●		●	●	●	●	228
	CF111.D	PUR	●		●	●	●	●	232
	CF113.D	PUR	●		●	●	●	●	238
Servo cables	CF887	PVC	●		●	●	●	●	256
	CF210.UL	PVC	●		●	●	●	●	258
	CF220.UL.H	PVC	●		●	●	●	●	262
	CF21.UL	PVC	●		●	●	●	●	266
	CF897	iguPUR	●		●	●	●		270
	CF270.UL.D	PUR	●		●	●	●	●	272
	CF280.UL.H	PUR	●		●	●	●	●	276
	CF27.D	PUR	●		●	●	●	●	280

Test method | **Fire tests**

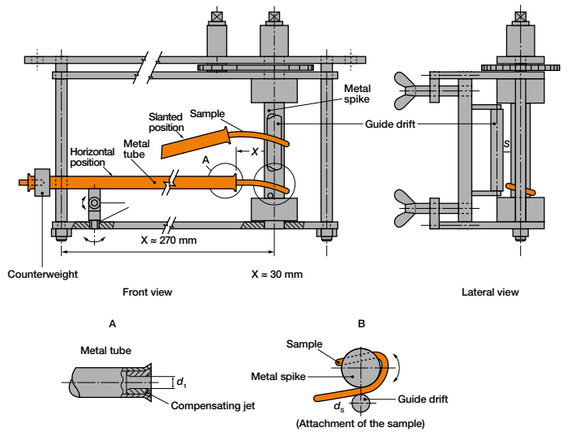
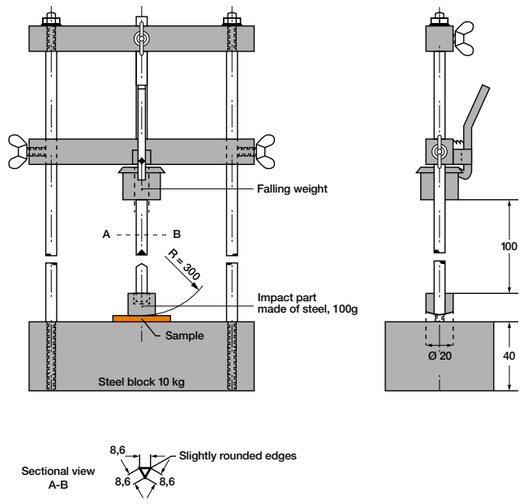
Group	chainflex® cable	Jacket material	IEC 60332-1-2	IEC 60332-3-22/-23/-24/-25	FT2 Flame Test	Vertical Flame and FT1	VW-1 Flame	Cable Flame	Page
Motor cables	CF885	PVC	●		●	●	●	●	292
	CF886	PVC	●		●	●	●	●	294
	CF210.UL	PVC	●		●	●	●	●	296
	CF30	PVC	●		●	●	●	●	298
	CF31	PVC	●		●	●	●	●	302
	CF895	iguPUR	●		●	●	●		306
	CF896	iguPUR	●		●	●	●		308
	CF270.UL.D	PUR	●		●	●	●	●	310
	CF27.D	PUR	●		●	●	●	●	314
	CF34.UL.D (≤ 1.5mm²)	TPE	●		●	●	●		318
	CF34.UL.D (≥ 2.5mm²)	TPE	●		●	●	●	●	318
	CF35.UL (≤ 1.5mm²)	TPE	●		●	●	●		322
	CF35.UL (≥ 2.5mm²)	TPE	●		●	●	●	●	322
	CF300.UL.D	TPE	●		●	●	●	●	338
	CFPE	TPE	●		●	●	●	●	340
	CF310.UL	TPE	●		●	●	●	●	342
	CFCRANE	igupren	●						348
	CFCRANE.PUR	PUR	●						350
Torsion cables	CF77.UL.D	PUR	●		●	●	●	●	358
	CFROBOT2	PUR	●		●	●	●	●	362
	CFROBOT3	PUR	●		●	●	●	●	364
	CFROBOT4	PUR	●		●	●	●	●	366
	CFROBOT6	PUR	●		●	●	●	●	372
	CFROBOT7	PUR	●		●	●	●	●	374
	CFROBOT	TPE	●		●	●	●	●	378
	CFROBOT8	PUR	●		●	●	●	●	380
	CFROBOT8.PLUS	PUR	●		●	●	●	●	384
	CFROBOT9	PUR	●		●	●	●	●	388
Special cables	CFBRAID	TPE	●			●	●		398
	CFSPECIAL.182	PUR	●		●	●	●	●	400
	CFSPECIAL.414	-	●	●	●	●			402
	CFSPECIAL.484	-	●	●	●	●			404
	CFSPECIAL.792	PUR	●		●	●	●	●	406

Test methods | **Media tests**

Test	Specification	Design
DIN EN 50363-4-1	**Testing of oil resistance for PVC jackets** Test according to DIN EN 60811-2-1, Clause 10 Test oil: IRM 902 Preparation of the sample according to DIN EN 60811-501 Test temperature: 90±2° Test duration: 7x 24 h Followed by storage at room temperature of at least 16hrs, but not longer than 24hrs Maximum alteration of tensile strength: ±30% Maximum elongation at break: ±30%	
DIN EN 50363-10-2	**Testing of oil resistance for PUR jacket** Test according to DIN EN 60811-2-1, Clause 10 Test oil: IRM 902 Preparation of the sample according to DIN EN 60811-501 Test temperature: 100±2° Test duration: 7x 24 h Followed by storage at room temperature of at least 16hrs, but not longer than 24hrs Maximum alteration of tensile strength: ±40% Minimum median elongation at break: 300% Maximum elongation at break: ±30%	
DIN EN 60811-404	**Testing of oil resistance for TPE jacket** Test according to DIN EN 60811-2-1, Clause 10 Test oil: IRM 902 Preparation of the sample according to DIN EN 60811-501 Test temperature: 100±2° Test duration: 7x 24 h Followed by storage at room temperature of at least 16hrs, but not longer than 24hrs Maximum alteration of tensile strength: ±30% Maximum elongation at break: ±30%	

Details on the media resistance of chainflex® cables ▶ Page 810-813

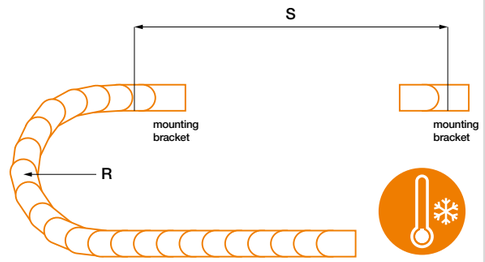
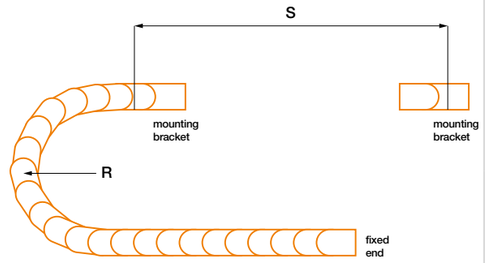
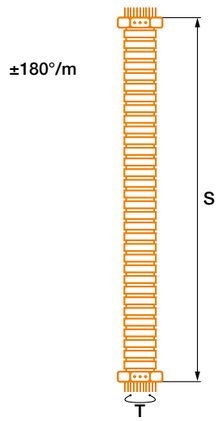
Test method | **Temperature tests**

Test	Specification	Design
DIN EN 60811-504	**Bending test at low temperature for jacket** Feed-through of the cold winding test according to 8.2 from DIN EN 60811-504 Deviating from the standard also the outer diameter of the sample > 12.5mm Mandrel diameter 4-5 times the sample diameter (there must be at least 2 samples) Storage of the wound sample > 16hrs at test temperature Heat to room temperature When viewed with the naked eye or visual aid without magnification, there should be no cracks in the outer jacket.	
DIN EN 50305	**Low temperature impact test for jacket** Feed-through of the cold impact test according to 8.5 from DIN EN 60811-504 **Selection criteria according to 5.1 from DIN EN 50305** 3 pieces, length at least 5x the outer diameter or 150mm Storage of test equipment and samples > 16hrs at test temperature Heat to room temperature When viewed with the naked eye or visual aid without magnification, there should be no cracks in the outer jacket.	

Diameter of the cable (D) [mm]	Dimensions of the the hammer [g]	Dimensions of the intermediate sample [g]	Fall height [mm]
D < 15	1000	200	100
15 < D ≤ 25	1500	200	150
D > 25	2000	200	200

Outer diameter (*d*) of the sample [mm]	Number of windings
d ≤ 2.5	10
2.5 < d ≤ 4.5	6
4.5 < d ≤ 6.5	4
6.5 < d ≤ 8.5	3
8.5 < d	2

Test method | **Motion tests**

Test	Specification	Design
igus® test: "Cold test" in e-chain®	**Horizontal travel** Travel length S: up to about 5m Temperature: down to about -40°C Bending factor: according to the catalogue (approx. 6.8 - 10 x d) Target: **minimum** 500,000 double strokes	
igus® test: "Short travel" in e-chain®	**Horizontal travel** Travel length S: up to about 2.5m Temperature: down to about -20°C Bending factor: according to the catalogue (approx. 5 - 7.5 x d) Target: **minimum** 5,000,000 double strokes	
igus® test: "Long travel" in e-chain®	**Horizontal travel** Travel length S: up to about 7.5m Temperature: approx. +5°C to +30°C Bending factor: according to the catalogue (approx. 5 - 7.5 x d) Target: **minimum** 5,000,000 double strokes	
igus® test: "Torsion test"	Twisted length S: approx. 1m Rotation angle: according to catalogue (about ±180°) Target: **minimum** 5,000,000 cycles	

Test 2233: Control cable tested for 41 million strokes …

Control cables are still used everywhere in automation. This makes it all the more important for control cables for constant movement in e-chains® to have a safe construction in order to meet increasingly stringent mechanical requirements.

The special features of the chainflex® control cables are:

- igus® braiding in bundles with specially aligned short pitch lengths
- Gusset-filled extruded inner jacket in shielded cables
- Braided shields with optimised braid angle and optical covering up to 90%.
- Gusset-filled extruded outer jackets to secure the core braiding, especially for long travels.

Every design has to be tested time and again under real-world conditions, in order to be able to calculate a binding guarantee, or show the service life online.

Example of long-term test 2233 of a control cable of the CF5 series on a short travel, with a test bend radius reduced by 25%.

This is just one example of the numerous cable tests from the chainflex® laboratory. All current tests can be found online at ▶ www.chainflex.eu/tests

A test result from the igus® database	
Test no.	2233
Cable type	CF5.10.25
Bend radius factor in e-chain®	5.3 x d
Number of bending strokes without damage	41 million

Details of the test online:
www.chainflex.eu/test2233

Calculate service life online:
www.igus.eu/chainflexlife

Test 4901: Data cable tested for 53 million strokes ...

Although data cables have different electrical requirements than bus cables, data cables have a specific requirement for EMC protection. In the case of constant movement in e-chains®, the EMC shielding is subjected to very high mechanical loads.
To ensure that this load does not lead to failures in the data, a safe construction is important, especially in the shielding.

The special features of the chainflex data cables are:

- Very short balanced winding in pairs according to electrical requirements
- Braid angles of the igus® overall shields have been especially developed and tested by igus®.
- Pressure extruded outer jackets to secure the shield and core structure

Every design has to be tested time and again under real-world conditions, in order to be able to calculate a binding guarantee, or the service life online.

Example of long-term test 4901 of a CF211 series data cable with short travel, with a 75 mm test bend radius.

This is just one example of the numerous cable tests from the chainflex® laboratory. All current tests can be found online at ▶ www.chainflex.eu/tests

A test result from the igus® database	
Test no.	4901
Cable type	CF211 Data
Bend radius factor in e-chain®	6.6 x d
Number of bending strokes without damage	53 million

Details of the test online:
www.chainflex.eu/test4901

Calculate service life online:
www.igus.eu/chainflexlife

Test 3089:
Ethernet bus cable tested for 76 million strokes ...

The use of fieldbus cables, and particularly the rapid growth of Ethernet communication in the industrial environment, places very high requirements on the design and manufacture of bus cables. This is the only way to prevent the classic mechanical damage and the gradual loss of data transmission quality. Increasing attenuation due to shield damage or characteristic impedance changes leads to reduction in data speed. Since the attenuation values are constantly changing during movement, troubleshooting is very challenging.

The special properties of the chainflex® bus cables are:

- The insulation material selection, which does not change its electrical properties even after millions of cycles.
- Very balanced cores, which meet the bus requirements in combination with the mechanical demands
- Braid angle of the chainflex® overall shield developed and tested by igus®
- With pressure extruded outer jackets for securing the shield and core structure

Every design has to be tested time and again under real-world conditions, in order to be able to calculate a binding guarantee, or the service life online.

This is just one example of the numerous cable tests from the chainflex® laboratory. All current tests can be found online at ▶ www.chainflex.eu/tests

A test result from the igus® database	
Test no.	3089
Cable type	CFBUS.045
Bend radius factor in e-chain®	9.4 x d
Number of bending strokes without damage	76 million

Details of the test online:
www.chainflex.eu/test3089

Calculate service life online:
www.igus.eu/chainflexlife

Test 4011:
Fibre optic cable tested for 50 million strokes ...

FOC cables are the safest and most effective data transmission method. When using glass fibres, the effective length, the effective data volume and the EMC safety is unsurpassed for today's automation technology. However, the pure glass fibres are sensitive to mechanical loads. Therefore, chainflex® fibre optic cables are designed in such a way that the fibres are never exposed to mechanical loads at any time, but the cable structure safely absorbs all forces, thus protecting the fibres.

The special properties of the chainflex® fibre optic cables are:

- FOC multimode or singlemode fibre with high flexural strength
- Balanced winding of the aramide-protected sub-cable elements
- High tensile strength aramid torsion protection braid
- With pressure extruded outer jackets for securing the structure.

Every design has to be tested time and again under real-world conditions, in order to be able to calculate a binding guarantee, or the service life online.

Example of long-term test 4011 of a multimode fibre glass cable of CFLG.LB series tested short travel distance, with a bend radius factor of only 4.2 x d.

This is just one example of the numerous cable tests from the chainflex® laboratory. All current tests can be found online at ▶ www.chainflex.eu/tests

A test result from the igus® database	
Test no.	4011
Cable type	CFLG.2LB
Bend radius factor in e-chain®	4.2 x d
Number of bending strokes without damage	50 million

Details of the test online:
www.chainflex.eu/test4011

Calculate service life online:
www.igus.eu/chainflexlife

Test 3479: Measuring system cable tested for 66 million strokes ...

Measuring system cables are the important communication link between the drive and the control system. Damage can occur if the electrical signals are not transmitted safely and in the correct time due to motion. Therefore measuring system cables have a special requirement for EMC protection. In the case of constant movement in e-chains®, the EMC shielding is subjected to very high mechanical loads. To ensure that this load does not lead to failures in the measuring system, a safe construction is very important, especially in the shielding and winding.

The special properties of the chainflex® measuring system cables are:

- Stranding elements specifically designed for the measuring system with the necessary element shields and optimised strand pitch lengths
- Core colour code matched to the defined measuring system
- Gusset-filled extruded inner jacket
- Shield structures especially developed and tested by igus®
- With pressure extruded outer jackets for securing the shield and core structure

Every design has to be tested time and again under real-world conditions, in order to be able to calculate a binding guarantee, or the service life online.

Example of long-term test 3479 of a measuring system cable of the CF11.D series, with a 75 mm test bend radius.

This is just one example of the numerous cable tests from the chainflex® laboratory. All current tests can be found online at ▶ www.chainflex.eu/tests

A test result from the igus® database	
Test no.	3479
Cable type	CF11.002.D
Bend radius factor in e-chain®	7.1 x d
Number of bending strokes without damage:	66 million

Details of the test online:
www.chainflex.eu/test3479

Calculate service life online:
www.igus.eu/chainflexlife

Test 3841: Servo cable tested for 53 million strokes

Servo cables are the standard for drive technology in automation and machine construction. Servo cables are often mechanically constructed in a very unbalanced manner, because of the combination of power cores and shielded pairs.
To ensure that this asymmetry does not lead to failures when in movement in e-chains®, servo cables must have very special design features, especially in long, gliding travels.
Due to the ever increasing speed of today's IGBT frequency converters, very low-capacitance insulating materials are usually needed.

The special properties of the chainflex® servo cables are:

- Low-capacitance insulating materials
- Short optimised pitch lengths, in combination with good sliding materials
- The signal or brake pairs matched to the drive type with optimised shielding for the highest EMC protection
- Gusset-filled extruded inner jacket
- High EMC protection due to optimised overall shield

Every design has to be tested time and again under real-world conditions, in order to be able to calculate a binding guarantee, or the service life online.

Example of long-term test 3841 of a CF21 series servo cable with a test bend factor of only 6.1 x d.

This is just one example of the numerous cable tests from the chainflex® laboratory. All current tests can be found online at ▶ www.chainflex.eu/tests

A test result from the igus® database	
Test no.	3841
Cable type	CF21.UL
Bend radius factor in e-chain®	6.1 x d
Number of bending strokes without damage	53 million

Details of the test online:
www.chainflex.eu/test3841

Calculate service life online:
www.igus.eu/chainflexlife

Test 4904:
Motor cable tested for 43 million strokes ...

Motor cables are very common in drive technology for automation as well as in plant and machine construction.
Because of today's high dynamics, the design features of conductors, insulation and in particular the core winding must be chosen in such a way that the cables can safely withstand millions of strokes.
With the ever increasing speed of today's IGBT frequency converters, very low-capacitance insulating materials are vital.

The special properties of the chainflex® motor cables are:

- Low-capacitance insulating materials
- Short optimised pitch lengths, in combination with good sliding materials
- In shielded motor cables, the gusset-filled extruded inner jacket with optimised shielding for maximum EMC protection
- Gusset-filled extruded outer jackets for unshielded types

Every design has to be tested time and again under real conditions, in order to be able to calculate a binding guarantee, or the service life online.

Example of long-term test 4904 of a CF38 series motor cable, with a test bend factor of only 6.5 x d.

This is just one example of the numerous cable tests from the chainflex® laboratory. All current tests can be found online at ▶ www.chainflex.eu/tests

A test result from the igus® database	
Test no.	4904
Cable type	CF38
Bend radius factor in e-chain®	6.5 x d
Number of bending strokes without damage:	43 million

Details of the test online:
www.chainflex.eu/test4904

Calculate service life online:
www.igus.eu/chainflexlife

Test 3486:
Robot bus cable tested for 22 million cycles ...

Cables for torsion are subjected to very specific stresses. In the case of shielded bus cables a high mechanical load is exerted by the bending and torsion on the insulation materials and especially on the shield.
This requires completely different structural concepts when compared to cables for linear e-chains application.

The special properties of the chainflex® bus robot cables are:

- Low-capacitance insulating materials
- Optimised pitch lengths, in combination with force-absorbing filler elements
- Special sliding films between the shielded elements
- Pressure extruded outer jacket

Every design should always be tested under real-world conditions in order to be able to calculate a binding guarantee or the service life online. Therefore, test standards are also necessary for robotic cables, which test these constructions time and again.

Example for long-term test 3486 of an Ethernet robot cable with 4 shielded Ethernet pairs of the series CFROBOT8, with a test torsion angle of ±180° on one metre.

This is just one example of the numerous cable tests from the chainflex® laboratory. All current tests can be found online at ▶ www.chainflex.eu/tests

A test result from the igus® database	
Test no.	3486
Cable type	CFROBOT8
Bend radius factor in e-chain®	±180°/m
Cycle frequency without damage	22 million

Details of the test online:
www.chainflex.eu/test3486

Calculate service life online:
www.igus.eu/chainflexlife

Control cables

chainflex® cable	Jacket	Shield	Minimum bend radius. e-chain® [factor x d]	Temperature. e-chain® from/to [°C]	Approvals and standards	Oil-resistant	Torsion resistant	v max. [m/s]. unsupported	v max. [m/s] gliding	a max. [m/s²]	Page
Control cables											
CF880	PVC		12.5	+5/+70				3		20	48
CF881	PVC	✓	12.5	+5/+70				3		20	52
CF130.UL	PVC		7.5	+5/+70			✓	3	2	20	56
CF140.UL	PVC	✓	7.5	+5/+70				3	2	20	60
CF5	PVC		6.8	+5/+70		✓	✓	10	5	80	64
CF6	PVC	✓	6.8	+5/+70		✓		10	5	80	68
CFSOFT1	PVC		5	+5/+70		✓		10	5	80	72
CFSOFT2	PVC	✓	5	+5/+70		✓		10	5	80	74
CF890	iguPUR		12.5	-20/+80		✓		3		20	76
CF891	iguPUR	✓	12.5	-20/+80		✓		3		20	80
CF77.UL.D	PUR		6.8	-25/+80		✓	✓	10	5	80	84 New
CF78.UL	PUR	✓	6.8	-25/+80		✓		10	5	80	88
CF2	PUR	✓	5	-20/+80		✓		10	5	80	92
CF9	TPE		5	-35/+100		✓	✓	10	6	100	96
CF10	TPE	✓	5	-35/+100		✓		10	6	100	100
CF9.UL	TPE		5	-35/+100		✓	✓	10	6	100	104
CF10.UL	TPE	✓	5	-35/+100		✓		10	6	100	108
CF98	TPE		4	-35/+90		✓	✓	10	6	100	112
CF99	TPE	✓	4	-35/+90		✓		10	6	100	114

Guarantee igus chainflex 36 month guarantee

36 month chainflex® guarantee

Guaranteed lifetime for predictable reliability

▶Selection table page 46

With the help of the chainflex® service life calculator, you can quickly and easily calculate the expected service life of chainflex® cables specifically for your application:

www.igus.eu/chainflexlife

chainflex® guarantee ▶▶ Guaranteed lifetime (1)

	chainflex® cable	Temperature, from/to [°C]	v max. [m/s] unsupported	v max. [m/s] gliding	a max. [m/s²]	Travel distance [m]	Minimum bend radius [factor x d] < 10 m	Minimum bend radius [factor x d] ≥ 10 m	Minimum bend radius [factor x d] < 10 m	Minimum bend radius [factor x d] ≥ 10 m	Minimum bend radius [factor x d] < 10 m	Minimum bend radius [factor x d] ≥ 10 m	Page
Control cables							5 million (1 million) double strokes *		7.5 million (3 million) double strokes *		10 million (5 million) double strokes *		
	CF880	+5 / +15 +15 / +60 +60 / +70	3	-	20	≤ 10	15 12.5 15	- - -	16 13.5 16	- - -	17 14.5 17	- - -	48
	CF881	+5 / +15 +15 / +60 +70 / +70	3	-	20	≤ 10	15 12.5 15	- - -	16 13.5 16	- - -	17 14.5 17	- - -	52
	CF130.UL	+5 / +15 +15 / +60 +60 / +70	3	2	20	≤ 50	10 7.5 10	12.5 10 12.5	11 8.5 11	13.5 11 13.5	12 9.5 12	14.5 12 14.5	56
	CF140.UL	+5 / +15 +15 / +60 +60 / +70	3	2	20	≤ 50	10 7.5 10	12.5 10 12.5	11 8.5 11	13.5 11 13.5	12 9.5 12	14.5 12 14.5	60
	CF5	+5 / +15 +15 / +60 +60 / +70	10	5	80	≤ 100	7.5 6.8 7.5	10 7.5 10	8.5 7.8 8.5	11 8.5 11	9.5 8.8 9.5	12 9.5 12	64
	CF6	+5 / +15 +15 / +60 +60 / +70	10	5	80	≤ 100	7.5 6.8 7.5	10 7.5 10	8.5 7.8 8.5	11 8.5 11	9.5 8.8 9.5	12 9.5 12	68
							10 million		15 million		20 million		
	CFSOFT1	+5 / +15 +15 / +60 +60 / +70	10	5	80	≤ 5	6.8 5 6.8	- - -	7.5 6 7.5	- - -	8.5 7 8.5	- - -	72
	CFSOFT2	+5 / +15 +15 / +60 +60 / +70	10	5	80	≤ 5	6.8 5 6.8	- - -	7.5 6 7.5	- - -	8.5 7 8.5	- - -	74
							5 million (1 million)		7.5 million (3 million)		10 million (5 million)		
	CF890	-20 / -10 -10 / +70 +70 / +80	3	-	20	≤ 10	15 12.5 15	- - -	16 13.5 16	- - -	17 14.5 17	- - -	76
	CF891	-20 / -10 -10 / +70 +70 / +80	3	-	20	≤ 10	15 12.5 15	- - -	16 13.5 16	- - -	17 14.5 17	- - -	80
	CF77.UL.D New!	-25 / -15 -15 / +70 +70 / +80	10	5	80	≤ 100	8.5 6.8 7.5	10 7.5 10	9.5 7.5 9.5	11 8.5 11	10.5 8.5 10.5	12 9.5 12	84
	CF78.UL	-25 / -15 -15 / +70 +70 / +80	10	5	80	≤ 100	8.5 6.8 7.5	10 7.5 10	9.5 7.5 9.5	11 8.5 11	10.5 8.5 10.5	12 9.5 12	88
	CF2	-20 / -10 -10 / +70 +70 / +80	10	5	80	≤ 100	6.8 5 6.8		7.5 6.8 7.5		8.5 7.5 8.5		92
	CF9	-35 / -25 -25 / +90 +90 / +100	10	6	100	> 400	6.8 5 6.8		7.5 6 7.5		8.5 7 8.5		96
	CF10	-35 / -25 -25 / +90 +90 / +100	10	6	100	> 400	6.8 5 6.8		7.5 6 7.5		8.5 7 8.5		100
	CF9.UL	-35 / -25 -25 / +90 +90 / +100	10	6	100	> 400	6.8 5 6.8		7.5 6 7.5		10 7 10		104
	CF10.UL	-35 / -25 -25 / +90 +90 / +100	10	6	100	> 400	6.8 5 6.8		7.5 6 7.5		8.5 7 8.5		108
							20 million		30 million		40 million		
	CF98	-35 / -25 -25 / +80 +80 / +90	10	6	100	≤ 100	5 4 5		6 5 6		7 6 7		112
	CF99	-35 / -25 -25 / +80 +80 / +90	10	6	100	≤ 100	5 4 5		6 5 6		7 6 7		114

(1) Exclusive! Guaranteed lifetime for this series according to the guarantee conditions ▶ Page 22-23

* Higher number of double strokes? Online lifetime calculation ▶ www.igus.eu/chainflexlife

Figures in brackets refer to chainflex® series CF880/CF881 and CF890/CF891

Control cable | PVC | chainflex® CF880

5 million
Double strokes guaranteed

12.5 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- PVC outer jacket
- Flame retardant

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 12.5 x d
	flexible	minimum 10 x d
	fixed	minimum 7 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality PVC mixture.
Core structure	Cores wound with an optimised pitch length.
Core identification	Black cores with white numbers, one green-yellow core.
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005)

Electrical information

Nominal voltage	300/500 V
Testing voltage	2000 V (following DIN EN 50395)

Class 3.1.1.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6		≥ 400 m
Oil resistance	none	**1**	2	3	4				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 11008 and 2464, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01560 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00449 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	15	16	17
+15/+60	12.5	13.5	14.5
+60/+70	15	16	17

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

CF880
PVC
12.5 x d

Control cable | PVC | chainflex® CF880

Class 3.1.1.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6		≥ 400 m
Oil resistance	none	**1**	2	3	4				highest
Torsion	none	**1**	2	3	4				±360°

CF880
PVC
12.5 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF880.05.02	2x0.5	5.5	10	37
CF880.05.03	3G0.5	6.0	15	44
CF880.05.04	4G0.5	6.5	20	53
CF880.05.05	5G0.5	7.0	25	65
CF880.05.07	7G0.5	8.5	35	97
CF880.05.12	12G0.5	9.5	60	141
CF880.05.18	18G0.5	11.5	90	205
CF880.05.25	25G0.5	13.5	124	283
CF880.07.02	2x0.75	6.0	15	46
CF880.07.03	3G0.75	6.5	23	55
CF880.07.04	4G0.75	7.0	30	67
CF880.07.05	5G0.75	7.5	38	82
CF880.07.07	7G0.75	9.0	53	121
CF880.07.12	12G0.75	10.5	90	181
CF880.07.18	18G0.75	13.0	134	269
CF880.07.25	25G0.75	15.0	186	372
CF880.10.02	2x1.0	6.5	20	53
CF880.10.03	3G1.0	6.5	30	66
CF880.10.04	4G1.0	7.0	40	81
CF880.10.05	5G1.0	8.0	50	98
CF880.10.07	7G1.0	9.5	70	149
CF880.10.12	12G1.0	11.5	119	221
CF880.10.18	18G1.0	13.5	178	322
CF880.10.25	25G1.0	16.0	248	454
CF880.15.02	2x1.5	7.5	30	82
CF880.15.03	3G1.5	8.5	45	103
CF880.15.04	4G1.5	9.0	60	127
CF880.15.05	5G1.5	10.0	75	161
CF880.15.07	7G1.5	12.5	104	243
CF880.15.12	12G1.5	14.5	178	360
CF880.15.18	18G1.5	17.5	267	530
CF880.15.25	25G1.5	21.0	371	743

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF880.25.03	3G2.5	9.0	75	143
CF880.25.04	4G2.5	10.0	100	183
CF880.25.05	5G2.5	11.5	124	226
CF880.25.07	7G2.5	14.0	174	343
CF880.25.12	12G2.5	16.5	297	513
CF880.25.25 [11)]	25G2.5	24.0	612	1064

[11)] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF880.07.03 – to your desired length (0.5 m steps)
CF880 chainflex® series .07 Code nominal cross section .03 Number of cores

Online order ▶ www.chainflex.eu/CF880

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Guarantee igus chainflex 36 month guarantee

Control cable | PVC | chainflex® CF881

5 million
Double strokes guaranteed

12.5 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- PVC outer jacket
- Shielded
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 12.5 x d
	flexible	minimum 10 x d
	fixed	minimum 7 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality PVC mixture.
Core structure	Cores wound with an optimised pitch length.
Core identification	Black cores with white numbers, one green-yellow core.
Overall shield	Braiding made of tinned copper wires. Coverage approx. 60 % optical
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005)

Electrical information

Nominal voltage	300/500 V
Testing voltage	2000 V (following DIN EN 50395)

Example image

Class 3.1.1.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m	
Oil resistance	none	**1**	2	3	4	highest			
Torsion	none	**1**	2	3	4	±360°			

Properties and approvals

Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 11008 and 2464, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01560 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00449 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	15	16	17
+15/+60	12.5	13.5	14.5
+60/+70	15	16	17

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

CF881
PVC
12.5 x d

Control cable | PVC | chainflex® CF881

Class 3.1.1.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6		≥ 400 m
Oil resistance	none	**1**	2	3	4				highest
Torsion	none	**1**	2	3	4				±360°

CF881
PVC
12.5 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF881.05.03	(3G0.5)C	6.5	32	58
CF881.05.04	(4G0.5)C	7.0	42	73
CF881.05.05	(5G0.5)C	7.5	47	83
CF881.05.07	(7G0.5)C	9.0	68	119
CF881.05.12	(12G0.5)C	10.5	98	167
CF881.05.18	(18G0.5)C	12.0	132	229
CF881.05.25	(25G0.5)C	14.5	191	325
CF881.07.02	(2x0.75)C	6.5	32	59
CF881.07.03	(3G0.75)C	7.0	44	73
CF881.07.04	(4G0.75)C	7.5	52	85
CF881.07.05	(5G0.75)C	8.0	65	107
CF881.07.07	(7G0.75)C	10.0	85	145
CF881.07.12	(12G0.75)C	11.5	127	207
CF881.07.18	(18G0.75)C	13.5	182	294
CF881.07.25	(25G0.75)C	16.0	262	415
CF881.10.02	(2x1.0)C	7.0	42	70
CF881.10.03	(3G1.0)C	7.5	52	82
CF881.10.04	(4G1.0)C	8.0	68	103
CF881.10.05	(5G1.0)C	8.5	78	122
CF881.10.07	(7G1.0)C	10.5	107	169
CF881.10.12	(12G1.0)C	12.0	162	245
CF881.10.18	(18G1.0)C	14.5	245	369
CF881.10.25	(25G1.0)C	17.0	334	501
CF881.15.02	(2x1.5)C	8.5	57	101
CF881.15.03	(3G1.5)C	9.0	73	121
CF881.15.04	(4G1.5)C	10.0	93	154
CF881.15.05	(5G1.5)C	11.0	113	184
CF881.15.07	(7G1.5)C	13.0	152	260
CF881.15.12	(12G1.5)C	16.0	255	408
CF881.15.18	(18G1.5)C	18.5	363	583
CF881.15.25	(25G1.5)C	22.0	486	781
CF881.25.04	(4G2.5)C	11.0	137	212
CF881.25.05	(5G2.5)C	12.0	167	251
CF881.25.07	(7G2.5)C	15.0	240	368
CF881.25.12	(12G2.5)C	17.5	383	559
CF881.25.25 [11)]	(25G2.5)C	25.0	735	1083

[11)] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF881.25.25 – to your desired length (0.5 m steps)
CF881 chainflex® series .25 Code nominal cross section .25 Number of cores

Online order ▶ www.chainflex.eu/CF881

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Control cable | PVC | chainflex® CF130.UL

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

50 m
Travel distance, e-chain®

- For medium duty applications
- PVC outer jacket
- Flame retardant

Dynamic information

Bend radius	e-chain® linear	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	e-chain® linear	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	unsupported	3 m/s
	gliding	2 m/s
a max.		20 m/s²
Travel distance		Unsupported travels and up to 50 m for gliding applications, Class 4
Torsion		± 90°, with 1 m cable length, Class 2

Cable structure

Conductor	Finely stranded conductor consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	**Number of cores < 12:** Cores wound in a layer with short pitch length. **Number of cores ≥ 12:** Cores wound in bundles which are then wound around a high tensile strength centre element, all with optimised short pitch lengths and directions. Especially low-torsion structure.
Core identification	**Cores < 0.5 mm²:** Colour code in accordance with DIN 47100. **Cores ≥ 0.5 mm²:** Black cores with white numbers, one green-yellow core.
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Silver-grey (similar to RAL 7001)
CFRIP®	Strip cables faster: a tear strip is moulded into the outer jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	300/500 V (following DIN VDE 0298-3)
Testing voltage	2000 V (following DIN EN 50395)

Example image

EPLAN download, configurators ▶ www.igus.eu/CF130.UL

Class 4.4.1.2

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	2	3	**4**	5	6		≥ 400 m
Oil resistance	none	**1**	2	3	4				highest
Torsion	none	1	**2**	3	4				±360°

Properties and approvals

Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10493 and 20200, 300 V, 60 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1, material/cable tested by IPA according to DIN EN ISO standard 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million		7.5 million		10 million	
Temperature, from/to [°C]	< 10 m R min. [factor x d]	≥ 10 m R min. [factor x d]	< 10 m R min. [factor x d]	≥ 10 m R min. [factor x d]	< 10 m R min. [factor x d]	≥ 10 m R min. [factor x d]
+5/+15	10	12.5	11	13.5	12	14.5
+15/+60	7.5	10	8.5	11	9.5	12
+60/+70	10	12.5	11	13.5	12	14.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travel distances and up to 50 m for gliding applications, Class 4
- Without influence of oil, Class 1
- Torsion ± 90°, with 1 m cable length, Class 2
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

chainflex® CF130.UL for woodworking.
e-chain®: E4/light

EU04.2019

CF130.UL
PVC
7.5 x d

Control cable | PVC | chainflex® CF130.UL

Class 4.4.1.2

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	2	3	**4**	5	6	≥ 400 m	
Oil resistance	none	**1**	2	3	4	highest			
Torsion	none	1	**2**	3	4	±360°			

Strip cables 50% faster

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF130.02.03.UL	3x0.25	5.0	8	24
CF130.02.04.UL	4x0.25	5.5	11	29
CF130.02.06.UL	6x0.25	6.0	16	48
CF130.02.07.UL	7x0.25	6.5	19	56
CF130.02.12.UL	12x0.25	8.5	33	96
CF130.02.20.UL	20x0.25	10.5	51	145
CF130.02.25.UL	25x0.25	11.5	66	154
CF130.02.30.UL	30x0.25	12.5	75	184
CF130.03.02.UL	2x0.34	5.0	8	25
CF130.03.05.UL	5x0.34	6.0	18	40
CF130.05.02.UL	2x0.5	5.5	11	38
CF130.05.03.UL	3G0.5	5.5	16	39
CF130.05.04.UL	4G0.5	6.0	21	47
CF130.05.05.UL	5G0.5	6.5	26	55
CF130.05.07.UL	7G0.5	7.5	37	76
CF130.05.12.UL	12G0.5	10.0	63	139
CF130.05.18.UL	18G0.5	12.0	94	183
CF130.05.25.UL	25G0.5	13.5	129	259
CF130.07.02.UL	2x0.75	6.0	15	41
CF130.07.03.UL	3G0.75	6.0	23	49
CF130.07.04.UL	4G0.75	6.5	30	58
CF130.07.05.UL	5G0.75	7.0	38	68
CF130.07.07.UL	7G0.75	8.0	53	95
CF130.07.12.UL	12G0.75	11.0	90	152
CF130.07.18.UL	18G0.75	13.5	134	226
CF130.07.25.UL	25G0.75	16.0	186	342
CF130.07.36.UL	36G0.75	19.0	293	531
CF130.07.42.UL	42G0.75	21.0	341	608
CF130.10.02.UL	2x1.0	6.0	20	51
CF130.10.03.UL	3G1.0	6.5	30	60
CF130.10.04.UL	4G1.0	7.0	40	74
CF130.10.05.UL	5G1.0	7.5	50	89
CF130.10.07.UL	7G1.0	9.0	70	121
CF130.10.12.UL	12G1.0	12.5	119	197
CF130.10.18.UL	18G1.0	15.0	178	278
CF130.10.25.UL	25G1.0	17.5	248	395

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF130.15.02.UL	2x1.5	7.0	30	62
CF130.15.03.UL	3G1.5	7.0	45	77
CF130.15.04.UL	4G1.5	8.0	60	97
CF130.15.05.UL	5G1.5	8.5	75	115
CF130.15.07.UL [17)]	7G1.5	9.5	104	153
CF130.15.12.UL	12G1.5	13.0	178	275
CF130.15.18.UL	18G1.5	17.5	267	466
CF130.15.25.UL	25G1.5	19.5	371	592
CF130.15.36.UL	36G1.5	23.5	579	887
CF130.25.03.UL	3G2.5	8.5	75	118
CF130.25.04.UL	4G2.5	9.5	100	147
CF130.25.07.UL [17)]	7G2.5	12.0	174	249
CF130.25.12.UL	12G2.5	17.5	297	510
CF130.40.03.UL	3G4.0	10.0	119	187
CF130.40.05.UL	5G4.0	12.0	198	299
CF130.60.04.UL	4G6.0	13.5	238	371
CF130.60.05.UL	5G6.0	14.5	299	471

[17)] When using the cables with "7G1.5 mm²" and "7G2.5 mm²" minimum bend radius must be 17.5 x d with gliding travel distance ≥ 5 m.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF130.05.02.UL – to your desired length (0.5 m steps)
CF130.UL chainflex® series .05 Code nominal cross section .02 Number of cores

Online order ▶ www.chainflex.eu/CF130.UL

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

CF130.UL
PVC
7.5 x d

EU04.2019

Control cable | PVC | chainflex® CF140.UL

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

50 m
Travel distance, e-chain®

- For medium duty applications
- PVC outer jacket
- Shielded
- Flame retardant

Dynamic information

Bend radius	e-chain® linear	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	e-chain® linear	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	unsupported	3 m/s
	gliding	2 m/s
a max.		20 m/s²
Travel distance		Unsupported travels and up to 50 m for gliding applications, Class 4

Cable structure

Conductor	Finely stranded conductor consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	**Number of cores < 12:** Cores wound in a layer with short pitch length. **Number of cores ≥ 12:** Cores wound in bundles which are then wound around a high tensile strength centre element, all with optimised short pitch lengths and directions. Especially low-torsion structure.
Core identification	**Cores < 0.5 mm²:** Colour code in accordance with DIN 47100. **Cores ≥ 0.5 mm²:** Black cores with white numbers, one green-yellow core.
Inner jacket	PVC mixture adapted to suit the requirements in e-chains®.
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage approx. 55 % linear, approx. 80 % optical
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Silver-grey (similar to RAL 7001)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	300/500 V (following DIN VDE 0298-3)
Testing voltage	2000 V (following DIN EN 50395)

Example image

Class 4.4.1.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	2	3	**4**	5	6		≥ 400 m
Oil resistance	none	**1**	2	3	4				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10493 and 20200, 300 V, 60 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF130.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million		7.5 million		10 million	
Temperature, from/to [°C]	< 10 m	≥ 10 m	< 10 m	≥ 10 m	< 10 m	≥ 10 m
	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	10	12.5	11	13.5	12	14.5
+15/+60	7.5	10	8.5	11	9.5	12
+60/+70	10	12.5	11	13.5	12	14.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travel distances and up to 50 m for gliding applications, Class 4
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

CF140.UL
PVC
7.5 x d

EU04.2019

Control cable | PVC | chainflex® CF140.UL

Strip cables 50% faster

Class 4.4.1.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	2	3	**4**	5	6		≥ 400 m
Oil resistance	none	**1**	2	3	4				highest
Torsion	none	**1**	2	3	4				±360°

CF140.UL
PVC
7.5 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF140.02.12.UL	(12x0.25)C	10.5	72	114
CF140.03.05.UL	(5x0.34)C	7.5	35	72
CF140.05.03.UL	(3G0.5)C	7.0	32	72
CF140.05.05.UL	(5G0.5)C	8.0	45	91
CF140.05.18.UL	(18G0.5)C	14.5	146	247
CF140.05.36.UL	(36G0.5)C	18.5	257	468
CF140.07.03.UL	(3G0.75)C	8.0	42	85
CF140.07.04.UL	(4G0.75)C	8.5	51	101
CF140.07.05.UL	(5G0.75)C	9.0	61	115
CF140.07.07.UL	(7G0.75)C	10.0	83	152
CF140.07.12.UL	(12G0.75)C	13.0	136	263
CF140.07.18.UL	(18G0.75)C	15.5	193	359
CF140.07.25.UL	(25G0.75)C	18.0	260	479
CF140.10.02.UL	(2x1.0)C	8.0	35	86
CF140.10.03.UL	(3G1.0)C	8.5	51	100
CF140.10.04.UL	(4G1.0)C	9.0	62	111
CF140.10.05.UL	(5G1.0)C	9.5	74	127
CF140.10.07.UL	(7G1.0)C	10.5	104	176
CF140.10.12.UL	(12G1.0)C	14.0	166	295
CF140.10.18.UL	(18G1.0)C	17.5	240	413
CF140.10.25.UL	(25G1.0)C	19.5	325	562
CF140.15.03.UL	(3G1.5)C	9.0	68	120
CF140.15.04.UL	(4G1.5)C	9.5	85	141
CF140.15.05.UL	(5G1.5)C	10.5	109	169
CF140.15.07.UL [17)]	(7G1.5)C	12.0	144	226
CF140.15.12.UL	(12G1.5)C	16.0	233	387
CF140.15.18.UL	(18G1.5)C	19.0	345	463
CF140.15.25.UL	(25G1.5)C	22.5	463	737
CF140.15.36.UL	(36G1.5)C	26.5	663	1150
CF140.25.03.UL	(3G2.5)C	10.5	107	202
CF140.25.04.UL	(4G2.5)C	11.5	139	210

[17)] When using the cables with "7G1.5 mm²" and "7G2.5 mm²" minimum bend radius must be 17.5 x d with gliding travel distance ≥ 5 m.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF140.02.12.UL – to your desired length (0.5 m steps)
CF140.UL chainflex® series .02 Code nominal cross section .12 Number of cores

Online order ▶ www.chainflex.eu/CF140.UL

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

chainflex® CF140.UL in a feeder application. e-chain®: easychain®

EU04.2019

Control cable | PVC | chainflex® CF5

10 million
Double strokes guaranteed

6.8 x d
Bend radius, e-chain®

100 m
Travel distance, e-chain®

- For heavy duty applications
- PVC outer jacket
- Oil-resistant
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 6.8 x d
	flexible	minimum 5 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.	80 m/s²	
Travel distance	Unsupported travels and up to 100 m for gliding applications, Class 5	
Torsion	± 90°, with 1 m cable length, Class 2	

Cable structure

Conductor	Finely stranded conductor consisting of bare copper wires (following DIN EN 60228).
Core insulation	**Cores ≤ 0.5 mm²:** Mechanically high-quality TPE mixture. **Cores ≥ 0.75 mm²:** Mechanically high-quality PVC mixture.
Core structure	**Number of cores < 12:** Cores wound in a layer with short pitch length. **Number of cores ≥ 12:** Cores wound in bundles which are then wound around a high tensile strength centre element, all with optimised short pitch lengths and directions. Especially low-torsion structure.
Core identification	**Cores ≤ 0.34 mm²:** Colour code in accordance with DIN 47100. **Cores ≥ 0.5 mm²:** Black cores with white numbers, one green-yellow core.
Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Moss green (similar to RAL 6005)
CFRIP®	Strip cables faster: a tear strip is moulded into the outer jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	300/500 V (following DIN VDE 0298-3)
Testing voltage	2000 V (following DIN EN 50395)

Example image

Class 5.5.2.2

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	**2**	3	4				highest
Torsion	none	1	**2**	3	4				±360°

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	11113, and, 2570, 600 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 2, material/cable tested by IPA according to ISO standard 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million		7.5 million		10 million	
Temperature, from/to [°C]	< 10 m	≥ 10 m	< 10 m	≥ 10 m	< 10 m	≥ 10 m
	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	7.5	10	8.5	11	9.5	12
+15/+60	6.8	7.5	7.8	8.5	8.8	9.5
+60/+70	7.5	10	8.5	11	9.5	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heavy duty applications, Class 5
- Unsupported travel distances and up to 100 m for gliding applications, Class 5
- Light oil influence, Class 2
- Torsion ± 90°, with 1 m cable length, Class 2
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Storage and retrieval units for high-bay warehouses, machining units/ packaging machines, quick handling, indoor cranes

CF5
PVC
6.8 x d

Control cable | PVC | chainflex® CF5

Strip cables 50% faster

Class 5.5.2.2

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	**2**	3	4	highest			
Torsion	none	1	**2**	3	4	±360°			

CF5
PVC
6.8 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF5.02.36	36x0.25	15.0	99	209
CF5.03.15	15x0.34	11.0	55	123
CF5.03.18	18x0.34	12.0	67	142
CF5.03.25	25x0.34	14.0	92	203
CF5.05.02	2x0.5	6.0	10	38
CF5.05.03	3G0.5	6.0	16	41
CF5.05.05	5G0.5	7.0	25	73
CF5.05.07	7G0.5	8.0	36	78
CF5.05.12	12G0.5	11.0	60	131
CF5.05.18	18G0.5	13.0	90	190
CF5.05.25	25G0.5	16.0	124	281
CF5.05.30	30G0.5	18.0	149	407
CF5.07.03	3G0.75	6.5	23	54
CF5.07.04	4G0.75	7.0	31	67
CF5.07.05	5G0.75	7.5	39	82
CF5.07.07	7G0.75	9.0	55	115
CF5.07.12	12G0.75	12.5	90	189
CF5.07.18	18G0.75	15.0	134	269
CF5.07.25	25G0.75	17.5	190	384
CF5.07.36	36G0.75	22.0	267	587
CF5.07.42	42G0.75	24.0	312	637
CF5.10.03	3G1.0	6.5	30	56
CF5.10.04	4G1.0	7.0	40	78
CF5.10.05	5G1.0	8.0	50	94
CF5.10.07	7G1.0	9.5	74	130
CF5.10.12	12G1.0	13.0	119	227
CF5.10.18	18G1.0	16.5	179	306
CF5.10.25	25G1.0	19.5	248	487
CF5.15.03	3G1.5	7.5	45	83
CF5.15.04	4G1.5	8.0	60	105
CF5.15.05	5G1.5	9.0	74	127
CF5.15.07 [17)]	7G1.5	10.5	105	180
CF5.15.12	12G1.5	15.0	179	264
CF5.15.18	18G1.5	19.5	267	478
CF5.15.25	25G1.5	21.5	371	645
CF5.15.36	36G1.5	26.5	529	960

[17)] When using the cables with "7G1.5 mm²" and "7G2.5 mm²" minimum bend radius must be 17.5 x d with gliding travel distance ≥ 5 m.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF5.25.04	4G2.5	10.0	96	170
CF5.25.05	5G2.5	11.0	120	200
CF5.25.07 [17)]	7G2.5	13.0	169	279
CF5.25.12	12G2.5	18.5	284	480
CF5.25.18	18G2.5	23.5	427	765
CF5.25.25	25G2.5	27.5	591	1054

[17)] When using the cables with "7G1.5 mm²" and "7G2.5 mm²" minimum bend radius must be 17.5 x d with gliding travel distance ≥ 5 m.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF5.02.36 – to your desired length (0.5 m steps)
CF5 chainflex® series .02 Code nominal cross section .36 Number of cores

Online order ▶ www.chainflex.eu/CF5

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

chainflex® CF5/CF6 for storage retrieval unit: Long travel on longitudinal axis.
e-chain®: Series E4/00 with igus® guide trough made of steel

Control cable | PVC | chainflex® CF6

Example image

10 million Double strokes guaranteed

6.8 x d Bend radius, e-chain®

100 m Travel distance, e-chain®

- For heavy duty applications
- PVC outer jacket
- Shielded
- Oil-resistant
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 6.8 x d
	flexible	minimum 5 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.	80 m/s²	
Travel distance	Unsupported travels and up to 100 m for gliding applications, Class 5	

Cable structure

Conductor	Finely stranded conductor consisting of bare copper wires (following DIN EN 60228).
Core insulation	**Cores ≤ 0.5 mm²:** Mechanically high-quality TPE mixture. **Cores ≥ 0.75 mm²:** Mechanically high-quality PVC mixture.
Core structure	**Number of cores < 12:** Cores wound in a layer with short pitch length. **Number of cores ≥ 12:** Cores wound in bundles which are then wound around a high tensile strength centre element, all with optimised short pitch lengths and directions. Especially low-torsion structure.
Core identification	**Cores ≤ 0.34 mm²:** Colour code in accordance with DIN 47100. **Cores ≥ 0.5 mm²:** Black cores with white numbers, one green-yellow core.
Inner jacket	PVC mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Moss green (similar to RAL 6005)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	300/500 V (following DIN VDE 0298-3)
Testing voltage	2000 V (following DIN EN 50395)

Class 5.5.2.1

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	**2**	3	4				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	**Cores < 0.5 mm²:** Style 10492 and 2570, 600 V, 80 °C **Cores ≥ 0.5 mm²:** Style 11113 and 2570, 600 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 2. The outer jacket material of this series complies with CF5.10.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million		7.5 million		10 million	
Temperature, from/to [°C]	< 10 m	≥ 10 m	< 10 m	≥ 10 m	< 10 m	≥ 10 m
	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	7.5	10	8.5	11	9.5	12
+15/+60	6.8	7.5	7.8	8.5	8.8	9.5
+60/+70	7.5	10	8.5	11	9.5	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heavy duty applications, Class 5
- Unsupported travel distances and up to 100 m for gliding applications, Class 5
- Light oil influence, Class 2
- No torsion, Class 1
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Storage and retrieval units for high-bay warehouses, machining units/ packaging machines, quick handling, indoor cranes

CF6
PVC
6.8 x d

Control cable | PVC | chainflex® CF6

Strip cables 50% faster

Class 5.5.2.1

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	**2**	3	4	highest			
Torsion	none	**1**	2	3	4	±360°			

CF6
PVC
6.8 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF6.02.04	(4x0.25)C	7.0	29	61
CF6.02.25	(25x0.25)C	14.5	111	260
CF6.03.05	(5x0.34)C	7.5	37	90
CF6.05.02	(2x0.5)C	7.0	29	77
CF6.05.05	(5G0.5)C	8.5	49	106
CF6.05.07	(7G0.5)C	10.0	64	127
CF6.05.09	(9G0.5)C	12.0	70	153
CF6.05.12	(12G0.5)C	13.0	98	232
CF6.05.18	(18G0.5)C	15.0	145	286
CF6.05.25	(25G0.5)C	17.5	192	399
CF6.07.03	(3G0.75)C	8.0	46	98
CF6.07.04	(4G0.75)C	8.5	56	113
CF6.07.05	(5G0.75)C	9.0	67	128
CF6.07.07	(7G0.75)C	10.5	86	152
CF6.07.12	(12G0.75)C	14.0	128	266
CF6.07.18	(18G0.75)C	17.5	196	400
CF6.07.25	(25G0.75)C	19.5	265	536
CF6.10.03	(3G1.0)C	8.0	54	107
CF6.10.04	(4G1.0)C	9.0	64	116
CF6.10.05	(5G1.0)C	9.5	77	136
CF6.10.07	(7G1.0)C	12.0	103	205
CF6.10.12	(12G1.0)C	15.0	161	319
CF6.10.18	(18G1.0)C	19.0	245	482
CF6.10.25	(25G1.0)C	21.0	322	595
CF6.15.03	(3G1.5)C	9.0	72	122
CF6.15.04	(4G1.5)C	9.5	87	155
CF6.15.05	(5G1.5)C	10.5	105	177
CF6.15.07 [17)]	(7G1.5)C	13.0	146	258
CF6.15.12	(12G1.5)C	17.0	225	375
CF6.15.18	(18G1.5)C	21.0	345	581
CF6.15.25	(25G1.5)C	24.0	462	865
CF6.15.36	(36G1.5)C	30.0	675	1293
CF6.25.04	(4G2.5)C	11.5	131	222

[17)] When using the cables with "7G1.5 mm²" and "7G2.5 mm²" minimum bend radius must be 17.5 x d with gliding travel distance ≥ 5 m.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF6.02.04 – to your desired length (0.5 m steps)
CF6 chainflex® series .02 Code nominal cross section .04 Number of cores

Online order ▶ www.chainflex.eu/CF6

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

chainflex® CF5 and CF6 control cables (green) as well as CF211 measuring system cables (grey) in a screwing station of a car factory. e-chain®: System E4/00 with chainfix clip strain relief devices.

Control cable | PVC | chainflex® CFSOFT1

20 million
Double strokes guaranteed

5 x d
Bend radius, e-chain®

5 m
Travel distance, e-chain®

- For heaviest duty applications and especially small bend radii, down to 5 x d
- Highly flexible, soft design
- PVC outer jacket
- Oil-resistant
- Flame retardant

Extra soft with special conductor design

Dynamic information

Bend radius	**e-chain® linear**	minimum 5 x d
	flexible	minimum 4 x d
	fixed	minimum 3 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.		80 m/s²
Travel distance		Short, very fast applications with small radii and restricted installation space, Class 1

Cable structure

Conductor	Very finely stranded special conductors with especially soft and bending resistant design, made of bare copper wires.
Core insulation	Mechanically high-quality TPE mixture.
Core structure	Cores wound in a layer with especially short pitch length.
Core identification	Colour code in accordance with DIN 47100.
Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Jet black (similar to RAL 9005)

Electrical information

Nominal voltage	300/500 V (following DIN VDE 0298-3)
Testing voltage	2000 V (following DIN EN 50395)

Example image

Class 7.1.2.1

Basic requirements	low	1	2	3	4	5	6	**7**	highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m	
Oil resistance	none	1	**2**	3	4	highest			
Torsion	none	**1**	2	3	4	±360°			

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10493 and 2464, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 2. The outer jacket material of this series complies with CF5.10.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	10 million	15 million	20 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	6.8	7.5	8.5
+15/+60	5	6	7
+60/+70	6.8	7.5	8.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications and especially small radii down to 5 x d, Class 7
- Especially for short, very fast applications with small radii and restricted installation space, Class 1
- Light oil influence, Class 2
- No torsion, Class 1
- Especially soft cable design, for reduced forces
- Pick and place machines, automatic doors, Clean room, very quick handling

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CFSOFT1.02.03	3x0.25	5.5	7	32
CFSOFT1.02.08	8x0.25	7.0	20	67
CFSOFT1.03.04	4x0.34	6.0	14	45
CFSOFT1.05.04	4x0.5	6.5	20	58

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

CFSOFT1
PVC
5 x d

Guarantee igus chainflex 36 month guarantee

Control cable | PVC | chainflex® CFSOFT2

20 million
Double strokes guaranteed

5 x d
Bend radius, e-chain®

5 m
Travel distance, e-chain®

- For heaviest duty applications and especially small bend radii, down to 5 x d
- Highly flexible, soft design
- PVC outer jacket
- Shielded
- Oil-resistant
- Flame retardant

Extra soft with special conductor design

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 5 x d
	flexible	minimum 4 x d
	fixed	minimum 3 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.		80 m/s²
Travel distance		Short, very fast applications with small radii and restricted installation space, Class 1

Cable structure

Conductor	Very finely stranded special conductors with especially soft and bending resistant design, made of bare copper wires.
Core insulation	Mechanically high-quality TPE mixture.
Core structure	Cores wound in a layer with especially short pitch length.
Core identification	Colour code in accordance with DIN 47100.
Intermediate layer	Foil taping over the outer layer.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Jet black (similar to RAL 9005)

Electrical information

Nominal voltage	300/500 V (following DIN VDE 0298-3)
Testing voltage	2000 V (following DIN EN 50395)

Class 7.1.2.1

Basic requirements	low	1	2	3	4	5	6	**7** highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m
Oil resistance	none	1	**2**	3	4	highest		
Torsion	none	**1**	2	3	4	±360°		

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10493 and 2464, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 2. The outer jacket material of this series complies with CF5.10.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	10 million	15 million	20 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	6.8	7.5	8.5
+15/+60	5	6	7
+60/+70	6.8	7.5	8.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications and especially small radii down to 5 x d, Class 7
- Especially for short, very fast applications with small radii and restricted installation space, Class 1
- Light oil influence, Class 2
- No torsion, Class 1
- Especially soft cable design, for reduced forces
- Pick and place machines, automatic doors, Clean room, very quick handling

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CFSOFT2.02.03	(3x0.25)C	6.0	17	43
CFSOFT2.02.08	(8x0.25)C	7.5	36	91
CFSOFT2.03.04	(4x0.34)C	6.5	25	54
CFSOFT2.05.04	(4x0.5)C	7.0	34	74
CFSOFT2.07.04	(4x0.75)C	8.0	46	100

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

CFSOFT2
PVC
5 x d

Control cable | iguPUR | chainflex® CF890

5 million
Double strokes guaranteed

12.5 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- iguPUR outer jacket
- Oil-resistant
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 12.5 x d
	flexible	minimum 10 x d
	fixed	minimum 7 x d
Temperature	**e-chain® linear**	-20 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality PVC mixture.
Core structure	Cores wound with an optimised pitch length.
Core identification	Black cores with white numbers, one green-yellow core.
Outer jacket	Low-adhesion iguPUR mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005)

Electrical information

Nominal voltage	300/500 V
Testing voltage	2000 V (following DIN EN 50395)

Example image

Class 3.1.3.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m	
Oil resistance	none	1	2	**3**	4	highest			
Torsion	none	**1**	2	3	4	±360°			

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 11008 and 20940, 600 V, 80 °C
EAC	Certificate No. RU C-DE.ME77.B.01560 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00449 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	15	16	17
-10/+70	12.5	13.5	14.5
+70/+80	15	16	17

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- With influence of oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Machining units/machine tools, low temperature applications

CF890
iguPUR
12.5 x d

Control cable | iguPUR | chainflex® CF890

Class 3.1.3.1

Basic requirements low 1 2 **3** 4 5 6 7 highest
Travel distance unsupported **1** 2 3 4 5 6 ≥ 400 m
Oil resistance none 1 2 **3** 4 highest
Torsion none **1** 2 3 4 ±360°

CF890
iguPUR
12.5 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF890.05.02	2x0.5	5.5	10	34
CF890.05.03	3G0.5	6.0	15	41
CF890.05.04	4G0.5	6.5	20	49
CF890.05.05	5G0.5	7.0	25	60
CF890.05.07	7G0.5	8.5	35	90
CF890.05.12	12G0.5	9.5	60	133
CF890.05.18	18G0.5	11.5	90	193
CF890.05.25	25G0.5	13.5	124	268
CF890.07.02	2x0.75	6.0	15	41
CF890.07.03	3G0.75	6.5	23	51
CF890.07.04	4G0.75	7.0	30	63
CF890.07.05	5G0.75	7.5	38	77
CF890.07.07	7G0.75	9.0	53	113
CF890.07.12	12G0.75	10.5	90	171
CF890.07.18	18G0.75	13.0	134	253
CF890.07.25	25G0.75	15.0	186	353
CF890.10.02	2x1.0	6.5	20	49
CF890.10.03	3G1.0	6.5	30	61
CF890.10.04	4G1.0	7.0	40	76
CF890.10.05	5G1.0	8.0	50	92
CF890.10.07	7G1.0	9.5	70	138
CF890.10.12	12G1.0	11.5	119	209
CF890.10.18	18G1.0	13.5	178	306
CF890.10.25	25G1.0	16.0	248	433
CF890.15.02	2x1.5	7.5	30	75
CF890.15.03	3G1.5	8.5	45	96
CF890.15.04	4G1.5	9.0	60	119
CF890.15.05	5G1.5	10.0	75	151
CF890.15.07	7G1.5	12.5	104	225
CF890.15.12	12G1.5	14.5	178	340
CF890.15.18	18G1.5	17.5	267	502
CF890.15.25	25G1.5	21.0	371	708
CF890.25.03	3G2.5	9.0	75	134
CF890.25.04	4G2.5	10.0	100	173
CF890.25.05	5G2.5	11.5	124	214
CF890.25.07	7G2.5	14.0	174	321
CF890.25.12 [11)]	12G2.5	16.5	297	488
CF890.25.25	25G2.5	24.0	612	1019

[11)] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF890.05.02 – to your desired length (0.5 m steps)
CF890 chainflex® series .05 Code nominal cross section .02 Number of cores

Online order ▶ www.chainflex.eu/CF890

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

EU04.2019

Control cable | iguPUR | chainflex® CF891

5 million
Double strokes guaranteed

12.5 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- iguPUR outer jacket
- Oil-resistant
- Shielded
- Flame retardant

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 12.5 x d
	flexible	minimum 10 x d
	fixed	minimum 7 x d
Temperature	**e-chain® linear**	-20 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality PVC mixture.
Core structure	Cores wound with an optimised pitch length.
Core identification	Black cores with white numbers, one green-yellow core.
Overall shield	Braiding made of tinned copper wires. Coverage approx. 60 % optical
Outer jacket	Low-adhesion iguPUR mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005)

Electrical information

Nominal voltage	300/500 V
Testing voltage	2000 V (following DIN EN 50395)

Class 3.1.3.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m	
Oil resistance	none	1	2	**3**	4	highest			
Torsion	none	**1**	2	3	4	±360°			

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 11008 and 20940, 600 V, 80 °C
EAC	Certificate No. RU C-DE.ME77.B.01560 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00449 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	15	16	17
-10/+70	12.5	13.5	14.5
+70/+80	15	16	17

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- With influence of oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Machining units/machine tools, low temperature applications

CF891
iguPUR
12.5 x d

Control cable | iguPUR | chainflex® CF891

Class 3.1.3.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	**1**	2	3	4				±360°

CF891
iguPUR
12.5 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF891.05.02	(2x0.5)C	6.0	27	49
CF891.05.03	(3G0.5)C	6.5	32	55
CF891.05.05	(5G0.5)C	7.5	47	79
CF891.05.12	(12G0.5)C	10.5	98	159
CF891.05.18	(18G0.5)C	12.0	132	219
CF891.05.25	(25G0.5)C	14.5	191	312
CF891.07.02	(2x0.75)C	6.5	32	55
CF891.07.03	(3G0.75)C	7.0	44	70
CF891.07.04	(4G0.75)C	7.5	52	81
CF891.07.05	(5G0.75)C	8.0	65	102
CF891.07.07	(7G0.75)C	10.0	85	138
CF891.07.12	(12G0.75)C	11.5	127	199
CF891.07.18	(18G0.75)C	13.5	182	283
CF891.07.25	(25G0.75)C	16.0	262	400
CF891.10.02	(2x1.0)C	7.0	42	67
CF891.10.03	(3G1.0)C	7.5	52	79
CF891.10.04	(4G1.0)C	8.0	68	99
CF891.10.05	(5G1.0)C	8.5	78	117
CF891.10.07	(7G1.0)C	10.5	107	162
CF891.10.12	(12G1.0)C	12.0	162	236
CF891.10.18	(18G1.0)C	14.5	245	357
CF891.10.25	(25G1.0)C	17.0	334	484
CF891.15.02	(2x1.5)C	8.5	57	96
CF891.15.03	(3G1.5)C	9.0	73	115
CF891.15.04	(4G1.5)C	10.0	93	147
CF891.15.05	(5G1.5)C	11.0	113	177
CF891.15.07	(7G1.5)C	13.0	152	249
CF891.15.12	(12G1.5)C	16.0	255	393
CF891.15.25	(25G1.5)C	22.0	486	754
CF891.25.04	(4G2.5)C	11.0	137	204
CF891.25.05	(5G2.5)C	12.0	167	242
CF891.25.07	(7G2.5)C	15.0	240	355
CF891.25.12	(12G2.5)C	17.5	383	541
CF891.25.25 [11)]	(25G2.5)C	25.0	735	1048

[11)] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF891.05.02 – to your desired length (0.5 m steps)
CF891 chainflex® series .05 Code nominal cross section .02 Number of cores

Online order ▶ www.chainflex.eu/CF891

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

PVC | iguPUR | **PUR** | TPE

New

Control cable | PUR | chainflex® CF77.UL.D

10 million Double strokes guaranteed

6.8 x d Bend radius, e-chain®

100 m Travel distance, e-chain®

- For heavy duty applications
- PUR outer jacket
- Oil resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 6.8 x d
	flexible	minimum 5 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.		80 m/s²
Travel distance		Unsupported travels and up to 100 m for gliding applications, Class 5
Torsion		± 180°, with 1 m cable length, Class 3 (except for 5-core types ≥ 4.0 mm² Product range table)

Cable structure

Conductor	Finely stranded conductor consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	**Number of cores < 12:** Cores wound in a layer with short pitch length. **Number of cores ≥ 12:** Cores wound in bundles which are then wound around a high tensile strength centre element, all with optimised short pitch lengths and directions. Especially low-torsion structure.
Core identification	**Cores < 0.5 mm²:** Colour code in accordance with DIN 47100. **Cores ≥ 0.5 mm²:** Black cores with white numbers, one green-yellow core. **CF77.UL.03.04.INI:** brown, blue, black **CF77.UL.03.04.INI:** brown, blue, black, white
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Window-grey (similar to RAL 7040) Variants ▶ Product range table

Electrical information

Nominal voltage	300/500 V (following DIN VDE 0298-3)
Testing voltage	2000 V (following DIN EN 50395)

Example image

Class 5.5.3.3

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	1	2	**3**	4				±360°

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	**Cores < 0.5 mm²:** Style 10493 and 20233, 300 V, 80 °C **Cores ≥ 0.5 mm²:** Style 11323 and 21223, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
DNV-GL	Type approval certificate No. 61 935-14 HH
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1, material/cable tested by IPA according to DIN EN ISO standard 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million		7.5 million		10 million	
Temperature, from/to [°C]	< 10 m	≥ 10 m	< 10 m	≥ 10 m	< 10 m	≥ 10 m
	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	8.5	10	9.5	11	10.5	12
-15/+70	6.8	7.5	7.5	8.5	8.5	9.5
+70/+80	8.5	10	9.5	11	10.5	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heavy duty applications, Class 5
- Unsupported travel distances and up to 100 m for gliding applications, Class 5
- Almost unlimited resistance to oil, Class 3
- Torsion ± 180°, with 1 m cable length, Class 3
- Indoor and outdoor applications with average sun radiation
- Machining units/machine tools, Storage and retrieval units for high-bay warehouses, Packaging industry, quick handling, refrigerating sector

CF77.UL.D
PUR
6.8 x d

PVC | iguPUR | **PUR** | TPE

Control cable | PUR | chainflex® CF77.UL.D

New

Class 5.5.3.3

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	2	**3**	4	highest			
Torsion	none	1	2	**3**	4	±360°			

CF77.UL.D
PUR
6.8 x d

Example image

	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
	CF77.UL.02.03.INI [12]	3x0.25	5.0	8	29
	CF77.UL.02.04.D	4x0.25	5.5	11	35
New	**CF77.UL.02.05.D**	5x0.25	6.0	13	41
New	**CF77.UL.02.07.D**	7x0.25	6.5	18	51
	CF77.UL.02.12.D	12x0.25	9.0	30	77
	CF77.UL.02.18.D	18x0.25	10.5	45	114
New	**CF77.UL.02.25.D**	25x0.25	11.5	63	154
	CF77.UL.03.04.INI [12]	4x0.34	6.0	16	39
	CF77.UL.05.04.D	4G0.5	6.0	21	43
	CF77.UL.05.05.D	5G0.5	6.5	26	50
	CF77.UL.05.07.D	7G0.5	7.5	39	78
	CF77.UL.05.12.D	12G0.5	10.0	63	129
	CF77.UL.05.18.D	18G0.5	12.0	94	179
	CF77.UL.05.25.D	25G0.5	14.0	129	238
	CF77.UL.05.30.D	30G0.5	15.0	155	315
	CF77.UL.07.03.D	3G0.75	6.5	23	54
	CF77.UL.07.04.D	4G0.75	7.0	30	63
	CF77.UL.07.05.D	5G0.75	7.5	38	73
	CF77.UL.07.07.D	7G0.75	8.5	53	103
	CF77.UL.07.12.D	12G0.75	12.0	90	187
	CF77.UL.07.18.D	18G0.75	13.5	134	251
	CF77.UL.07.20.D	20G0.75	14.5	149	282
	CF77.UL.07.25.D	25G0.75	16.0	186	356
	CF77.UL.07.36.D	36G0.75	19.0	279	505
	CF77.UL.07.42.D	42G0.75	21.0	341	580
	CF77.UL.10.02.D	2x1.0	6.5	20	53
	CF77.UL.10.03.D	3G1.0	6.5	30	63
	CF77.UL.10.04.D	4G1.0	7.0	40	77
	CF77.UL.10.05.D	5G1.0	8.0	50	94
	CF77.UL.10.07.D	7G1.0	9.0	70	115
	CF77.UL.10.12.D	12G1.0	12.5	119	225
	CF77.UL.10.18.D	18G1.0	15.0	178	326
	CF77.UL.10.25.D	25G1.0	17.5	248	436
	CF77.UL.10.42.D	42G1.0	22.5	433	679

[12] Colour outer jacket: Colza yellow, similar to RAL 1021
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF77.UL.15.03.D	3G1.5	7.5	45	83
CF77.UL.15.04.D	4G1.5	8.0	60	102
CF77.UL.15.05.D	5G1.5	8.5	75	121
CF77.UL.15.07.D [17]	7G1.5	10.5	104	167
CF77.UL.15.12.D	12G1.5	14.0	178	296
CF77.UL.15.18.D	18G1.5	17.0	267	459
CF77.UL.15.25.D	25G1.5	19.5	371	605
CF77.UL.15.36.D	36G1.5	23.5	551	848
CF77.UL.15.42.D [11]	42G1.5	26.5	676	987
CF77.UL.25.03.D	3G2.5	8.5	75	119
CF77.UL.25.04.D	4G2.5	9.5	100	149
CF77.UL.25.05.D	5G2.5	10.5	124	183
CF77.UL.25.07.D [17]	7G2.5	12.5	174	259
CF77.UL.25.12.D	12G2.5	17.0	297	451
CF77.UL.40.04.D [90]	4G4.0	11.5	165	245
CF77.UL.40.05.D [90]	5G4.0	12.0	198	288
CF77.UL.60.05.D [90]	5G6.0	14.0	297	407

[11] Phase-out model
[17] When using the cables with "7G1.5 mm²" and "7G2.5 mm²" minimum bend radius must be 17.5 x d with gliding travel distance ≥ 5 m.
[90] Torsion: ± 90°
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF77.UL.02.04.D – to your desired length (0.5 m steps)
CF77.UL.D chainflex® series .02 Code nominal cross section .04 Number of cores

Online order ▶ www.chainflex.eu/CF77.UL.D

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Guarantee igus chainflex 36 month guarantee

Control cable | PUR | chainflex® CF78.UL

Example image

10 million
Double strokes guaranteed

6.8 x d
Bend radius, e-chain®

100 m
Travel distance, e-chain®

- For heavy duty applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 6.8 x d
	flexible	minimum 5 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.		80 m/s²
Travel distance		Unsupported travels and up to 100 m for gliding applications, Class 5

Cable structure

Conductor	Finely stranded conductor consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	**Number of cores < 12:** Cores wound in a layer with short pitch length. **Number of cores ≥ 12:** Cores wound in bundles which are then wound around a high tensile strength centre element, all with optimised short pitch lengths and directions. Especially low-torsion structure.
Core identification	Black cores with white numbers, one green-yellow core.
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage approx. 55 % linear, approx. 80 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Window-grey (similar to RAL 7040)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	300/500 V (following DIN VDE 0298-3)
Testing voltage	2000 V (following DIN EN 50395)

CF78.UL
PUR
6.8 x d

Class 5.5.3.1

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	Style 11323 and 21223, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
DNV-GL	Type approval certificate No. 61 935-14 HH
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million		7.5 million		10 million	
Temperature, from/to [°C]	< 10 m	≥ 10 m	< 10 m	≥ 10 m	< 10 m	≥ 10 m
	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	8.5	10	9.5	11	10.5	12
-15/+70	6.8	7.5	7.5	8.5	8.5	9.5
+70/+80	8.5	10	9.5	11	10.5	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heavy duty applications, Class 5
- Unsupported travel distances and up to 100 m for gliding applications, Class 5
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications with average sun radiation
- Machining units/machine tools, Storage and retrieval units for high-bay warehouses, Packaging industry, quick handling, refrigerating sector

EU04.2019

PVC | iguPUR | **PUR** | TPE

Control cable | PUR | chainflex® CF78.UL

Strip cables 50% faster

Class 5.5.3.1

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	2	**3**	4	highest			
Torsion	none	**1**	2	3	4	±360°			

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF78.UL.05.04	(4G0.5)C	8.0	38	77
CF78.UL.05.05	(5G0.5)C	8.0	45	91
CF78.UL.05.07	(7G0.5)C	9.5	58	119
CF78.UL.05.09	(9G0.5)C	11.0	77	143
CF78.UL.05.12	(12G0.5)C	12.5	92	202
CF78.UL.05.18	(18G0.5)C	14.5	146	247
CF78.UL.05.25	(25G0.5)C	16.0	168	354
CF78.UL.07.03	(3G0.75)C	8.0	42	77
CF78.UL.07.04	(4G0.75)C	8.5	49	96
CF78.UL.07.05	(5G0.75)C	9.5	61	105
CF78.UL.07.07	(7G0.75)C	10.5	82	142
CF78.UL.07.12	(12G0.75)C	13.5	136	242
CF78.UL.07.18	(18G0.75)C	15.5	193	354
CF78.UL.07.36	(36G0.75)C	22.0	390	702
CF78.UL.10.03	(3G1.0)C	8.5	50	87
CF78.UL.10.04	(4G1.0)C	9.0	62	104
CF78.UL.10.05	(5G1.0)C	9.5	74	119
CF78.UL.10.07	(7G1.0)C	11.0	104	164
CF78.UL.10.12	(12G1.0)C	14.5	166	295
CF78.UL.10.18	(18G1.0)C	17.0	240	407
CF78.UL.10.25	(25G1.0)C	20.0	325	545
CF78.UL.15.03	(3G1.5)C	9.5	68	129
CF78.UL.15.04	(4G1.5)C	10.0	85	134
CF78.UL.15.05	(5G1.5)C	10.5	109	160
CF78.UL.15.07 [17)]	(7G1.5)C	12.5	144	217
CF78.UL.15.12	(12G1.5)C	16.0	233	387
CF78.UL.15.18	(18G1.5)C	19.0	345	541
CF78.UL.15.25	(25G1.5)C	22.5	463	724
CF78.UL.15.36	(36G1.5)C	26.5	663	1095
CF78.UL.15.42	(42G1.5)C	29.5	820	1296
CF78.UL.25.03	(3G2.5)C	10.0	106	181
CF78.UL.25.04	(4G2.5)C	11.5	139	203
CF78.UL.25.05	(5G2.5)C	12.5	166	235
CF78.UL.25.07 [17)]	(7G2.5)C	14.5	229	334
CF78.UL.25.12	(12G2.5)C	19.0	382	585
CF78.UL.40.04	(4G4.0)C	14.0	203	328

[17)] When using the cables with "7G1.5 mm²" and "7G2.5 mm²" minimum bend radius must be 17.5 x d with gliding travel distance ≥ 5 m.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF78.UL.05.04 – to your desired length (0.5 m steps)
CF78.UL **chainflex® series** .05 **Code nominal cross section** .04 **Number of cores**

Online order ▶ www.chainflex.eu/CF78.UL

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

CF78.UL
PUR
6.8 x d

PVC | iguPUR | **PUR** | TPE

Control cable | PUR | chainflex® CF2

10 million
Double strokes guaranteed

5 x d
Bend radius, e-chain®

100 m
Travel distance, e-chain®

- For extremely heavy duty applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Flame retardant
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 5 x d
	flexible	minimum 4 x d
	fixed	minimum 3 x d
Temperature	**e-chain® linear**	-20 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.		80 m/s²
Travel distance		Unsupported travels and up to 100 m for gliding applications, Class 5

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	**Number of cores < 12:** Cores wound in a layer with short pitch length. **Number of cores ≥ 12:** Cores wound in bundles which are then wound around a high tensile strength centre element, all with optimised short pitch lengths and directions. Especially low-torsion structure.
Core identification	Colour code in accordance with DIN 47100.
Inner jacket	PVC mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Anthracite grey (similar to RAL 7016)

Electrical information

Nominal voltage	300/500 V (following DIN VDE 0298-3)
Testing voltage	2000 V (following DIN EN 50395)

Example image

Class 6.5.3.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10493 and 20317, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	6.8	7.5	8.5
-10/+70	5	6.8	7.5
+70/+80	6.8	7.5	8.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications, Class 6
- Unsupported travel distances and up to 100 m for gliding applications, Class 5
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications
- Storage and retrieval units for high-bay warehouses, machining units/packaging machines, quick handling, indoor cranes, refrigerating sector

CF2
PUR
5 x d

Control cable | PUR | chainflex® CF2

Class 6.5.3.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6	≥ 400 m
Oil resistance	none	1	2	**3**	4	highest		
Torsion	none	**1**	2	3	4	±360°		

CF2
PUR
5 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF2.01.04	(4x0.14)C	6.5	17	40
CF2.01.08	(8x0.14)C	7.5	29	65
CF2.01.12	(12x0.14)C	9.5	49	101
CF2.01.18	(18x0.14)C	10.5	53	125
CF2.01.24 [3)]	(24x0.14)C	11.5	65	135
CF2.01.36	(36x0.14)C	14.5	88	200
CF2.02.04	(4x0.25)C	7.0	24	53
CF2.02.08	(8x0.25)C	8.5	41	83
CF2.02.18	(18x0.25)C	12.5	96	190
CF2.02.24 [3)]	(24x0.25)C	13.5	120	220
CF2.02.48	(48x0.25)C	18.0	230	450

The chainflex® types marked with a [3)] refer to cables that are based on a bundling of 4 cores each. Due to their excellent electrical properties (star-quad with especially low crosstalk), these cables can be used in virtually all cases in which twisted-pair cables are normally required.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF2.01.04 – to your desired length (0.5 m steps)
CF2 chainflex® series .01 Code nominal cross section .04 Number of cores

Online order ▶ www.chainflex.eu/CF2

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

chainflex® CF2 cables are resistant to oil and coolants. e-chain®: System E4/00

PVC | iguPUR | PUR | **TPE**

Control cable | TPE | chainflex® CF9

10 million
Double strokes guaranteed

5 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For heaviest duty applications
- TPE outer jacket
- Oil and bio-oil resistant
- PVC and halogen-free
- Low-temperature-flexible
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 5 x d
	flexible	minimum 4 x d
	fixed	minimum 3 x d
Temperature	**e-chain® linear**	-35 °C up to +100 °C
	flexible	-50 °C up to +100 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +100 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
Torsion		± 90°, with 1 m cable length, Class 2

Cable structure

Conductor
Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).

Core insulation
Mechanically high-quality TPE mixture.

Core structure
Number of cores < 12: Cores wound in a layer with short pitch length.
Number of cores ≥ 12: Cores wound in bundles which are then wound around a high tensile strength centre element, all with optimised short pitch lengths and directions. Especially low-torsion structure.

Core identification
Cores < 0.75 mm²: Colour code in accordance with DIN 47100.
Cores ≥ 0.75 mm²: Black cores with white numbers, one green-yellow core.
CF9.02.03.INI: brown, blue, black
CF9.03.04.INI: brown, blue, black, white
CF9.03.05.INI: brown, blue, black, white, green-yellow
CF9.03.16.07.03.INI:
0.34 mm²: violet/red/grey/red-blue,green/grey-pink/white-green/white-yellow,white-grey/black/yellow-brown/brown-green,white/yellow/pink/grey-brown
0.75 mm²:blue/green-yellow/brown

Outer jacket
Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®.
Colour: Steel-blue (similar to RAL 5011)

CFRIP®
Strip cables faster: a tear strip is moulded into the outer jacket
Video ▶ www.igus.eu/CFRIP

Example image

EPLAN download, configurators ▶ www.igus.eu/CF9

Class 7.6.4.2

Basic requirements	low	1	2	3	4	5	6	**7**	highest
Travel distance	unsupported	1	2	3	4	5	**6**	≥ 400 m	
Oil resistance	none	1	2	3	**4**	highest			
Torsion	none	1	**2**	3	4	±360°			

Electrical information

Nominal voltage 300/500 V (following DIN VDE 0298-3)

Testing voltage 2000 V (following DIN EN 50395)

Properties and approvals

UV resistance High

Oil resistance Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4

Silicone-free Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)

Halogen-free Following DIN EN 60754

EAC Certificate No. RU C-DE.ME77.B.01254 (TR ZU)

Lead-free Following 2011/65/EC (RoHS-II)

Clean room According to ISO Class 1, material/cable tested by IPA according to DIN EN ISO standard 14644-1

CE Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	6.8	7.5	8.5
-25/+90	5	6	7
+90/+100	6.8	7.5	8.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications
- Unsupported travel distances and up to 400 m and more for gliding applications
- Almost unlimited resistance to oil, also with bio-oils
- Torsion ± 90°, with 1 m cable length, Class 2
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

chainflex® CF9 for outdoor crane systems. e-chain®: Series E4/00

CF9
TPE
5 x d

Control cable | TPE | chainflex® CF9

Strip cables 50% faster

Class 7.6.4.2

Basic requirements	low	1	2	3	4	5	6	**7** highest
Travel distance	unsupported	1	2	3	4	5	**6**	≥ 400 m
Oil resistance	none	1	2	3	**4** highest			
Torsion	none	1	**2**	3	4	±360°		

CF9
TPE
5 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF9.02.02	2x0.25	4.5	5	18
CF9.02.03.INI	3x0.25	4.5	8	21
CF9.02.06	6x0.25	5.5	15	36
CF9.02.07	7x0.25	6.5	18	43
CF9.02.08	8x0.25	6.5	20	49
CF9.02.12	12x0.25	8.0	30	71
CF9.02.18	18x0.25	9.5	45	102
CF9.02.20	20x0.25	9.5	50	109
CF9.02.25	25x0.25	11.0	63	141
CF9.03.04.INI	4x0.34	5.0	14	31
CF9.03.05.INI	5x0.34	5.5	17	37
CF9.03.06	6x0.34	6.0	21	44
CF9.03.08	8x0.34	7.0	28	58
CF9.03.16.07.03.INI	16x0.34+3x0.75	11.0	77	154
CF9.05.02	2x0.5	5.0	10	26
CF9.05.03	3x0.5	5.0	15	31
CF9.05.04	4x0.5	5.5	20	39
CF9.05.05	5x0.5	6.0	25	47
CF9.05.07	7x0.5	7.0	35	64
CF9.05.12	12x0.5	10.0	60	117
CF9.05.18	18x0.5	11.5	90	172
CF9.05.25	25x0.5	13.0	124	227
CF9.05.36	36x0.5	15.5	178	322
CF9.07.04	4G0.75	6.0	30	54
CF9.07.05	5G0.75	6.5	38	66
CF9.07.07	7G0.75	8.0	53	91
CF9.07.12	12G0.75	11.0	90	165
CF9.07.20	20G0.75	13.5	149	257
CF9.07.25	25G0.75	14.5	186	317
CF9.10.03	3G1.0	6.0	30	52
CF9.10.04	4G1.0	6.5	40	67
CF9.10.05	5G1.0	7.5	50	81
CF9.10.12	12G1.0	12.0	119	206
CF9.10.18	18G1.0	14.5	178	302
CF9.10.25	25G1.0	17.0	248	433

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF9.15.02	2x1.5	6.5	30	55
CF9.15.04	4G1.5	7.5	61	87
CF9.15.05	5G1.5	8.0	76	105
CF9.15.07 [17)]	7G1.5	9.5	107	144
CF9.15.12	12G1.5	13.5	179	278
CF9.15.18	18G1.5	16.5	268	395
CF9.15.25	25G1.5	20.0	371	607
CF9.15.36	36G1.5	23.5	530	798
CF9.25.04	4G2.5	9.0	100	152
CF9.25.05	5G2.5	10.0	124	197
CF9.25.07 [17)]	7G2.5	12.0	176	245
CF9.25.12	12G2.5	17.5	297	515
CF9.25.16	16G2.5	19.5	396	687
CF9.25.18 [7)]	18G2.5	23.0	445	830
CF9.25.25	25G2.5	24.5	612	1011
CF9.40.04	4G4.0	10.5	159	218
CF9.60.04	4G6.0	12.5	238	315
CF9.60.05	5G6.0	13.5	297	390
CF9.100.04	4G10.0	16.5	396	553
CF9.160.04	4G16.0	18.0	495	685

[7)] Nominal voltage 600/1000 V
[17)] When using the cables with "7G1.5 mm²" and "7G2.5 mm²" minimum bend radius must be 17.5 x d with gliding travel distance ≥ 5 m.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF9.25.04 – to your desired length (0.5 m steps)
CF9 chainflex® series .25 Code nominal cross section .04 Number of cores

Online order ▶ www.chainflex.eu/CF9

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Control cable | TPE | chainflex® CF10

Example image

10 million Double strokes guaranteed

5 x d Bend radius, e-chain®

400 m Travel distance, e-chain®

- For heaviest duty applications
- TPE outer jacket
- Shielded
- Oil and bio-oil resistant
- PVC and halogen-free
- Low-temperature-flexible
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 5 x d
	flexible	minimum 4 x d
	fixed	minimum 3 x d
Temperature	**e-chain® linear**	-35 °C up to +100 °C
	flexible	-50 °C up to +100 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +100 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	**Number of cores < 12:** Cores wound in a layer with short pitch length. **Number of cores ≥ 12:** Cores wound in bundles which are then wound around a high tensile strength centre element, all with optimised short pitch lengths and directions. Especially low-torsion structure.
Core identification	**Cores < 0.75 mm²:** Colour code in accordance with DIN 47100. **Cores ≥ 0.75 mm²:** Black cores with white numbers, one green-yellow core. **CF10.03.05.INI:** brown, blue, black, white, green-yellow
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Steel-blue (similar to RAL 5011)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	300/500 V (following DIN VDE 0298-3)
Testing voltage	2000 V (following DIN EN 50395)

Class 7.6.4.1

Basic requirements	low	1	2	3	4	5	6	**7**	highest
Travel distance	unsupported	1	2	3	4	5	**6**	≥ 400 m	
Oil resistance	none	1	2	3	**4**	highest			
Torsion	none	**1**	2	3	4	±360°			

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	6.8	7.5	8.5
-25/+90	5	6	7
+90/+100	6.8	7.5	8.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications, Class 7
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

CF10
TPE
5 x d

Control cable | TPE | chainflex® CF10

Class 7.6.4.1

Basic requirements	low	1	2	3	4	5	6	**7**	highest
Travel distance	unsupported	1	2	3	4	5	**6**		≥ 400 m
Oil resistance	none	1	2	3	**4**				highest
Torsion	none	**1**	2	3	4				±360°

CF10
TPE
5 x d

Strip cables 50% faster

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF10.01.12	(12x0.14)C	8.0	38	79
CF10.01.18	(18x0.14)C	9.5	64	124
CF10.02.04	(4x0.25)C	6.5	24	50
CF10.02.08	(8x0.25)C	8.0	40	79
CF10.02.12	(12x0.25)C	9.5	66	123
CF10.02.25	(25x0.25)C	12.5	112	218
CF10.03.05.INI	(5x0.34)C	7.0	34	63
CF10.05.04	(4x0.5)C	7.0	37	67
CF10.05.05	(5x0.5)C	7.5	43	77
CF10.05.07	(7x0.5)C	8.5	57	100
CF10.05.12	(12x0.5)C	12.0	106	192
CF10.05.18	(18x0.5)C	13.5	144	253
CF10.05.25	(25x0.5)C	15.0	186	323
CF10.07.04	(4G0.75)C	7.5	48	84
CF10.07.05	(5G0.75)C	8.0	58	96
CF10.07.07	(7G0.75)C	9.5	89	140
CF10.07.12	(12G0.75)C	12.5	136	237
CF10.07.20	(20G0.75)C	15.0	212	353
CF10.07.25	(25G0.75)C	16.5	253	433
CF10.10.02	(2x1.0)C	7.5	37	70
CF10.10.03	(3G1.0)C	7.5	48	80
CF10.10.04	(4G1.0)C	8.0	61	99
CF10.10.05	(5G1.0)C	8.5	70	116
CF10.10.07	(7G1.0)C	10.0	109	172
CF10.10.12	(12G1.0)C	13.5	175	290
CF10.10.18	(18G1.0)C	16.0	246	398
CF10.10.25	(25G1.0)C	18.0	322	528
CF10.15.04	(4G1.5)C	9.0	94	140
CF10.15.05	(5G1.5)C	10.0	112	168
CF10.15.07 [17)]	(7G1.5)C	11.5	149	225
CF10.15.12	(12G1.5)C	15.5	243	375
CF10.15.18	(18G1.5)C	20.0	372	599
CF10.25.04	(4G2.5)C	11.0	140	215
CF10.25.07 [17)]	(7G2.5)C	13.5	228	349
CF10.25.12	(12G2.5)C	19.0	385	627
CF10.40.04	(4G4.0)C	12.5	208	303
CF10.40.05	(5G4.0)C	13.5	254	369

[17)] When using the cables with "7G1.5 mm²" and "7G2.5 mm²" minimum bend radius must be 17.5 x d with gliding travel distance ≥ 5 m.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF10.01.12 – to your desired length (0.5 m steps)
CF10 chainflex® series .01 Code nominal cross section .12 Number of cores

Online order ▶ www.chainflex.eu/CF10

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Control cable chainflex® CF10 in storage and retrieval units for high-bay warehouses. e-chain®: System E2

Control cable | TPE | chainflex® CF9.UL

10 million
Double strokes guaranteed

5 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Oil and bio-oil resistant
- Flame retardant
- PVC-free
- Low-temperature-flexible
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 5 x d
	flexible	minimum 4 x d
	fixed	minimum 3 x d
Temperature	**e-chain® linear**	-35 °C up to +100 °C
	flexible	-45 °C up to +100 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +100 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
Torsion		± 90°, with 1 m cable length, Class 2

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	**Number of cores < 12:** Cores wound in a layer with short pitch length. **Number of cores ≥ 12:** Cores wound in bundles which are then wound around a high tensile strength centre element, all with optimised short pitch lengths and directions. Especially low-torsion structure.
Core identification	**Cores < 0.75 mm²:** Colour code in accordance with DIN 47100. **Cores ≥ 0.75 mm²:** Black cores with white numbers, one green-yellow core. **CF9.UL.02.03.INI:** brown, blue, black **CF9.UL.03.04.INI:** brown, blue, black, white **CF9.UL.03.05.INI:** brown, blue, black, white, green-yellow
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Slate grey (similar to RAL 7015)
CFRIP®	Strip cables faster: a tear strip is moulded into the outer jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	300/500 V (following DIN VDE 0298-3)
Testing voltage	2000 V (following DIN EN 50395)

Example image

Class 6.6.4.2

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	5	**6**		≥ 400 m
Oil resistance	none	1	2	3	**4**				highest
Torsion	none	1	**2**	3	4				±360°

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	10258, and, 21387, 1000 V, 90 °C
NFPA	Following NFPA 79-2018, chapter 12.9
DNV-GL	Type approval certificate No. 61 935-14 HH
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF34.UL.25.04.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	6.8	7.5	8.5
-25/+90	5	6	7
+90/+100	6.8	7.5	8.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications, Class 6
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ± 90°, with 1 m cable length, Class 2
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, Ship to shore, outdoor cranes, low temperature applications

Control cable | TPE | chainflex® CF9.UL

Class 6.6.4.2

Basic requirements: low 1 2 3 4 5 **6** 7 highest
Travel distance: unsupported 1 2 3 4 5 **6** ≥ 400 m
Oil resistance: none 1 2 3 **4** highest
Torsion: none 1 **2** 3 4 ±360°

Strip cables 50% faster

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF9.UL.02.02	2x0.25	5.0	5	28
CF9.UL.02.03.INI	3x0.25	5.5	8	32
CF9.UL.02.04	4x0.25	5.5	10	37
CF9.UL.02.06	6x0.25	6.5	15	48
CF9.UL.02.08	8x0.25	7.5	20	63
CF9.UL.02.12	12x0.25	8.5	30	93
CF9.UL.03.04.INI	4x0.34	6.0	14	42
CF9.UL.03.05.INI	5x0.34	6.5	17	52
CF9.UL.03.06	6x0.34	6.5	21	56
CF9.UL.03.08	8x0.34	7.5	28	74
CF9.UL.05.02	2x0.5	6.0	10	42
CF9.UL.05.03	3x0.5	6.5	15	51
CF9.UL.05.04	4x0.5	7.0	20	59
CF9.UL.05.05	5x0.5	7.5	25	69
CF9.UL.05.07	7x0.5	8.5	35	94
CF9.UL.05.12	12x0.5	11.5	60	167
CF9.UL.05.18	18x0.5	13.5	90	234
CF9.UL.05.25 [11]	25x0.5	14.5	124	288
CF9.UL.07.05	5G0.75	8.0	38	94
CF9.UL.07.07	7G0.75	9.5	53	130
CF9.UL.07.12	12G0.75	13.0	90	228
CF9.UL.07.25	25G0.75	16.5	186	408
CF9.UL.10.03	3G1.0	7.5	30	77
CF9.UL.10.04	4G1.0	8.0	40	94
CF9.UL.10.12	12G1.0	14.0	119	275
CF9.UL.10.18	18G1.0	16.5	178	393
CF9.UL.10.25	25G1.0	18.5	248	524
CF9.UL.15.04	4G1.5	9.0	60	122
CF9.UL.15.05	5G1.5	9.5	75	146
CF9.UL.15.07 [17]	7G1.5	11.5	104	199
CF9.UL.15.12	12G1.5	16.0	178	372
CF9.UL.15.18	18G1.5	19.0	267	535
CF9.UL.15.25	25G1.5	22.0	371	731

[11] Phase-out model
[17] When using the cables with "7G1.5 mm²" and "7G2.5 mm²" minimum bend radius must be 17.5 x d with gliding travel distance ≥ 5 m.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF9.UL.25.04	4G2.5	10.5	100	188
CF9.UL.25.05	5G2.5	11.0	124	231
CF9.UL.25.07 [17]	7G2.5	13.5	174	317
CF9.UL.25.12	12G2.5	19.0	297	600
CF9.UL.25.18	18G2.5	24.0	445	887
CF9.UL.25.25	25G2.5	27.0	612	1151
CF9.UL.40.04	4G4.0	12.0	159	261
CF9.UL.60.04	4G6.0	14.0	238	364

[17] When using the cables with "7G1.5 mm²" and "7G2.5 mm²" minimum bend radius must be 17.5 x d with gliding travel distance ≥ 5 m.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF9.UL.02.02 – to your desired length (0.5 m steps)
CF9.UL chainflex® series .02 Code nominal cross section .02 Number of cores

Online order ▶ www.chainflex.eu/CF9.UL

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

igus® chainflex® cables in a drilling application.

Guarantee igus chainflex 36 month guarantee

PVC | iguPUR | PUR | **TPE**

Control cable | TPE | chainflex® CF10.UL

10 million
Double strokes guaranteed

5 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Shielded
- Oil and bio-oil resistant
- Flame retardant
- PVC-free
- Low-temperature-flexible
- Hydrolysis and microbe-resistant

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 5 x d
	flexible	minimum 4 x d
	fixed	minimum 3 x d
Temperature	**e-chain® linear**	-35 °C up to +100 °C
	flexible	-45 °C up to +100 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +100 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.	100 m/s²	
Travel distance	Unsupported travel distances and up to 400 m and more for gliding applications, Class 6	

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	**Number of cores < 12:** Cores wound in a layer with short pitch length. **Number of cores ≥ 12:** Cores wound in bundles which are then wound around a high tensile strength centre element, all with optimised short pitch lengths and directions. Especially low-torsion structure.
Core identification	**Cores < 0.75 mm²:** Colour code in accordance with DIN 47100. **Cores ≥ 0.75 mm²:** Black cores with white numbers, one green-yellow core.
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Slate grey (similar to RAL 7015)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	300/500 V (following DIN VDE 0298-3)
Testing voltage	2000 V (following DIN EN 50395)

Class 6.6.4.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	5	**6**		≥ 400 m
Oil resistance	none	1	2	3	**4**				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	**Cores < 0.5 mm²:** Style 10479 and 21529, 300 V, 90 °C **Cores ≥ 0.5 mm²:** Style 10258 and 21387, 1000 V, 90 °C
NFPA	Following NFPA 79-2018, chapter 12.9
DNV-GL	Type approval certificate No. 61 935-14 HH
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF34.UL.25.04.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	6.8	7.5	8.5
-25/+90	5	6	7
+90/+100	6.8	7.5	8.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications, Class 6
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, Ship to shore, outdoor cranes, low temperature applications

CF10.UL
TPE
5 x d

Control cable | TPE | chainflex® CF10.UL

Strip cables 50% faster

Class 6.6.4.1

Basic requirements	low	1 2 3 4 5 **6** 7 highest
Travel distance	unsupported	1 2 3 4 5 **6** ≥ 400 m
Oil resistance	none	1 2 3 **4** highest
Torsion	none	**1** 2 3 4 ±360°

CF10.UL
TPE
5 x d

Example image

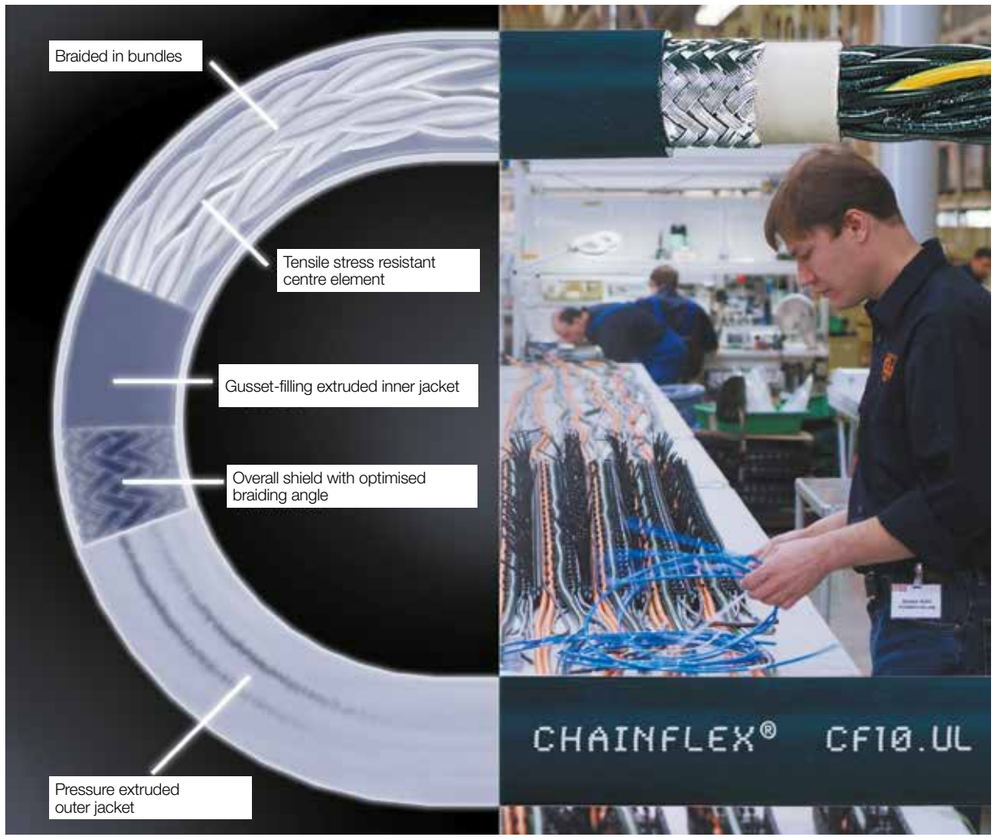
Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF10.UL.02.04	(4x0.25)C	7.0	26	67
CF10.UL.02.08	(8x0.25)C	9.0	39	102
CF10.UL.02.12	(12x0.25)C	10.5	66	155
CF10.UL.02.25	(25x0.25)C	13.0	112	252
CF10.UL.05.04	(4x0.5)C	8.5	39	97
CF10.UL.05.05	(5x0.5)C	9.0	45	109
CF10.UL.05.12	(12x0.5)C	13.0	110	251
CF10.UL.05.25	(25x0.5)C	16.5	191	407
CF10.UL.07.04	(4G0.75)C	9.0	51	120
CF10.UL.07.05	(5G0.75)C	10.0	71	152
CF10.UL.07.07	(7G0.75)C	11.0	94	197
CF10.UL.07.12	(12G0.75)C	14.5	148	332
CF10.UL.07.20	(20G0.75)C	17.0	220	467
CF10.UL.07.25	(25G0.75)C	19.0	288	598
CF10.UL.10.02	(2x1.0)C	8.5	40	103
CF10.UL.10.03	(3G1.0)C	9.0	50	118
CF10.UL.10.04	(4G1.0)C	10.0	74	153
CF10.UL.10.05	(5G1.0)C	10.5	87	176
CF10.UL.10.07	(7G1.0)C	12.0	113	231
CF10.UL.10.18	(18G1.0)C	19.0	283	567
CF10.UL.10.25 [11)]	(25G1.0)C	21.5	365	747
CF10.UL.15.04	(4G1.5)C	10.5	98	189
CF10.UL.15.05	(5G1.5)C	11.5	116	221
CF10.UL.15.07 [17)]	(7G1.5)C	13.0	154	289
CF10.UL.15.12	(12G1.5)C	18.0	251	506
CF10.UL.15.18	(18G1.5)C	21.5	387	745
CF10.UL.25.04	(4G2.5)C	12.0	145	266
CF10.UL.25.07 [17)]	(7G2.5)C	15.0	234	425
CF10.UL.25.12	(12G2.5)C	21.5	417	817
CF10.UL.40.04	(4G4.0)C	13.5	213	361

[11)] Phase-out model
[17)] When using the cables with "7G1.5 mm²" and "7G2.5 mm²" minimum bend radius must be 17.5 x d with gliding travel distance ≥ 5 m.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF10.UL.02.04 – to your desired length (0.5 m steps)
CF10.UL chainflex® series .02 Code nominal cross section .04 Number of cores

Online order ▶ www.chainflex.eu/CF10.UL

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.



The special cable structure of chainflex® CF10.UL guarantees quality – offered by igus® fully harnessed.

Control cable | TPE | chainflex® CF98

Example image

40 million
Double strokes guaranteed

4 x d
Bend radius, e-chain®

100 m
Travel distance, e-chain®

- For heaviest duty applications and especially small radii down to 4 x d
- TPE outer jacket
- Oil and bio-oil resistant
- PVC and halogen-free
- Low-temperature-flexible
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 4 x d
	flexible	minimum 4 x d
	fixed	minimum 3 x d
Temperature	**e-chain® linear**	-35 °C up to +90 °C
	flexible	-50 °C up to +90 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +90 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		Short, very fast applications with small radii and restricted installation space, Class 5
Torsion		± 90°, with 1 m cable length, Class 2

Cable structure

Conductor	Conductor consisting of a highly flexible special alloy.
Core insulation	Mechanically high-quality TPE mixture.
Core structure	Cores wound in a layer with especially short pitch length.
Core identification	Colour code in accordance with DIN 47100. **CF98.02.03.INI:** brown, blue, black **CF98.03.04.INI:** brown, blue, black, white
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Steel-blue (similar to RAL 5011)

Electrical information

Nominal voltage	300/300 V
Testing voltage	1500 V

Class 7.5.4.2

Basic requirements	low	1	2	3	4	5	6	**7** highest
Travel distance	unsupported	1	2	3	4	**5**	6	≥ 400 m
Oil resistance	none	1	2	3	**4** highest			
Torsion	none	1	**2**	3	4	±360°		

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	20 million	30 million	40 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	5	6	7
-25/+80	4	5	6
+80/+90	5	6	7

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications and especially small radii down to 4 x d, Class 7
- Especially for short, very fast applications with small radii and restricted installation space, Class 5
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ± 90°, with 1 m cable length, Class 2
- Indoor and outdoor applications, UV-resistant
- Pick and place machines, automatic doors, Clean room, very quick handling

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF98.01.02	2x0.14	4.5	4	18
CF98.01.03	3x0.14	4.5	6	19
CF98.01.04	4x0.14	5.0	7	25
CF98.01.08	8x0.14	6.5	15	45
CF98.02.03.INI	3x0.25	5.0	10	29
CF98.02.04	4x0.25	5.5	15	36
CF98.02.07	7x0.25	7.0	25	59
CF98.02.08	8x0.25	7.5	29	68
CF98.03.04.INI	4x0.34	5.5	15	38
CF98.05.04	4x0.5	6.0	32	52

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

EU04.2019

Control cable | TPE | chainflex® CF99

Example image

40 million Double strokes guaranteed

4 x d Bend radius, e-chain®

100 m Travel distance, e-chain®

- For heaviest duty applications and especially small radii down to 4 x d
- TPE outer jacket
- Shielded
- Oil and bio-oil resistant
- PVC and halogen-free
- Low-temperature-flexible
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 4 x d
	flexible	minimum 4 x d
	fixed	minimum 3 x d
Temperature	**e-chain® linear**	-35 °C up to +90 °C
	flexible	-50 °C up to +90 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +90 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		Short, very fast applications with small radii and restricted installation space, Class 5

Cable structure

Conductor	Conductor consisting of a highly flexible special alloy.
Core insulation	Mechanically high-quality TPE mixture.
Core structure	Cores wound in a layer with especially short pitch length.
Core identification	Colour code in accordance with DIN 47100.
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending resistant braiding made of alloy wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Steel-blue (similar to RAL 5011)

Electrical information

Nominal voltage	300/300 V
Testing voltage	1500 V

Class 7.5.4.1

Basic requirements	low	1	2	3	4	5	6	**7**	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	2	3	**4**				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	20 million	30 million	40 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	5	6	7
-25/+80	4	5	6
+80/+90	5	6	7

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications and especially small radii down to 4 x d, Class 7
- Especially for short, very fast applications with small radii and restricted installation space, Class 5
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Pick and place machines, automatic doors, Clean room, very quick handling

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF99.01.02	(2x0.14)C	6.0	12	37
CF99.01.04	(4x0.14)C	6.5	16	46
CF99.01.08	(8x0.14)C	8.0	28	76
CF99.02.04	(4x0.25)C	7.0	24	59
CF99.02.07 [11)]	(7x0.25)C	8.0	40	93
CF99.03.08	(8x0.34)C	9.0	45	107

[11)] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Data cables

Coax cables

chainflex® cable	Jacket	Shield	Minimum bend radius. e-chain® [factor x d]	Temperature. e-chain® from/to [°C]	Approvals and standards	Oil-resistant	Torsion resistant	v max. [m/s]. unsupported	v max. [m/s] gliding	a max. [m/s²]	Page
Data cables – Wound in layers											
CF8821	PVC	✓	12.5	+5/+70				3		20	120
CF240	PVC	✓	10	+5/+70			✓	3	2	20	122
CF240.PUR	PUR	✓	10	-25/+80			✓	3	2	20	126 New
Data cables – Twisted pair											
CF211	PVC	✓	7.5	+5/+70			✓	5	3	50	130
CF211.PUR	PUR	✓	7.5	-25/+80			✓	5	3	50	134
CF11	TPE	✓	6.8	-35/+100			✓	10	6	100	138
Data cables – Twisted pair with pair shield											
CF112	PUR	✓	10	-25/+80			✓	10	5	80	142
CF12	TPE	✓	10	-35/+100			✓	10	6	100	146
Data cables – Wound in layers											
CF298	TPE	✓	4	-35/+90		✓	✓	10	6	100	148
CF299	TPE	✓	4	-35/+90			✓	10	6	100	150
Coax cables											
CFKoax	TPE	✓	10	-35/+100 -35/+70			✓	10	5	100	152

Guarantee igus chainflex 36 month guarantee

36 month chainflex® guarantee

Guaranteed lifetime for predictable reliability

▶Selection table page 118

With the help of the chainflex® service life calculator, you can quickly and easily calculate the expected service life of chainflex® cables specifically for your application:

www.igus.eu/chainflexlife

chainflex® guarantee

Guaranteed lifetime (1)

	chainflex® cable	Temperature, from/to [°C]	v max. [m/s] unsupported	v max. [m/s] gliding	a max. [m/s²]	Travel distance [m]	Minimum bend radius [factor x d] < 10 m	Minimum bend radius [factor x d] ≥ 10 m	Minimum bend radius [factor x d] < 10 m	Minimum bend radius [factor x d] ≥ 10 m	Minimum bend radius [factor x d] < 10 m	Minimum bend radius [factor x d] ≥ 10 m	Page
Data cables							5 million (1 million) double strokes *		7.5 million (3 million) double strokes *		10 million (5 million) double strokes *		
	CF8821	+5 / +15	3	-	20	≤ 10	15	-	16	-	17	-	120
		+15 / +60					12.5	-	13.5	-	14.5	-	
		+60 / +70					15	-	16	-	17	-	
							5 million (10 million)		7.5 million (15 million)		10 million (20 million)		
	CF240	+5 / +15	3	2	20	≤ 50	12.5	15	13.5	16	14.5	17	122
		+15 / +60					10	12.5	11	13.5	12	14.5	
		+60 / +70					12.5	15	13.5	16	14.5	17	
	CF240.PUR	-25 / -15	3	2	20	≤ 50	12.5	15	13.5	16	14.5	17	126
		-15 / +70					10	12.5	11	13.5	12	14.5	
		+70 / +80					12.5	15	13.5	16	14.5	17	
	CF211	+5 / +15	5	3	50	≤ 100	10		11		12		130
		+15 / +60					7.5		8.5		9.5		
		+60 / +70					10		11		12		
	CF211.PUR	-25 / -15	5	3	50	≤ 100	10		11		12		134
		-15 / +70					7.5		8.5		9.5		
		+70 / +80					10		11		12		
	CF11	-35 / -25	10	6	100	≤ 400	7.5		8.5		9.5		138
		-25 / +90					6.8		7.5		8.5		
		+90 / +100					7.5		8.5		9.5		
	CF112	-20 / -15	10	5	80	≤ 100	12.5		13.5		14.5		142
		-15 / +70					10		11		12		
		+70 / +80					12.5		13.5		14.5		
	CF12	-35 / -25	10	6	100	≤ 400	12.5		13.5		14.5		146
		-25 / +90					10		11		12		
		+90 / +100					12.5		13.5		14.5		
	CF298	-35 / -25	10	6	100	≤ 100	5		6		7		148
		-25 / +80					4		5		6		
		+80 / +90					5		6		7		
	CF299	-35 / -25	10	6	100	≤ 100	5		6		7		150
		-25 / +80					4		5		6		
		+80 / +90					5		6		7		
Coax Cables													
	CFKoax1/3	-35 / -25	10	5	100	≤ 400	12.5		13.5		14.5		152
		-25 / +90					10		11		12		
		+90 / +100					12.5		13.5		14.5		
	CFKoax2	-35 / -25	10	5	100	≤ 400	12.5		13.5		14.5		152
		-25 / +60					10		11		12		
		+60 / +70					12.5		13.5		14.5		

(1) Exclusive! Guaranteed lifetime for this series according to the guarantee conditions ▶ Page 22-23

* Higher number of double strokes? Online lifetime calculation ▶ www.igus.eu/chainflexlife
Figures in brackets refer to chainflex® series CF8821 and CF298/CF299

Data cable | PVC | chainflex® CF8821

5 million
Double strokes guaranteed

12.5 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- PVC outer jacket
- Shielded
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 12.5 x d
	flexible	minimum 10 x d
	fixed	minimum 7 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	Cores wound with an optimised pitch length.
Core identification	Colour code in accordance with DIN 47100.
Overall shield	Braiding made of tinned copper wires. Coverage approx. 60 % optical
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005)

Electrical information

Nominal voltage	300/300 V (following DIN VDE 0298-3)
Testing voltage	1500 V (following DIN EN 50395)

Example image

Class 3.1.1.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6		≥ 400 m
Oil resistance	none	**1**	2	3	4				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10493 and 2464, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	15	16	17
+15/+60	12.5	13.5	14.5
+60/+70	15	16	17

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF8821.01.02	(2x0.14)C	5.0	11	31
CF8821.01.03	(3x0.14)C	5.5	13	35
CF8821.01.04	(4x0.14)C	5.5	15	41
CF8821.01.05	(5x0.14)C	6.0	18	46
CF8821.01.07	(7x0.14)C	6.5	23	57
CF8821.02.02	(2x0.25)C	5.5	13	34
CF8821.02.03	(3x0.25)C	5.5	16	40
CF8821.02.04	(4x0.25)C	6.0	20	46
CF8821.02.05	(5x0.25)C	6.0	23	53
CF8821.02.07	(7x0.25)C	7.0	30	66

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

CF8821
PVC
12.5 x d

Data cable | PVC | chainflex® CF240

Example image

10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

50 m
Travel distance, e-chain®

- For medium duty applications
- PVC outer jacket
- Shielded
- Oil-resistant
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
	gliding	2 m/s
a max.		20 m/s²
Travel distance		Unsupported travels and up to 50 m for gliding applications, Class 4

Cable structure

Conductor	Very finely stranded special conductors of particularly bending resistant design made of bare copper wires.
Core insulation	Mechanically high-quality TPE mixture.
Core structure	The individual cores are wound in layers with a short pitch length.
Core identification	Colour code in accordance with DIN 47100.
Intermediate layer	Foil taping over the outer layer.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Silver-grey (similar to RAL 7001)

Electrical information

Nominal voltage	300/300 V (following DIN VDE 0298-3)
Testing voltage	1500 V (following DIN EN 50395)

Class 4.4.2.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	2	3	**4**	5	6	≥ 400 m
Oil resistance	none	1	**2**	3	4	highest		
Torsion	none	**1**	2	3	4	±360°		

Properties and approvals

Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10493 and 2464, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1, material/cable tested by IPA according to DIN EN ISO standard 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million		7.5 million		10 million	
Temperature, from/to [°C]	< 10 m	≥ 10 m	< 10 m	≥ 10 m	< 10 m	≥ 10 m
	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	12.5	15	13.5	16	14.5	17
-15/+70	10	12.5	11	13.5	12	14.5
+70/+80	12.5	15	13.5	16	14.5	17

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travel distances and up to 50 m for gliding applications, Class 4
- Light oil influence, Class 2
- Unsupported travel distances and up to 50 m for gliding applications, Class 4
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Storage and retrieval units for high-bay warehouses, machining units/ packaging machines, Handling, indoor cranes

CF240
PVC
10 x d

PVC | iguPUR | PUR | TPE

Data cable | PVC | chainflex® CF240

Class 4.4.2.1

Basic requirements	low	1	2	3	4	5	6	7 highest
Travel distance	unsupported	1	2	3	4	5	6	≥ 400 m
Oil resistance	none	1	2	3	4	highest		
Torsion	none	1	2	3	4	±360°		

CF240
PVC
10 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF240.01.03	(3x0.14)C	5.0	14	28
CF240.01.04	(4x0.14)C	5.0	15	31
CF240.01.05	(5x0.14)C	5.5	17	34
CF240.01.07	(7x0.14)C	6.0	23	44
CF240.01.14	(14x0.14)C	7.5	41	72
CF240.01.18	(18x0.14)C	8.0	51	90
CF240.01.24	(24x0.14)C	9.0	64	125
CF240.02.03	(3x0.25)C	5.0	17	34
CF240.02.04	(4x0.25)C	5.5	20	44
CF240.02.05	(5x0.25)C	5.5	24	42
CF240.02.07	(7x0.25)C	6.5	31	53
CF240.02.08	(8x0.25)C	7.0	35	61
CF240.02.14	(14x0.25)C	8.0	59	90
CF240.02.18	(18x0.25)C	8.5	71	107
CF240.02.24	(24x0.25)C	9.5	95	161
CF240.03.02	(2x0.34)C	5.5	19	37
CF240.03.03	(3x0.34)C	5.5	25	39
CF240.03.04	(4x0.34)C	6.0	30	50
CF240.03.05	(5x0.34)C	6.0	34	55
CF240.03.07	(7x0.34)C	7.5	45	74
CF240.03.10	(10x0.34)C	8.5	59	95
CF240.03.14	(14x0.34)C	9.0	74	112
CF240.03.18	(18x0.34)C	10.0	91	137
CF240.03.24	(24x0.34)C	11.0	119	176

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF240.01.03 – to your desired length (0.5 m steps)
CF240 **chainflex® series** .01 **Code nominal cross section** .03 **Number of cores**

Online order ▶ www.chainflex.eu/CF240

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

PVC | iguPUR | **PUR** | TPE

New

Data cable | PUR | chainflex® CF240.PUR

10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

50 m
Travel distance, e-chain®

- For medium duty applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
	gliding	2 m/s
a max.	20 m/s²	
Travel distance	Unsupported travels and up to 50 m for gliding applications, Class 4	

Cable structure

Conductor	Very finely stranded special conductors of particularly bending resistant design made of bare copper wires.
Core insulation	Mechanically high-quality TPE mixture.
Core structure	The individual cores are wound in layers with a short pitch length.
Core identification	Colour code in accordance with DIN 47100.
Intermediate layer	Foil taping over the outer layer.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Window-grey (similar to RAL 7040)

Electrical information

Nominal voltage	300/300 V (following DIN VDE 0298-3)
Testing voltage	1500 V (following DIN EN 50395)

Example image

Class 4.4.3.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	2	3	**4**	5	6		≥ 400 m
Oil resistance	none	1	2	**3**	**4**				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	Style 10493 and 20233, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
DNV-GL	Type approval certificate No. 61 936-14 HH
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million		7.5 million		10 million	
Temperature, from/to [°C]	< 10 m	≥ 10 m	< 10 m	≥ 10 m	< 10 m	≥ 10 m
	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	12.5	15	13.5	16	14.5	17
-15/+70	10	12.5	11	13.5	12	14.5
+70/+80	12.5	15	13.5	16	14.5	17

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travel distances and up to 50 m for gliding applications, Class 4
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications with average sun radiation
- Machining units/machine tools, Storage and retrieval units for high-bay warehouses, Packaging industry, quick handling, refrigerating sector

CF240.PUR
PUR
10 x d

PVC | iguPUR | **PUR** | TPE

Data cable | PUR | chainflex® CF240.PUR

New

Class 4.4.3.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	2	3	**4**	5	6	≥ 400 m	
Oil resistance	none	1	2	**3**	4	highest			
Torsion	none	**1**	2	3	4	±360°			

CF240.PUR
PUR
10 x d

Example image

	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
	CF240.PUR.01.04	(4x0.14)C	6.0	15	39
	CF240.PUR.01.07	(7x0.14)C	6.5	22	53
New	**CF240.PUR.01.08**	(8x0.14)C	7.0	26	64
	CF240.PUR.01.14	(14x0.14)C	8.0	40	79
	CF240.PUR.01.18	(18x0.14)C	8.5	51	94
New	**CF240.PUR.01.25**	(25x0.14)C	9.5	67	124
	CF240.PUR.02.03	(3x0.25)C	6.0	17	41
	CF240.PUR.02.04	(4x0.25)C	6.0	21	45
	CF240.PUR.02.05	(5x0.25)C	6.0	24	50
	CF240.PUR.02.07	(7x0.25)C	7.0	32	65
	CF240.PUR.02.08	(8x0.25)C	7.5	35	71
	CF240.PUR.02.14	(14x0.25)C	8.5	59	103
	CF240.PUR.02.18	(18x0.25)C	9.0	71	122
New	**CF240.PUR.02.25**	(25x0.25)C	10.5	96	161
	CF240.PUR.03.03	(3x0.34)C	6.0	25	47
	CF240.PUR.03.04	(4x0.34)C	6.5	30	54
	CF240.PUR.03.05	(5x0.34)C	7.0	34	60
	CF240.PUR.03.07	(7x0.34)C	8.0	45	84
	CF240.PUR.03.14	(14x0.34)C	9.5	74	126
	CF240.PUR.03.18	(18x0.34)C	10.5	92	156

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF240.PUR.01.04 – to your desired length (0.5 m steps)
CF240.PUR **chainflex® series** .01 **Code nominal cross section** .04 **Number of cores**

Online order ▶ www.chainflex.eu/CF240.PUR

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Data cable | PVC | chainflex® CF211

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

100 m
Travel distance, e-chain®

- For heavy duty applications
- PVC outer jacket
- Shielded
- Twisted pair
- Oil-resistant
- Flame retardant

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	5 m/s
	gliding	3 m/s
a max.		50 m/s²
Travel distance		Unsupported travels and up to 100 m for gliding applications, Class 5

Cable structure

Conductor	Very finely stranded special conductors of particularly bending resistant design made of bare copper wires.
Core insulation	Mechanically high-quality TPE mixture.
Core structure	Cores twisted in pairs with a short pitch length, core pairs then wound with short pitch lengths.
Core identification	Colour code in accordance with DIN 47100.
Intermediate layer	Foil taping over the outer layer.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Silver-grey (similar to RAL 7001)

Electrical information

Nominal voltage	300/300 V (following DIN VDE 0298-3)
Testing voltage	1500 V (following DIN EN 50395)

Class 5.5.2.1

Basic requirements	low	1	2	3	4	**5**	6	7 highest
Travel distance	unsupported	1	2	3	4	**5**	6	≥ 400 m
Oil resistance	none	1	**2**	3	4	highest		
Torsion	none	**1**	2	3	4	±360°		

Properties and approvals

Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10493 and 2464, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF240.02.24 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	10	11	12
+15/+60	7.5	8.5	9.5
+60/+70	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heavy duty applications, Class 5
- Unsupported travel distances and up to 100 m for gliding applications, Class 5
- Light oil influence, Class 2
- Storage and retrieval units for high-bay warehouses, machining units/ packaging machines, Handling, indoor cranes
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- No torsion, Class 1

Data cable | PVC | chainflex® CF211

Class 5.5.2.1

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	4	±360°			

CF211
PVC
7.5 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF211.02.01.02	(2x0.25)C	5.0	16	31
CF211.02.02.02 [2)]	(2x(2x0.25))C	6.0	23	41
CF211.02.03.02	(3x(2x0.25))C	7.0	32	67
CF211.02.04.02	(4x(2x0.25))C	8.0	40	72
CF211.02.05.02	(5x(2x0.25))C	8.5	48	87
CF211.02.06.02	(6x(2x0.25))C	9.0	56	103
CF211.02.08.02	(8x(2x0.25))C	10.5	70	138
CF211.02.10.02	(10x(2x0.25))C	12.0	90	169
CF211.02.14.02	(14x(2x0.25))C	12.0	108	189
CF211.03.03.02	(3x(2x0.34))C	8.0	44	81
CF211.03.08.02	(8x(2x0.34))C	11.5	91	169
CF211.03.10.02	(10x(2x0.34))C	13.0	111	190
CF211.05.01.02	(2x0.5)C	5.5	24	41
CF211.05.02.02 [2)]	(2x(2x0.5))C	7.0	37	62
CF211.05.03.02	(3x(2x0.5))C	9.0	55	103
CF211.05.04.02	(4x(2x0.5))C	9.5	67	128
CF211.05.05.02	(5x(2x0.5))C	10.5	83	149
CF211.05.06.02	(6x(2x0.5))C	11.5	91	174
CF211.05.08.02	(8x(2x0.5))C	13.0	125	224
CF211.05.10.02	(10x(2x0.5))C	15.5	170	283
CF211.05.14.02	(14x(2x0.5))C	15.5	187	288

The chainflex® types marked with [2)] are cables designed as a star-quad.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF211.02.01.02 – to your desired length (0.5 m steps)
CF211 **chainflex® series** .02 **Code nominal cross section** .01 **Number of pairs** .02 **Identification pairs**

Online order ▶ www.chainflex.eu/CF211

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Data cable | PUR | chainflex® CF211.PUR

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

100 m
Travel distance, e-chain®

- For heavy duty applications
- PUR outer jacket
- Shielded, twisted pair
- Oil resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	5 m/s
	gliding	3 m/s
a max.		50 m/s²
Travel distance		Unsupported travels and up to 100 m for gliding applications, Class 5

Cable structure

Conductor	Very finely stranded special conductors of particularly bending resistant design made of bare copper wires.
Core insulation	Mechanically high-quality TPE mixture.
Core structure	Cores twisted in pairs with a short pitch length, core pairs then wound with short pitch lengths.
Core identification	Colour code in accordance with DIN 47100.
Intermediate layer	Foil taping over the outer layer.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Window-grey (similar to RAL 7040)

Electrical information

Nominal voltage	300/300 V (following DIN VDE 0298-3)
Testing voltage	1500 V (following DIN EN 50395)

Example image

Class 5.5.3.1

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	Style 10493 and 20233, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
DNV-GL	Type approval certificate No. 13 656-14 HH
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00449 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	10	11	12
-15/+70	7.5	8.5	9.5
+70/+80	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heavy duty applications, Class 5
- Unsupported travel distances and up to 100 m for gliding applications, Class 5
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications with average sun radiation
- Machining units/machine tools, Storage and retrieval units for high-bay warehouses, Packaging industry, quick handling, refrigerating sector

CF211.PUR
PUR
7.5 x d

Data cable | PUR | chainflex® CF211.PUR

Class 5.5.3.1

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	3	4				highest
Torsion	none	1	2	3	4				±360°

CF211.PUR
PUR
7.5 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF211.PUR.02.01.02	(2x0.25)C	5.0	16	29
CF211.PUR.02.02.02 2)	(2x(2x0.25))C	6.0	23	38
CF211.PUR.02.03.02	(3x(2x0.25))C	7.0	32	62
CF211.PUR.02.04.02	(4x(2x0.25))C	7.5	40	65
CF211.PUR.02.05.02	(5x(2x0.25))C	8.5	48	81
CF211.PUR.02.06.02	(6x(2x0.25))C	9.0	56	97
CF211.PUR.02.08.02	(8x(2x0.25))C	10.5	70	124
CF211.PUR.02.10.02	(10x(2x0.25))C	12.0	90	155
CF211.PUR.02.14.02	(14x(2x0.25))C	12.0	108	175
CF211.PUR.03.03.02	(3x(2x0.34))C	8.0	44	81
CF211.PUR.03.08.02	(8x(2x0.34))C	12.0	91	147
CF211.PUR.05.01.02	(2x0.5)C	5.5	24	40
CF211.PUR.05.02.02 2)	(2x(2x0.5))C	7.0	37	59
CF211.PUR.05.03.02	(3x(2x0.5))C	9.0	55	98
CF211.PUR.05.04.02	(4x(2x0.5))C	9.5	67	118
CF211.PUR.05.05.02	(5x(2x0.5))C	10.5	83	149
CF211.PUR.05.06.02	(6x(2x0.5))C	11.5	91	174
CF211.PUR.05.08.02	(8x(2x0.5))C	13.0	125	211
CF211.PUR.05.10.02	(10x(2x0.5))C	15.0	170	265
CF211.PUR.05.14.02	(14x(2x0.5))C	15.0	187	288

The chainflex® types marked with 2) are cables designed as a star-quad.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF211.PUR.02.01.02 – to your desired length (0.5 m steps)
CF211.PUR **chainflex® series** .02 **Code nominal cross section** .01 **Number of pairs** .02 **Identification pairs**

Online order ▶ www.chainflex.eu/CF211.PUR

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

PVC | iguPUR | PUR | TPE

Data cable | TPE | chainflex® CF11

10 million
Double strokes guaranteed

6.8 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Shielded
- Twisted pair
- Oil and bio-oil resistant
- PVC and halogen-free
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 6.8 x d
	flexible	minimum 5 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-35 °C up to +100 °C
	flexible	-50 °C up to +100 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +100 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.	100 m/s²	
Travel distance	Unsupported travel distances and up to 400 m and more for gliding applications, Class 6	

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	Cores twisted in pairs with a short pitch length, core pairs then wound with short pitch lengths.
Core identification	**Cores < 1.0 mm²:** Colour code in accordance with DIN 47100. **Cores ≥ 1.0 mm²:** Black cores with white numbers.
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Steel-blue (similar to RAL 5011)

Electrical information

Nominal voltage	300/300 V (following DIN VDE 0298-3)
Testing voltage	1500 V (following DIN EN 50395)

Example image

Class 6.6.4.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	5	**6**		≥ 400 m
Oil resistance	none	1	2	3	**4**				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	7.5	8.5	9.5
-25/+90	6.8	7.5	8.5
+90/+100	7.5	8.5	9.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For extremely heavy duty applications, Class 6
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

Data cable | TPE | chainflex® CF11

Class 6.6.4.1

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	3	4				highest
Torsion	none	1	2	3	4				±360°

CF11
TPE
6.8 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF11.01.04.02	(4x(2x0.14))C	7.5	30	64
CF11.01.18.02	(18x(2x0.14))C	12.0	101	192
CF11.02.01.02	(2x0.25)C	6.0	17	38
CF11.02.02.02 [2)]	(2x(2x0.25))C	6.5	26	49
CF11.02.03.02	(3x(2x0.25))C	8.0	35	78
CF11.02.04.02	(4x(2x0.25))C	8.5	42	89
CF11.02.05.02	(5x(2x0.25))C	9.0	49	104
CF11.02.06.02	(6x(2x0.25))C	10.0	69	130
CF11.02.10.02	(10x(2x0.25))C	13.0	103	217
CF11.02.14.02	(14x(2x0.25))C	13.5	124	224
CF11.03.08.02	(8x(2x0.34))C	13.0	106	220
CF11.05.04.02	(4x(2x0.5))C	9.5	77	133
CF11.05.06.02	(6x(2x0.5))C	12.0	103	198
CF11.05.08.02	(8x(2x0.5))C	14.0	135	261
CF11.07.03.02	(3x(2x0.75))C	10.0	83	155
CF11.10.04.02	(4x(2x1.0))C	12.0	125	228
CF11.15.06.02	(6x(2x1.5))C	17.0	247	411

The chainflex® types marked with [2)] are cables designed as a star-quad.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF11.01.04.02 – to your desired length (0.5 m steps)
CF11 **chainflex® series** .01 **Code nominal cross section** .04 **Number of pairs** .02 **Identification pairs**

Online order ▶ www.chainflex.eu/CF11

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Data cable | PUR | chainflex® CF112

10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

100 m
Travel distance, e-chain®

- For extremely heavy duty applications
- PUR outer jacket
- Double shielded, twisted pair
- Oil resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.		80 m/s²
Travel distance		Unsupported travels and up to 100 m for gliding applications, Class 5

Cable structure

Conductor	Very finely stranded special conductors of particularly bending resistant design made of bare copper wires.
Core insulation	Mechanically high-quality TPE mixture.
Core structure	Cores twisted in pairs with a short pitch length, core pairs then wound with short pitch lengths.
Core identification	Colour code in accordance with DIN 47100.
Element shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Anthracite grey (similar to RAL 7016)

Electrical information

Nominal voltage	300/300 V (following DIN VDE 0298-3)
Testing voltage	1500 V (following DIN EN 50395)

Example image

Class 6.5.3.1

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	3	4				highest
Torsion	none	1	2	3	4				±360°

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	Style 10493 and 20233, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
DNV-GL	Type approval certificate No. 13 656-14 HH
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	12.5	13.5	14.5
-15/+70	10	11	12
+70/+80	12.5	13.5	14.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications, Class 6
- Unsupported travel distances and up to 100 m for gliding applications, Class 5
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications with average sun radiation
- Machining units/machine tools, Storage and retrieval units for high-bay warehouses, Packaging industry, quick handling, refrigerating sector

PVC | iguPUR | **PUR** | TPE

Data cable | PUR | chainflex® CF112

Class 6.5.3.1

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	3	4				highest
Torsion	none	1	2	3	4				±360°

CF112
PUR
10 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF112.02.02.02	(2x(2x0.25)C)C	9.5	56	128
CF112.02.03.02	(3x(2x0.25)C)C	10.0	71	147
CF112.02.04.02	(4x(2x0.25)C)C	11.0	81	163
CF112.02.05.02	(5x(2x0.25)C)C	11.5	99	188
CF112.05.02.02	(2x(2x0.5)C)C	11.5	75	171
CF112.05.04.02	(4x(2x0.5)C)C	13.0	116	225
CF112.05.06.02	(6x(2x0.5)C)C	14.5	160	312

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF112.02.02.02 **– to your desired length (0.5 m steps)**
CF112 **chainflex® series** .02 **Code nominal cross section** .02 **Number of pairs** .02 **Identification pairs**

Online order ▶ www.chainflex.eu/CF112

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Guarantee igus chainflex 36 month guarantee

Data cable | TPE | chainflex® CF12

Example image

10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Double-shielded
- Oil and bio-oil resistant
- PVC and halogen-free
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	-35 °C up to +100 °C
	flexible	-50 °C up to +100 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +100 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	Cores twisted in pairs with a short pitch length, core pairs then wound with short pitch lengths.
Core identification	**Cores < 0.5 mm²:** Colour code in accordance with DIN 47100. **Cores ≥ 0.5 mm²:** Black cores with white numbers.
Element shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Element jacket	TPE mixture on pair shielding adapted to suit the requirements in e-chains®.
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Highly flexible shield consisting of galvanized steel wire braid. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Steel-blue (similar to RAL 5011)

Electrical information

Nominal voltage	300/300 V (following DIN VDE 0298-3)
Testing voltage	1500 V (following DIN EN 50395)

Class 6.6.4.1

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	3	4				highest
Torsion	none	1	2	3	4				±360°

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	12.5	13.5	14.5
-25/+90	10	11	12
+90/+100	12.5	13.5	14.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications, Class 6
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- For maximum EMC protection
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF12.02.04.02	(4x(2x0.25)C)C	11.0	51	174
CF12.05.03.02	(3x(2x0.5)C)C	13.5	65	228
CF12.05.04.02	(4x(2x0.5)C)C	14.5	83	266
CF12.05.06.02	(6x(2x0.5)C)C	17.0	128	388
CF12.05.08.02	(8x(2x0.5)C)C	20.5	163	516
CF12.05.10.02	(10x(2x0.5)C)C	23.0	203	600
CF12.05.14.02	(14x(2x0.5)C)C	23.0	297	705
CF12.10.06.02	(6x(2x1.0)C)C	20.0	198	537

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Data cable | TPE | chainflex® CF298

Example image

20 million Double strokes guaranteed

4 x d Bend radius, e-chain®

100 m Travel distance, e-chain®

- **For heaviest duty applications and especially small radii down to 4 x d**
- **TPE outer jacket**
- **Oil and bio-oil resistant**
- **PVC and halogen-free**
- **Low-temperature-flexible**
- **Hydrolysis and microbe-resistant**

Dynamic information

Bend radius	**e-chain® linear**	minimum 4 x d
	flexible	minimum 4 x d
	fixed	minimum 3 x d
Temperature	**e-chain® linear**	-35 °C up to +90 °C
	flexible	-50 °C up to +90 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +90 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		Short, very fast applications with small radii and restricted installation space, Class 5
Torsion		± 90°, with 1 m cable length, Class 2

Cable structure

Conductor	Conductor consisting of a highly flexible special alloy.
Core insulation	Mechanically high-quality TPE mixture.
Core structure	Cores wound in a layer with especially short pitch length.
Core identification	Colour code in accordance with DIN 47100. **CF298.02.03:** brown, blue, black **CF298.03.04:** brown, blue, black, white
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Steel-blue (similar to RAL 5011)

Electrical information

Nominal voltage	300/300 V
Testing voltage	1500 V

CF298
TPE
4 x d

Class 7.5.4.2

Basic requirements	low	1	2	3	4	5	6	**7** highest
Travel distance	unsupported	1	2	3	4	**5**	6	≥ 400 m
Oil resistance	none	1	2	3	**4**	highest		
Torsion	none	1	**2**	3	4	±360°		

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
EAC	Certificate No. RU C-DE.ME77.B.02806 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	10 million	15 million	20 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	5	6	7
-25/+80	4	5	6
+80/+90	5	6	7

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications and especially small radii down to 4 x d, Class 7
- Especially for short, very fast applications with small radii and restricted installation space, Class 5
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ± 90°, with 1 m cable length, Class 2
- Indoor and outdoor applications, UV-resistant
- Pick and place machines, automatic doors, Clean room, very quick handling

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF298.01.02	2x0.14	4.5	5	15
CF298.01.04	4x0.14	5.5	9	25
CF298.01.08	8x0.14	7.0	16	44
CF298.02.03	3x0.25	5.5	12	28
CF298.02.04	4x0.25	6.0	16	35
CF298.02.07	7x0.25	7.0	28	53
CF298.02.08	8x0.25	7.5	32	61
CF298.03.04	4x0.34	6.0	19	37
CF298.03.07	7x0.34	7.5	33	62
CF298.05.04	4x0.5	6.5	27	48

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Data cable | TPE | chainflex® CF299

20 million
Double strokes guaranteed

4 x d
Bend radius, e-chain®

100 m
Travel distance, e-chain®

- For heaviest duty applications and especially small radii down to 4 x d
- TPE outer jacket
- Shielded
- Oil and bio-oil resistant
- PVC and halogen-free
- Low-temperature-flexible
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 4 x d
	flexible	minimum 4 x d
	fixed	minimum 3 x d
Temperature	**e-chain® linear**	-35 °C up to +90 °C
	flexible	-50 °C up to +90 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +90 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		Short, very fast applications with small radii and restricted installation space, Class 5

Cable structure

Conductor	Conductor consisting of a highly flexible special alloy.
Core insulation	Mechanically high-quality TPE mixture.
Core structure	Cores wound in a layer with especially short pitch length.
Core identification	Colour code in accordance with DIN 47100.
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending resistant braiding made of alloy wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Steel-blue (similar to RAL 5011)

Electrical information

Nominal voltage	300/300 V
Testing voltage	1500 V

Example image

Class 7.5.4.1

Basic requirements	low	1	2	3	4	5	6	**7**	highest
Travel distance	unsupported	1	2	3	4	**5**	6	≥ 400 m	
Oil resistance	none	1	2	3	**4**	highest			
Torsion	none	**1**	2	3	4	±360°			

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
EAC	Certificate No. RU C-DE.ME77.B.02806 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	10 million	15 million	20 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	5	6	7
-25/+80	4	5	6
+80/+90	5	6	7

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications and especially small radii down to 4 x d, Class 7
- Especially for short, very fast applications with small radii and restricted installation space, Class 5
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Pick and place machines, automatic doors, Clean room, very quick handling

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF299.01.02	(2x0.14)C	6.0	17	36
CF299.01.04	(4x0.14)C	6.5	22	45
CF299.01.08	(8x0.14)C	8.5	35	75
CF299.02.04	(4x0.25)C	7.0	32	57
CF299.02.07	(7x0.25)C	8.5	46	83

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Coax cable | TPE | chainflex® CFKoax

10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Oil and bio-oil resistant
- UV-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	-35 °C up to +100 °C (CFKoax1/3) -35 °C up to +70 °C (CFKoax2)
	flexible	-50 °C up to +100 °C (CFKoax1/3) -50 °C up to +70 °C (CFKoax2)
	fixed	-55 °C up to +100 °C (CFKoax1/3) -55 °C up to +70 °C (CFKoax2)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.		100 m/s²
Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6

Cable structure

Conductor	Multi-wire; adapted to single-wire diameter with pitch length to suit the requirements in e-chains®.
Core insulation	Special FEP mixture (CFKoax1/3) Special PE mixture. (CFKoax2)
Core structure	Cores wound in a layer with especially short pitch length.
Core identification	Coaxial elements ▶ Product range table
Element shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Element jacket	TPE mixture adapted to suit the requirements in e-chains®.
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: ▶ Product range table

Example image

Class 6.6.4.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	5	**6**		≥ 400 m
Oil resistance	none	1	2	3	**4**				highest
Torsion	none	**1**	2	3	4				±360°

Electrical information

Nominal voltage	500/500 V (following DIN VDE 0298-3)
Testing voltage	1500 V (following DIN EN 50395)

Properties and approvals

UV resistance	Medium
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU
Info	The coaxial elements used in cables of the CFKoax1 series are comparable with a HF75-0.3/1.6 according to MIL-C-17/94-RG179 and thus fit into an RG179 plug. The coaxial elements used in cables of the CFKoax2 series are comparable with a HF50-0.9/2.95 according to MIL-C-17/28-RG58 and thus fit into an RG58 plug. The coaxial elements used in cables of the CFKoax3 series are comparable with a HF50-0.3/0.84 according to MIL-C-17/93-RG178 and thus fit into an RG178 plug.

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	12,5	13,5	14,5
-25/+60 (CFKoax2)	10	11	12
-25/+90 (CFKoax1/3)	10	11	12
+60/+70 (CFKoax2)	12,5	13,5	14,5
+90/+100 (CFKoax1/3)	12,5	13,5	14,5

* Higher number of double strokes? Online lifetime calculation: www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- No torsion, Class 1
- Indoor and outdoor applications with average sun radiation
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, indoor cranes, low temperature applications

CFKoax
TPE
10 x d

Coax cable | TPE | chainflex® CFKoax

Class 6.6.4.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	5	**6**	≥ 400 m	
Oil resistance	none	1	2	3	**4**	highest			
Torsion	none	**1**	2	3	4	±360°			

CFKoax
TPE
10 x d

Example image

Part No.	Coaxial elements	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CFKoax1.01	1	4.5	7	23
CFKoax1.05	5	10.0	33	110
CFKoax2.01	1	5.5	19	36
CFKoax3.01	1	3.0	5	11

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Part No.	Characteristic wace impedance [Ω]]	Conductor/ Core diameter nominal [mm]	Colour code	Colour outer jacket (similar to RAL)
CFKoax1.01	75	0.3/1.6	red	Steel-blue (similar to RAL 5011)
CFKoax1.05	75	0.3/1.6	red, green, blue, white, black	Steel-blue (similar to RAL 5011)
CFKoax2.01	50	0.9/2.95	-	Jet black (similar to RAL 9005)
CFKoax3.01	50	0.3/0.85	-	Window-grey (similar to RAL 7040)

Order example: CFKoax1.01 – to your desired length (0.5 m steps)
CFKoax **chainflex® series** .01 **Number of coaxial elements**

Online order ▶ www.chainflex.eu/CFKoax

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Coax cable and other chainflex® cables in stage technology. e-chain®: System E4/4

Bus cables

chainflex® cable	Jacket	Shield	Minimum bend radius. e-chain® [factor x d]	Temperature. e-chain® from/to [°C]	Approvals and standards	Oil-resistant	Torsion resistant	v max. [m/s]. unsupported	v max. [m/s] gliding	a max. [m/s²]	Page
Bus cables											
Selection chart for chainflex® bus cables											160
Selection chart for chainflex® ethernet cables											163
CF888	PVC	✓	15	+5/+70				3		20	164
CFBUS.PVC	PVC	✓	12.5	+5/+70		✓		3	2	30	168 New
CF898	iguPUR	✓	15	-20/+70		✓		3		20	172
CFBUS.PUR	PUR	✓	12.5	-20/+70		✓		3	2	30	176 New
CFBUS	TPE	✓	10-12.5	-35/+70		✓		10	6	100	180 New
CFBUS.LB	TPE	✓	7.5	-35/+70		✓		10	6	100	186 New
Twistable Bus cables (Chapter Twistable cables) ► Page 346											
CFROBOT8	PUR	✓	10	-25/+70		✓	✓				380
CFROBOT8. PLUS	PUR	✓	10	-25/+70		✓	✓				384 New

Guarantee igus chainflex 36 month guarantee

36 month chainflex® guarantee

Guaranteed lifetime for predictable reliability

►Selection table page 158

With the help of the chainflex® service life calculator, you can quickly and easily calculate the expected service life of chainflex® cables specifically for your application:

www.igus.eu/chainflexlife

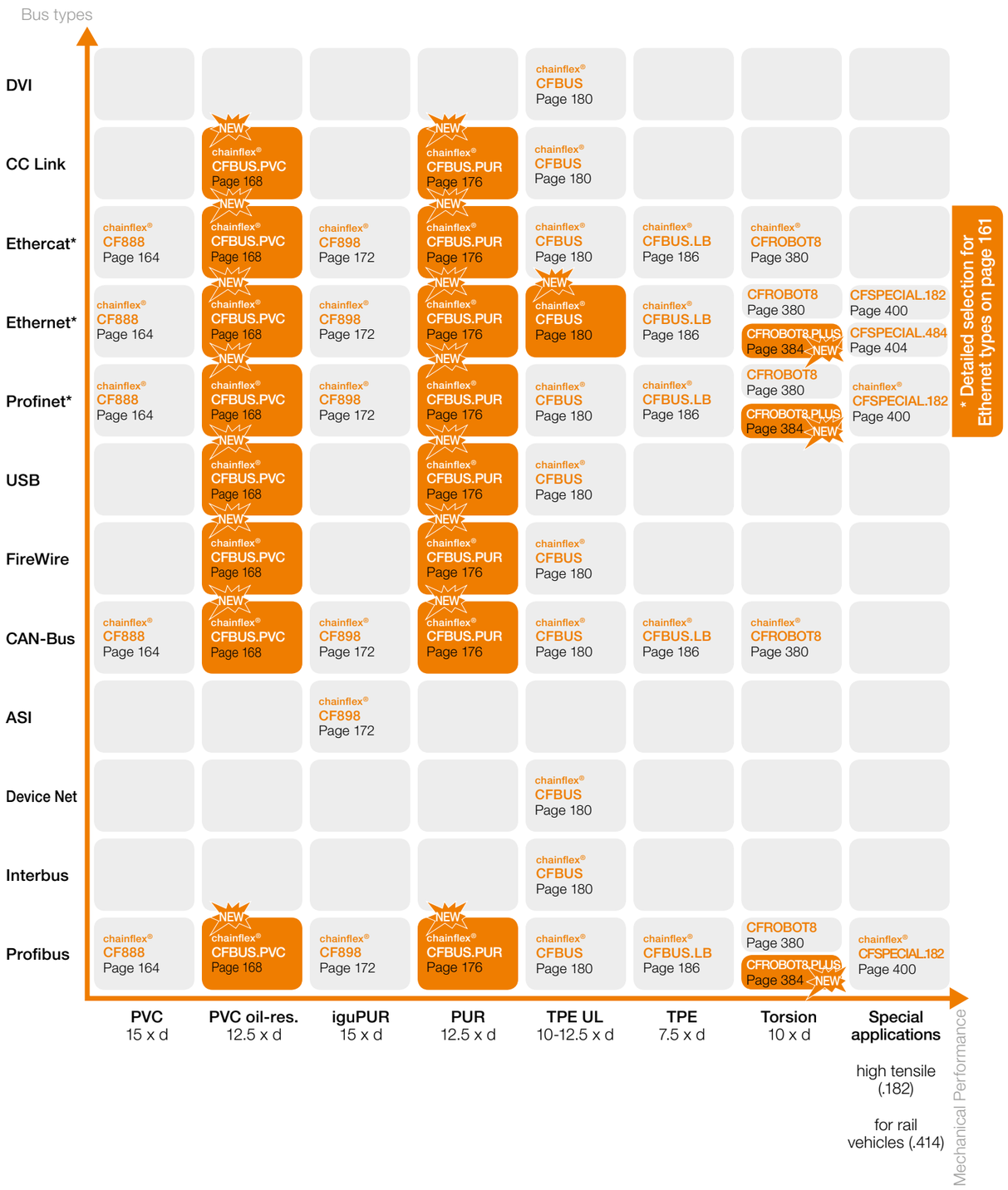
chainflex® guarantee ▶▶ Guaranteed lifetime (1)

	chainflex® cable	Temperature, from/to [°C]	v max. [m/s] unsupported	v max. [m/s] gliding	a max. [m/s²]	Travel distance [m]	Minimum bend radius [factor x d] 5 million (1 million) double strokes *	Minimum bend radius [factor x d] 7.5 million (3 million) double strokes *	Minimum bend radius [factor x d] 10 million (5 million) double strokes *	Page
Bus cables										
	CF888	+5 / +15 +15 / +60 +60 / +70	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5	164
	CFBUS.PVC New!	+5 / +15 +15 / +60 +60 / +70	3	2	30	≤ 20	15 12.5 15	16 13.5 16	17 14.5 17	168
	CF898	-20 / -10 -10 / +60 +60 / +70	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5	172
	CFBUS.PUR New!	-20 / -10 -10 / +60 +60 / +70	3	2	30	≤ 20	15 12.5 15	16 13.5 16	17 14.5 17	176
	CFBUS.001-.049 New! CFBUS.060	-35 / -25 -25 / +60 +60 / +70	10	6	100	≤ 400	12.5 10 12.5	13.5 11 13.5	14.5 12 14.5	180
	CFBUS.050-.055 New! CFBUS.065-.070	-35 / -25 -25 / +60 +60 / +70	10	6	100	≤ 400	15 12.5 15	16 13.5 16	17 14.5 17	180
	CFBUS.LB .001-.022 New!	-35 / -25 -25 / +60 +60 / +70	10	6	100	≤ 400	12.5 10 12.5	13.5 11 13.5	14.5 12 14.5	186
	CFBUS.LB. .040-.049 New!	-35 / -25 -25 / +60 +60 / +70	10	6	100	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12	186

(1) Exclusive! Guaranteed lifetime for this series according to the guarantee conditions ▶ Page 22-23

* Higher number of double strokes? Online lifetime calculation ▶ www.igus.eu/chainflexlife
Figures in brackets refer to chainflex® series CF888 and CF898

The right cable for every bus system …
Product range of chainflex® Bus cables at a glance



* Details for chainflex® Ethernet cables can be found on page 163!

	Bus system/ chainflex® type	Jacket	Number of cores and conductor nominal cross section [mm²]	Page
	Profibus (1x2x0.64 mm)		**150 Ohm**	
	CF888.001	PVC	(2x0.25)C	166
New	CFBUS.PVC.001	PVC	(2x0.25)C	170
	CF898.001	iguPUR	(2x0.25)C	174
New	CFBUS.PUR.001	PUR	(2x0.25)C	178
	CFBUS.001	TPE	(2x0.25)C	182
	CFBUS.002	TPE	(2x0.25)C+4x1.5	182
	CFBUS.003	TPE	(2x0.25)C+3G0.75	182
	CFBUS.LB.001	TPE	(2x0.25)C	188
	CFBUS.LB.004	TPE	(4x0.25)C	188
	CFROBOT8.001	PUR	(2x0.35)	382
New	CFROBOT8.PLUS.001	PUR	(2x0.25)C	386
	CFSPECIAL.182.001	PUR	(2x0.25)C	400
	Interbus		**100 Ohm**	
	CFBUS.010	TPE	(3x(2x0.25))C	182
	CFBUS.011	TPE	(3x(2x0.25)+(3G1.0))C	182
	CAN-Bus		**120 Ohm**	
	CF888.021	PVC	(2x0.5)C	166
New	CFBUS.PVC.020	PVC	(4x0.25)C	170
New	CFBUS.PVC.021	PVC	(2x0.5)C	170
New	CFBUS.PVC.022	PVC	(4x0.5)C	170
	CF898.021	iguPUR	(2x0.5)C	174
New	CFBUS.PUR.020	PUR	(4x0.25)C	178
New	CFBUS.PUR.021	PUR	(2x0.5)C	178
New	CFBUS.PUR.022	PUR	(4x0.5)C	178
	CFBUS.020	TPE	(4x0.25)C	182
	CFBUS.021	TPE	(2x0.5)C	182
	CFBUS.022	TPE	(4x0.5)C	182
	CFBUS.LB.020	TPE	(4x0.25)C	188
	CFBUS.LB.021	TPE	(2x0.5)C	188
	CFBUS.LB.022	TPE	(4x0.5)C	188
	CFROBOT8.022	PUR	(4x0.5)	382
	Device-Net		**120 Ohm**	
	CFBUS.030	TPE	((2xAWG24)C+2xAWG22)C	182
	CFBUS.031	TPE	((2xAWG18)C+2xAWG15)C	182
	CC-Link		**110 Ohm**	
New	CFBUS.PVC.035	PVC	(3x0.5)C	170
New	CFBUS.PUR.035	PUR	(3x0.5)C	178
	CFBUS.035	TPE	(3xAWG20)C	182
	Ethernet/CAT5		**100 Ohm**	
New	CFBUS.PVC.040	PVC	(4x0.25)C	170
New	CFBUS.PUR.040	PUR	(4x0.25)C	178
	CFBUS.040	TPE	(4x0.25)C	184
	CFBUS.044	TPE	(4x(2x0.15))C	184
	CFBUS.LB.040	TPE	(4x(0.25)C	188

	Bus system/ chainflex® type	Jacket	Number of cores and conductor nominal cross section [mm²]	Page
	Ethernet/CAT5e		**100 Ohm**	
	CF888.045	PVC	(4x(2x0.14))C	166
New	CFBUS.PVC.045	PVC	(4x(2x0.15))C	170
	CF898.045	iguPUR	(4x(2x0.14))C	174
New	CFBUS.PUR.045	PUR	(4x(2x0.15))C	178
New	CFBUS.045	TPE	(4x(2x0.15))C	184
	CFBUS.LB.045	TPE	(4x(2x0.15))C	188
	CFROBOT8.045	PUR	4x(2x0.14)C	382
New	CFROBOT8.PLUS.045	PUR	(4x(2x0.15))C	386
	CFSPECIAL.182.045	PUR	(4x(2x0.15))C	400
	Ethernet/CAT6		**100 Ohm**	
New	CFBUS.PVC.049	PVC	(4x(2x0.15))C	170
New	CFBUS.PUR.049	PUR	(4x(2x0.15))C	178
New	CFBUS.PUR.H01.049	PUR	(4x(2x0.15))C+4x1.5	178
New	CFBUS.049	TPE	(4x(2x0.15))C	184
	CFBUS.LB.049	TPE	(4x(2x0.15))C	188
	CFROBOT8.049	PUR	4x(2x0.14)C	382
	CFSPECIAL.484.049	-	(4x(2x0.15))C	404
	Ethernet/CAT6A		**100 Ohm**	
New	CFBUS.PVC.050	PVC	4x(2x0.20)C	170
New	CFBUS.PUR.050	PUR	4x(2x0.20)C	178
	CFBUS.050	TPE	(4x(2x0.15)C)C	184
	Ethernet/CAT7		**100 Ohm**	
New	CFBUS.PVC.052	PVC	(4x(2x0.15)C)C	170
New	CFBUS.PUR.052	PUR	(4x(2x0.15)C)C	178
	CFBUS.052	TPE	(4x(2x0.15)C)C	184
	FireWire IEEE 1394a/b		**100 Ohm**	
New	CFBUS.PVC.056	PVC	(2x(2x0.15)C+2x0.38)C	170
New	CFBUS.PUR.056	PUR	(2x(2x0.15)C+2x0.38)C	178
	CFBUS.055	TPE	2x(2x0.15)C+2x(0.34)C	184
	Profinet		**100 Ohm**	
	CF888.060	PVC	(4x0.38)C	166
New	CFBUS.PVC.060	PVC	(4x0.38)C	170
	CF898.060	iguPUR	(4x0.38)C	174
New	CFBUS.PUR.060	PUR	(4x0.38)C	178
New	CFBUS.PUR.H01.060	PUR	(4x0.38)C+4x1.5	178
	CFBUS.060	TPE	(4x0.38)C	184
	CFBUS.LB.060	TPE	(4x0.38)C	188
	CFROBOT8.060	PUR	(2x(2x0.34))C	382
New	CFROBOT8.PLUS.060	PUR	(4x0.38)C	386
	USB		**90 Ohm**	
	CFBUS.065	TPE	((2xAWG28)+2xAWG20)C	184
	CFBUS.066	TPE	((2xAWG24)+2xAWG20)C	184
	USB 3.0		**90 Ohm**	
	CFBUS.PVC.068	PVC	(2x(2xAWG28)+2x(2xAWG28)C)C	170
	CFBUS.PUR.068	PUR	(2x(2xAWG28)+2x(2xAWG28)C)C	178
	DVI		**100 Ohm**	
New	CFBUS.070	TPE	(4x(2xAWG28)C +(2xAWG28)+3xAWG28)C	184
	ASI BUS (flat cables)			
	CF898.082 (yellow)	iguPUR	2x2.5	174
	CF898.083 (black)	iguPUR	2x2.5	174

EU04.2019

EU04.2019

chainflex®
Bus cables

For all data rates and types of movement ...
Networking your machine with chainflex® Ethernet cables

In our catalogue range you will find the right Ethernet solution for every type of motion. We offer a wide range of products sold by the metre and a wide variety of cables with connectors. We offer all cables with a guarantee of 36 months and up to 10 million double strokes giving you peace of mind.

We support you in three ways when matching your machine with Ethernet cables that have been developed, manufactured and tested for high quality:

1. For your system, we offer Ethernet cables from CAT5 to CAT7 so that you have the right solution for all data rates. With that you can safely use Bus systems such as Ethernet/IP, Profinet, EtherCAT, Sercos and many other derivatives. With different quality levels for each type, you can save money whilst ensuring the product will last in your application.

2. By taking into account the individual mechanical requirements in your application, we offer more customised solutions. There are cable series for large and small bending radii for linear movements in energy chains or torsional movements on robots. We can offer you a cost-effective PVC solution, an oil-resistant PUR cable or a solution with highly abrasion-resistant TPE. Also, special requests for long travels or high tensile strength versions for hanging or rolling applications are standard for us.

3. The third major advantage we can offer you is the various ways in which you can receive the cables. We deliver on drums or in coils to your desired length, without any cutting charges. If it helps, we can fit connectors and label the cable as you require. We do this from a quantity of 1 and would be happy to use your individual measurements and designs. Of course you can also have your Ethernet cable as part of a complete system with chain and attachment parts. Tell us how you would like to reveive it and wel'll deliver what you want.

Our online tools also enable you to reduce process costs. igus® delivers from stock in 24-48 hours! Also, see our website.

www.chainflex.eu/ethernet

CFROBOT8
CAT7 for Torsion

CFROBOT8.052 CAT7
PUR Bus cable, twistable
Page 384

Always find the Ethernet cable that works, for less.
Selection table for the largest range of flexible Ethernet cables

Electrical Performance

	PVC 15 x d	PVC oil-res. 12,5 x d	iguPUR 15 x d	PUR 12.5 x d	TPE UL 10 x d	TPE Hal 7.5 x d	Torsion ± 180°/m	High tensile 50 m freely hanging	For rail vehicles
CAT7 10 GBit 600 MHz		NEW chainflex® CFBUS.PVC.052 Page 170		NEW chainflex® CFBUS.PUR.052 Page 178	chainflex® CFBUS.052 Page 184		chainflex® CFROBOT8.052 Page 382		
CAT6A 10 GBit 500 MHz		NEW chainflex® CFBUS.PVC.050 Page 170		NEW chainflex® CFBUS.PUR.050 Page 178	chainflex® CFBUS.050 Page 184		chainflex® CFROBOT8.050 Page 382		
CAT6 1 GBit 250 MHz		NEW chainflex® CFBUS.PVC.049 Page 170		NEW chainflex® CFBUS.PUR.049 Page 178	NEW chainflex® CFBUS.049 Page 184	chainflex® CFBUS.LB.049 Page 188	chainflex® CFROBOT8.049 Page 382		chainflex® CFSPECIAL.484.049 Page 404
CAT5e 1 GBit 100 MHz	chainflex® CF888.045 Page 166	NEW chainflex® CFBUS.PVC.045 Page 170	chainflex® CF898.045 Page 174	NEW chainflex® CFBUS.PUR.045 Page 178	NEW chainflex® CFBUS.045 Page 184	chainflex® CFBUS.LB.045 Page 188	CFROBOT8.045 Page 382 NEW CFROBOT8. PLUS.045 P.386	chainflex® CFSPECIAL.182.045 Page 400	
Profinet 100 MBit 100 MHz	chainflex® CF888.060 Page 166	NEW chainflex® CFBUS.PVC.060 Page 170	chainflex® CF898.060 Page 174	NEW chainflex® CFBUS.PUR.060 Page 178	chainflex® CFBUS.060 Page 184	chainflex® CFBUS.LB.060 Page 188	CFROBOT8.060 Page 382 NEW CFROBOT8. PLUS.060 P.386	chainflex® CFSPECIAL.182.060 Page 400	
CAT5 100 MBit 100 MHz		NEW chainflex® CFBUS.PVC.040 Page 170		NEW chainflex® CFBUS.PUR.040 Page 178	chainflex® CFBUS.040 Page 184	chainflex® CFBUS.LB.040 Page 188			

Mechanical Performance

HIghly flexible chainflex® cables
- 1,354 cables from stock
- Tested, and in seven jacket materials
- No cutting charges, from 1 m
- 36 months or 10 million double strokes guarantee*
- Approvals and certificates

Harnessed cables readycable®
- New: More than 400 harnessed Ethernet cables
- In seven jacket materials
- 36 months or 10 million double stroke guarantee*
- Shipped in 24h**
- To your desired length, with centimetre accuracy

Assembled e-chain systems® readychain®
- Customised and ready to connect according to your specifications
- From the basic solution to complex systems
- Optionally with assembly rack
- From batch size 1 to series production
- Assembly service by experts

* Whichever is first. Up to 5 million double strokes for the highly affordable chainflex® M cables. The number of double strokes depends on installation and cable quality. This is described in the current catalogue, in the data sheets and in the service life calculator at www.igus.eu/chainflexlife.

** Delivery time means time until shipping of goods.

EU04.2019

EU04.2019

Bus cable | PVC | chainflex® CF888

5 million
Double strokes guaranteed

15 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- PVC outer jacket
- Shielded
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 15 x d
	flexible	minimum 12 x d
	fixed	minimum 8 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	According to bus specification.
Core structure	According to bus specification.
Core identification	According to bus specification. ▶ Product range table
Overall shield	Braiding made of tinned copper wires. Coverage approx. 60 % optical
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Red lilac (similar to RAL 4001) Variants ▶ Product range table

Electrical information

Nominal voltage	50 V
Testing voltage	500 V

Example image

Class 3.1.1.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6		≥ 400 m
Oil resistance	none	**1**	2	3	4				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	**CF888.001:** Style 1589 and 2560, 30 V, 60 °C **CF888.021-CF888.060:** Style 1598 and 2571, 30 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01559 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00449 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	17.5	18.5	19.5
+15/+60	15	16	17
+60/+70	17.5	18.5	19.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

CF888
PVC
15 x d

Bus cable | PVC | chainflex® CF888

Class 3.1.1.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m
Oil resistance	none	**1**	2	3	4	highest		
Torsion	none	**1**	2	3	4	±360°		

CF888
PVC
15 x d

Example image

Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight	Part No.	Characteristic wave impedance approx.	Core group	Colour code
	[mm²]	[mm]	[kg/km]	[kg/km]		[Ω]		
Profibus (1x2x0.64 mm)								
CF888.001	(2x0.25)C	8.0	18	61	**CF888.001**	150	(2x0.25)C	red, green
CAN-Bus								
CF888.021	(2x0.5)C	8.5	24	80	**CF888.021**	120	(2x0.5)C	white, brown
Ethernet/CAT5e								
CF888.045	(4x(2x0.14))C	7.5	25	66	**CF888.045**	100	(4x(2x0.14))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Profinet								
CF888.060 [2) 13)]	(4x0.34)C	7.0	25	56	**CF888.060** [2) 13)]	100	(4x0.34)C	white, orange, blue, yellow (Star-quad)

The chainflex® types marked with [2)] are cables designed as a star-quad.
[13)] Colour outer jacket: Yellow-green (RAL 6018)
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF888.045 – to your desired length (0.5 m steps)
CF888 chainflex® series .045 Code Bus type

Online order ▶ www.chainflex.eu/CF888

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Technical note on bus cables
chainflex® bus cables have been specially developed and tested for continuously moving use in e-chains®. Depending on the material used for the outer jacket and on the underlying construction principle, the bus cables are designed for different mechanical requirements and resistance to different media. The cables have been electrically designed in such a way that, on the one hand, the electrical requirements of the respective bus specification are reliably met and, on the other, there is a high degree of EMC reliability.It is also ensured that the electrical values remain stable over the long term in spite of constant movement. The overall quality of transmission in a complete bus communication system, however, is not solely dependent on the cable used. What is also essential is that all components (electronic parts, connecting system and cable) are precisely matched to each other and that the maximum transmission lengths, which are dependent on the respective system, are adhered to with regard to the data transmission rates needed. A cable is thus not solely responsible for the reliable transmission of signals. igus® advises you when you are designing your bus system to take all these factors into account and, with its extensive tests, helps you to ensure the process reliability of your system from the very beginning.

Bus cable | PVC | chainflex® CFBUS.PVC

New

10 million
Double strokes guaranteed

12.5 x d
Bend radius, e-chain®

20 m
Travel distance, e-chain®

- For medium duty applications
- PVC outer jacket
- Shielded
- Oil-resistant
- Flame retardant

Now with CMX approval (UL-Listed)

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 12.5 x d
	flexible	minimum 10 x d
	fixed	minimum 7 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
	gliding	2 m/s
a max.		30 m/s²
Travel distance		Unsupported travels and up to 20 m for gliding applications, Class 3

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	According to bus specification.
Core structure	According to bus specification.
Core identification	According to bus specification. ▶ Product range table
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage approx. 55 % linear, approx. 80 % optical
Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Red lilac (similar to RAL 4001) Variants ▶ Product range table

Electrical information

Nominal voltage	50 V
Testing voltage	500 V

Class 4.3.2.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	2	**3**	4	5	6	≥ 400 m	
Oil resistance	none	1	**2**	3	4	highest			
Torsion	none	**1**	2	3	4	±360°			

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL-Listed	**CFBUS.PVC.045-CFBUS.PVC.049:** CMX, 75°C
UL/CSA	Style 1598 and 2571, 30 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
CLPA	**CFBUS.PVC.045:** CC-Link IE Field, Reference no. 153 **CFBUS.PVC.049:** CC-Link IE Field, Reference no. 154
EAC	Certificate No. RU C-DE.ME77.B.01218 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF240.02.24 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	15	16	17
+15/+60	12.5	13.5	14.5
+60/+70	15	16	17

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travel distances and up to 20 m for gliding applications, Class 3
- Light oil influence, Class 2
- No torsion, Class 1
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- machining units/packaging machines, Handling, indoor cranes

CFBUS.PVC
PVC
12.5 x d

PVC | iguPUR | PUR | TPE

Bus cable | PVC | chainflex® CFBUS.PVC

New

Class 4.3.2.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	2	**3**	4	5	6		≥ 400 m
Oil resistance	none	1	**2**	3	4				highest
Torsion	none	**1**	2	3	4				±360°

Example image

	Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight	Part No.	Characteristic wave impedance approx.	Core group	Colour code
		[mm²]	[mm]	[kg/km]	[kg/km]		[Ω]		
	Profibus (1x2x0.64 mm)								
	CFBUS.PVC.001	(2x0.25)C	8.5	25	75	**CFBUS.PVC.001**	150	(2x0.25)C	red, green
	CAN-Bus								
New	**CFBUS.PVC.020** [2]	(4x0.25)C	7.0	23	57	**CFBUS.PVC.020** [2]	120	(4x0,25)C	white, green, brown, yellow (Star-quad)
	CFBUS.PVC.021	(2x0.5)C	8.5	32	86	**CFBUS.PVC.021**	120	(2x0.5)C	white, brown
	CFBUS.PVC.022 [2]	(4x0.5)C	8.5	43	94	**CFBUS.PVC.022** [2]	120	(4x0.5)C	white, green, brown, yellow (Star-quad)
	CC-Link								
	CFBUS.PVC.035	(3x0.5)C	8.0	40	82	**CFBUS.PVC.035**	110	(3x0.5)C	white, blue, yellow
	Ethernet/CAT5								
EtherCAT	**CFBUS.PVC.040** [2]	(4x0.25)C	6.5	29	68	**CFBUS.PVC.040** [2]	100	(4x0.25)C	white, green, brown, yellow (Star-quad)
	Ethernet/CAT5e								
New CC-Link IE Field	**CFBUS.PVC.045**	(4x(2x0.15))C	7.5	33	67	**CFBUS.PVC.045**	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
New	**Ethernet/CAT6**								
CC-Link IE Field	**CFBUS.PVC.049**	(4x(2x0.15))C	7.5	34	67	**CFBUS.PVC.049**	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
	Ethernet/CAT6A								
	CFBUS.PVC.050	4x(2x0.20)C	9.5	65	120	**CFBUS.PVC.050**	100	4x(2x0.20)C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
	Ethernet/CAT7								
	CFBUS.PVC.052	(4x(2x0.15)C)C	9.5	89	136	**CFBUS.PVC.052**	100	(4x(2x0.15)C)C	white/blue, white/orange, white/green, white/brown
	FireWire IEEE 1394b								
	CFBUS.PVC.056	(2x(2x0.15)C+2x0.38)C	9.0	59	96	**CFBUS.PVC.056**	110	2x(2x0.15)C	orange/blue, blue/red
								2x0.38	black, white
PROFINET EtherCAT	**Profinet**								
	CFBUS.PVC.060 [2] [13]	(4x0.38)C	7.0	33	67	**CFBUS.PVC.060** [2] [13]	100	(4x0.38)C	white, orange, blue, yellow (Star-quad)
	USB 3.0								
	CFBUS.PVC.068	(2x(2xAWG28)+2x(2xAWG28)C)C	7.0	39	67	**CFBUS.PVC.068**	90	2x(2xAWG28)	red/black, green/white-green
								2x(2xAWG28)C	blue/yellow, orange/violet

The chainflex® types marked with [2] are cables designed as a star-quad.
[13] Colour outer jacket: Yellow-green (RAL 6018)
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CFBUS.PVC.052 – to your desired length (0.5 m steps)
CFBUS.PVC **chainflex® series** .052 **Code Bus type**

Online order ▶ www.chainflex.eu/CFBUS.PVC

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Technical note on bus cables
chainflex® bus cables have been specially developed and tested for continuously moving use in e-chains®. Depending on the material used for the outer jacket and on the underlying construction principle, the bus cables are designed for different mechanical requirements and resistance to different media. The cables have been electrically designed in such a way that, on the one hand, the electrical requirements of the respective bus specification are reliably met and, on the other, there is a high degree of EMC reliability.It is also ensured that the electrical values remain stable over the long term in spite of constant movement. The overall quality of transmission in a complete bus communication system, however, is not solely dependent on the cable used. What is also essential is that all components (electronic parts, connecting system and cable) are precisely matched to each other and that the maximum transmission lengths, which are dependent on the respective system, are adhered to with regard to the data transmission rates needed. A cable is thus not solely responsible for the reliable transmission of signals. igus® advises you when you are designing your bus system to take all these factors into account and, with its extensive tests, helps you to ensure the process reliability of your system from the very beginning.

EU04.2019

Bus cable | iguPUR | chainflex® CF898

5 million
Double strokes guaranteed

15 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- iguPUR outer jacket
- Oil-resistant
- Shielded
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 15 x d
	flexible	minimum 12 x d
	fixed	minimum 8 x d
Temperature	**e-chain® linear**	-20 °C up to +70 °C
	flexible	-40 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	According to bus specification.
Core structure	According to bus specification.
Core identification	According to bus specification. ▶ Product range table
Overall shield	Braiding made of tinned copper wires. Coverage approx. 60 % optical
Outer jacket	Low-adhesion iguPUR mixture, adapted to suit the requirements in e-chains®. Colour: Red lilac (similar to RAL 4001) Variants ▶ Product range table

Electrical information

Nominal voltage	50 V
Testing voltage	500 V

Example image

Class 3.1.3.1

Basic requirements	low	1	2	**3**	4	5	6	7 highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m
Oil resistance	none	1	2	**3**	4	highest		
Torsion	none	**1**	2	3	4	±360°		

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Flame retardant	**CF898.001-CF898.060:** According to IEC 60332-1-2, CEI 20-35, FT1, VW-1 **CF898.082-CF898.083:** According to IEC 60332-1-2, CEI 20-35, FT2
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	**CF898.001:** Style 1589 and 20236, 30 V, 80 °C **CF898.021-CF898.060:** Style 1598 and 20236, 30 V, 80 °C **CF898.082-CF898.083:** Style 21866, 90 V, 80 °C
NFPA	**CF898.001-CF898.060:** Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01559 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00449 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	17.5	18.5	19.5
-10/+60	15	16	17
+60/+70	17.5	18.5	19.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- With influence of oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Machining units/machine tools, low temperature applications

CF898
iguPUR
15 x d

Bus cable | iguPUR | chainflex® CF898

Class 3.1.3.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m
Oil resistance	none	1	2	**3**	4			highest
Torsion	none	**1**	2	3	4			±360°

CF898 iguPUR 15 x d

Example image

Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight	Part No.	Characteristic wave impedance approx.	Core group	Colour code
	[mm²]	[mm]	[kg/km]	[kg/km]		[Ω]		
Profibus (1x2x0.64 mm)								
CF898.001	(2x0.25)C	8.0	18	57	**CF898.001**	150	(2x0.25)C	red, green
CAN-Bus								
CF898.021	(2x0.5)C	8.5	24	80	**CF898.021**	120	(2x0.5)C	white, brown
Ethernet/CAT5e								
CF898.045	(4x(2x0.14))C	7.5	25	62	**CF898.045**	100	(4x(2x0.14))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Profinet								
CF898.060 [13]	(4x0.34)C	7.0	25	58	**CF898.060** [13]	100	(4x0.34)C	white, orange, blue, yellow (Star-quad)
ASI BUS (flat cables)								
CF898.082 [14]	2x2.5		50	78	**CF898.082** [14]		2x2.5	blue, brown
CF898.083 [15]	2x2.5		50	78	**CF898.083** [15]		2x2.5	blue, brown

[13] Colour outer jacket: Yellow-green (RAL 6018)
[14] Colour outer jacket: Yellow (RAL 1021)
[15] Colour outer jacket: Black (RAL 9005)
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF898.045 – to your desired length (0.5 m steps)
CF898 chainflex® series .045 Code Bus type

Online order ▶ www.chainflex.eu/CF898

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Technical note on bus cables
chainflex® bus cables have been specially developed and tested for continuously moving use in e-chains®. Depending on the material used for the outer jacket and on the underlying construction principle, the bus cables are designed for different mechanical requirements and resistance to different media. The cables have been electrically designed in such a way that, on the one hand, the electrical requirements of the respective bus specification are reliably met and, on the other, there is a high degree of EMC reliability.It is also ensured that the electrical values remain stable over the long term in spite of constant movement. The overall quality of transmission in a complete bus communication system, however, is not solely dependent on the cable used. What is also essential is that all components (electronic parts, connecting system and cable) are precisely matched to each other and that the maximum transmission lengths, which are dependent on the respective system, are adhered to with regard to the data transmission rates needed. A cable is thus not solely responsible for the reliable transmission of signals. igus® advises you when you are designing your bus system to take all these factors into account and, with its extensive tests, helps you to ensure the process reliability of your system from the very beginning.

PVC | iguPUR | **PUR** | TPE

Bus cable | PUR | chainflex® CFBUS.PUR

New

10 million
Double strokes guaranteed

12.5 x d
Bend radius, e-chain®

20 m
Travel distance, e-chain®

- For medium duty applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Now with CMX approval (UL-Listed)

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 12.5 x d
	flexible	minimum 10 x d
	fixed	minimum 7 x d
Temperature	**e-chain® linear**	-20 °C up to +70 °C
	flexible	-40 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
	gliding	2 m/s
a max.		30 m/s²
Travel distance		Unsupported travels and up to 20 m for gliding applications, Class 3

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	According to bus specification.
Core structure	According to bus specification.
Core identification	According to bus specification. ▶ Product range table
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage approx. 55 % linear, approx. 80 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Red lilac (similar to RAL 4001) Variants ▶ Product range table

Electrical information

Nominal voltage	50 V
Testing voltage	500 V

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3

EPLAN download, configurators ▶ www.igus.eu/CFBUS.PUR

CFBUS.PUR
PUR
12.5 x d

Class 4.3.3.1

Basic requirements	low	1 2 3 **4** 5 6 7 highest
Travel distance	unsupported	1 2 **3** 4 5 6 ≥ 400 m
Oil resistance	none	1 2 **3** 4 highest
Torsion	none	**1** 2 3 4 ±360°

Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL-Listed	**CFBUS.PUR.045-CFBUS.PUR.049:** CMX, 75°C
UL/CSA	Style 1598 and 20236, 30 V, 80 °C **CFBUS.PUR.H01.049:** Style 10493 (1.5 mm²), 11602 (0.15 mm²) and 20233, 300 V, 80 °C **CFBUS.PUR.H01.060:** Style 10493 (1.5 mm²), 11602 (0.38 mm²) and 20233, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
CLPA	**CFBUS.PUR.045:** CC-Link IE Field, Reference no. 151 **CFBUS.PUR.049:** CC-Link IE Field, Reference no. 152
DNV-GL	Type approval certificate No. 61 937-14 HH
EAC	Certificate No. RU C-DE.ME77.B.01218 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	15	16	17
-10/+60	12.5	13.5	14.5
+60/+70	15	16	17

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travel distances and up to 20 m for gliding applications, Class 3
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Machining units/machine tools, low temperature applications
- Machining units/machine tools, low temperature applications

EU04.2019

PVC | iguPUR | PUR | TPE

Bus cable | PUR | chainflex® CFBUS.PUR

New!

Class 4.3.3.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	2	**3**	4	5	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	**1**	2	3	4				±360°

CFBUS.PUR
PUR
12.5 x d

Example image

	Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight	Part No.	Characteristic wave impedance approx.	Core group	Colour code
		[mm²]	[mm]	[kg/km]	[kg/km]		[Ω]		
	Profibus (1x2x0.64 mm)								
	CFBUS.PUR.001	(2x0.25)C	8.5	25	72	**CFBUS.PUR.001**	150	(2x0.25)C	red, green
	CAN-Bus								
	CFBUS.PUR.020 [2]	(4x0.25)C	7.5	23	66	**CFBUS.PUR.020** [2]	120	(4x0.25)C	white, green, brown, yellow (Star-quad)
	CFBUS.PUR.021	(2x0.5)C	8.5	32	82	**CFBUS.PUR.021**	120	(2x0.5)C	white, brown
	CFBUS.PUR.022 [2]	(4x0.5)C	8.5	43	90	**CFBUS.PUR.022** [2]	120	(4x0.5)C	white, green, brown, yellow (Star-quad)
	CC-Link								
	CFBUS.PUR.035	(3x0.5)C	8.0	40	77	**CFBUS.PUR.035**	110	(3x0.5)C	white, blue, yellow
	Ethernet/CAT5								
EtherCAT	**CFBUS.PUR.040** [2]	(4x0.25)C	6.5	29	67	**CFBUS.PUR.040** [2]	100	(4x0.25)C	white, green, brown, yellow (Star-quad)
New	**Ethernet/CAT5e**								
CC-Link IE Field	**CFBUS.PUR.045**	(4x(2x0.15))C	7.5	33	66	**CFBUS.PUR.045**	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
New	**Ethernet/CAT6**								
CC-Link IE Field	**CFBUS.PUR.049**	(4x(2x0.15))C	7.5	34	66	**CFBUS.PUR.049**	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
	CFBUS.PUR.H01.049	((4x(2x0.15))C+4x1.5)C	12.5	126	207	**CFBUS.PUR.H01.049**	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
								4x1.5	black, brown, Grey, blue
	Ethernet/CAT6A								
	CFBUS.PUR.050	4x(2x0.20)C	9.5	65	118	**CFBUS.PUR.050**	100	4x(2x0.20)C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
	Ethernet/CAT7								
	CFBUS.PUR.052	(4x(2x0.15)C)C	9.5	89	129	**CFBUS.PUR.052**	100	(4x(2x0.15)C)C	white/blue, white/orange, white/green, white/brown
	FireWire IEEE 1394b								
	CFBUS.PUR.056	(2x(2x0.15)C+2x0.38)C	9.0	59	91	**CFBUS.PUR.056**	110	2x(2x0.15)C	orange/blue, blue/red
								2x0.38	black, white
PROFINET EtherCAT	**Profinet**								
	CFBUS.PUR.060 [2] [13]	(4x0.38)C	7.0	33	64	**CFBUS.PUR.060** [2] [13]	100	(4x0.38)C	white, orange, blue, yellow (Star-quad)
	CFBUS.PUR.H01.060	((4x0.38)C+4x1.5)C	11.5	121	199	**CFBUS.PUR.H01.060**	100	(4x0.38)C	white, orange, blue, yellow (Star-quad)
								4x1.5	black, brown, Grey, blue
	USB 3.0								
	CFBUS.PUR.068	(2x(2xAWG28)+2x(2xAWG28)C)C	7.0	39	64	**CFBUS.PUR.068**	90	2x(2xAWG28)	red/black, green/white-green
								2x(2xAWG28)C	blue/yellow, orange/violet

The chainflex® types marked with [2] are cables designed as a star-quad.
[13] Colour outer jacket: Yellow-green (RAL 6018)
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

PVC | iguPUR | PUR | **TPE**

New!

Bus cable | TPE | chainflex® CFBUS

10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Shielded
- Oil and bio-oil resistant
- Flame retardant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 10 x d (CFBUS.001-.049 and CFBUS.060) minimum 12.5 x d (CFBUS.050-.055 and CFBUS.070)
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	-35 °C up to +70 °C
	flexible	-45 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	According to bus specification.
Core structure	According to bus specification.
Core identification	According to bus specification. ▶ Product range table
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Red lilac (similar to RAL 4001) Variants ▶ Product range table

Electrical information

Nominal voltage	50 V
Testing voltage	500 V (following DIN EN 50289-1-3)

Example image

EPLAN download, configurators ▶ www.igus.eu/CFBUS

Class 6.6.4.1

Basic requirements	low	1	2	3	4	5	**6**	7 highest
Travel distance	unsupported	1	2	3	4	5	**6**	≥ 400 m
Oil resistance	none	1	2	3	**4**	highest		
Torsion	none	**1**	2	3	4	±360°		

Properties and approvals

UV resistance	Medium
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 1589 and 21371, 30 V, 80 °C **CFBUS.045-.049:** Style 11632 and 21218, 600 V, 80 °C **CFBUS.040/.050/.052/.060:** Style 10138 and 21235, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
CLPA	**CFBUS.045:** CC-Link IE Field, Reference no. 130 **CFBUS.049:** CC-Link IE Field, Reference no. 137
DNV-GL	Type approval certificate No. 61 937-14 HH
EAC	Certificate No. RU C-DE.ME77.B.01218 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF34.UL.25.04.D - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million		7.5 million		10 million	
Temperature, from/to [°C]	CFBUS .001-.049	CFBUS .050-.070	CFBUS .001-.049	CFBUS .050-.070	CFBUS .001-.049	CFBUS .050-.070
	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	12.5	15	13.5	16	14.5	17
-25/+60	10	12.5	11	13.5	12	14.5
+60/+70	12.5	15	13.5	16	14.5	17

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For extremely heavy duty applications, Class 6
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, indoor cranes, low temperature applications

EU04.2019

CFBUS
TPE
10-12.5 x d

Guarantee igus chainflex 36 month guarantee

PVC | iguPUR | PUR | **TPE**

Bus cable | TPE | chainflex® CFBUS

Class 6.6.4.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	5	**6**		≥ 400 m
Oil resistance	none	1	2	3	**4**				highest
Torsion	none	**1**	2	3	4				±360°

CFBUS
TPE
10-12.5 x d

Example image

Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight	Part No.	Characteristic wave impedance approx.	Core group	Colour code
	[mm²]	[mm]	[kg/km]	[kg/km]		[Ω]		
Profibus (1x2x0.64 mm)								
CFBUS.001	(2x0.25)C	9.0	32	84	**CFBUS.001**	150	(2x0.25)C	red, green
CFBUS.002	(2x0.25)C+4x1.5	12.5	93	198	**CFBUS.002**	150	(2x0.25)C	red/green
							4x1.5	black with white numbers 1-4
CFBUS.003	(2x0.25)C+3G0.75	11.5	55	138	**CFBUS.003**	150	(2x0.25)C	red/green
							3G0.75	black, blue, green-yellow
Interbus								
CFBUS.010	(3x(2x0.25))C	9.0	47	87	**CFBUS.010**	100	3x(3x0.25)	white/brown, green/yellow, Grey/pink
CFBUS.011	(3x(2x0.25)+(3G1.0))C	10.5	84	138	**CFBUS.011**	100	3x(2x0.25)	white/brown, green/yellow, Grey/pink
							3G1.0	red, blue, green-yellow
CAN-Bus/Feldbus								
CFBUS.020 [2]	(4x0.25)C	6.5	28	57	**CFBUS.020** [2]	120	(4x0.25)C	white, green, brown, yellow (Star-quad)
CFBUS.021	(2x0.5)C	8.0	38	83	**CFBUS.021**	120	(2x0.5)C	white, brown
CFBUS.022 [2]	(4x0.5)C	8.5	43	87	**CFBUS.022** [2]	120	(4x0.5)C	white, green, brown, yellow (Star-quad)
DeviceNet								
CFBUS.030 [4]	((2xAWG24)C+2xAWG22)C	7.5	35	63	**CFBUS.030** [4]	120	(2xAWG24)C	white/blue
							2xAWG22	red, black
CFBUS.031 [4]	((2xAWG18)C+2xAWG15)C	11.5	103	193	**CFBUS.031** [4]	120	(2xAWG18)C	white/blue
							2xAWG15	red, black
CC-Link								
CFBUS.035	(3xAWG20)C	9.0	43	91	**CFBUS.035**	110	(3xAWG20)C	white, blue, yellow

The chainflex® types marked with [2] are cables designed as a star-quad.
[4] manufactured without inner jacket
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CFBUS.035 – to your desired length (0.5 m steps)
CFBUS chainflex® series .035 Code Bus type

Online order ▶ www.chainflex.eu/CFBUS

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Technical note on bus cables
chainflex® bus cables have been specially developed and tested for continuously moving use in e-chains®. Depending on the material used for the outer jacket and on the underlying construction principle, the bus cables are designed for different mechanical requirements and resistance to different media. The cables have been electrically designed in such a way that, on the one hand, the electrical requirements of the respective bus specification are reliably met and, on the other, there is a high degree of EMC reliability.It is also ensured that the electrical values remain stable over the long term in spite of constant movement. The overall quality of transmission in a complete bus communication system, however, is not solely dependent on the cable used. What is also essential is that all components (electronic parts, connecting system and cable) are precisely matched to each other and that the maximum transmission lengths, which are dependent on the respective system, are adhered to with regard to the data transmission rates needed. A cable is thus not solely responsible for the reliable transmission of signals. igus® advises you when you are designing your bus system to take all these factors into account and, with its extensive tests, helps you to ensure the process reliability of your system from the very beginning.

PVC | iguPUR | PUR | TPE

Bus cable | TPE | chainflex® CFBUS

New!

Basic requirements
Travel distance
Oil resistance
Torsion

Class 6.6.4.1

low	1	2	3	4	5	6	7	highest	
unsupported	1	2	3	4	5	6		≥ 400 m	
none	1	2	3	4				highest	
none	1	2	3	4				±360°	

CFBUS TPE 10-12.5 x d

Example image

	Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight	Part No.	Characteristic wave impedance approx.	Core group	Colour code
		[mm²]	[mm]	[kg/km]	[kg/km]		[Ω]		
	Ethernet/CAT5/PoE								
EtherCAT	**CFBUS.040** 2)	(4x0.25)C	7.0	33	64	**CFBUS.040** 2)	100	(4x0.25)C	white, green, brown, yellow (Star-quad)
	Ethernet/CAT5e/PoE								
CC-Link IE Field	**CFBUS.045**	(4x(2x0.15))C	8.5	41	86	**CFBUS.045**	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
	Ethernet/CAT6/PoE								
CC-Link IE Field	**CFBUS.049**	(4x(2x0.15))C	8.5	42	86	**CFBUS.049**	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
	Ethernet/CAT6A/PoE								
	CFBUS.050 4)	(4x(2x0.15)C)C	10.5	82	135	**CFBUS.050** 4)	100	(4x(2x0.15)C)C	white/blue, white/orange, white/green, white/brown
	Ethernet/CAT7/PoE								
	CFBUS.052 4)	(4x(2x0.15)C)C	10.5	89	137	**CFBUS.052** 4)	100	(4x(2x0.15)C)C	white/blue, white/orange, white/green, white/brown
	FireWire 1394a								
	CFBUS.055	2x(2x0.15)C+2x(0.34)C	8.0	39	82	**CFBUS.055**	100	2x(2x0.15)C	orange/blue, green/red
								2x(0.34)C	white, black
PROFINET EtherCAT	**Profinet**								
	CFBUS.060 2) 13)	(4x0.38)C	7.5	39	73	**CFBUS.060** 2) 13)	100	(4x0.38)C	white, orange, blue, yellow (Star-quad)
	USB								
	CFBUS.065	((2xAWG28)+2xAWG20)C	5.5	27	45	**CFBUS.065**	90	(2xAWG28)	white/green
								2xAWG20	red, black
	CFBUS.066	((2xAWG24)+2xAWG20)C	6.5	32	55	**CFBUS.066**	90	(2xAWG24)	white/green
								2xAWG20	red, black
	DVI								
	CFBUS.070 4) 6)	(4x(2xAWG28)C +(2xAWG28)+3xAWG28)C	9.0	35	92	**CFBUS.070** 4) 6)	100	4x(2xAWG28)C	4 x white/yellow with element-shield in blue, black, white, red
								(2xAWG28)	white, brown
								3xAWG28	green, yellow, Grey

The chainflex® types marked with 2) are cables designed as a star-quad.
4) manufactured without inner jacket
6) without cULus
13) Colour outer jacket: Yellow-green (RAL 6018)
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Technical note on bus cables
chainflex® bus cables have been specially developed and tested for continuously moving use in e-chains®. Depending on the material used for the outer jacket and on the underlying construction principle, the bus cables are designed for different mechanical requirements and resistance to different media. The cables have been electrically designed in such a way that, on the one hand, the electrical requirements of the respective bus specification are reliably met and, on the other, there is a high degree of EMC reliability.It is also ensured that the electrical values remain stable over the long term in spite of constant movement. The overall quality of transmission in a complete bus communication system, however, is not solely dependent on the cable used. What is also essential is that all components (electronic parts, connecting system and cable) are precisely matched to each other and that the maximum transmission lengths, which are dependent on the respective system, are adhered to with regard to the data transmission rates needed. A cable is thus not solely responsible for the reliable transmission of signals. igus® advises you when you are designing your bus system to take all these factors into account and, with its extensive tests, helps you to ensure the process reliability of your system from the very beginning.

Bus cable | TPE | chainflex® CFBUS.LB

10 million Double strokes guaranteed

7.5 x d Bend radius, e-chain®

400 m Travel distance, e-chain®

- For heaviest duty applications
- TPE outer jacket
- Shielded
- Oil and bio-oil resistant
- Low-temperature-flexible
- PVC and halogen-free
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-35 °C up to +70 °C
	flexible	-50 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.	100 m/s²	
Travel distance	Unsupported travel distances and up to 400 m and more for gliding applications, Class 6	

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	According to bus specification.
Core structure	According to bus specification.
Core identification	According to bus specification. ▶ Product range table
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Red lilac (similar to RAL 4001) Variants ▶ Product range table

Electrical information

Nominal voltage	50 V
Testing voltage	500 V (following DIN EN 50289-1-3)

Example image

Class 7.6.4.1

Basic requirements	low	1	2	3	4	5	6	**7**	highest
Travel distance	unsupported	1	2	3	4	5	**6**	≥ 400 m	
Oil resistance	none	1	2	3	**4**	highest			
Torsion	none	**1**	2	3	4	±360°			

Properties and approvals

UV resistance	Medium
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
CLPA	**CFBUS.LB.045:** CC-Link IE Field, Reference no. 131 **CFBUS.LB.049:** CC-Link IE Field, Reference no. 138
EAC	Certificate No. RU C-DE.ME77.B.02806 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million		7.5 million		10 million	
Temperature, from/to [°C]	CFBUS.LB .001-.022	CFBUS.LB .040-.060	CFBUS.LB .001-.022	CFBUS.LB .040-.060	CFBUS.LB .001-.022	CFBUS.LB .040-.060
	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	12.5	10	13.5	11	14.5	12
-25/+60	10	7.5	11	8.5	12	9.5
+60/+70	12.5	10	13.5	11	14.5	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications, Class 7
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, indoor cranes, low temperature applications

CFBUS.LB
TPE
7.5 x d

Bus cable | TPE | chainflex® CFBUS.LB

Class 7.6.4.1

Basic requirements	low	1	2	3	4	5	6	**7**	highest
Travel distance	unsupported	1	2	3	4	5	**6**	≥ 400 m
Oil resistance	none	1	2	3	**4**	highest		
Torsion	none	**1**	2	3	4	±360°		

CFBUS.LB
TPE
7.5 x d

Example image

Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight	Part No.	Characteristic wave impedance approx.	Core group	Colour code
	[mm²]	[mm]	[kg/km]	[kg/km]		[Ω]		
Profibus (1x2x0.64 mm)								
CFBUS.LB.001	(2x0.25)C	9.0	32	78	**CFBUS.LB.001**	150	(2x0.25)C	red, green
CFBUS.LB.004 2)	(4x0.25)C	9.0	35	80	**CFBUS.LB.004** 2)	150	(4x0.25)C	green, yellow, red, brown (Star-quad)
CAN-Bus								
CFBUS.LB.020 2)	(4x0.25)C	6.5	28	52	**CFBUS.LB.020** 2)	120	(4x0.25)C	white, green, brown, yellow (Star-quad)
CFBUS.LB.021	(2x0.5)C	8.0	38	78	**CFBUS.LB.021**	120	(2x0.5)C	white, brown
CFBUS.LB.022 2)	(4x0.5)C	8.5	43	84	**CFBUS.LB.022** 2)	120	(4x0.5)C	white, green, brown, yellow (Star-quad)
Ethernet/CAT5								
EtherCAT **CFBUS.LB.040** 2)	(4x0.25)C	7.0	33	64	**CFBUS.LB.040** 2)	100	(4x0.25)C	white, green, brown, yellow (Star-quad)
Ethernet/CAT5e								
CC-Link IE Field **CFBUS.LB.045**	(4x(2x0.15))C	8.5	41	86	**CFBUS.LB.045**	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Ethernet/CAT6								
CC-Link IE Field **CFBUS.LB.049**	(4x(2x0.15))C	8.5	42	86	**CFBUS.LB.049**	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
CC-Link IE Field **CFBUS.LB.049**	(4x(2x0.15))C	8.5	42	86	**CFBUS.LB.049**	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Profinet								
EtherCAT **CFBUS.LB.060** 2) 13)	(4x0.38)C	7.5	39	64	**CFBUS.LB.060** 2) 13)	100	(4x0.38)C	white, orange, blue, yellow (Star-quad)

The chainflex® types marked with 2) are cables designed as a star-quad.
13) Colour outer jacket: Yellow-green (RAL 6018)
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CFBUS.LB.045 – to your desired length (0.5 m steps)
CFBUS.LB chainflex® series .045 Code Bus type

Online order ▶ www.chainflex.eu/CFBUS.LB

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Technical note on bus cables
chainflex® bus cables have been specially developed and tested for continuously moving use in e-chains®. Depending on the material used for the outer jacket and on the underlying construction principle, the bus cables are designed for different mechanical requirements and resistance to different media. The cables have been electrically designed in such a way that, on the one hand, the electrical requirements of the respective bus specification are reliably met and, on the other, there is a high degree of EMC reliability.It is also ensured that the electrical values remain stable over the long term in spite of constant movement. The overall quality of transmission in a complete bus communication system, however, is not solely dependent on the cable used. What is also essential is that all components (electronic parts, connecting system and cable) are precisely matched to each other and that the maximum transmission lengths, which are dependent on the respective system, are adhered to with regard to the data transmission rates needed. A cable is thus not solely responsible for the reliable transmission of signals. igus® advises you when you are designing your bus system to take all these factors into account and, with its extensive tests, helps you to ensure the process reliability of your system from the very beginning.

Fibre optic cables

chainflex® cable	Jacket	Minimum bend radius. e-chain® [factor x d]	Temperature. e-chain® from/to [°C]	Approvals and standards	Oil-resistant	Torsion resistant	v max. [m/s]. unsupported	v max. [m/s] gliding	a max. [m/s²]	Page
Fibre optic cables										
Information about Fibre optic cables										192
CFLK	PUR	12.5	-20/+60		CE ✓		10	5	20	196
CFLG88	PVC	7.5	+5/+70		CE		3	2	20	198
CFLG.LB.PUR	PUR	5-7.5	-25/+80		CE ✓		10	6	20	200
CFLG.LB	TPE	5	-35/+80		CE ✓		10	6	20	204
CFLG.G	TPE	10	-40/+80		CE ✓		10	6	20	208
Twistable Fibre optic cables (Chapter Twistable cables) ▶ Page 352										
CFROBOT5	TPE	10	-20/ +80		CE ✓		180	180		370

Overview to find the right Fibre optic cable

	POF Plastic FOC 980/1000 µm	PCF Glass fibre FOC 200/230 µm	GOF Multimode Glass fibre FOC 50/125 µm 62.5/125 µm	GOF Singlemode Glass fibre FOC 9/125 µm
CFLK	✓			
CFLG88			✓	
CFLG.LB.PUR			✓	✓
CFLG.LB		✓	✓	
CFLG.G			✓	✓

Guarantee igus chainflex 36 month guarantee

36 month chainflex® guarantee

Guaranteed lifetime for predictable reliability

▶Selection table page 194

With the help of the chainflex® service life calculator, you can quickly and easily calculate the expected service life of chainflex® cables specifically for your application:

www.igus.eu/chainflexlife

The safest and often cheapest way to transfer data to machines and plant.

Communication between systems in machines and plant is becoming more and more complex all the time, yet fault-free performance is becoming ever more important.

However, many plant manufacturers or operators have major EMC problems that occur sporadically or even after years of operation.

These problems are often based on conventional bus cables that either have insufficient or unreliable shielding.

Alongside igus® chainflex® bus cables that already prevent these problems to a large extent, chainflex® fibre optic cables provide further advantages for even greater data safety.

Fibre optic cables (FOC) do not require a braided shielding that is susceptible to mechanical damage as EMC protection, and are insensitive to EMC on account of their very nature, since industrial conventional interference fields do not have any effect on light signals.
In addition, fibre optic cables can be used independently of the system, since a special bus cable is not required for every bus system type, rather one FOC type can usually be used to operate any bus system providing the bus system manufacturer provides respective FOC converters.

The large number of fibre optic cables in industrial data transmission is also much more manageable than the large number of different field or high-speed buses which require a separate cable for each bus.

Thus the following fibre types can be used for industrial data communication, completely independently of the type of field bus used. The fibre type and number depends only on which converters are used and which fibre type the respective manufacturer prescribes. The fibres are defined on the basis of diameter and result in a clear and limited choice.

Important fibre types:

- **Mulit-mode fibres**
  50/125 µm
  62.5/125 µm
  The ideal fibre for large data volumes and longer transmission lengths in the field of automation. Transmission lengths of several hundred metres can be realised quite easily, due to the very low output attenuation (0.8-3 db/km per fibre and light wave length) of these fibre types.

- **POF (Plastic fibres)**
  980/1000 µm
  The ideal and low-cost fibre for short transmission paths. On account of the high output attenuation of the fibre type of 160-230 dB/km, lengths over 15 m must be avoided in constantly moving energy chains.

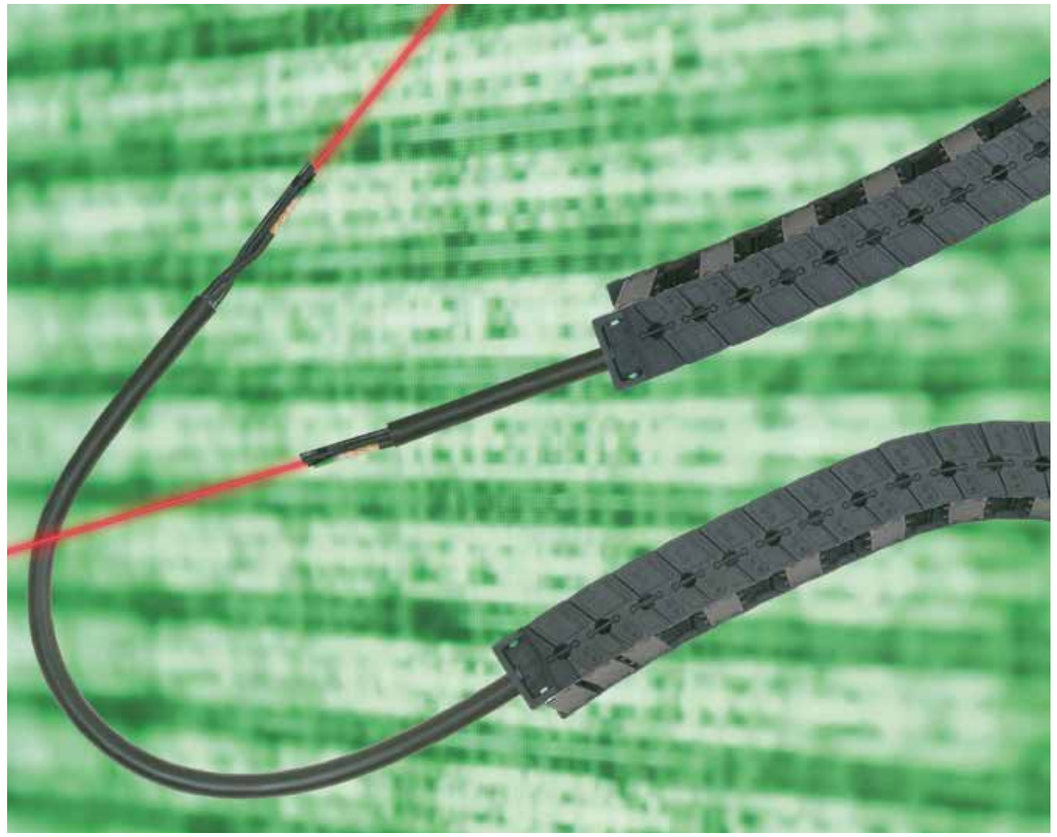
- **PCF (Polymer Cladded Fibre)**
  200/230 µm
  The ideal compromise for POF fibre. This plastic coated quartz glass fibre is a viable alternative for many terminal devices that have been designed for POF. This means greater transmission lengths (100 m and more) are possible without the original POF terminal devices having to be replaced.

chainflex® FOC offer the operator the following advantages:

1. Greater data security
- Better transmission characteristics
- Greater possible transmission lengths of several 100 m
- Greater possible data volumes thanks to lower attenuation values
- Maximum EMC protection for the data transmitted
- Future-proof installation (no cable replacement with new bus systems)

2. Greater mechanical protection
- The FOC designed for permanent mechanical movement
- The igus®-typical highly abrasion-proof and chemical resistant sheathing materials
- The special chainflex® design concept (tested for 30 million cycles without a significant increase in attenuation)

3. Future-oriented cost reduction
- Bus-independent bus cable wiring
- Longer service life in e-chains®
- Extendable without transmission limits



chainflex® guarantee

Guaranteed lifetime (1)

	chainflex® cable	Temperature. from/to [°C]	v max. [m/s] unsupported	v max. [m/s] gliding	a max. [m/s²]	Travel distance [m]	Minimum bend radius [factor x d] 5 million (1 million) double strokes *	Minimum bend radius [factor x d] 7.5 million (3 million) double strokes *	Minimum bend radius [factor x d] 10 million (5 million) double strokes *	Page
Fibre optic cables										
	CFLK	-20 / -10 -10 / +50 +50 / +60	10	5	20	≤ 20	15 12.5 15	16 13.5 16	17 14.5 17	196
	CFLG88	+5 / +15 +15 / +60 +60 / +70	3	-	20	≤ 10	10 7.5 10	11 8.5 11	12 9.5 12	198
	CFLG.LB.PUR	-35 / -25 -25 / +70 +70 / +80	10	6	20	≤ 100	7.5 5 7.5	8.5 6 8.5	9.5 7 9.5	200
	CFLG.LB	-35 / -25 -25 / +70 +70 / +80	10	6	20	≤ 100	7.5 5 7.5	8.5 6 8.5	9.5 7 9.5	204
	CFLG.LB.CU	-35 / -25 -25 / +70 +70 / +80	10	6	20	≤ 100	10 7.5 10	11 8.5 11	12 9.5 12	204
	CFLG.G	-40 / -30 -30 / +60 +60 / +70	10	6	20	> 400	12.5 10 12.5	13.5 11 13.5	14.5 12 14.5	208

(1) Exclusive! Guaranteed lifetime for this series according to the guarantee conditions ▶ Page 22-23

* Higher number of double strokes? Online lifetime calculation ▶ www.igus.eu/chainflexlife
Figures in brackets refer to chainflex® series CFLG88

Fibre Optic Cable | PUR | chainflex® CFLK

10 million
Double strokes guaranteed

12.5 x d
Bend radius, e-chain®

20 m
Travel distance, e-chain®

- **POF fibres for heavy duty applications and interference-free transmission**
- **PUR outer jacket**
- **Oil resistant and coolant-resistant**

Dynamic information

Bend radius	**e-chain® linear**	minimum 12.5 x d
	flexible	minimum 10 x d
	fixed	minimum 7 x d
Temperature	**e-chain® linear**	-20 °C up to +60 °C
	flexible	-40 °C up to +60 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +60 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.		20 m/s²
Travel distance		Unsupported travels and up to 20 m for gliding applications, Class 3

Cable structure

Fibre	980/1000 µm fibre with PE isolation.
Core structure	POF fibre with stranded high-tensile plastic reinforcement.
Core identification	Core black.
Outer jacket	Low-adhesion, halogen-free PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Red lilac (similar to RAL 4001)

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Class 5.3.3.1

Basic requirements	low	1	2	3	4	5	6	7 highest
Travel distance	unsupported	1	2	3	4	5	6	≥ 400 m
Oil resistance	none	1	2	3	4	highest		
Torsion	none	1	2	3	4	±360°		

Guaranteed service life (details see page 22-23)

Double strokes	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	15	16	17
-10/+50	12.5	13.5	14.5
+50/+60	15	16	17

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heavy duty applications, Class 5
- Unsupported travel distances and up to 20 m for gliding applications, Class 3
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Highest EMC safety
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

Part No.	Number of fibres/ Fibre diameter/ Conductor nominal cross section	Outer diameter (d) max. [mm]	Weight [kg/km]
CFLK.L1.01	1x980/1000	6.0	27
CFLK.L1.02	2x980/1000	7.0	31

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.

Part No.	Bandwidth [MHz x km] @ 650 nm	Attenuation [dB/km] @ 650 nm	Fibre identification
CFLK.L1.01	2	200	black
CFLK.L1.02	2	200	black, blue

CFLK
PUR
12.5 x d

Fibre Optic Cable | PVC | chainflex® CFLG88

5 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- Graded index glass-fibre cable for flexing applications
- PVC outer jacket
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Fibre	50/125 µm, 62.5/125 µm bending-resistant solid glass fibre optic cores, with aramid strain relief elements.
Core structure	FOC cores wound with a short pitch length with high-tensile aramid dampers.
Core identification	FOC cores: Orange or blue with black numbers.
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005)

Properties and approvals

Flame retardant	According to IEC 60332-1-2
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF240.02.24 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Class 3.1.1.1

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	3	4				highest
Torsion	none	1	2	3	4				±360°

Guaranteed service life (details see page 22-23)

Double strokes	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	10	11	12
+15/+60	7.5	8.5	9.5
+60/+70	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Highest EMC safety
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

Part No.	Number of fibres/ Fibre diameter/ Conductor nominal cross section	Outer diameter (d) max. [mm]	Weight [kg/km]
CFLG88.2.62.5/125 [11)]	2x62.5/125	7.0	44
CFLG88.2.50/125	2x50/125	7.0	44

Part No.	Bandwidth [MHz x km] @ 850 nm	Bandwidth [MHz x km] @ 1300 nm	Attenuation [dB/km] @ 850 nm	Attenuation [dB/km] @ 1300 nm	Fibre identification
CFLG88.2.62.5/125 [11)]	≥ 200	≥ 500	≤ 3.0	≤ 0.7	orange with black numbers
CFLG88.2.50/125	≥ 500	≥ 500	≤ 2.5	≤ 0.7	blue with black numbers

[11)] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.

Order example: CFLG88.2.62,5/125 – to your desired length (0.5 m steps)
CFLG88 **chainflex® series** .2 **Number of fibres** .62,5/125 **Fibre diameter**

Online order ▶ www.chainflex.eu/CFLG88

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

CFLG88
PVC
7.5 x d

PVC | iguPUR | **PUR** | TPE

Fibre Optic Cable | PUR | chainflex® CFLG.LB.PUR

PVC | iguPUR | **PUR** | TPE

Fibre Optic Cable | PUR | chainflex® CFLG.LB.PUR

Class 6.5.3.1

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	3	4				highest
Torsion	none	1	2	3	4				±360°

CFLG.
LB.PUR
5 x d

Example image

Part No.	Number of fibres/ Fibre diameter/ Conductor nominal cross section	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CFLG.2LB.PUR.62.5/125	2x62.5/125	8.5	-	62
CFLG.4LB.PUR.62.5/125	4x62.5/125	9.0	-	68
CFLG.6LB.PUR.62.5/125	6x62.5/125	11.0	-	96
CFLG.12LB.PUR.62.5/125	12x62.5/125	14.0	-	150
CFLG.2LB.PUR.50/125	2x50/125	8.5	-	62
CFLG.6LB.PUR.50/125	6x50/125	11.0	-	96
CFLG.12LB.PUR.50/125	12x50/125	14.0	-	150
CFLG.6LB.PUR.9/125	6x9/125	11.0	-	96

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Part No.	Bandwidth [MHz x km] @ 850 nm	Bandwidth [MHz x km] @ 1300 nm	Attenuation [dB/km] @ 850 nm	Attenuation [dB/km] @ 1300 nm	Fibre identification
CFLG.2LB.PUR.62.5/125	≥ 200	≥ 500	≤ 3.0	≤ 0.7	orange with black numbers
CFLG.4LB.PUR.62.5/125	≥ 200	≥ 500	≤ 3.0	≤ 0.7	orange with black numbers
CFLG.6LB.PUR.62.5/125	≥ 200	≥ 500	≤ 3.0	≤ 0.7	orange with black numbers
CFLG.12LB.PUR.62.5/125	≥ 200	≥ 500	≤ 3.0	≤ 0.7	orange with black numbers
CFLG.2LB.PUR.50/125	≥ 500	≥ 500	≤ 2.5	≤ 0.7	blue with black numbers
CFLG.6LB.PUR.50/125	≥ 500	≥ 500	≤ 2.5	≤ 0.7	blue with black numbers
CFLG.12LB.PUR.50/125	≥ 500	≥ 500	≤ 2.5	≤ 0.7	blue with black numbers

Part No.	Attenuation [dB/km] @ 1310 nm	Attenuation [dB/km] @ 1550 nm	Chromatic dispersion [ps/nm x km] @ 1310 nm	Chromatic dispersion [ps/nm x km] @ 1550 nm	Fibre identification
CFLG.6LB.PUR.9/125	≤ 0.35	≤ 0.25	3.5	18	yellow with black numbers

Order example: CFLG.4LB.PUR.62.5/125 – to your desired length (0.5 m steps)
CFLG.LB.PUR **chainflex® series** .4 **Number of fibres** .62,5/125 **Fibre diameter**

Online order ▶ www.chainflex.eu/CFLG.LB.PUR

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Guarantee igus chainflex 36 month guarantee

EU04.2019 igus

Fibre Optic Cable | TPE | chainflex® CFLG.LB

10 million
Double strokes guaranteed

5 x d
Bend radius, e-chain®

100 m
Travel distance, e-chain®

- Graded index glass-fibre cable for heaviest duty applications
- TPE outer jacket
- Metal-free
- Oil and bio-oil resistant
- Low-temperature-flexible
- PVC and halogen-free
- UV-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 5 x d
	flexible	minimum 4 x d
	fixed	minimum 3 x d
Temperature	**e-chain® linear**	-35 °C up to +80 °C
	flexible	-50 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		20 m/s²
Travel distance		Unsupported travels and up to 100 m for gliding applications, Class 5

Cable structure

Fibre	50/125 µm, 62.5/125 µm especially bending-resistant solid glass fibre optic cores, with aramid strain relief elements.
Core structure	FOC cores wound with a short pitch length with high-tensile aramid dampers.
Core identification	FOC cores: Orange or blue with black numbers. Copper cores: Black with white numbers.
Overall shield	Extremely bending-resistant aramid braid for torsion protection.
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005)

Electrical information

Nominal voltage	Copper cores: 300/500 V (following DIN VDE 0298-3)
Testing voltage	Copper cores: 2000 V (following DIN EN 50395)

Example image

Class 7.5.4.1

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	3	4				highest
Torsion	none	1	2	3	4				±360°

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million		7.5 million		10 million	
Temperature, from/to [°C]	CFLG.LB	CFLG.LB.CU	CFLG.LB	CFLG.LB.CU	CFLG.LB	CFLG.LB.CU
	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	7.5	10	8.5	11	9.5	12
-25/+70	5	7.5	6	8.5	7	9.5
+70/+80	7.5	10	8.5	11	9.5	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications with 5-7.5 x d, Class 7
- Unsupported travel distances and up to 100 m for gliding applications (horizontal + vertical), Class 5
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Maximum EMC protection, with high transmission qualities
- Indoor and outdoor applications
- crane applications, Conveyor technique, Storage and retrieval units for high-bay warehouses, machining units/packaging machines, quick handling, semiconductor insertion, refrigerating sector

Fibre Optic Cable | TPE | chainflex® CFLG.LB

Class 7.5.4.1

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	3	4				highest
Torsion	none	1	2	3	4				±360°

CFLG.LB
TPE
5 x d

Example image

Part No.	Number of fibres/ Fibre diameter/ Conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight
		[mm]	[kg/km]	[kg/km]
CFLG.2LB.200/230	2x200/230	8.5	-	57
CFLG.2LB.62.5/125	2x62.5/125	8.5	-	57
CFLG.4LB.62.5/125	4x62.5/125	9.0	-	68
CFLG.6LB.62.5/125	6x62.5/125	11.0	-	91
CFLG.12LB.62.5/125	12x62.5/125	14.0	-	150
CFLG.2LB.50/125	2x50/125	8.5	-	57
CFLG.4LB.50/125	4x50/125	9.0	-	68
CFLG.6LB.50/125	6x50/125	11.0	-	91
CFLG.12LB.50/125	12x50/125	14.0	-	150

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Part No.	Bandwidth [MHz x km] @ 850 nm	Attenuation [dB/km] @ 850 nm	Bandwidth [MHz x km] @ 1300 nm	Attenuation [dB/km] @ 1300 nm	Fibre identification
CFLG.2LB.200/230	≥ 20	≤ 6.0	-	-	black with white numbers
CFLG.2LB.62.5/125	≥ 200	≤ 3.0	≥ 500	≤ 0.7	orange with black numbers
CFLG.4LB.62.5/125	≥ 200	≤ 3.0	≥ 500	≤ 0.7	orange with black numbers
CFLG.6LB.62.5/125	≥ 200	≤ 3.0	≥ 500	≤ 0.7	orange with black numbers
CFLG.12LB.62.5/125	≥ 200	≤ 3.0	≥ 500	≤ 0.7	orange with black numbers
CFLG.2LB.50/125	≥ 500	≤ 2.5	≥ 500	≤ 0.7	blue with black numbers
CFLG.4LB.50/125	≥ 500	≤ 2.5	≥ 500	≤ 0.7	blue with black numbers
CFLG.6LB.50/125	≥ 500	≤ 2.5	≥ 500	≤ 0.7	blue with black numbers
CFLG.12LB.50/125	≥ 500	≤ 3.0	≥ 500	≤ 1.0	blue with black numbers

Order example: CFLG.4LB.62.5/125 – to your desired length (0.5 m steps)
CFLG.LB **chainflex® series** .4 **Number of fibres** .62,5/125 **Fibre diameter**

Online order ▶ www.chainflex.eu/CFLG.LB

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Fibre Optic Cable | TPE | chainflex® CFLG.G

Example image

10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- Glass-fibre cable for heaviest duty applications
- TPE outer jacket
- Oil and bio-oil resistant
- PVC and halogen-free
- Low-temperature-flexible
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	-40 °C up to +80 °C
	flexible	-50 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6

Cable structure

Fibre	9/125 µm, 50/125 µm, 62.5/125 µm fibres in gel-filled tubes.
Core structure	Gel-filled fibre sheath surrounded by GRP rods and torsion protection braid in the outer jacket.
Core identification	Fibres ▶ Product range table
Outer jacket	Low-adhesion TPE mixture, especially abrasion resistant and highly flexible, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005)

Class 7.6.4.1

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	3	4				highest
Torsion	none	1	2	3	4				±360°

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU
Info	For hanging applications, please use cables of the series CFLG.LB - see page 198!

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-40/-30	12.5	13.5	14.5
-30/+70	10	11	12
+70/+80	12.5	13.5	14.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications, Class 7
- Unsupported travel distances and up to 400 m and more for gliding applications (horizontal), Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Maximum EMC protection, with high transmission qualities
- Indoor and outdoor applications
- crane applications, Conveyor technique, low temperature applications

CFLG.G
TPE
10 x d

Fibre Optic Cable | TPE | chainflex® CFLG.G

Class 7.6.4.1

Basic requirements	low	1	2	3	4	5	6	7 highest
Travel distance	unsupported	1	2	3	4	5	6	≥ 400 m
Oil resistance	none	1	2	3	4	highest		
Torsion	none	1	2	3	4	±360°		

CFLG.G
TPE
10 x d

Example image

Part No.	Number of fibres/ Fibre diameter/ Conductor nominal cross section	Outer diameter (d) max. [mm]	Weight [kg/km]
CFLG.6G.62.5/125.TC	6x62.5/125	10.0	80
CFLG.12G.62.5/125.TC	12x62.5/125	10.0	80
CFLG.6G.50/125.TC	6x50/125	10.0	80
CFLG.12G.50/125.TC	12x50/125	10.0	80
CFLG.12E.9/125.TC	12x9/125	10.0	80

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Part No.	Bandwidth [MHz x km] @ 850 nm	Bandwidth [MHz x km] @ 1300 nm	Attenuation [dB/km] @ 850 nm	Attenuation [dB/km] @ 1300 nm
CFLG.6G.62.5/125.TC	≥ 200	≥ 500	≤ 3.5	≤ 1.0
CFLG.12G.62.5/125.TC	≥ 200	≥ 500	≤ 3.5	≤ 1.0
CFLG.6G.50/125.TC	≥ 500	≥ 500	≤ 3.0	≤ 1.0
CFLG.12G.50/125.TC	≥ 500	≥ 500	≤ 3.0	≤ 1.0

Part No.	Attenuation [dB/km] @ 1310 nm	Attenuation [dB/km] @ 1550 nm	Chromatic dispersion [ps/nm x km] @ 1310 nm	Chromatic dispersion [ps/nm x km] @ 1550 nm
CFLG.12E.9/125.TC	≤ 0.35	≤ 0.23	3.5	18

Part No.	Fibre identification	Hollow core identification
CFLG.6G.62.5/125.TC	ecru, yellow, green, red, violet, blue	orange
CFLG.12G.62.5/125.TC	ecru, yellow, green, red, violet, blue, lightblue, grey, brown, black, orange, pink	orange
CFLG.6G.50/125.TC	ecru, yellow, green, red, violet, blue	blue
CFLG.12G.50/125.TC	ecru, yellow, green, red, violet, blue, lightblue, grey, brown, black, orange, pink	blue
CFLG.12E.9/125.TC	ecru, yellow, green, red, violet, blue, lightblue, grey, brown, black, orange, pink	yellow

Order example: CFLG.6G.62.5/125.TC **– to your desired length (0.5 m steps)**
CFLG.G **chainflex® series** .6G **Number of fibres** .62,5/125 **Fibre diameter** .TC **Special identification**

Online order ▶ www.chainflex.eu/CFLG.G

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Measuring system cables

chainflex® cable	Jacket	Shield	Minimum bend radius. e-chain® [factor x d]	Temperature. e-chain® from/to [°C]	Approvals and standards	Oil-resistant	Torsion resistant	v max. [m/s]. unsupported	v max. [m/s] gliding	a max. [m/s²]	Page
Measuring system cables											
Selection chart for chainflex® measuring system cables											216
CF884	PVC	✓	15	+5/+70				3		20	218
CF211	PVC	✓	10	+5/+70		✓		5	3	30	222 New
CF894	iguPUR	✓	15	-20/+80		✓		3		20	228
CF111.D	PUR	✓	10	-25/+80		✓		5	3	30	232 New
CF113.D	PUR	✓	7.5	-25/+80		✓		10	5	50	238 New
CF11.D	TPE	✓	7.5	-35/+90		✓		10	6	100	244 New

Guarantee igus chainflex 36 month guarantee

36 month chainflex® guarantee

Guaranteed lifetime for predictable reliability

▶Selection table page 214

With the help of the chainflex® service life calculator, you can quickly and easily calculate the expected service life of chainflex® cables specifically for your application:

www.igus.eu/chainflexlife

chainflex® guarantee

Guaranteed lifetime (1)

	chainflex® cable	Temperature, from/to [°C]	v max. [m/s] unsupported	v max. [m/s] gliding	a max. [m/s²]	Travel distance [m]	Minimum bend radius [factor x d] 5 million (1 million) double strokes *	Minimum bend radius [factor x d] 7.5 million (3 million) double strokes *	Minimum bend radius [factor x d] 10 million (5 million) double strokes *	Page
Measuring system cables										
	CF884	+5 / +15 +15 / +60 +60 / +70	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5	218
	CF211 New!	+5 / +15 +15 / +60 +60 / +70	5	3	30	≤ 10	12.5 10 12.5	13.5 11 13.5	14.5 12 14.5	222
	CF894	-20 / -10 -10 / +70 +70 / +80	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5	228
	CF111.D New!	-25 / -15 -15 / +70 +70 / +80	5	3	30	≤ 10	12.5 10 12.5	13.5 11 13.5	14.5 12 14.5	232
	CF113.D New!	-25 / -15 -15 / +70 +70 / +80	10	5	50	≤ 100	10 7.5 10	11 8.5 11	12 9.5 12	238
	CF11.D New!	-35 / -25 -25 / +80 +80 / +90	10	6	100	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12	244

(1) Exclusive! Guaranteed lifetime for this series according to the guarantee conditions ▶ Page 22-23

* Higher number of double strokes? Online lifetime calculation ▶ www.igus.eu/chainflexlife
Figures in brackets refer to chainflex® series CF884 and CF894

Selection chart for chainflex® measuring system cables

Drive Technology System	chainflex® series Class Jacket Page	CF884.yyy 3.1.1.1 PVC 218	CF211.yyy 4.2.2.1 PVC 222	CF894.yyy 3.1.3.1 PUR 228	CF111.yyy 4.2.3.1 PUR 232	CF113.yyy 6.5.3.1 PUR 238	CF11.yyy.D 6.6.4.1 TPE 244
	Number of cores and conductor nominal cross section [mm²]						
Allen Bradley							
CFxxx.040.D	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C				✓	✓	✓
B&R							
CFxxx.024.D	((4x0.14)+2x(2x0.34))C		✓		✓		
CFxxx.027.D	(5x(2x0.14)+2x0.5)C		✓		✓	✓	✓
Baumüller							
CFxxx.027.D	(5x(2x0.14)+2x0.5)C		✓		✓	✓	✓
Beckhoff							
CFxxx.007.D	(4x0.34)C						✓
Berger Lahr							
CFxxx.011.D	(4x(2x0.34)+4x0.5)C	✓	✓	✓		✓	✓
Control Techniques							
CFxxx.001.D	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	✓	✓		✓	✓	✓
CFxxx.011.D	(4x(2x0.34)+4x0.5)C	✓	✓	✓		✓	✓
CFxxx.026.D	(6x(2x0.25)+(2x0.34)C+2x0.5)C				✓		
ELAU							
CFxxx.009.D	(4x(2x0.25)+2x0.5)C	✓	✓	✓		✓	✓
Fagor							
CFxxx.002.D	(3x(2x0.14)C+2x(0.5)C)C					✓	
CFxxx.004.D	(2x(2x2x0.14)+(4x0.14)C+(4x0.5))C				✓	✓	✓
CFxxx.015.D	(4x(2x0.14)+4x0.5)C	✓		✓	✓	✓	✓
FANUC							
CFxxx.021.D	((4x0.25)+3x(2x0.25+2x0.5))C				✓		✓
CFxxx.022.D	((2x0.25)+5x0.5)C	✓		✓	✓	✓	✓
Festo							
CFxxx.002.D	(3x(2x0.14)C+2x(0.5)C)C				✓		✓
Heidenhain							
CFxxx.002.D	(3x(2x0.14)C+2x(0.5)C)C		✓			✓	✓
CFxxx.004.D	(2x(2x2x0.14)+(4x0.14)C+(4x0.5))C				✓	✓	✓
CFxxx.005.D	(4x(2x0.14)+4x0.5)C					✓	✓
CFxxx.015.D	(4x(2x0.14)+4x0.5)C	✓		✓	✓	✓	✓
CFxxx.017.D	(4x(2x0.14)+(4x0.14)C+4x1.0)C		✓			✓	✓
CFxxx.025.D	(3x(2x0.14)C+(2x0.5)C)C					✓	✓
Jetter							
CFxxx.025.D	(3x(2x0.14)C+(2x0.5)C)C					✓	✓
Lenze							
CFxxx.002.D	(3x(2x0.14)C+2x(0.5)C)C		✓				
CFxxx.010.D	(4x(2x0.25)+2x1.0)C		✓			✓	✓
CFxxx.025.D	(3x(2x0.14)C+(2x0.5)C)C					✓	✓
CFxxx.032.D	3x(2x0.14)C+(3x0.14)C		✓			✓	✓
CFxxx.033.D	4x(2x0.14)C+2x(1.0)C		✓			✓	✓
CFxxx.034.D	3x(2x0.14)C+(4x0.14)C+2x(2x0.5)C					✓	✓

chainflex® Measuring system cables

Drive Technology System	chainflex® series Class Jacket Page	CF884.yyy 3.1.1.1 PVC 218	CF211.yyy 4.2.2.1 PVC 222	CF894.yyy 3.1.3.1 PUR 228	CF111.yyy 4.2.3.1 PUR 232	CF113.yyy 6.5.3.1 PUR 238	CF11.yyy.D 6.6.4.1 TPE 244
	Number of cores and conductor nominal cross section [mm²]						
LTi DRiVES							
CFxxx.004.D	(2x(2x2x0.14)+(4x0.14)C+(4x0.5))C				✓	✓	✓
CFxxx.009.D	(4x(2x0.25)+2x0.5)C	✓	✓	✓		✓	✓
CFxxx.010.D	(4x(2x0.25)+2x1.0)C		✓				✓
NUM							
CFxxx.001.D	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	✓	✓	✓			✓
Omron							
CFxxx.008.D	(3x(2x0.25))C					✓	✓
CFxxx.009.D	(4x(2x0.25)+2x0.5)C	✓	✓	✓		✓	✓
CFxxx.010.D	(4x(2x0.25)+2x1.0)C		✓			✓	✓
CFxxx.018.D	(2x(2x0.25)+2x0.5)C		✓			✓	✓
Rexroth							
CFxxx.009.D	(4x(2x0.25)+2x0.5)C	✓	✓	✓		✓	✓
CFxxx.010.D	(4x(2x0.25)+2x1.0)C		✓			✓	✓
CFxxx.017.D	(4x(2x0.14)+(4x0.14)C+4x1.0)C		✓			✓	✓
CFxxx.018.D	(2x(2x0.25)+2x0.5)C		✓			✓	✓
CFxxx.019.D	(3x(2x0.25)C+(3x0.25)+2x1.0)C		✓			✓	✓
Schneider Electric							
CFxxx.009.D	(4x(2x0.25)+2x0.5)C	✓	✓	✓		✓	✓
SEW							
CFxxx.008.D	(3x(2x0.25))C					✓	
CFxxx.036.D	(5x(2x0.25))C		✓			✓	
CFxxx.037.D	(6x(2x0.25))C		✓			✓	
Siemens							
CFxxx.001.D	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	✓	✓	✓		✓	✓
CFxxx.002.D	(3x(2x0.14)C+2x(0.5)C)C		✓			✓	✓
CFxxx.006.D	(3x(2x0.14)C+2x0.5+4x0.14+4x0.23)C	✓	✓	✓		✓	✓
CFxxx.011.D	(4x(2x0.34)+4x0.5)C	✓	✓	✓		✓	✓
CFxxx.028.D	(2x(2x0.15)+(2x0.38))C	✓	✓	✓	✓	✓	
Stöber							
CFxxx.008.D	(3x(2x0.25))C					✓	✓
CFxxx.009.D	(4x(2x0.25)+2x0.5)C	✓	✓	✓		✓	✓
CFxxx.011.D	(4x(2x0.34)+4x0.5)C	✓	✓	✓	✓	✓	✓
CFxxx.016.D	(3x(2x0.25)C)C		✓				
CFxxx.021.D	(3x(2x0.5+2x0.25)+(4x0.25))C				✓		✓

Measuring system cable | PVC | chainflex® CF884

5 million
Double strokes guaranteed

15 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- PVC outer jacket
- Shielded
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 15 x d
	flexible	minimum 12 x d
	fixed	minimum 8 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	According to measuring system specification.
Core identification	According to measuring system specification. ▶ Product range table
Element shield	Foil taping of optimised, bending-resistant foil shield. Coverage approx. 100 % optical
Overall shield	Braiding made of tinned copper wires. Coverage approx. 60 % optical
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Yellow-green (similar to RAL 6018)

Electrical information

Nominal voltage	50 V
Testing voltage	500 V

Example image

Class 3.1.1.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m
Oil resistance	none	**1**	2	3	4	highest		
Torsion	none	**1**	2	3	4	±360°		

Properties and approvals

Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 1589 and 2560, 30 V, 60 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01559 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00449 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	17.5	18.5	19.5
+15/+60	15	16	17
+60/+70	17.5	18.5	19.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

CF884
PVC
15 x d

Measuring system cable | PVC | chainflex® CF884

Class 3.1.1.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6		≥ 400 m
Oil resistance	none	**1**	2	3	4	highest			
Torsion	none	**1**	2	3	4	±360°			

CF884
PVC
15 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]	Part No.	Core group	Colour code
CF884.001	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	8.5	41	92	**CF884.001**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						4x0.14	grey, blue, white-yellow, white-black
						2x0.5	brown-red, brown-blue
CF884.006	(3x(2x0.14)C+(4x0.14)+(4x0.22)+(2x0.5))C	9.0	50	118	**CF884.006**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						4x0.14	grey, blue, white-yellow, white-black
						4x0.22	brown-yellow, brown-grey, green-black, green-red
						2x0.5	brown-red, brown-blue
CF884.009	(4x(2x0.25)+2x0.5)C	8.0	44	85	**CF884.009**	(4x(2x0.25)	brown/green, blue/violet, grey/pink, red/black
						2x0.5)C	white, brown
CF884.011	(4x(2x0.34)+4x0.5)C	9.5	64	120	**CF884.011**	4x(2x0.34)	black/brown, red/orange, yellow/green, blue/violet
						4x0.5	blue-white, black-white, red-white, yellow-white
CF884.015	(4x(2x0.14)+4x0.5)C	8.5	44	93	**CF884.015**	4x(2x0.14)	brown/green, yellow/violet, grey/pink, red/black
						4x0.5	blue, white, brown-green, white-green
CF884.022	((2x0.25)+5x0.5)C	8.0	42	87	**CF884.022**	2x0.25	white, brown
						5x0.5	green, yellow, grey, pink, blue
CF884.028	(2x(2x0.15)+(2x0.38))C	7.5	41	69	**CF884.028**	2x(2x0.15)	green/yellow, pink/blue
						2x0.38	red, black

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF884.015 – to your desired length (0.5 m steps)
CF884 chainflex® series .015 Code measuring system type

Online order ▶ www.chainflex.eu/CF884

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

PVC | iguPUR | PUR | TPE

New

Measuring system cable | PVC | chainflex® CF211

10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For medium duty applications
- PVC outer jacket
- Shielded
- Oil-resistant
- Flame retardant

Now with 300 V
UL approval

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	5 m/s
	gliding	3 m/s
a max.		30 m/s²
Travel distance		Unsupported travels and up to 10 m for gliding applications, Class 2

Cable structure

Conductor	Very finely stranded special conductors of particularly bending resistant design made of tinned copper wires.
Core insulation	Mechanically high-quality TPE mixture.
Core structure	According to measuring system specification.
Core identification	According to measuring system specification. ▶ Product range table
Element shield	Extremely bending-resistant, tinned copper cover. Coverage approx. 90 % optical
Element jacket	TPE mixture on pair shielding adapted to suit the requirements in e-chains®.
Intermediate layer	Foil taping over the outer layer.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 55 % linear, approx. 80 % optical
Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Yellow-green (similar to RAL 6018)

Electrical information

Nominal voltage	50 V
Testing voltage	500 V

Class 4.2.2.1

Basic requirements	low	1	2	3	**4**	5	6	7 highest
Travel distance	unsupported	1	**2**	3	4	5	6	≥ 400 m
Oil resistance	none	1	**2**	3	4	highest		
Torsion	none	**1**	2	3	4	±360°		

Properties and approvals

Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10467 and 2464, 300 V, 80 °C **CF211.028:** Style 1589 and 2571, 30 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01559 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 2. The outer jacket material of this series complies with CF5.10.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	12.5	13.5	14.5
+15/+60	10	11	12
+60/+70	12.5	13.5	14.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travel distances and up to 10 m for gliding applications, Class 2
- Light oil influence, Class 2
- No torsion, Class 1
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Storage and retrieval units for high-bay warehouses, machining units/packaging machines, Handling, indoor cranes, Wood/stone processing

CF211
PVC
10 x d

PVC | iguPUR | PUR | TPE

Measuring system cable | PVC | chainflex® CF211

New

Class 4.2.2.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	**2**	3	4	5	6		≥ 400 m
Oil resistance	none	1	**2**	3	4	highest			
Torsion	none	**1**	2	3	4	±360°			

CF211
PVC
10 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]	Part No.	Core group	Colour code
CF211.001	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	59	99	**CF211.001**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						(4x0.14)	grey/blue/white-yellow/white-black
						(2x0.5)	brown-red, brown-blue
CF211.002	(3x(2x0.14)C+2x(0.5)C)C	9.5	62	105	**CF211.002**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						2x(0.5)C	black, red
CF211.004	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	10.0	70	118	**CF211.004**	2x(2x(2x0.14))	(brown/green)/(yellow/violet), (grey/pink)/(red/black)
						(4x0.14)C	yellow-black/red-black/green-black/blue-black
						(4x0.5)	brown-green/white-green/blue/white
CF211.006	(3x(2x0.14)C+(4x0.14)+(4x-0.25)+(2x0.5))C	10.0	76	121	**CF211.006**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						(4x0.14)	grey/blue/white-yellow/white-black
						(4x0.25)	brown-yellow/brown-grey/green-black/green-red
						(2x0.5)	brown-red, brown-blue
CF211.009	(4x(2x0.25)+2x0.5)C	8.0	48	78	**CF211.009**	4x(2x0.25)	brown/green, blue/violet, grey/pink, red/black
						2x0.5	white, brown
CF211.010	(4x(2x0.25)+2x1.0)C	8.5	60	92	**CF211.010**	4x(2x0.25)	brown/green, blue/violet, grey/pink, red/black
						2x1.0	white, brown
CF211.011	(4x(2x0.34)+4x0.5)C	9.0	68	103	**CF211.011**	4x(2x0.34)	black/brown, red/orange, green/yellow, blue/violet
						4x0.5	black-white, red-white, yellow-white, blue-white
CF211.014	(4x(2x0.25)C+(2x0.5))C	10.0	74	120	**CF211.014**	4x(2x0.25)C	white/brown, green/yellow, grey/pink, blue/red
						(2x0.5)	black no. 1/black no. 2
CF211.015	(4x(2x0.14)+4x0.5)C	8.0	51	85	**CF211.015**	4x(2x0.14)	brown/green, yellow/violet, grey/pink, red/black
						4x0.5	blue, white, brown-green, white-green
CF211.016	(3x(2x0.25)C)C	9.0	49	86	**CF211.016**	3x(2x0.25)C	white/brown, green/yellow, grey/pink
CF211.017	(4x(2x0.14)+(4x0.14)C+4x1.0)C	10.0	94	141	**CF211.017**	4x(2x0.14)	red/black, brown/green, yellow/violet, grey/pink
						(4x0.14)C	blue-black/yellow-black/red-black/green-black
						4x1.0	white-green, brown-green, blue, white
CF211.018	(2x(2x0.25)+2x0.5)C	6.5	33	56	**CF211.018**	2x(2x0.25)	red/black, grey/pink
						2x0.5	white, brown
CF211.019	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.0	80	125	**CF211.019**	3x(2x0.25)C	brown/green, grey/pink, red/black
						(3x0.25)	blue/violet/yellow
						2x1.0	white, brown
CF211.022	((2x0.25)+5x0.5)C	7.0	44	71	**CF211.022**	(2x0.25)	white/brown
						5x0.5	green, yellow, grey, pink, blue
CF211.024	((4x0.14)+2x(2x0.34))C	7.0	35	61	**CF211.024**	(4x0.14)	yellow/grey/violet/pink
						2x(2x0.34)	white-green/white, brown-green/blue
CF211.027	(5x(2x0.14)+2x0.5)C	8.0	43	75	**CF211.027**	5x(2x0.14)	brown/green, yellow/grey, white/violet, red/black, pink/blue
						2x0.5	white-green, white-red

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Other types ▶ page 226

EU04.2019

EU04.2019

PVC | iguPUR | PUR | TPE

Measuring system cable | PVC | chainflex® CF211

New

Class 4.2.2.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	**2**	3	4	5	6		≥ 400 m
Oil resistance	none	1	**2**	3	4	highest			
Torsion	none	**1**	2	3	4	±360°			

CF211
PVC
10 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]	Part No.	Core group	Colour code
CF211.028	(2x(2x0.15)+(2x0.38))C	7.5	35	77	**CF211.028**	2x(2x0.15)	green/yellow, pink/blue
						(2x0.38)	red/black
CF211.032	3x(2x0.14)C+(3x0.14)C	8.0	31	70	**CF211.032**	3x(2x0.14)C	green/black, yellow/black, red/black
						(3x0.14)C	grey/pink/black
CF211.033	4x(2x0.14)C+2x(1.0)C	9.5	58	110	**CF211.033**	4x(2x0.14)C	yellow/black, red/black, blue/black, green/black
						2x(1.0)C	white, brown
CF211.036	(5x(2x0.25))C	8.0	42	72	**CF211.036**	5x(2x0.25)	white/brown, green/yellow, grey/pink, blue/red, black/violet
CF211.037	(6x(2x0.25))C	8.5	49	83	**CF211.037**	6x(2x0.25)	white/brown, green/yellow, grey/pink, blue/ red, black/violet, grey-pink/red-blue
CF211.038	(3x(2x0.14)+(2x0.34))C	7.5	32	64	**CF211.038**	3x(2x0.14)	white/brown, green/yellow, grey/pink
						(2x0.34)	blue/red
CF211.039	(4x(2x0.14)C+2x(0.5)C)C	10.0	71	121	**CF211.039**	(4x(2x0.14)C	green/yellow, grey/pink, blue/red, black/violet
						2x(0.5)C)C	white, brown

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Other types ▶ page 224

Order example: CF211.038 – to your desired length (0.5 m steps)
CF211 chainflex® series .038 Code measuring system type

Online order ▶ www.chainflex.eu/CF211

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Measuring system cable | iguPUR | chainflex® CF894

Example image

5 million
Double strokes guaranteed

15 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- iguPUR outer jacket
- Oil-resistant
- Shielded
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 15 x d
	flexible	minimum 12 x d
	fixed	minimum 8 x d
Temperature	**e-chain® linear**	-20 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	According to measuring system specification.
Core identification	According to measuring system specification. ▶ Product range table
Element shield	Foil taping of optimised, bending-resistant foil shield. Coverage approx. 100 % optical
Overall shield	Braiding made of tinned copper wires. Coverage approx. 60 % optical
Outer jacket	Low-adhesion iguPUR mixture, adapted to suit the requirements in e-chains®. Colour: Yellow-green (similar to RAL 6018)

Electrical information

Nominal voltage	50 V
Testing voltage	500 V

Class 3.1.3.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m	
Oil resistance	none	1	2	**3**	4	highest			
Torsion	none	**1**	2	3	4	±360°			

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 1589 and 20236, 30 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01559 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00449 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	17.5	18.5	19.5
-10/+70	15	16	17
+70/+80	17.5	18.5	19.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- With influence of oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Machining units/machine tools, low temperature applications

CF894
iguPUR
15 x d

Measuring system cable | iguPUR | chainflex® CF894

Class 3.1.3.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	**1**	2	3	4				±360°

CF894
iguPUR
15 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]	Part No.	Core group	Colour code
CF894.001	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	8.5	41	88	**CF894.001**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						4x0.14	grey, blue, white-yellow, white-black
						2x0.5	brown-red, brown-blue
CF894.006	(3x(2x0.14)C+(4x0.14)+(4x0.22)+(2x0.5))C	9.0	50	110	**CF894.006**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						4x0.14	grey, blue, white-yellow, white-black
						4 x 0.22	brown-yellow, brown-grey, green-black, brown-red
						2x0.5	brown-red, brown-blue
CF894.009	(4x(2x0.25)+2x0.5)C	8.0	44	78	**CF894.009**	4x(2x0.25)	brown/green, blue/violet, grey/pink, red/black
						2x0.5	white/brown
CF894.011	(4x(2x0.34)+4x0.5)C	9.5	64	112	**CF894.011**	4x(2x0.34)	black/brown, red/orange, yellow/green, blue/violet
						4x0.5	blue-white, black-white, red-white, yellow-white
CF894.015	(4x(2x0.14)+4x0.5)C	8.5	44	87	**CF894.015**	4x(2x0.14)	brown/green, yellow/violet, grey/pink, red/black
						4x0.5	blue, white, brown-green, white-green
CF894.022	((2x0.25)+5x0.5)C	8.0	42	81	**CF894.022**	5x0.5	white, brown
						2x0.25	green, yellow, grey, pink, blue
CF894.028	(2x(2x0.15)+(2x0.38))C	7.5	41	64	**CF894.028**	2x(2x0.15)	green/yellow, pink/blue
						2x0.38	red, black

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF894.011 – to your desired length (0.5 m steps)
CF894 chainflex® series .011 Code measuring system type

Online order ▶ www.chainflex.eu/CF894

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

PVC | iguPUR | **PUR** | TPE

Measuring system cable | PUR | chainflex® CF111.D

New

10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For medium duty applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Now with 300 V UL approval

Dynamic information

Bend radius	**e-chain® linear**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	5 m/s
	gliding	3 m/s
a max.		30 m/s²
Travel distance		Unsupported travels and up to 10 m for gliding applications, Class 2

Cable structure

Conductor	Very finely stranded special conductors of particularly bending resistant design made of tinned copper wires.
Core insulation	Mechanically high-quality TPE mixture.
Core structure	According to measuring system specification.
Core identification	According to measuring system specification. ▶ Product range table
Element shield	Extremely bending-resistant, tinned copper cover. Coverage approx. 90 % optical
Element jacket	TPE mixture on pair shielding adapted to suit the requirements in e-chains®.
Intermediate layer	Foil taping over the outer layer.
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage approx. 55 % linear, approx. 80 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Yellow-green (similar to RAL 6018)

Electrical information

Nominal voltage	50 V
Testing voltage	500 V

Example image

EU04.2019

Class 4.2.3.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	**2**	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	**3**	4		highest		
Torsion	none	**1**	2	3	4		±360°		

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	Style 10467 and 20233, 300 V, 80 °C **CF111.028.D:** Style 1589 and 20236, 30 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
DNV-GL	Type approval certificate No. 61 936-14 HH
EAC	Certificate No. RU C-DE.ME77.B.01559 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	12.5	13.5	14.5
-15/+70	10	11	12
+70/+80	12.5	13.5	14.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travel distances and up to 10 m for gliding applications, Class 2
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Machining units/machine tools, low temperature applications

CF111.D
PUR
10 x d

PVC | iguPUR | PUR | TPE

Measuring system cable | PUR | chainflex® CF111.D

New

Class 4.2.3.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	**2**	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	**1**	2	3	4				±360°

CF111.D
PUR
10 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]	Part No.	Core group	Colour code
CF111.001.D	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	59	101	**CF111.001.D**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						(4x0.14)	grey/blue/white-yellow/white-black
						(2x0.5)	brown-red/brown-blue
CF111.002.D	(3x(2x0.14)C+2x(0.5)C)C	9.5	62	105	**CF111.002.D**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						2x(0.5)C	black, red
CF111.004.D	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	10.5	70	118	**CF111.004.D**	2x(2x(2x0.14))	(brown/green)/(yellow/violet), (grey/pink)/(red/black)
						(4x0.14)C	yellow-black/red-black/green-black/blue-black
						(4x0.5)	brown-green/white-green/blue/white
CF111.006.D	(3x(2x0.14)C+(4x0.14)+(4x-0.25)+(2x0.5))C	10.0	76	121	**CF111.006.D**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						(4x0.14)	grey/blue/white-yellow/white-black
						(4x0.25)	brown-yellow/brown-grey/green-black/green-red
						(2x0.5)	brown-red/brown-blue
CF111.009.D	(4x(2x0.25)+2x0.5)C	8.0	48	79	**CF111.009.D**	4x(2x0.25)	brown/green, blue/violet, grey/pink, red/black
						2x0.5	white, brown
CF111.010.D	(4x(2x0.25)+2x1.0)C	8.5	60	93	**CF111.010.D**	4x(2x0.25)	brown/green, blue/violet, grey/pink, red/black
						2x1.0	white, brown
CF111.011.D	(4x(2x0.34)+4x0.5)C	9.0	68	104	**CF111.011.D**	4x(2x0.34)	black/brown, red/orange, green/yellow, blue/violet
						4x0.5	black-white, red-white, yellow-white, blue-white
CF111.014.D	(4x(2x0.25)C+(2x0.5))C	10.0	74	120	**CF111.014.D**	4x(2x0.25)C	white/brown, green/yellow, grey/pink, blue/red
						(2x0.5)	black no. 1/black no. 2
CF111.015.D	(4x(2x0.14)+4x0.5)C	8.5	51	85	**CF111.015.D**	4x(2x0.14)	brown/green, yellow/violet, grey/pink, red/black
						4x0.5	blue, white, brown-green, white-green
CF111.020.D	(3x(2x0.14)+2x(4x0.14)+(2x0.5))C	8.5	51	89	**CF111.020.D**	3x(2x0.14)	blue/red, black/violet, grey-pink/red-blue
						2x(4x0.14)	green/grey/yellow/pink, white-green/white-yellow/brown-green/brown-yellow
						(2x0.5)	white/brown
CF111.021.D	((4x0.25)+3x(2x0.25+2x0.5))C	9.5	77	115	**CF111.021.D**	(4x0.25)	white/brown/grey/black
						3x2x0.25	white/yellow, white/grey, black/orange
						3x2x0.5	black no. 1/black no. 2, black no. 3/black no. 4, black no. 5/black no. 6
CF111.022.D	((2x0.25)+5x0.5)C	7.0	44	71	**CF111.022.D**	(2x0.25)	white/brown
						5x0.5	green, yellow, grey, pink, blue
CF111.024.D	((4x0.14)+2x(2x0.34))C	7.0	35	61	**CF111.024.D**	(4x0.14)	yellow/grey/violet/pink
						2x(2x0.34)	white-green/white, brown-green/blue
CF111.026.D	(6x(2x0.25)+(2x0.34)C+2x0.5)C	10.5	72	116	**CF111.026.D**	6x(2x0.25)	green/yellow, grey/pink, blue/red, black/violet, grey-pink/red-blue, white-green/brown-green
						(2x0.34)C	white/brown
						2x0.5	blue/red

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Other types ▶ page 236

igus EU04.2019

EU04.2019 igus

PVC | iguPUR | **PUR** | TPE

Measuring system cable | PUR | chainflex® CF111.D

New

Class 4.2.3.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	**2**	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	**1**	2	3	4				±360°

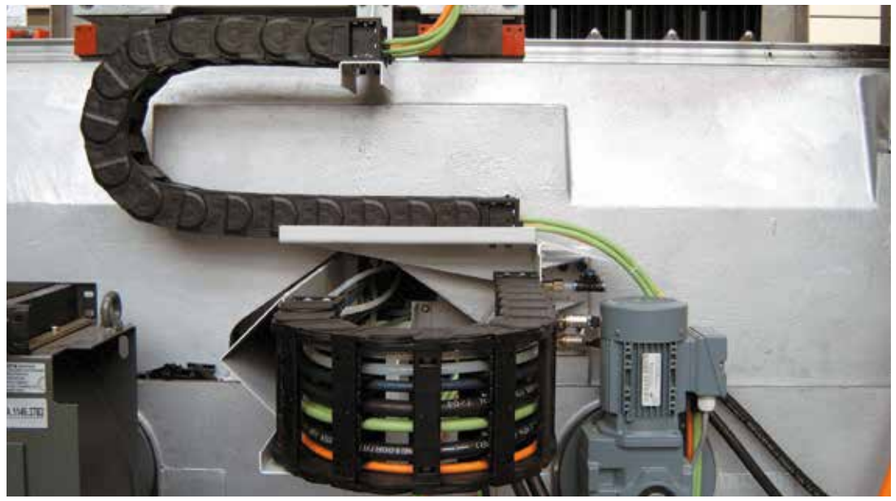
CF111.D
PUR
10 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]	Part No.	Core group	Colour code
CF111.027.D	(5x(2x0.14)+2x0.5)C	8.0	43	75	**CF111.027.D**	5x(2x0.14)	brown/green, yellow/grey, white/violet, red/black, pink/blue
						2x0.5	white-green, white-red
CF111.028.D	(2x(2x0.15)+(2x0.38))C	7.5	35	73	**CF111.028.D**	2x(2x0.15)	green/yellow, pink/blue
						(2x0.38)	red/black
CF111.032.D	3x(2x0.14)C+(3x0.14)C	8.5	31	70	**CF111.032.D**	3x(2x0.14)C	green/black, yellow/black, red/black
						(3x0.14)C	grey/pink/black
CF111.040.D	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	9.0	79	120	**CF111.040.D**	(3x(4x0.14)	black/red/white-black/white-red, green/blue/white-green/ white-blueyellow/brown/white-yellow/white-brown
						(2x0.14+2x0.34)	violet/orange/white-violet/white-orange
						2x1.5)C	white-grey, grey

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Other types ▶ page 234



readychain® systems from igus® are completely pre-harnessed with chainflex® cables, hoses, metal parts etc.

Order example: CF111.021.D – to your desired length (0.5 m steps)
CF111.D **chainflex® series** .021 **Code measuring system type**

Online order ▶ www.chainflex.eu/CF111.D

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

PVC | iguPUR | **PUR** | TPE

Measuring system cable | PUR | chainflex® CF113.D

New

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

100 m
Travel distance, e-chain®

Example image

- For extremely heavy duty applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Now with 300 V
UL approval

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.	50 m/s²	
Travel distance	Unsupported travels and up to 100 m for gliding applications, Class 5	

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of tinned copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	According to measuring system specification.
Core identification	According to measuring system specification. ▶ Product range table
Element shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Element jacket	TPE mixture on pair shielding adapted to suit the requirements in e-chains®.
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Yellow-green (similar to RAL 6018)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	50 V
Testing voltage	500 V

Class 6.5.3.1

Basic requirements	low	1	2	3	4	5	**6**	7 highest
Travel distance	unsupported	1	2	3	4	**5**	6	≥ 400 m
Oil resistance	none	1	2	**3**	4	highest		
Torsion	none	**1**	2	3	4	±360°		

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	Style 10467 and 20233, 300 V, 80 °C **CF113.028.D:** Style 1589 and 20236, 30 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
DNV-GL	Type approval certificate No. 61 936-14 HH
EAC	Certificate No. RU C-DE.ME77.B.01559 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	10	11	12
-15/+70	7.5	8.5	9.5
+70/+80	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For extremely heavy duty applications, Class 6
- Unsupported travel distances and up to 100 m for gliding applications, Class 5
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, indoor cranes, low temperature applications

CF113.D
PUR
7.5 x d

PVC | iguPUR | **PUR** | TPE

Measuring system cable | PUR | chainflex® CF113.D

New

Strip cables 50% faster

Class 6.5.3.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6	≥ 400 m	
Oil resistance	none	1	2	**3**	4	highest			
Torsion	none	**1**	2	3	4	±360°			

CF113.D
PUR
7.5 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]	Part No.	Core group	Colour code
CF113.001.D	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	75	175	**CF113.001.D**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						(4x0.14)	grey/blue/white-yellow/white-black
						(2x0.5)	brown-red/brown-blue
CF113.002.D	(3x(2x0.14)C+2x(0.5)C)C	10.5	77	188	**CF113.002.D**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						2x(0.5)C	black, red
CF113.003.D [11]	(3x(2x0.14)+2x1.0)C	8.5	58	127	**CF113.003.D** [11]	3x(2x0.14)	white/brown, green/yellow, grey/pink
						2x1.0	blue, red
CF113.004.D	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	86	199	**CF113.004.D**	2x(2x(2x0.14))	(brown/green)/(yellow/violet), (grey/pink)/(red/black)
						(4x0.14)C	yellow-black/red-black/green-black/blue-black
						(4x0.5)	brown-green/white-green/blue/white
CF113.005.D	(4x(2x0.14)+4x0.5)C	9.5	64	147	**CF113.005.D**	4x(2x0.14)	white/brown, green/yellow, grey/pink, blue/red
						4x0.5	black, violet, grey-pink, red-blue
CF113.006.D	(3x(2x0.14)C+(4x0.14)+(4x-0.25)+(2x0.5))C	11.0	88	201	**CF113.006.D**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						(4x0.14)	grey/blue/white-yellow/white-black
						(4x0.25)	brown-yellow/brown-grey/green-black/green-red
						(2x0.5)	brown-red/brown-blue
CF113.007.D [2]	(4x0.34)C	6.0	31	66	**CF113.007.D** [2]	4x0.34	white, green, brown, yellow(Star-quad)
CF113.008.D	(3x(2x0.25))C	7.5	35	83	**CF113.008.D**	3x(2x0.25)	white/brown, green/yellow, grey/pink
CF113.009.D	(4x(2x0.25)+2x0.5)C	9.5	63	140	**CF113.009.D**	4x(2x0.25)	brown/green, blue/violet, grey/pink, red/black
						2x0.5	white, brown
CF113.010.D	(4x(2x0.25)+2x1.0)C	9.5	75	162	**CF113.010.D**	4x(2x0.25)	brown/green, blue/violet, grey/pink, red/black
						2x1.0	white, brown
CF113.011.D	(4x(2x0.34)+4x0.5)C	10.5	91	203	**CF113.011.D**	4x(2x0.34)	black/brown, red/orange, green/yellow, blue/violet
						4x0.5	black-white, red-white, yellow-white, blue-white
CF113.013.D	(3x(2x0.14)C+2x0.5)C	9.5	66	156	**CF113.013.D**	3x(2x0.14)C	white/brown, green/yellow, grey/pink
						2x0.5	blue, red
CF113.014.D	(4x(2x0.25)C+(2x0.5))C	11.5	95	219	**CF113.014.D**	4x(2x0.25)C	white/brown, green/yellow, grey/pink, blue/red
						(2x0.5)	black no. 1/black no. 2
CF113.015.D	(4x(2x0.14)+4x0.5)C	9.5	64	143	**CF113.015.D**	4x(2x0.14)	brown/green, yellow/violet, grey/pink, red/black
						4x0.5	blue, white, brown-green, white-green
CF113.016.D	(3x(2x0.25)C)C	9.5	62	144	**CF113.016.D**	3x(2x0.25)C	white/brown, green/yellow, grey/pink
CF113.017.D [4]	(4x(2x0.14)+(4x0.14)C+4x1.0)C	11.0	109	245	**CF113.017.D** [4]	4x(2x0.14)	red/black, brown/green, yellow/violet, grey/pink
						(4x0.14)C	blue-black/yellow-black/red-black/green-black
						4x1.0	white-green, brown-green, blue, white

The chainflex® types marked with [2] are cables designed as a star-quad.
[4] manufactured without inner jacket
[11] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Other types ▶ page 242

PVC | iguPUR | **PUR** | TPE

Measuring system cable | PUR | chainflex® CF113.D

New

Strip cables 50% faster

Class 6.5.3.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6	≥ 400 m	
Oil resistance	none	1	2	**3**	4	highest			
Torsion	none	**1**	2	3	4	±360°			

CF113.D
PUR
7.5 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]	Part No.	Core group	Colour code
CF113.018.D [4]	(2x(2x0.25)+2x0.5)C	7.0	38	79	**CF113.018.D** [4]	2x(2x0.25)	red/black, grey/pink
						2x0.5	white, brown
CF113.019.D [4]	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.5	100	229	**CF113.019.D** [4]	3x(2x0.25)C	brown/green, grey/pink, red/black
						(3x0.25)	blue/violet/yellow
						2x1.0	white, brown
CF113.022.D	((2x0.25)+5x0.5)C	8.5	52	123	**CF113.022.D**	(2x0.25)	white/brown
						5x0.5	green, yellow, grey, pink, blue
CF113.025.D	(3x(2x0.14)C+(2x0.5)C)C	11.0	76	183	**CF113.025.D**	3x(2x0.14)C	green/yellow, blue/red, grey/pink
						(2x0.5)C	white/brown
CF113.027.D	(5x(2x0.14)+2x0.5)C	9.0	55	124	**CF113.027.D**	5x(2x0.14)	brown/green, yellow/grey, white/violet, red/black, pink/blue
						2x0.5	white-green, white-red
CF113.028.D [4]	(2x(2x0.20)+(2x0.38))C	7.5	44	71	**CF113.028.D** [4]	2x(2x0.20)	green/yellow, pink/blue
						(2x0.38)	red/black
CF113.029.D	(5x(2x0.25)C+(2x0.25+2x0.5))C	13.0	112	271	**CF113.029.D**	5x(2x0.25)C	white/brown, green/yellow, grey/pink, blue/red, black/violet
						(2x0.25+2x0.5)	grey-pink/brown-green/white-green/red-blue
CF113.031.D [11]	(2x(2x0.25)C+2x1.0)C	9.0	72	157	**CF113.031.D** [11]	2x(2x0.25)C	white/brown, green/yellow
						2x1.0	black no. 1, black no. 2
CF113.032.D [5]	3x(2x0.14)C+(3x0.14)C	8.0	64	151	**CF113.032.D** [5]	3x(2x0.14)C	green/black, yellow/black, red/black
						(3x0.14)C	grey/pink/black
CF113.033.D [5]	4x(2x0.14)C+2x(1.0)C	10.0	101	241	**CF113.033.D** [5]	4x(2x0.14)C	yellow/black, red/black, blue/black, green/black
						2x(1.0)C	white, brown
CF113.036.D	(5x(2x0.25))C	9.5	55	105	**CF113.036.D**	5x(2x0.25)	white/brown, green/yellow, grey/pink, blue/red, black/violet
CF113.037.D	(6x(2x0.25))C	10.0	65	116	**CF113.037.D**	6x(2x0.25)	white/brown, green/yellow, grey/pink, blue/ red, black/violet,grey-pink/red-blue
CF113.038.D	(3x(2x0.14)+(2x0.34))C	8.0	34	69	**CF113.038.D**	3x(2x0.14)	white/brown, green/yellow, grey/pink
						(2x0.34)	blue/red
CF113.040.D	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	95	159	**CF113.040.D**	3x(4x0.14)	black/red/white-black/white-red, green/blue/white-green/ white-blue,yellow/brown/white-yellow/white-brown
						(2x0.14+2x0.34)	violet/orange/white-violet/white-orange
						2x1.5	white-grey, grey

[4] manufactured without inner jacket
[5] manufactured without overall shield
[11] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Other types ▶ page 240

PVC | iguPUR | PUR | TPE

Measuring system cable | TPE | chainflex® CF11.D

New

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Shielded
- Oil and bio-oil resistant
- PVC and halogen-free
- Hydrolysis and microbe-resistant

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-35 °C up to +90 °C
	flexible	-50 °C up to +90 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +90 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of tinned copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	According to measuring system specification.
Core identification	According to measuring system specification. ▶ Product range table
Element shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Element jacket	TPE mixture on pair shielding adapted to suit the requirements in e-chains®.
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Yellow-green (similar to RAL 6018)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	50 V
Testing voltage	500 V

Class 6.6.4.1

Basic requirements	low	1	2	3	4	5	**6**	7 highest
Travel distance	unsupported	1	2	3	4	5	**6**	≥ 400 m
Oil resistance	none	1	2	3	**4** highest			
Torsion	none	**1**	2	3	4 ±360°			

Properties and approvals

UV resistance	Medium
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
EAC	Certificate No. RU C-DE.ME77.B.01559 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

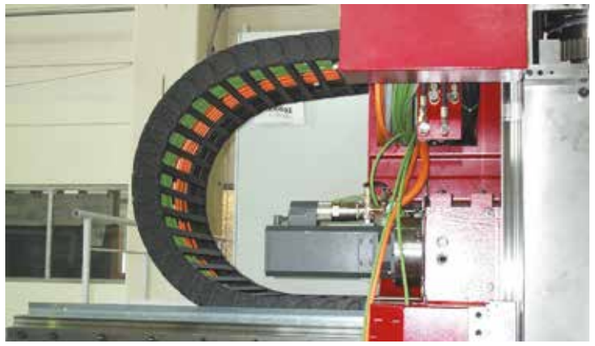
Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For extremely heavy duty applications, Class 6
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, indoor cranes, low temperature applications



Pre-harnessed igus® energy supply systems for machine tool manufacture. e-chain®: System E4/4

EU04.2019

CF11.D
TPE
7.5 x d

Measuring system cable | TPE | chainflex® CF11.D

Class 6.6.4.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	5	**6**	≥ 400 m
Oil resistance	none	1	2	3	**4**	highest		
Torsion	none	**1**	2	3	4	±360°		

CF11.D
TPE
7.5 x d

Strip cables 50% faster

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]	Part No.	Core group	Colour code
CF11.001.D	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	75	171	**CF11.001.D**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						(4x0.14)	grey/blue/white-yellow/white-black
						(2x0.5)	brown-red/brown-blue
CF11.002.D	(3x(2x0.14)C+2x(0.5)C)C	10.0	77	183	**CF11.002.D**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						2x(0.5)C	black, red
CF11.003.D	(3x(2x0.14)+2x1.0)C	8.5	58	121	**CF11.003.D**	3x(2x0.14)	white/brown, green/yellow, grey/pink
						2x1.0	blue, red
CF11.004.D	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	91	197	**CF11.004.D**	2x(2x(2x0.14))	(brown/green)/(yellow/violet), (grey/pink)/(red/black)
						(4x0.14)C	yellow-black/red-black/green-black/blue-black
						(4x0.5)	brown-green/white-green/blue/white
CF11.005.D	(4x(2x0.14)+4x0.5)C	9.0	64	140	**CF11.005.D**	4x(2x0.14)	white/brown, green/yellow, grey/pink, blue/red
						4x0.5	black, violet, grey-pink, red-blue
CF11.006.D	(3x(2x0.14)C+(4x0.14)+(4x-0.25)+(2x0.5))C	11.0	88	197	**CF11.006.D**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						(4x0.14)	grey/blue/white-yellow/white-black
						(4x0.25)	brown-yellow/brown-grey/green-black/green-red
						(2x0.5)	brown-red/brown-blue
CF11.007.D [2]	(4x0.34)C	6.5	31	64	**CF11.007.D** [2]	4x0.34	white, green, brown, yellow(Star-quad)
CF11.008.D	(3x(2x0.25))C	7.5	35	79	**CF11.008.D**	3x(2x0.25)	white/brown, green/yellow, grey/pink
CF11.009.D	(4x(2x0.25)+2x0.5)C	9.5	63	134	**CF11.009.D**	4x(2x0.25)	brown/green, blue/violet, grey/pink, red/black
						2x0.5	white, brown
CF11.010.D	(4x(2x0.25)+2x1.0)C	9.5	75	156	**CF11.010.D**	4x(2x0.25)	brown/green, blue/violet, grey/pink, red/black
						2x1.0	white, brown
CF11.011.D	(4x(2x0.34)+4x0.5)C	10.5	91	196	**CF11.011.D**	4x(2x0.34)	black/brown, red/orange, green/yellow, blue/violet
						4x0.5	black-white, red-white, yellow-white, blue-white
CF11.012.D	(3x(2x0.14)C+(3x0.14)C+(4x-0.14)+(2x0.14+2x0.5))C	11.5	94	217	**CF11.012.D**	3x(2x0.14)C	green/yellow, white/grey, blue/red
						(3x0.14)C	red/green/brown
						(4x0.14)	grey/yellow/pink/violet
						(2x0.14+2x0.5)	blue/brown-blue/grey/brown-red
CF11.013.D	(3x(2x0.14)C+2x0.5)C	9.5	66	148	**CF11.013.D**	3x(2x0.14)C	white/brown, green/yellow, grey/pink
						2x0.5	blue, red
CF11.014.D	(4x(2x0.25)C+(2x0.5))C	11.5	90	207	**CF11.014.D**	4x(2x0.25)C	white/brown, green/yellow, grey/pink, blue/red
						(2x0.5)	black no. 1/black no. 2
CF11.015.D	(4x(2x0.14)+4x0.5)C	9.0	64	136	**CF11.015.D**	4x(2x0.14)	brown/green, yellow/violet, grey/pink, red/black
						4x0.5	blue, white, brown-green, white-green
CF11.016.D	(3x(2x0.25)C)C	9.5	65	144	**CF11.016.D**	3x(2x0.25)C	white/brown, green/yellow, grey/pink
CF11.017.D [4]	(4x(2x0.14)+(4x0.14)C+4x1.0)C	11.0	109	238	**CF11.017.D** [4]	4x(2x0.14)	red/black, brown/green, yellow/violet, grey/pink
						(4x0.14)C	blue-black/yellow-black/red-black/green-black
						4x1.0	white-green, brown-green, blue, white

The chainflex® types marked with [2] are cables designed as a star-quad.
[4] manufactured without inner jacket
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Other types ▶ page 248

PVC | iguPUR | PUR | TPE

Measuring system cable | TPE | chainflex® CF11.D

New

Class 6.6.4.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	5	**6**	≥ 400 m	
Oil resistance	none	1	2	3	**4**	highest			
Torsion	none	**1**	2	3	4	±360°			

CF11.D
TPE
7.5 x d

Strip cables 50% faster

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]	Part No.	Core group	Colour code
CF11.018.D [4]	(2x(2x0.25)+2x0.5)C	7.0	38	74	**CF11.018.D** [4]	2x(2x0.25)	red/black, grey/pink
						2x0.5	white, brown
CF11.019.D [4]	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.5	106	228	**CF11.019.D** [4]	3x(2x0.25)C	brown/green, grey/pink, red/black
						(3x0.25)	blue/violet/yellow
						2x1.0	white, brown
CF11.021.D	((4x0.25)+3x(2x0.25+2x0.5))C	11.0	96	207	**CF11.021.D**	(4x0.25)	white/brown/grey/black
						3x2x0.25	white/yellow, white/grey, black/orange
						3x2x0.5	black no. 1/black no. 2, black no. 3/black no. 4, black no. 5/black no. 6
CF11.022.D	((2x0.25)+5x0.5)C	8.5	52	117	**CF11.022.D**	(2x0.25)	white/brown
						5x0.5	green, yellow, grey, pink, blue
CF11.025.D	(3x(2x0.14)C+(2x0.5)C)C	10.5	76	177	**CF11.025.D**	3x(2x0.14)C	green/yellow, blue/red, grey/pink
						(2x0.5)	white/brown
CF11.027.D	(5x(2x0.14)+2x0.5)C	9.0	55	118	**CF11.027.D**	5x(2x0.14)	brown/green, yellow/grey, white/violet, red/black, pink/blue
						2x0.5	white-green, white-red
New **CF11.028.D**	(2x(2x0.20)+(2x0.38))C	7.5	44	63	**CF11.028.D**	2x(2x0.20)	green/yellow, pink/blue
						(2x0.38)	red/black
CF11.031.D	(2x(2x0.25)C+2x1.0)C	9.0	72	151	**CF11.031.D**	2x(2x0.25)C	white/brown, green/yellow
						2x1.0	black no. 1, black no. 2
CF11.032.D [5]	3x(2x0.14)C+(3x0.14)C	8.0	64	147	**CF11.032.D** [5]	3x(2x0.14)C	green/black, yellow/black, red/black
						(3x0.14)C	grey/pink/black
CF11.033.D [5]	4x(2x0.14)C+2x(1.0)C	10.0	101	234	**CF11.033.D** [5]	4x(2x0.14)C	yellow/black, red/black, blue/black, green/black
						2x(1.0)C	white, brown
CF11.034.D [5]	3x(2x0.14)C+(4x0.14)C+2x(2x0.5)C	11.5	109	181	**CF11.034.D** [5]	3x(2x0.14)C	green/black, violet/black, blue/black
						(4x0.14)C	red/yellow/black-red/black-yellow
						2x(2x0.5)C	black/white, black/brown
CF11.035.D	(4x(2x0.25)C+2x(2x0.5))C	12.5	114	254	**CF11.035.D**	4x(2x0.25)C	white/brown, green/yellow, grey/pink, blue/red
						2x(2x0.5)	black no. 1/black no. 2, black no. 3/black no. 4
CF11.038.D	(3x(2x0.14)+(2x0.34))C	8.0	36	72	**CF11.038.D**	3x(2x0.14)	white/brown, green/yellow, grey/pink
						(2x0.34)	blue/red
CF11.040.D	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	95	149	**CF11.040.D**	(3x(4x0.14)	black/red/white-black/white-red, green/blue/white-green/white-blue, yellow/brown/white-yellow/white-brown
						(2x0.14+ 2x0.34)	violet/orange/white-violet/white-orange
						2x1.5)C	white-grey, grey

[4] manufactured without inner jacket
[5] manufactured without overall shield
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Other types ▶ page 246

Servo cables

chainflex® cable	Jacket	Shield	Minimum bend radius. e-chain® [factor x d]	Temperature. e-chain® from/to [°C]	Approvals and standards	Oil-resistant	Torsion resistant	v max. [m/s]. unsupported	v max. [m/s] gliding	a max. [m/s²]	Page
Servo cables											
Information and selection chart for Hybrid Servo cables											254
CF887	PVC	✓	15	+5/+70				3		20	256
CF210.UL	PVC	✓	10	+5/+70		✓		10	2	50	258
CF220.UL.H	PVC	✓	10	+5/+70		✓		10	2	50	262
CF21.UL	PVC	✓	7.5	+5/+70		✓		10	5	80	266 New
CF897	iguPUR	✓	15	-20/+80		✓		3		20	270
CF270.UL.D	PUR	✓	10	-25/+80		✓		10	2	50	272
CF280.UL.H	PUR	✓	10	-25/+80		✓		10	2	50	276
CF27.D	PUR	✓	7.5	-25/+80		✓		10	5	80	280 New
CF29.D	TPE	✓	6.8	-35/+100		✓		10	5	80	284 New

Guarantee igus chainflex 36 month guarantee

36 month chainflex® guarantee

Guaranteed lifetime for predictable reliability

▶Selection table page 252

With the help of the chainflex® service life calculator, you can quickly and easily calculate the expected service life of chainflex® cables specifically for your application:

www.igus.eu/chainflexlife

chainflex® guarantee ▶▶ Guaranteed lifetime (1)

	chainflex® cable		Temperature, from/to [°C]	v max. [m/s] unsupported	v max. [m/s] gliding	a max. [m/s²]	Travel distance [m]	Minimum bend radius [factor x d] < 10 m	Minimum bend radius [factor x d] ≥ 10 m	Minimum bend radius [factor x d] < 10 m	Minimum bend radius [factor x d] ≥ 10 m	Minimum bend radius [factor x d] < 10 m	Minimum bend radius [factor x d] ≥ 10 m	Page
Servo cables								5 million (1 million) double strokes *		7.5 million (3 million) double strokes *		10 million (5 million) double strokes *		
	CF887		+5 / +15 +15 / +60 +60 / +70	3	-	20	≤ 10	17.5 15 17.5		18.5 16 18.5		19.5 17 19.5		256
	CF210.UL		+5 / +15 +15 / +60 +60 / +70	10	2	50	≤ 10	12.5 10 12.5		13.5 11 13.5		14.5 12 14.5		258
	CF220.UL.H		+5 / +15 +15 / +60 +60 / +70	10	2	50	≤ 10	12.5 10 12.5		13.5 11 13.5		14.5 12 14.5		262
	CF21.UL	New!	+5 / +15 +15 / +60 +60 / +70	10	5	80	≤ 100	10 7.5 10		11 8.5 11		12 9.5 12		266
	CF897		-20 / -10 -10 / +70 +70 / +80	3	-	20	≤ 10	17.5 15 17.5		18.5 16 18.5		19.5 17 19.5		270
	CF270.UL.D		-25 / -15 -15 / +70 +70 / +80	10	2	50	≤ 10	12.5 10 12.5		13.5 11 13.5		14.5 12 14.5		272
	CF280.UL.H		-25 / -15 -15 / +70 +70 / +80	10	2	50	≤ 10	12.5 10 12.5		13.5 11 13.5		14.5 12 14.5		276
	CF27.D	New!	-25 / -15 -15 / +70 +70 / +80	10	5	80	≤ 100	10 7.5 10		11 8.5 11		12 9.5 12		280
	CF29.D	New!	-35 / -25 -25 / +90 +90 / +100	10	5	80	> 400	8.5 6.8 7.5	10 7.5 10	9.5 7.5 9.5	11 8.5 11	10.5 8.5 10.5	12 9.5 12	284

(1) Exclusive! Guaranteed lifetime for this series according to the guarantee conditions ▶ Page 22-23

* Higher number of double strokes? Online lifetime calculation ▶ www.igus.eu/chainflexlife
Figures in brackets refer to chainflex® series CF887 and CF897

igus chainflex® System cables (Hybrid Servo cables) ...
... for single-cable solutions in drive technology

In chainflex® series CF220.UL.H and CF280.UL.H, you will see system cables for intelligent drive concepts for many well known system manufacturers.

To save installation space in e-chain systems® some manufacturers combine the servo cable for power with the measuring system cable for position data to make a so-called hybrid cable. The feedback of the position data to the servo controller is done frequently by various digital bus technologies.

When combining these two cables into a hybrid cable, it is necessary to guarantee the data transmission properties and the EMC behavior of the cable for many millions of movement cycles.

High optical coverage shielding designs are used in igus® chainflex® servo hybrid cables because of the close proximity of the power cores carrying high-interference square-wave signals to the bus cores.

A secure transmission of bus signals at maximum cable length and at maximum speed makes high demands on the insulating materials of the bus or data cores. In the 2,750 m² large igus® laboratory, electrical parameters such as capacitance, impedance, attenuation and crosstalk are measured over the entire test period of several million double strokes and monitored for compliance with the specifications.

igus® chainflex® servo hybrid cables are available in cost-effective PVC and oil-resistant, halogen-free PUR. As with all chainflex® cables, igus® also offers a guarantee of 36 months or 10 million double strokes for the servo hybrid cables and 5 million for chainflex® M.

In the chart on the opposite page you will find an overview of all currently available hybrid cables grouped by system manufacturer.
The companies listed are drive systems manufacturers or technology providers whose rotation sensors are commonly available.

Two become one: Hybrid Servo cables combine Servo and Measuring system cables.

chainflex®
Hybrid
Servo

Selection table Hybrid Servo cables

Manufacturer	Hybrid technolgy	CF220.UL.H PVC 10 x d UL page 262	CF280.UL.H PUR 10 x d oil-resistant page 276
ABB	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
AMK	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
B&R	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
B&R	**Heidenhain**	CF220.UL.H50x	CF280.UL.H50x
Baumüller	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
BCB	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
Beckhoff	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
BMP	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
Bosch-Rexroth	**IndraDrive**	-	CF280.UL.H40x
CEDS	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
ELAU/Schneider Electric	**isH Servo**	CF220.UL.H60x	CF280.UL.H60x
Fertig	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
Fine	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
Han´s	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
Harmonic Drive AG	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
Heidrive	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
Infranor	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
IRT	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
Jetter	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
KEBA	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
Kinavo	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
Kollmorgen	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
Lafert	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
LTi DRiVES	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
Mavilor	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
Maxsine	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
metronix	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
PowerMotor	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
NUM	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
Parker	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
ROBOX	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
Selema	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
SEW	**SEW Cable type A, B, C, D, E**	CF220.UL.H20x	CF280.UL.H20x
Siemens	**SINAMICS S210**	-	CF280.UL.H30x
Siboni	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
Sigmatek	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
STEP	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
TG-Drives	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
WEG	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x
Witthur Drive	**Sick "Hiperface DSL"**	CF220.UL.H10x	CF280.UL.H10x

Servo cable | PVC | chainflex® CF887

Example image

5 million
Double strokes guaranteed

15 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- PVC outer jacket
- Shielded
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 15 x d
	flexible	minimum 12 x d
	fixed	minimum 8 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Power cores and control pair elements wound together in an optimised pitch length.
Core identification	**Power cores:** Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- **1 Control pair:** Black cores with white numbers. 1. Control core: 5 2. Control core: 6 **2 Control pairs:** Black cores with white numbers. 1. Control core: 5 2. Control core: 6 3. Control core: 7 4. Control core: 8
Element shield	Foil taping of optimised, bending-resistant foil shield.
Overall shield	Braiding made of tinned copper wires. Coverage approx. 60 % optical
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Class 3.1.1.1

Basic requirements	low	1	2	**3**	4	5	6	7 highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m
Oil resistance	none	**1**	2	3	4	highest		
Torsion	none	**1**	2	3	4	±360°		

Properties and approvals

Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10492 and 2570, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01561 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00450 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	17.5	18.5	19.5
+15/+60	15	16	17
+60/+70	17.5	18.5	19.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
1 Control pair shielded				
CF887.15.15.02.01	(4G1.5+(2x1.5)C)C	12.5	124	204
CF887.25.15.02.01	(4G2.5+(2x1.5)C)C	13.5	182	269
CF887.40.15.02.01	(4G4.0+(2x1.5)C)C	14.5	236	352
2 Control pairs shielded				
CF887.10.07.02.02	(4G1.0+2x(2x0.75)C)C	11.5	109	184
CF887.15.15.02.02	(4G1.5+2x(2x1.5)C)C	13.5	164	258
CF887.25.15.02.02	(4G2.5+2x(2x1.5)C)C	14.5	217	325

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Servo cable | PVC | chainflex® CF210.UL

10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For medium duty applications
- PVC outer jacket
- Shielded
- Oil-resistant
- Flame retardant

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	2 m/s
a max.	50 m/s²	
Travel distance	Unsupported travels and up to 10 m for gliding applications, Class 2	

Cable structure

Conductor	Stranded conductor in bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Power cores and control pair elements wound with a short pitch length around a high tensile strength centre element.
Core identification	**Power cores:** Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- **1 Control pair:** Black cores with white numbers. 1. Control core: 4 2. Control core: 5 **2 Control pairs:** Black cores with white numbers. 1. Control core: 5 2. Control core: 6 3. Control core: 7 4. Control core: 8
Element shield	Bending-resistant braiding made of tinned copper wires.
Intermediate layer	Foil taping over the outer layer.
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage approx. 55 % linear, approx. 80 % optical
Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Pastel orange (similar to RAL 2003)

Class 4.2.2.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	**2**	3	4	5	6		≥ 400 m
Oil resistance	none	1	**2**	3	4				highest
Torsion	none	**1**	2	3	4				±360°

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10989 and 2570, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 2. The outer jacket material of this series complies with CF5.10.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	12.5	13.5	14.5
+15/+60	10	11	12
+60/+70	12.5	13.5	14.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travel distances and up to 10 m for gliding applications, Class 2
- Light oil influence, Class 2
- No torsion, Class 1
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

CF210.UL
PVC
10 x d

Servo cable | PVC | chainflex® CF210.UL

Class 4.2.2.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	**2**	3	4	5	6		≥ 400 m
Oil resistance	none	1	**2**	3	4		highest		
Torsion	none	**1**	2	3	4		±360°		

CF210.UL
PVC
10 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
1 Control pair shielded				
CF210.UL.15.15.02.01	(4G1.5+(2x1.5)C)C	12.0	154	253
CF210.UL.25.15.02.01	(4G2.5+(2x1.5)C)C	14.0	218	309
CF210.UL.40.15.02.01	(4G4.0+(2x1.5)C)C	15.0	281	429
CF210.UL.60.15.02.01	(4G6.0+(2x1.5)C)C	16.5	375	531
2 Control pairs shielded				
CF210.UL.15.07.02.02	(4G1.5+2x(2x0.75)C)C	13.5	174	298
CF210.UL.25.15.02.02	(4G2.5+2x(2x1.5)C)C	16.0	268	421
CF210.UL.40.15.02.02	(4G4.0+2x(2x1.5)C)C	17.0	340	520
CF210.UL.60.15.02.02	(4G6.0+2x(2x1.5)C)C	18.5	438	644
without control pair				
CF210.UL.15.04	(4G1.5)C	9.5	85	151
CF210.UL.25.04	(4G2.5)C	11.5	145	231
CF210.UL.40.04	(4G4.0)C	12.5	217	323

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF210.UL.40.15.02.01 – to your desired length (0.5 m steps)
CF210.UL **chainflex® series** .40 **Code nominal cross section** .15 **Code nominal cross section signal pairs** .02 **Identification pairs** .01 **Number of pairs**

Online order ▶ www.chainflex.eu/CF210.UL

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

PVC | iguPUR | PUR | TPE

Hybrid servo cable | PVC | chainflex® CF220.ULH

10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For medium duty applications
- PVC outer jacket
- Shielded
- Oil-resistant
- Flame retardant

Example image

Dynamic information

Bend radius	e-chain® linear	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	e-chain® linear	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	unsupported	10 m/s
	gliding	2 m/s
a max.		50 m/s²
Travel distance		Unsupported travels and up to 10 m for gliding applications, Class 2

Cable structure

Conductor	Stranded conductor in bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Power cores and control pair elements wound with a short pitch length around a high tensile strength centre element.
Core identification	According to Servo-Hybrid specification. Latest data sheet ▶ www.chainflex.eu/CF220ULH
Element shield	Bending-resistant braiding made of tinned copper wires.
Intermediate layer	Foil taping over the outer layer.
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage approx. 55 % linear, approx. 80 % optical
Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Class 4.2.2.1

Basic requirements	low	1	2	3	**4**	5	6	7 highest
Travel distance	unsupported	1	**2**	3	4	5	6	≥ 400 m
Oil resistance	none	1	**2**	3	4	highest		
Torsion	none	**1**	2	3	4	±360°		

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10989 and 2570, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 2. The outer jacket material of this series complies with CF5.10.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU
Info	As hybrid cables are always designed for specific drive systems, additional electrotechnical data may need to be considered. You will find more information in the latest datasheet for the cable series.

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	12.5	13.5	14.5
+15/+60	10	11	12
+60/+70	12.5	13.5	14.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travel distances and up to 10 m for gliding applications, Class 2
- Light oil influence, Class 2
- No torsion, Class 1
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

CF220.ULH
PVC
10 x d

Hybrid servo cable | PVC | chainflex® CF220.ULH

Class 4.2.2.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	**2**	3	4	5	6	≥ 400 m
Oil resistance	none	1	**2**	3	4	highest		
Torsion	none	**1**	2	3	4	±360°		

CF220.ULH
PVC
10 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]	Part No.	Hybrid technology	Manufacturer
CF220.UL.H100.07.04	(4G0.75+(2x0.34)C +(2xAWG22)C)C	12.0	110	214	**CF220.UL.H100.07.04**	Sick (Hiperface DSL)	please see selection table on page 255
CF220.UL.H101.10.04	(4G1.0+(2x0.75)C +(2xAWG22)C)C	12.5	130	248	**CF220.UL.H101.10.04**	Sick (Hiperface DSL)	please see selection table on page 255
CF220.UL.H101.15.04	(4G1.5+(2x0.75)C +(2xAWG22)C)C	13.5	149	284	**CF220.UL.H101.15.04**	Sick (Hiperface DSL)	please see selection table on page 255
CF220.UL.H102.25.04	(4G2.5+(2x1.0)C +(2xAWG22)C)C	15.0	203	348	**CF220.UL.H102.25.04**	Sick (Hiperface DSL)	please see selection table on page 255
CF220.UL.H102.40.04	(4G4.0+(2x1.0)C +(2xAWG22)C)C	16.5	281	434	**CF220.UL.H102.40.04**	Sick (Hiperface DSL)	please see selection table on page 255

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF220.UL.H101.10.04 – to your desired length (0.5 m steps)
CF220.ULH chainflex® series .101.10.04 Code hybrid bus element

Online order ▶ www.chainflex.eu/CF220.ULH

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Drilling machine for wooden plates equipped with latest Hybrid Cable Technology with Hiperface DSL

EU04.2019

EU04.2019

PVC | iguPUR | PUR | TPE

New

Servo cable | PVC | chainflex® CF21.UL

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

100 m
Travel distance, e-chain®

- For heavy duty applications
- PVC outer jacket
- Shielded
- Oil-resistant
- Flame retardant

New pair shielding for 30% faster harnessing

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.	80 m/s²	
Travel distance	Unsupported travels and up to 100 m for gliding applications, Class 5	

Cable structure

Conductor
Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).

Core insulation
Mechanically high-quality, especially low-capacitance TPE mixture.

Core structure
Power cores with control pair elements wound with elements for high tensile stresses.

Core identification
Power cores: Black cores with white numbers, one green-yellow core.
1. Core: U / L1 / C / L+
2. Core: V / L2
3. Core: W / L3 / D / L-
1 Control pair: Black cores with white numbers.
1. Control core: 4 2. Control core: 5
2 Control pairs: Black cores with white numbers.
1. Control core: 5 2. Control core: 6
3. Control core: 7 4. Control core: 8

Element shield
Extremely bending-resistant wrapping made of tinned copper wires.

Inner jacket
PVC mixture adapted to suit the requirements in e-chains®.

Overall shield
Extremely bending-resistant braiding made of tinned copper wires.
Coverage approx. 70 % linear, approx. 90 % optical

Outer jacket
Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1).
Colour: Moss green (similar to RAL 6005)

CFRIP®
Strip cables faster: a tear strip is moulded into the inner jacket
Video ▶ www.igus.eu/CFRIP

Class 5.5.2.1

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	**2**	3	4				highest
Torsion	none	**1**	2	3	4				±360°

Electrical information

Nominal voltage
600/1000 V (following DIN VDE 0298-3)

Testing voltage
4000 V (following DIN EN 50395)

Properties and approvals

UV resistance
Medium

Oil resistance
Oil-resistant (following DIN EN 50363-4-1), Class 2

Flame retardant
According to IEC 60332-1-2, CEI 20-35, FT1, VW-1

Silicone-free
Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)

UL/CSA
Style 10492 and 2570, 1000 V, 80 °C

NFPA
Following NFPA 79-2018, chapter 12.9

EAC
Certificate No. RU C-DE.ME77.B.02324 (TR ZU)

CTP
Certificate No. C-DE.PB49.B.00420 (Fire protection)

CEI
Following CEI 20-35

Lead-free
Following 2011/65/EC (RoHS-II)

Clean room
According to ISO Class 2. The outer jacket material of this series complies with CF5.10.07 - tested by IPA according to standard DIN EN ISO 14644-1

CE
Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	10	11	12
+15/+60	7.5	8.5	9.5
+60/+70	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heavy duty applications, Class 5
- Unsupported travel distances and up to 100 m for gliding applications, Class 5
- Light oil influence, Class 2
- No torsion, Class 1
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Storage and retrieval units for high-bay warehouses, machining units/ packaging machines, quick handling, indoor cranes

CF21.UL
PVC
7.5 x d

Servo cable | PVC | chainflex® CF21.UL

Strip cables 50% faster

Class 5.5.2.1

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	**2**	3	4	highest			
Torsion	none	**1**	2	3	4	±360°			

CF21.UL
PVC
7.5 x d

Example image

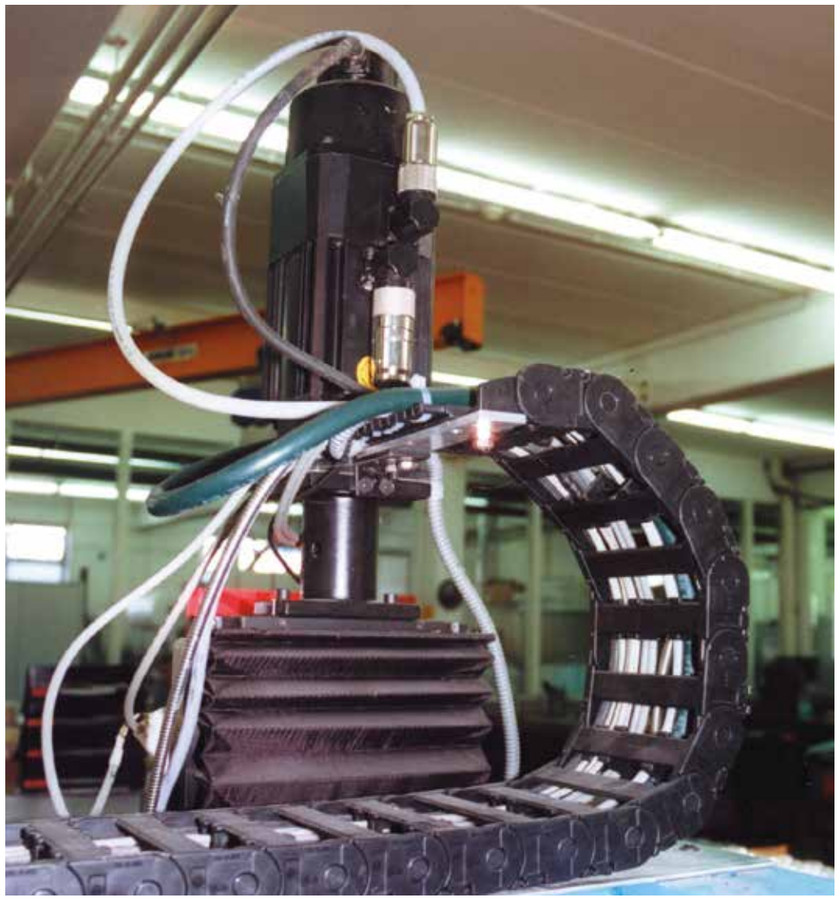
Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
1 Control pair shielded				
CF21.07.05.02.01.UL	(4G0.75+(2x0.5)C)C	11.5	83	185
CF21.15.15.02.01.UL	(4G1.5+(2x1.5)C)C	13.0	149	271
CF21.25.15.02.01.UL	(4G2.5+(2x1.5)C)C	14.5	203	334
CF21.40.15.02.01.UL	(4G4.0+(2x1.5)C)C	16.0	264	422
CF21.60.15.02.01.UL	(4G6.0+(2x1.5)C)C	18.0	345	558
CF21.100.15.02.01.UL	(4G10.0+(2x1.5)C)C	22.5	543	872
2 Control pairs shielded				
CF21.07.03.02.02.UL	(4G0.75+2x(2x0.34)C)C	12.5	109	223
CF21.10.07.02.02.UL	(4G1.0+2x(2x0.75)C)C	13.5	157	282
CF21.15.07.02.02.UL	(4G1.5+2x(2x0.75)C)C	14.5	180	328
CF21.25.15.02.02.UL	(4G2.5+2x(2x1.5)C)C	17.0	267	458
CF21.40.15.02.02.UL	(4G4.0+2x(2x1.5)C)C	18.5	324	538
CF21.60.15.02.02.UL	(4G6.0+2x(2x1.5)C)C	21.5	422	726
CF21.100.15.02.02.UL	(4G10.0+2x(2x1.5)C)C	24.0	606	968
CF21.160.15.02.02.UL	(4G16.0+2x(2x1.5)C)C	27.5	889	1323

[11] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF21.40.15.02.01.UL – to your desired length (0.5 m steps)
CF21.UL chainflex® series .40 Code nominal cross section .15 Code nominal cross section signal pairs .02 Identification pairs .01 Number of pairs

Online order ▶ www.chainflex.eu/CF21.UL

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.



chainflex® CF21.UL: cables for energy supply systems in spinneret production. e-chain®: E2/000

Servo cable | iguPUR | chainflex® CF897

Example image

5 million
Double strokes guaranteed

15 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- iguPUR outer jacket
- Oil-resistant
- Shielded
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 15 x d
	flexible	minimum 12 x d
	fixed	minimum 8 x d
Temperature	**e-chain® linear**	-20 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Power cores and control pair elements wound together in an optimised pitch length.
Core identification	**Power cores:** Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- **1 Control pair:** Black cores with white numbers. 1. Control core: 5 2. Control core: 6 **2 Control pairs:** Black cores with white numbers. 1. Control core: 5 2. Control core: 6 3. Control core: 7 4. Control core: 8
Element shield	Foil taping of optimised, bending-resistant foil shield.
Overall shield	Braiding made of tinned copper wires. Coverage approx. 60 % optical
Outer jacket	Low-adhesion iguPUR mixture, adapted to suit the requirements in e-chains®. Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

CF897
iguPUR
15 x d

Class 3.1.3.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m	
Oil resistance	none	1	2	**3**	4	highest			
Torsion	none	**1**	2	3	4	±360°			

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10492 and 20940, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01561 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00450 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	17.5	18.5	19.5
-10/+70	15	16	17
+70/+80	17.5	18.5	19.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- With influence of oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Machining units/machine tools, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
1 Control pair shielded				
CF897.15.15.02.01	(4G1.5+(2x1.5)C)C	12.5	124	194
CF897.25.15.02.01	(4G2.5+(2x1.5)C)C	13.5	182	259
CF897.40.15.02.01	(4G4.0+(2x1.5)C)C	14.5	236	337
2 Control pairs shielded				
CF897.15.15.02.02	(4G1.5+2x(2x1.5)C)C	13.5	164	251

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Servo cable | PUR | chainflex® CF270.UL.D

10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For medium duty applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Notch-resistant
- Flame retardant
- Hydrolysis and microbe-resistant
- PVC and halogen-free

Dynamic information

Bend radius	**e-chain® linear**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	2 m/s
a max.		50 m/s²
Travel distance		Unsupported travels and up to 10 m for gliding applications, Class 2

Cable structure

Conductor	Stranded conductor in bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Power cores and control pair elements wound with a short pitch length around a high tensile strength centre element.
Core identification	**Power cores:** Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- **1 Control pair:** Black cores with white numbers. 1. Control core: 4 2. Control core: 5 **2 Control pairs:** Black cores with white numbers. 1. Control core: 5 2. Control core: 6 3. Control core: 7 4. Control core: 8
Element shield	Bending-resistant braiding made of tinned copper wires.
Intermediate layer	Foil taping over the outer layer.
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage approx. 55 % linear, approx. 80 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Pastel orange (similar to RAL 2003)

Example image

Class 4.2.3.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	**2**	3	4	5	6	≥ 400 m	
Oil resistance	none	1	2	**3**	4	highest			
Torsion	none	**1**	2	3	4	±360°			

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	Style 10989 and 21223, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	12.5	13.5	14.5
-15/+70	10	11	12
+70/+80	12.5	13.5	14.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travel distances and up to 10 m for gliding applications, Class 2
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Machining units/machine tools, low temperature applications

EU04.2019

CF270.UL.D
PUR
10 x d

PVC | iguPUR | **PUR** | TPE

Servo cable | PUR | chainflex® CF270.UL.D

Class 4.2.3.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	**2**	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	**1**	2	3	4				±360°

CF270.UL.D
PUR
10 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
1 Control pair shielded				
CF270.UL.15.15.02.01.D	(4G1.5+(2x1.5)C)C	12.0	154	253
CF270.UL.25.15.02.01.D	(4G2.5+(2x1.5)C)C	14.0	210	292
CF270.UL.40.15.02.01.D	(4G4.0+(2x1.5)C)C	15.0	281	429
CF270.UL.60.15.02.01.D	(4G6.0+(2x1.5)C)C	16.5	375	531
CF270.UL.100.15.02.01.D	(4G10.0+(2x1.5)C)C	20.5	593	858
CF270.UL.160.15.02.01.D	(4G16.0+(2x1.5)C)C	24.0	873	1251
CF270.UL.250.15.02.01.D [11)]	(4G25.0+(2x1.5)C)C	28.5	1340	1599
2 Control pairs shielded				
CF270.UL.07.03.02.02.D	(4G0.75+2x(2x0.34)C)C	11.5	110	201
CF270.UL.10.07.02.02.D	(4G1.0+2x(2x0.75)C)C	13.0	147	256
CF270.UL.15.07.02.02.D	(4G1.5+2x(2x0.75)C)C	13.5	174	298
CF270.UL.25.15.02.02.D	(4G2.5+2x(2x1.5)C)C	16.0	268	421
CF270.UL.40.15.02.02.D	(4G4.0+2x(2x1.5)C)C	17.0	340	520
CF270.UL.60.15.02.02.D	(4G6.0+2x(2x1.5)C)C	18.5	438	644
CF270.UL.100.15.02.02.D	(4G10.0+2x(2x1.5)C)C	22.5	645	960
CF270.UL.160.15.02.02.D	(4G16.0+2x(2x1.5)C)C	26.0	920	1333
CF270.UL.250.15.02.02.D [11)]	(4G25.0+2x(2x1.5)C)C	28.5	1393	1874
without control pair				
CF270.UL.07.04.D	(4G0.75)C	8.0	49	94
CF270.UL.15.04.D	(4 G 1.5)C	9.5	85	151
CF270.UL.25.04.D	(4 G 2.5)C	11.5	145	231
CF270.UL.40.04.D	(4 G 4.0)C	12.5	217	323
CF270.UL.60.04.D	(4 G 6.0)C	14.5	316	444
CF270.UL.100.04.D	(4 G 10.0)C	18.0	510	712
CF270.UL.160.04.D	(4 G 16.0)C	22.0	798	1067
CF270.UL.250.04.D	(4 G 25.0)C	25.5	1220	1595
CF270.UL.350.04.D	(4 G 35.0)C	33.0	1728	2347
Spindle cable/Single core				
CF270.UL.60.01.D	(1x6.0)C	7.0	70	93
CF270.UL.100.01.D	(1 x 10.0)C	8.5	110	141
CF270.UL.160.01.D	(1 x 16.0)C	9.5	170	201
CF270.UL.250.01.D	(1 x 25.0)C	11.0	261	296
CF270.UL.350.01.D	(1 x 35.0)C	13.0	363	405
CF270.UL.500.01.D	(1 x 50.0)C	15.0	514	567
CF270.UL.700.01.D	(1 x 70.0)C	17.5	736	788

[11)] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF270.UL.40.15.02.01.D – to your desired length (0.5 m steps)
CF270.UL.D chainflex® series .40 Code nominal cross section .15 Code nominal cross section signal pairs .02 Identification pairs .01 Number of pairs

Online order ▶ www.chainflex.eu/CF270.UL.D

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

PVC | iguPUR | **PUR** | TPE

Hybrid servo cable | PUR | chainflex® CF280.ULH

10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For medium duty applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	2 m/s
a max.		50 m/s²
Travel distance		Unsupported travels and up to 10 m for gliding applications, Class 2

Cable structure

Conductor	Stranded conductor in bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Power cores and control pair elements wound with a short pitch length around a high tensile strength centre element.
Core identification	According to Servo-Hybrid specification. Latest data sheet ▶ www.chainflex.eu/CF280ULH
Element shield	Bending-resistant braiding made of tinned copper wires.
Intermediate layer	Foil taping over the outer layer.
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage approx. 55 % linear, approx. 80 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Pastel orange (similar to RAL 2003) Variants ▶ Product range table

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Example image

igus® chainflex® CF280.ULH

EPLAN download, configurators ▶ www.igus.eu/CF280.ULH

Class 4.2.3.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	**2**	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	▶ Product range table
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU
Info	As hybrid cables are always designed for specific drive systems, additional electrotechnical data may need to be considered. You will find more information in the latest datasheet for the cable series.

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	12.5	13.5	14.5
-15/+70	10	11	12
+70/+80	12.5	13.5	14.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travel distances and up to 10 m for gliding applications, Class 2
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Machining units/machine tools, low temperature applications

EU04.2019

CF280.ULH
PUR
10 x d

Hybrid servo cable | PUR | chainflex® CF280.ULH

Class 4.2.3.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	**2**	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	**1**	2	3	4				±360°

CF280.ULH
PUR
10 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]	Part No.	Hybrid technology	Manufacturer
Sick (Hiperface DSL) ▶ Style 10867 (11117 for AWG22) and 21223, 1000 V, 80 °C							
CF280.UL.H100.07.04.D	(4G0.75+(2x0.34)C +(2xAWG22)C)C	12.0	110	200	**CF280.UL.H100.07.04.D**	Sick (Hiperface DSL)	please see selection table on page 255
CF280.UL.H101.10.04.D	(4G1.0+(2x0.75)C +(2xAWG22)C)C	12.5	130	224	**CF280.UL.H101.10.04.D**	Sick (Hiperface DSL)	please see selection table on page 255
CF280.UL.H101.15.04.D	(4G1.5+(2x0.75)C +(2xAWG22)C)C	13.5	149	268	**CF280.UL.H101.15.04.D**	Sick (Hiperface DSL)	please see selection table on page 255
CF280.UL.H102.25.04.D	(4G2.5+(2x1.0)C +(2xAWG22)C)C	15.0	203	324	**CF280.UL.H102.25.04.D**	Sick (Hiperface DSL)	please see selection table on page 255
CF280.UL.H102.40.04.D	(4G4.0+(2x1.0)C +(2xAWG22)C)C	16.5	281	431	**CF280.UL.H102.40.04.D**	Sick (Hiperface DSL)	please see selection table on page 255
CF280.UL.H102.60.04.D	(4G6.0+(2x1.0)C +(2xAWG22)C)C	18.0	369	564	**CF280.UL.H102.60.04.D**	Sick (Hiperface DSL)	please see selection table on page 255
SEW ▶ Style 10989 and 21223, 1000 V, 80 °C							
CF280.UL.H200.15.07.D [15]	(7x1.5+(2x0.75)C)C	16.5	202	354	**CF280.UL.H200.15.07.D** [15]	SEW Kabeltyp A/1,5	SEW
CF280.UL.H200.25.07.D [15]	(7x2.5+(2x0.75)C)C	20.0	289	521	**CF280.UL.H200.25.07.D** [15]	SEW Kabeltyp A/2,5	SEW
CF280.UL.H201.15.04.D [15]	4G1.5+(2x0.75)C+(3x0.75)C	14.0	139	272	**CF280.UL.H201.15.04.D** [15]	SEW Kabeltyp B/1,5	SEW
CF280.UL.H201.25.04.D [15]	4G2.5+(2x0.75)C+(3x0.75)C	15.0	183	318	**CF280.UL.H201.25.04.D** [15]	SEW Kabeltyp B/2,5	SEW
CF280.UL.H203.15.04.D	(4G1.5+(3x1.0)C)C	12.0	158	253	**CF280.UL.H203.15.04.D**	SEW Kabeltyp E/1,5	SEW
CF280.UL.H203.25.04.D	(4G2.5+(3x1.0)C)C	14.0	193	310	**CF280.UL.H203.25.04.D**	SEW Kabeltyp E/2,5	SEW
CF280.UL.H204.15.04.D	(4G1.5+(2x0.75)C+(3x1.0)C)C	15.0	200	340	**CF280.UL.H204.15.04.D**	SEW Kabeltyp D/1,5	SEW
CF280.UL.H206.40.04.D	(4G4.0+(2x0.75)C+(3x1.5)C)C	18.0	339	482	**CF280.UL.H206.40.04.D**	SEW Kabeltyp D/4,0	SEW
CF280.UL.H206.60.04.D	(4G6.0+(2x0.75)C+(3x1.5)C)C	19.5	431	648	**CF280.UL.H206.60.04.D**	SEW Kabeltyp D/6,0	SEW
SINAMICS S210 ▶ Style 10867 and 20233, 300 V, 80 °C							
CF280.UL.H300.03.04.D	(4G0.34+(2x0.34)C +(4xAWG26)C)C	10.0	77	133	**CF280.UL.H300.03.04.D**	SINAMICS S210	Siemens
CF280.UL.H301.07.04.D	(4G0.75+(2x0.5)C +(4xAWG26)C)C	11.0	103	160	**CF280.UL.H301.07.04.D**	SINAMICS S210	Siemens
CF280.UL.H400.25.05.D	(5x2.5+(5x0.35)+(4x0.35)C)C	17.0	240	389	**CF280.UL.H400.25.05.D**	IndraDrive	Bosch Rexroth
IndraDrive ▶ Style 10867 (0.35 mm²), 11117 (Bus element), 10989 (2.5 mm²) and 21223, 1000 V, 80 °C							
CF280.UL.H501.15.04.D	(4G1.5+(2x0.75)C +(2x2x0.14+2x0.25)C)C	15.0	181	281	**CF280.UL.H501.15.04.D**	Heidenhain	B&R
CF280.UL.H502.40.04.D	(4G4.0+(2x1.0)C +(2x2x0.14+2x0.25)C)C	17.0	295	407	**CF280.UL.H502.40.04.D**	Heidenhain	B&R
isH Servo ▶ Style 10867 (AWG24/0.25 mm²), Style 10989 (2.5 mm²) and 21223, 1000 V, 80 °C							
CF280.UL.H601.25.05 [13]	5G2.5+(4xAWG24)C+(2x0.25)C	14.5	158	289	**CF280.UL.H601.25.05** [15]	isH Servo	ELAU/Schneider Electric

[13] Colour outer jacket: Yellowgreen (RAL 6018)
[15] Colour outer jacket: Jet black (RAL 9005)
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x** = without earth core

igus EU04.2019 EU04.2019 igus

PVC | iguPUR | **PUR** | TPE

New

Servo cable | PUR | chainflex® CF27.D

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

100 m
Travel distance, e-chain®

- For extremely heavy duty applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Notch-resistant
- Flame retardant
- Hydrolysis and microbe-resistant
- PVC and halogen-free

New pair shielding for 30% faster harnessing

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.	80 m/s²	
Travel distance	Unsupported travels and up to 100 m for gliding applications, Class 5	

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Power cores with control pair elements wound with elements for high tensile stresses.
Core identification	**Power cores:** Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- **1 Control pair:** Black cores with white numbers. 1. Control core: 4 2. Control core: 5 **2 Control pairs:** Black cores with white numbers. 1. Control core: 5 2. Control core: 6 3. Control core: 7 4. Control core: 8 **Star quad:** yellow, black, red, white
Element shield	Extremely bending-resistant wrapping made of tinned copper wires.
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Pastel orange (similar to RAL 2003)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ▶ www.igus.eu/CFRIP

Class 6.5.3.1

Basic requirements	low	1	2	3	4	5	**6**	7 highest
Travel distance	unsupported	1	2	3	4	**5**	6	≥ 400 m
Oil resistance	none	1	2	**3**	4	highest		
Torsion	none	**1**	2	3	4	±360°		

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	Style 10492 and 20234, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
DNV-GL	Type approval certificate No. 61 938-14 HH
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	10	11	12
-15/+70	7.5	8.5	9.5
+70/+80	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For extremely heavy duty applications, Class 6
- Unsupported travel distances and up to 100 m for gliding applications, Class 5
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

EU04.2019

CF27.D
PUR
7.5 x d

PVC | iguPUR | **PUR** | TPE

Servo cable | PUR | chainflex® CF27.D

Strip cables 50% faster

Class 6.5.3.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	**1**	2	3	4				±360°

CF27.D
PUR
7.5 x d

Example image

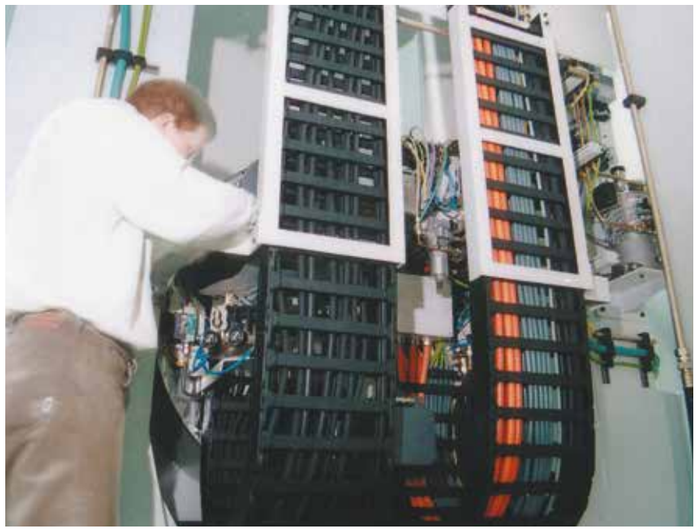
Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
1 Control pair shielded				
CF27.07.05.02.01.D	(4G0.75+(2x0.5)C)C	11.5	89	178
CF27.15.15.02.01.D	(4G1.5+(2x1.5)C)C	13.0	149	254
CF27.25.15.02.01.D	(4G2.5+(2x1.5)C)C	14.5	205	325
CF27.40.15.02.01.D	(4G4.0+(2x1.5)C)C	16.0	265	415
CF27.60.15.02.01.D	(4G6.0+(2x1.5)C)C	18.0	343	530
CF27.100.15.02.01.D	(4G10.0+(2x1.5)C)C	21.0	542	762
CF27.160.15.02.01.D	(4G16.0+(2x1.5)C)C	24.5	797	1074
CF27.250.15.02.01.D	(4G25.0+(2x1.5)C)C	28.5	1163	1539
CF27.350.15.02.01.D	(4G35.0+(2x1.5)C)C	32.5	1592	2104
2 Control pairs shielded				
CF27.07.03.02.02.D	(4G0.75+2x(2x0.34)C)C	12.5	109	205
CF27.10.07.02.02.D	(4G1.0+2x(2x0.75)C)C	13.5	157	263
CF27.15.07.02.02.D	(4G1.5+2x(2x0.75)C)C	14.0	178	297
CF27.25.15.02.02.D	(4G2.5+2x(2x1.5)C)C	17.0	266	421
CF27.40.15.02.02.D	(4G4.0+2x(2x1.5)C)C	18.0	324	490
CF27.60.15.02.02.D	(4G6.0+2x(2x1.5)C)C	20.0	420	634
CF27.100.15.02.02.D	(4G10.0+2x(2x1.5)C)C	23.5	606	882
CF27.160.15.02.02.D	(4G16.0+2x(2x1.5)C)C	26.5	889	1202
CF27.250.15.02.02.D	(4G25.0+2x(2x1.5)C)C	31.0	1224	1701
1 Star-quad shielded				
CF27.15.05.04.D	(4G1.5+(4x0.5)C)C	13.0	136	240
CF27.25.05.04.D	(4G2.5+(4x0.5)C)C	14.5	185	302
CF27.40.05.04.D	(4G4.0+(4x0.5)C)C	16.0	253	395
without control pair				
CF27.07.04.D	(4G0.75)C	9.0	58	114
CF27.15.04.D	(4G1.5)C	10.5	89	163
CF27.25.04.D	(4G2.5)C	12.5	133	227
CF27.500.04.D	(4G50.0)C	37.0	2244	2832

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF27.40.15.02.01.D – to your desired length (0.5 m steps)
CF27.D chainflex® series

Online order ▶ www.chainflex.eu/CF27.D

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.



Modular design, easy to retrofit: igus® E4 e-chain® and chainflex® cables.

PVC | iguPUR | PUR | **TPE**

New

Servo cable | TPE | chainflex® CF29.D

10 million Double strokes guaranteed

6.8 x d Bend radius, e-chain®

400 m Travel distance, e-chain®

- For heaviest duty applications
- TPE outer jacket
- Shielded
- Oil and bio-oil resistant
- PVC and halogen-free
- UV-resistant
- Hydrolysis and microbe-resistant

Optimised core insulation

Dynamic information

Bend radius	**e-chain® linear**	minimum 6.8 x d
	flexible	minimum 5 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-35 °C up to +100 °C
	flexible	-50 °C up to +100 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +100 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.	80 m/s²	
Travel distance	Unsupported travel distances and up to 400 m and more for gliding applications, Class 6	

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Power cores with control pair elements wound with elements for high tensile stresses.
Core identification	**Power cores:** Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- **1 Control pair:** Black cores with white numbers. 1. Control core: 4 2. Control core: 5
Element shield	Extremely bending-resistant braiding made of tinned copper wires.
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Example image

EPLAN download, configurators ▶ www.igus.eu/CF29.D

EU04.2019

Class 7.6.4.1

Basic requirements	low	1	2	3	4	5	6	**7**	highest
Travel distance	unsupported	1	2	3	4	5	**6**	≥ 400 m	
Oil resistance	none	1	2	3	**4**	highest			
Torsion	none	**1**	2	3	4	±360°			

Properties and approvals

UV resistance	Medium
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
EAC	Certificate No. RU C-DE.ME77.B.02806 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+90	7.5	8.5	9.5
+90/+100	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications, Class 7
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant, Class 4
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
1 Control pair shielded				
CF29.15.15.02.01.D	(4G1.5+(2x1.5)C)C	13.0	143	230
CF29.25.15.02.01.D	(4G2.5+(2x1.5)C)C	14.0	191	290
CF29.40.15.02.01.D	(4G4.0+(2x1.5)C)C	15.5	258	378

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

CF29.D
TPE
6.8 x d

Motor cables

chainflex® cable	Jacket	Shield	Minimum bend radius. e-chain® [factor x d]	Temperature. e-chain® from/to [°C]	Approvals and standards	Oil-resistant	Torsion resistant	v max. [m/s]. unsupported	v max. [m/s] gliding	a max. [m/s²]	Page	
Motor cables												
CF885	PVC		15	+5/+70				3		20	292	
CF886	PVC	✓	15	+5/+70				3		20	294	
CF210.UL	PVC	✓	10	+5/+70		✓		10	2	50	296	
CF30	PVC		7.5	+5/+70		✓	✓	10	5	80	298	New
CF31	PVC	✓	7.5	+5/+70		✓		10	5	80	302	New
CF895	iguPUR		15	-20/+80		✓		3		20	306	
CF896	iguPUR	✓	15	-20/+80		✓		3		20	308	
CF270.UL.D	PUR	✓	10	-25/+80		✓		10	2	50	310	
CF27.D	PUR	✓	7.5	-25/+80		✓		10	5	80	314	New
CF34.UL.D	TPE		7.5	-35/+90		✓	✓	10	6	80	318	New
CF35.UL	TPE	✓	7.5	-35/+90		✓		10	6	80	322	New
CF37.D	TPE		7.5	-35/+90		✓	✓	10	6	80	326	New
CF38	TPE	✓	7.5	-35/+90		✓		10	6	80	328	New
Spindle cables/Single cores												
CF885	PVC		15	+5/+70				3		20	330	
CF885.PE	PVC		15	+5/+70				3		20	332	
CF886	PVC	✓	15	+5/+70				3		20	334	
CF270.UL.D	PUR	✓	10	-25/+80		✓		10	2	50	336	
CF300.UL.D	TPE		7.5	-35/+90		✓	✓	10	6	100	338	
CFPE	TPE		7.5	-35/+90		✓	✓	10	6	100	340	
CF310.UL	TPE	✓	7.5	-35/+90		✓		10	6	100	342	
CF330.D	TPE		7.5	-35/+90		✓	✓	10	6	100	344	
CF340	TPE	✓	7.5	-35/+90		✓		10	6	100	346	
Medium voltage cables												
CFCRANE.PUR	PUR	✓	10	-20/+80		✓		10	6	50	348	
CFCRANE	igupren	✓	10	-20/+80		✓		10	6	50	350	

Guarantee igus chainflex 36 month guarantee

36 month chainflex® guarantee

Guaranteed lifetime for predictable reliability

▶Selection table page 288

With the help of the chainflex® service life calculator, you can quickly and easily calculate the expected service life of chainflex® cables specifically for your application:

www.igus.eu/chainflexlife

chainflex® guarantee ▶▶ Guaranteed lifetime (1)

	chainflex® cable		Temperature, from/to [°C]	v max. [m/s] unsupported	v max. [m/s] gliding	a max. [m/s²]	Travel distance [m]	Minimum bend radius [factor x d] 5 million (1 million) double strokes *	Minimum bend radius [factor x d] 7.5 million (3 million) double strokes *	Minimum bend radius [factor x d] 10 million (5 million) double strokes *	Page
Motor cables											
	CF885		+5 / +15 +15 / +60 +60 / +70	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5	292
	CF886		+5 / +15 +15 / +60 +60 / +70	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5	294
	CF210.UL		+5 / +15 +15 / +60 +60 / +70	10	2	50	≤ 10	12.5 10 12.5	13.5 11 13.5	14.5 12 14.5	296
	CF30	New!	+5 / +15 +15 / +60 +60 / +70	10	5	80	≤ 100	10 7.5 10	11 8.5 11	12 9.5 12	298
	CF31	New!	+5 / +15 +15 / +60 +60 / +70	10	5	80	≤ 100	10 7.5 10	11 8.5 11	12 9.5 12	302
	CF895		-20 / -10 -10 / +70 +70 / +80	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5	306
	CF896		-20 / -10 -10 / +70 +70 / +80	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5	308
	CF270.UL.D		-25 / -15 -15 / +70 +70 / +80	10	2	50	≤ 10	12.5 10 12.5	13.5 11 13.5	14.5 12 14.5	310
	CF27.D	New!	-25 / -15 -15 / +70 +70 / +80	10	5	80	≤ 100	10 7.5 10	11 8.5 11	12 8.5 12	314
	CF34.UL.D	New!	-35 / -25 -25 / +80 +80 / +90	10	6	80	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12	318
	CF35.UL	New!	-35 / -25 -25 / +80 +80 / +90	10	6	80	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12	322
	CF37.D	New!	-35 / -25 -25 / +80 +80 / +90	10	6	80	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12	326
	CF38	New!	-35 / -25 -25 / +80 +80 / +90	10	6	80	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12	328

(1) Exclusive! Guaranteed lifetime for this series according to the guarantee conditions ▶ Page 22-23

* Higher number of double strokes? Online lifetime calculation ▶ www.igus.eu/chainflexlife
Figures in brackets refer to chainflex® series CF885/CF886 and CF895/CF896

chainflex® guarantee ▶▶ Guaranteed lifetime (1)

	chainflex® cable	Temperature, from/to [°C]	v max. [m/s] unsupported	v max. [m/s] gliding	a max. [m/s²]	Travel distance [m]	Minimum bend radius [factor x d] 5 million (1 million) double strokes *	Minimum bend radius [factor x d] 7.5 million (3 million) double strokes *	Minimum bend radius [factor x d] 10 million (5 million) double strokes *	Page
Spindle cables/Single cores										
	CF885	+5 / +15 +15 / +60 +60 / +70	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5	330
	CF885.PE	+5 / +15 +15 / +60 +60 / +70	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5	332
	CF886	+5 / +15 +15 / +60 +60 / +70	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5	334
	CF270.UL.D	-25 / -15 -15 / +70 +70 / +80	10	2	50	≤ 10	12.5 10 12.5	13.5 11 13.5	14.5 12 14.5	336
	CF300.UL.D	-35 / -25 -25 / +80 +80 / +90	10	6	100	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12	338
	CFPE	-35 / -25 -25 / +80 +80 / +90	10	6	100	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12	340
	CF310.UL	-35 / -25 -25 / +80 +80 / +90	10	6	100	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12	342
	CF330.D	-35 / -25 -25 / +80 +80 / +90	10	6	100	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12	344
	CF340	-35 / -25 -25 / +80 +80 / +90	10	6	100	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12	346
Medium voltage cables										
	CFCRANE.PUR	-20 / -10 -10 / +70 +70 / +80	10	6	50	≤ 400	12.5 10 12.5	13.5 11 13.5	14.5 12 14.5	348
	CFCRANE	-20 / -10 -10 / +70 +70 / +80	10	6	50	≤ 400	12.5 10 12.5	13.5 11 13.5	14.5 12 14.5	350

(1) Exclusive! Guaranteed lifetime for this series according to the guarantee conditions ▶ Page 22-23

* Higher number of double strokes? Online lifetime calculation ▶ www.igus.eu/chainflexlife
Figures in brackets refer to chainflex® series CF885 and CF886

Motor cable | PVC | chainflex® CF885

Example image

5 million
Double strokes guaranteed

15 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- PVC outer jacket
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 15 x d
	flexible	minimum 12 x d
	fixed	minimum 8 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Cores wound with an optimised pitch length.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L-
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Class 3.1.1.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6		≥ 400 m
Oil resistance	none	**1**	2	3	4				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10492 and 2570, 1000 V, 80 °C
EAC	Certificate No. RU C-DE.ME77.B.01561 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00450 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	17.5	18.5	19.5
+15/+60	15	16	17
+60/+70	17.5	18.5	19.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF885.15.04	4G1.5	9.0	60	118
CF885.25.04	4G2.5	10.5	100	176
CF885.40.04	4G4.0	12.0	159	256
CF885.60.04	4G6.0	14.0	238	358
CF885.100.04	4G10.0	16.5	396	546
CF885.160.04	4G16.0	20.0	627	843

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Motor cable | PVC | chainflex® CF886

Example image

5 million Double strokes guaranteed

15 x d Bend radius, e-chain®

10 m Travel distance, e-chain®

- For flexing applications
- PVC outer jacket
- Shielded
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 15 x d
	flexible	minimum 12 x d
	fixed	minimum 8 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Cores wound with an optimised pitch length.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L-
Overall shield	Braiding made of tinned copper wires. Coverage approx. 60 % optical
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Class 3.1.1.1

Basic requirements	low	1	2	**3**	4	5	6	7 highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m
Oil resistance	none	**1**	2	3	4	highest		
Torsion	none	**1**	2	3	4	±360°		

Properties and approvals

Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10492 and 2570, 1000 V, 80 °C
EAC	Certificate No. RU C-DE.ME77.B.01561 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00450 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	17.5	18.5	19.5
+15/+60	15	16	17
+60/+70	17.5	18.5	19.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application arease

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight
	[mm²]	[mm]	[kg/km]	[kg/km]
CF886.15.04	(4G1.5)C	9.5	79	133
CF886.25.04	(4G2.5)C	11.0	122	191
CF886.40.04	(4G4.0)C	13.0	186	270
CF886.60.04	(4G6.0)C	14.5	278	381
CF886.100.04	(4G10.0)C	17.5	444	571
CF886.160.04	(4G16.0)C	20.5	691	854

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Motor cable | PVC | chainflex® CF210.UL

10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For medium duty applications
- PVC outer jacket
- Shielded
- Oil-resistant
- Flame retardant

Example image

Dynamic information

Bend radius	e-chain® linear	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	e-chain® linear	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	unsupported	10 m/s
	gliding	2 m/s
a max.		50 m/s²
Travel distance		Unsupported travels and up to 10 m for gliding applications, Class 2

Cable structure

Conductor	Stranded conductor in bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Cores wound with high tensile strength centre elements.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L-
Intermediate layer	Foil taping over the outer layer.
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage approx. 55 % linear, approx. 80 % optical
Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Class 4.2.2.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	**2**	3	4	5	6		≥ 400 m
Oil resistance	none	1	**2**	3	4	highest			
Torsion	none	**1**	2	3	4	±360°			

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10989 and 2570, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 2. The outer jacket material of this series complies with CF5.10.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	12.5	13.5	14.5
+15/+60	10	11	12
+60/+70	12.5	13.5	14.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application arease

- For medium duty applications, Class 4
- Unsupported travel distances and up to 10 m for gliding applications, Class 2
- Light oil influence, Class 2
- No torsion, Class 1
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF210.UL.15.04	(4G1.5)C	9.5	85	151
CF210.UL.25.04	(4G2.5)C	11.5	145	231
CF210.UL.40.04	(4G4.0)C	12.5	217	323

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x** = without earth core

CF210.UL
PVC
10 x d

PVC | iguPUR | PUR | TPE

New

Motor cable | PVC | chainflex® CF30

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

100 m
Travel distance, e-chain®

- For heavy duty applications
- PVC outer jacket
- Oil-resistant
- Flame retardant

Optimised core insulation

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.		80 m/s²
Travel distance		Unsupported travels and up to 100 m for gliding applications, Class 5
Torsion		± 90°, with 1 m cable length, Class 2

Cable structure

Conductor	**Cores < 10 mm²:** Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228). **Cores ≥ 10 mm²:** Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Cores wound with a short pitch length around a high tensile strength centre element.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- 4. Core: 4 / N
Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Jet black (similar to RAL 9005)
CFRIP®	Strip cables faster: a tear strip is moulded into the outer jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Example image

Class 5.5.2.2

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	**2**	3	4				highest
Torsion	none	1	**2**	3	4				±360°

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10492 and 2570, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 2. The outer jacket material of this series complies with CF5.10.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	10	11	12
+15/+60	7.5	8.5	9.5
+60/+70	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heavy duty applications, Class 5
- Unsupported travel distances and up to 100 m for gliding applications, Class 5
- Light oil influence, Class 2
- Torsion ± 90°, with 1 m cable length, Class 2
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Storage and retrieval units for high-bay warehouses, machining units/ packaging machines, quick handling, indoor cranes

CF30
PVC
7.5 x d

Motor cable | PVC | chainflex® CF30

Strip cables 50% faster

Class 5.5.2.2

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	**2**	3	4				highest
Torsion	none	1	**2**	3	4				±360°

CF30
PVC
7.5 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF30.15.04	4G1.5	8.5	61	103
CF30.25.04	4G2.5	10.5	100	168
CF30.25.05	5G2.5	11.5	124	203
CF30.40.04	4G4.0	12.0	163	236
CF30.40.05	5G4.0	13.0	204	301
CF30.60.04	4G6.0	14.0	237	337
CF30.60.05	5G6.0	15.5	297	425
CF30.100.04	4G10.0	17.5	407	570
CF30.100.05	5G10.0	20.0	510	727
CF30.160.04	4G16.0	21.0	646	869
CF30.160.05	5G16.0	24.0	815	1102
CF30.250.04	4G25.0	25.5	1014	1340
CF30.350.04	4G35.0	29.0	1439	1674
CF30.500.04	4G50.0	35.0	2061	2607

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF30.15.04 – to your desired length (0.5 m steps)
CF30 chainflex® series .15 Code nominal cross section .04 Number of cores

Online order ▶ www.chainflex.eu/CF30

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core

PVC | iguPUR | PUR | TPE

New

Motor cable | PVC | chainflex® CF31

10 million Double strokes guaranteed

7.5 x d Bend radius, e-chain®

100 m Travel distance, e-chain®

- For heavy duty applications
- PVC outer jacket
- Shielded
- Oil-resistant
- Flame retardant

Optimised core insulation

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.		80 m/s²
Travel distance		Unsupported travels and up to 100 m for gliding applications, Class 5

Cable structure

Conductor	**Cores < 10 mm²:** Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228). **Cores ≥ 10 mm²:** Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Cores wound with a short pitch length around a high tensile strength centre element.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- 4. Core: 4 / N
Inner jacket	PVC mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Jet black (similar to RAL 9005)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Class 5.5.2.1

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	**2**	3	4				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10492 and 2570, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 2. The outer jacket material of this series complies with CF5.10.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	10	11	12
+15/+60	7.5	8.5	9.5
+60/+70	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application arease

- For heavy duty applications, Class 5
- Unsupported travel distances and up to 100 m for gliding applications, Class 5
- Light oil influence, Class 2
- No torsion, Class 1
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Storage and retrieval units for high-bay warehouses, machining units/ packaging machines, quick handling, indoor cranes

CF31
PVC
7.5 x d

Motor cable | PVC | chainflex® CF31

Strip cables 50% faster

Class 5.5.2.1

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	**2**	3	4	highest			
Torsion	none	**1**	2	3	4	±360°			

CF31
PVC
7.5 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF31.15.04	(4G1.5)C	10.5	89	163
CF31.25.04	(4G2.5)C	12.0	133	241
CF31.25.05	(5G2.5)C	13.0	163	284
CF31.40.04	(4G4.0)C	13.5	203	314
CF31.40.05	(5G4.0)C	15.0	263	383
CF31.60.04	(4G6.0)C	16.0	298	467
CF31.60.05	(5G6.0)C	18.0	361	538
CF31.100.04	(4G10.0)C	20.5	505	762
CF31.100.05	(5G10.0)C	22.5	637	910
CF31.160.04	(4G16.0)C	23.5	763	1069
CF31.250.04	(4G25.0)C	28.5	1163	1629
CF31.350.04	(4G35.0)C	32.5	1592	2183
CF31.500.04	(4G50.0)C	37.5	2244	3001
CF31.700.04	(4G70.0)C	43.0	3203	3834

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF31.15.04 – to your desired length (0.5 m steps)
CF31 chainflex® series .15 Code nominal cross section .04 Number of cores

Online order ▶ www.chainflex.eu/CF31

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Motor cable | iguPUR | chainflex® CF895

Example image

5 million
Double strokes guaranteed

15 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- iguPUR outer jacket
- Oil-resistant
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 15 x d
	flexible	minimum 12 x d
	fixed	minimum 8 x d
Temperature	**e-chain® linear**	-20 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Cores wound with an optimised pitch length.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L-
Outer jacket	Low-adhesion iguPUR mixture, adapted to suit the requirements in e-chains®. Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Class 3.1.3.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10492 and 20940, 1000 V, 80 °C
EAC	Certificate No. RU C-DE.ME77.B.01561 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00450 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	17.5	18.5	19.5
-10/+70	15	16	17
+70/+80	17.5	18.5	19.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application arease

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- With influence of oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Machining units/machine tools, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF895.15.04	4G1.5	9.0	60	110
CF895.25.04	4G2.5	10.0	100	165
CF895.40.04	4G4.0	12.0	159	242
CF895.60.04	4G6.0	14.0	238	340
CF895.100.04	4G10.0	16.5	396	522
CF895.160.04	4G16.0	20.0	627	808

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

CF895
iguPUR
15 x d

Motor cable | iguPUR | chainflex® CF896

Example image

5 million
Double strokes guaranteed

15 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- iguPUR outer jacket
- Oil-resistant
- Shielded
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 15 x d
	flexible	minimum 12 x d
	fixed	minimum 8 x d
Temperature	**e-chain® linear**	-20 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Cores wound with an optimised pitch length.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L-
Overall shield	Braiding made of tinned copper wires. Coverage approx. 60 % optical
Outer jacket	Low-adhesion iguPUR mixture, adapted to suit the requirements in e-chains®. Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Class 3.1.3.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m	
Oil resistance	none	1	2	**3**	4	highest			
Torsion	none	**1**	2	3	4	±360°			

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10492 and 20940, 1000 V, 80 °C
EAC	Certificate No. RU C-DE.ME77.B.01561 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00450 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	17.5	18.5	19.5
-10/+70	15	16	17
+70/+80	17.5	18.5	19.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application arease

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- With influence of oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Machining units/machine tools, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF896.15.04	(4G1.5)C	9.0	79	126
CF896.25.04	(4G2.5)C	10.5	122	182
CF896.40.04	(4G4.0)C	12.5	186	259
CF896.60.04	(4G6.0)C	14.5	278	367
CF896.100.04	(4G10.0)C	17.5	444	553
CF896.160.04 [11)]	(4G16.0)C	20.5	691	831

[11)] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x** = without earth core

CF896
iguPUR
15 x d

Motor cable | PUR | chainflex® CF270.UL.D

10 million Double strokes guaranteed

10 x d Bend radius, e-chain®

10 m Travel distance, e-chain®

- For medium duty applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Notch-resistant
- Flame retardant
- Hydrolysis and microbe-resistant
- PVC and halogen-free

Example image

Dynamic information

Bend radius	e-chain® linear	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	e-chain® linear	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	unsupported	10 m/s
	gliding	2 m/s
a max.		50 m/s²
Travel distance		Unsupported travels and up to 10 m for gliding applications, Class 2

Cable structure

Conductor	Stranded conductor in bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Cores wound with high tensile strength centre elements.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L-
Intermediate layer	Foil taping over the external layer.
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage approx. 55 % linear, approx. 80 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Class 4.2.3.1

Basic requirements	low 1 2 3 **4** 5 6 7 highest
Travel distance	unsupported 1 **2** 3 4 5 6 ≥ 400 m
Oil resistance	none 1 2 **3** 4 highest
Torsion	none **1** 2 3 4 ±360°

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	Style 10989 and 21223, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	12.5	13.5	14.5
-15/+70	10	11	12
+70/+80	12.5	13.5	14.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travel distances and up to 10 m for gliding applications, Class 2
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Machining units/machine tools, low temperature applications

CF270.UL.D
PUR
10 x d

Motor cable | PUR | chainflex® CF270.UL.D

Class 4.2.3.1

Basic requirements	low	1	2	3	**4**	5	6	7	highest
Travel distance	unsupported	1	**2**	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	**1**	2	3	4				±360°

CF270.UL.D
PUR
10 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF270.UL.07.04.D	(4G0.75)C	8.0	49	94
CF270.UL.15.04.D	(4 G 1.5)C	9.5	85	151
CF270.UL.25.04.D	(4 G 2.5)C	11.5	145	231
CF270.UL.40.04.D	(4 G 4.0)C	12.5	217	323
CF270.UL.60.04.D	(4 G 6.0)C	14.5	316	444
CF270.UL.100.04.D	(4 G 10.0)C	18.0	510	712
CF270.UL.160.04.D	(4 G 16.0)C	22.0	798	1067
CF270.UL.250.04.D	(4 G 25.0)C	25.5	1220	1595
CF270.UL.350.04.D	(4 G 35.0)C	33.0	1728	2347

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF270.UL.07.04.D – to your desired length (0.5 m steps)
CF270.UL.D chainflex® series .07 Code nominal cross section .04 Number of cores

Online order ▶ www.chainflex.eu/CF270.UL.D

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

igus EU04.2019 EU04.2019 igus

PVC | iguPUR | **PUR** | TPE

New

Motor cable | PUR | chainflex® CF27.D

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

100 m
Travel distance, e-chain®

- For extremely heavy duty applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Notch-resistant
- Flame retardant
- Hydrolysis and microbe-resistant
- PVC and halogen-free

Optimised core insulation

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.	80 m/s²	
Travel distance	Unsupported travels and up to 100 m for gliding applications, Class 5	

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Cores wound around a high tensile strength centre element.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L-
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Pastel orange (similar to RAL 2003)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

EPLAN download, configurators ▶ www.igus.eu/CF27.D

Class 6.5.3.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	Style 10492 and 20234, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
DNV-GL	Type approval certificate No. 61 938-14 HH
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	10	11	12
-15/+70	7.5	8.5	9.5
+70/+80	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For extremely heavy duty applications, Class 6
- Unsupported travel distances and up to 100 m for gliding applications, Class 5
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

EU04.2019

CF27.D
PUR
7.5 x d

PVC | iguPUR | **PUR** | TPE

Motor cable | PUR | chainflex® CF27.D

Strip cables 50% faster

Class 6.5.3.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	**5**	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	**1**	2	3	4				±360°

CF27.D
PUR
7.5 x d

Example image

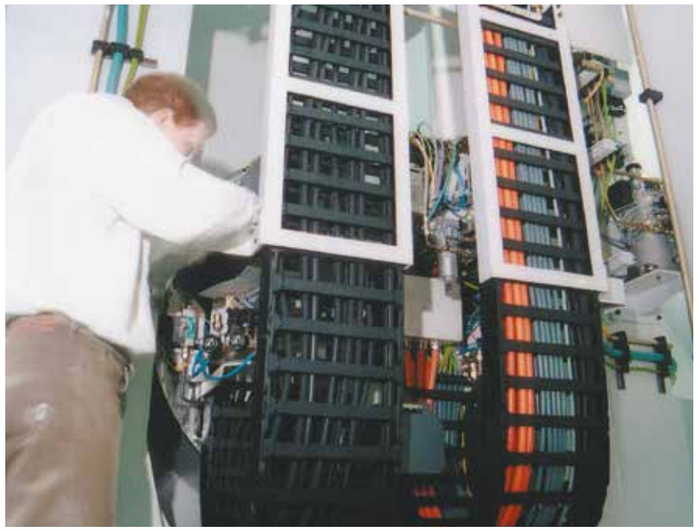
Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF27.07.04.D	(4G0.75)C	9.0	58	114
CF27.15.04.D	(4G1.5)C	10.5	89	163
CF27.25.04.D	(4G2.5)C	12.5	133	227
CF27.500.04.D	(4G50.0)C	37.0	2244	2832

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF27.07.04.D – to your desired length (0.5 m steps)
CF27.D chainflex® series .07 Code nominal cross section .04 Number of cores

Online order ▶ www.chainflex.eu/CF27.D

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.



Modular design, easy to retrofit: igus® E4 e-chain® and chainflex® cables.

PVC | iguPUR | PUR | **TPE**

New

Motor cable | TPE | chainflex® CF34.UL.D

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Oil and bio-oil resistant
- Flame retardant
- UV-resistant
- Hydrolysis and microbe-resistant

Optimised core insulation

Dynamic information

Bend radius	e-chain® linear	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	e-chain® linear	-35 °C up to +90 °C
	flexible	-45 °C up to +90 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +90 °C (following DIN EN 50305)
v max.	unsupported	10 m/s
	gliding	6 m/s
a max.		80 m/s²
Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
Torsion		± 90°, with 1 m cable length, Class 2

Cable structure

Conductor	**Cores < 10 mm²:** Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228). **Cores ≥ 10 mm²:** Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Cores wound with a short pitch length around a high tensile strength centre element.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- 4. Core: 4 / N
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Signal black (similar to RAL 9004)
CFRIP®	Strip cables faster: a tear strip is moulded into the outer jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Example image

Class 6.6.4.2

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	5	**6**		≥ 400 m
Oil resistance	none	1	2	3	**4**				highest
Torsion	none	1	**2**	3	4				±360°

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	**Cores ≤ 1.5 mm²:** Style 10492 and 22188, 1000 V, 80 °C **Cores ≥ 2.5 mm²:** Style 10492 and 21184 or 21218, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
DNV-GL	Type approval certificate No. 61 938-14 HH
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1, material/cable tested by IPA according to DIN EN ISO standard 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For extremely heavy duty applications, Class 6
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ± 90°, with 1 m cable length, Class 2
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

CF34.UL.D
TPE
7.5 x d

Motor cable | TPE | chainflex® CF34.UL.D

Strip cables 50% faster

Class 6.6.4.2

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	5	**6**		≥ 400 m
Oil resistance	none	1	2	3	**4**				highest
Torsion	none	1	**2**	3	4				±360°

CF34.UL.D
TPE
7.5 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF34.UL.15.04.D	4G1.5	8.5	61	109
CF34.UL.25.04.D	4G2.5	10.5	100	166
CF34.UL.40.04.D	4G4.0	12.0	163	244
CF34.UL.60.04.D	4G6.0	14.0	237	344
CF34.UL.60.05.D	5G6.0	15.5	297	420
CF34.UL.100.04.D	4G10.0	17.0	407	540
CF34.UL.100.05.D	5G10.0	19.5	510	683
CF34.UL.160.04.D	4G16.0	20.5	646	819
CF34.UL.160.05.D	5G16.0	23.0	813	1039
CF34.UL.250.04.D	4G25.0	25.0	1014	1268
CF34.UL.100.04.O.PE.D	4x10.0	17.0	407	540
CF34.UL.160.04.O.PE.D	4x16.0	20.5	646	819

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF34.UL.15.04.D – to your desired length (0.5 m steps)
CF34.UL.D chainflex® series .15 Code nominal cross section .04 Number of cores

Online order ▶ www.chainflex.eu/CF34.UL.D

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

EU04.2019 EU04.2019

PVC | iguPUR | PUR | **TPE**

New

Motor cable | TPE | chainflex® CF35.UL

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Shielded
- Oil and bio-oil resistant
- Flame retardant
- UV-resistant
- Hydrolysis and microbe-resistant

Optimised core insulation

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-35 °C up to +90 °C
	flexible	-45 °C up to +90 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +90 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.	80 m/s²	
Travel distance	Unsupported travel distances and up to 400 m and more for gliding applications, Class 6	

Cable structure

Conductor	**Cores < 10 mm²:** Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228). **Cores ≥ 10 mm²:** Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Cores wound with a short pitch length around a high tensile strength centre element.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- 4. Core: 4 / N
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Signal black (similar to RAL 9004)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

EPLAN download, configurators ▶ www.igus.eu/CF35.UL

EU04.2019

CF35.UL
TPE
7.5 x d

Class 6.6.4.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	5	**6**		≥ 400 m
Oil resistance	none	1	2	3	**4**				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	**Cores ≤ 1.5 mm²:** Style 10492 and 22188, 1000 V, 80 °C **Cores ≥ 2.5 mm²:** Style 10492 and 21184 or 21218, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
DNV-GL	Type approval certificate No. 61 938-14 HH
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF34.UL.25.04.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For extremely heavy duty applications, Class 6
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

Motor cable | TPE | chainflex® CF35.UL

Strip cables 50% faster

Class 6.6.4.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	5	**6**	≥ 400 m	
Oil resistance	none	1	2	3	**4**	highest			
Torsion	none	**1**	2	3	4	±360°			

CF35.UL
TPE
7.5 x d

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF35.UL.05.04	(4G0.5)C	8.0	42	86
CF35.UL.07.04	(4G0.75)C	8.5	58	107
CF35.UL.15.04	(4G1.5)C	10.0	89	153
CF35.UL.25.04	(4G2.5)C	11.5	133	214
CF35.UL.40.04	(4G4.0)C	13.5	209	327
CF35.UL.60.04	(4G6.0)C	16.0	305	461
CF35.UL.100.04	(4G10.0)C	19.5	468	689
CF35.UL.160.04	(4G16.0)C	23.0	740	1025
CF35.UL.250.04	(4G25.0)C	28.0	1181	1544
CF35.UL.60.03.O.PE	(3x6.0)C	15.5	239	370
CF35.UL.250.03.O.PE [11)]	(3x25.0)C	25.0	902	1228
CF35.UL.350.03.O.PE [11)]	(3x35.0)C	28.5	1222	1701
CF35.UL.500.03.O.PE [11)]	(3x50.0)C	33.5	1714	2234

[11)] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF35.UL.05.04 – to your desired length (0.5 m steps)
CF35.UL chainflex® series .05 Code nominal cross section .04 Number of cores

Online order ▶ www.chainflex.eu/CF35.UL

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

PVC | iguPUR | PUR | **TPE**

New

Motor cable | TPE | chainflex® CF37.D

10 million Double strokes guaranteed

7.5 x d Bend radius, e-chain®

400 m Travel distance, e-chain®

- For heaviest duty applications
- TPE outer jacket
- Oil and bio-oil resistant
- PVC and halogen-free
- UV-resistant
- Hydrolysis and microbe-resistant

Optimised core insulation

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-35 °C up to +90 °C
	flexible	-50 °C up to +90 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +90 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.	80 m/s²	
Travel distance	Unsupported travel distances and up to 400 m and more for gliding applications, Class 6	
Torsion	± 90°, with 1 m cable length, Class 2	

Cable structure

Conductor	**Cores < 10 mm²:** Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228). **Cores ≥ 10 mm²:** Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Cores wound with a short pitch length around a high tensile strength centre element.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- 4. Core: 4 / N
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005)
CFRIP®	Strip cables faster: a tear strip is moulded into the outer jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

EU04.2019

CF37.D
TPE
7.5 x d

Class 7.6.4.2

Basic requirements	low	1	2	3	4	5	6	**7**	highest
Travel distance	unsupported	1	2	3	4	5	**6**		≥ 400 m
Oil resistance	none	1	2	3	**4**				highest
Torsion	none	1	**2**	3	4				±360°

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application arease

- For extremely heavy duty applications, Class 7
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ± 90°, with 1 m cable length, Class 2
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF37.15.04.D	4G1.5	8.5	61	96
CF37.25.04.D	4G2.5	10.0	101	169
CF37.40.04.D	4G4.0	12.0	163	229
CF37.60.04.D	4G6.0	14.0	243	354
CF37.60.05.D	5G6.0	15.5	297	374
CF37.100.04.D	4G10.0	17.5	409	555
CF37.100.05.D	5G10.0	19.5	526	700
CF37.160.04.D	4G16.0	20.5	646	782
CF37.160.05.D	5G16.0	23.5	814	1084
CF37.250.04.D	4G25.0	25.5	1014	1210
CF37.500.03.O.PE.D	3x50.0	31.0	1530	1879

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

PVC | iguPUR | PUR | **TPE**

New

Motor cable | TPE | chainflex® CF38

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For heaviest duty applications
- TPE outer jacket
- Shielded
- Oil and bio-oil resistant
- PVC and halogen-free
- UV-resistant
- Hydrolysis and microbe-resistant

Optimised core insulation

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-35 °C up to +90 °C
	flexible	-50 °C up to +90 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +90 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		80 m/s²
Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6

Cable structure

Conductor	**Cores < 10 mm²:** Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228). **Cores ≥ 10 mm²:** Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Cores wound with a short pitch length around a high tensile strength centre element.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- 4. Core: 4 / N
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

EPLAN download, configurators ▶ www.igus.eu/CF38

CF38
TPE
7.5 x d

Class 7.6.4.1

Basic requirements	low	1	2	3	4	5	6	**7**	highest
Travel distance	unsupported	1	2	3	4	5	**6**		≥ 400 m
Oil resistance	none	1	2	3	**4**				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application arease

- For extremely heavy duty applications, Class 7
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF38.15.04	(4G1.5)C	10.0	89	140
CF38.25.04	(4G2.5)C	11.5	135	205
CF38.40.04	(4G4.0)C	13.5	206	334
CF38.60.04	(4G6.0)C	16.0	306	462
CF38.100.04	(4G10.0)C	19.5	482	633
CF38.160.04	(4G16.0)C	22.5	738	944
CF38.250.04	(4G25.0)C	28.0	1186	1545
CF38.100.03.O.PE	(3x10.0)C	17.5	365	573
CF38.160.03.O.PE [11)]	(3x16.0)C	21.0	563	797
CF38.500.03.O.PE	(3x50.0)C	33.5	1714	2129

[11)] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

EU04.2019

Spindle cable/Single core | PVC | chainflex® CF885

5 million
Double strokes guaranteed

15 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- PVC outer jacket
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 15 x d
	flexible	minimum 12 x d
	fixed	minimum 8 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality PVC mixture.
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Example image

Class 3.1.1.1

Basic requirements	low	1	2	**3**	4	5	6	7 highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m
Oil resistance	none	**1**	2	3	4	highest		
Torsion	none	**1**	2	3	4	±360°		

Properties and approvals

Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10107, 600 V, 80 °C
EAC	Certificate No. RU C-DE.ME77.B.01561 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00450 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	17.5	18.5	19.5
+15/+60	15	16	17
+60/+70	17.5	18.5	19.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application arease

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF885.40.01	1x4.0	7.0	39	75
CF885.60.01	1x6.0	8.0	58	97
CF885.100.01	1x10.0	9.5	96	147
CF885.160.01	1x16.0	10.5	154	228
CF885.250.01	1x25.0	12.0	240	328
CF885.350.01	1x35.0	14.5	336	431
CF885.500.01	1x50.0	16.5	480	642
CF885.700.01	1x70.0	18.5	672	859
CF885.950.01	1x95.0	20.0	912	1101

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Spindle cable/Single core | PVC | chainflex® CF885.PE

5 million
Double strokes guaranteed

15 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- PVC outer jacket
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 15 x d
	flexible	minimum 12 x d
	fixed	minimum 8 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality PVC mixture.
Core identification	Green-yellow
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Example image

Class 3.1.1.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6		≥ 400 m
Oil resistance	none	**1**	2	3	4				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10107, 600 V, 80 °C
EAC	Certificate No. RU C-DE.ME77.B.01561 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00450 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	17.5	18.5	19.5
+15/+60	15	16	17
+60/+70	17.5	18.5	19.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF885.PE.25.01	1G2.5	6.5	24	55
CF885.PE.40.01	1G4.0	7.0	39	75
CF885.PE.60.01	1G6.0	8.0	58	97
CF885.PE.100.01	1G10.0	9.5	96	147
CF885.PE.160.01	1G16.0	10.5	154	228
CF885.PE.250.01	1G25.0	12.0	240	328

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

CF885.PE
PVC
15 x d

PVC | iguPUR | PUR | TPE

Spindle cable/Single core | PVC | chainflex® CF886

5 million
Double strokes guaranteed

15 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- PVC outer jacket
- Shielded
- Flame retardant

Dynamic information

Bend radius	**e-chain® linear**	minimum 15 x d
	flexible	minimum 12 x d
	fixed	minimum 8 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
Travel distance		Unsupported travel distances up to 10 m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality PVC mixture.
Overall shield	Braiding made of tinned copper wires. Coverage approx. 60 % optical
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Example image

Class 3.1.1.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6		≥ 400 m
Oil resistance	none	**1**	2	3	4				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10107, 600 V, 80 °C
EAC	Certificate No. RU C-DE.ME77.B.01561 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00450 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	17.5	18.5	19.5
+15/+60	15	16	17
+60/+70	17.5	18.5	19.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application arease

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

Part No.	Number of cores and conductor nominal cross section [mm²]		Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF886.160.01 [11]	(1x16.0)C		11.5	180	256
CF886.250.01 [11]	(1x25.0)C		13.0	271	361
CF886.350.01 [11]	(1x35.0)C		15.5	382	521

[11] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

CF886
PVC
15 x d

PVC | iguPUR | **PUR** | TPE

Spindle cable/Single core | PUR | chainflex® CF270.UL.D

10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For medium duty applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Notch-resistant
- Flame retardant
- Hydrolysis and microbe-resistant
- PVC and halogen-free

Dynamic information

Bend radius	**e-chain® linear**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	2 m/s
a max.		50 m/s²
Travel distance		Unsupported travels and up to 10 m for gliding applications, Class 2

Cable structure

Conductor	Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage approx. 55 % linear, approx. 80 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754

Example image

EPLAN download, configurators ▶ www.igus.eu/CF270.UL.D

Class 4.2.3.1

Basic requirements	low 1 2 3 **4** 5 6 7 highest
Travel distance	unsupported 1 **2** 3 4 5 6 ≥ 400 m
Oil resistance	none 1 2 **3** 4 highest
Torsion	none **1** 2 3 4 ±360°

UL/CSA	Style 10492 and 10973, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	12.5	13.5	14.5
-15/+70	10	11	12
+70/+80	12.5	13.5	14.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application arease

- For medium duty applications, Class 4
- Unsupported travel distances and up to 10 m for gliding applications, Class 2
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Machining units/machine tools, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF270.UL.60.01.D [11]	(1x6.0)C	7.0	70	93
CF270.UL.100.01.D	(1 x 10.0)C	8.5	110	141
CF270.UL.160.01.D	(1 x 16.0)C	9.5	170	201
CF270.UL.250.01.D	(1 x 25.0)C	11.0	261	296
CF270.UL.350.01.D	(1 x 35.0)C	13.0	363	405
CF270.UL.500.01.D	(1 x 50.0)C	15.0	514	567
CF270.UL.700.01.D	(1 x 70.0)C	17.5	736	788

[11] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

EU04.2019

CF270.UL.D
PUR
10 x d

Spindle cable/Single core | TPE | chainflex® CF300.UL.D

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Oil and bio-oil resistant
- Flame retardant
- UV-resistant
- Hydrolysis and microbe-resistant

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-35 °C up to +90 °C
	flexible	-45 °C up to +90 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +90 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
Torsion		± 90°, with 1 m cable length, Class 2

Cable structure

Conductor	Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Signal black (similar to RAL 9004)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10492 and 21218, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9

EPLAN download, configurators ▶ www.igus.eu/CF300.UL.D

Class 6.6.4.2

Basic requirements	low 1 2 3 4 5 **6** 7 highest
Travel distance	unsupported 1 2 3 4 5 **6** ≥ 400 m
Oil resistance	none 1 2 3 **4** highest
Torsion	none 1 **2** 3 4 ±360°

DNV-GL	Type approval certificate No. 61 938-14 HH
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF34.UL.25.04.D - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application arease

- For extremely heavy duty applications, Class 6
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ± 90°, with 1 m cable length, Class 2
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF300.UL.40.01.D	1x4.0	6.5	39	61
CF300.UL.60.01.D	1x6.0	7.0	58	82
CF300.UL.100.01.D	1x10.0	8.0	96	123
CF300.UL.160.01.D	1x16.0	9.5	154	189
CF300.UL.250.01.D	1x25.0	11.0	240	286
CF300.UL.350.01.D	1x35.0	12.5	336	384
CF300.UL.500.01.D	1x50.0	14.5	480	531
CF300.UL.700.01.D	1x70.0	16.5	696	757
CF300.UL.950.01.D	1x95.0	20.0	917	1023
CF300.UL.1200.01.D	1x120.0	21.5	1160	1271
CF300.UL.1500.01.D	1x150.0	23.5	1440	1549
CF300.UL.1850.01.D	1x185.0	26.5	1890	2014

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

EU04.2019

CF300.UL.D
TPE
7.5 x d

Motor cable | TPE | chainflex® CFPE

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Oil and bio-oil resistant
- Flame retardant
- UV-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-35 °C up to +90 °C
	flexible	-45 °C up to +90 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +90 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
Torsion		± 90°, with 1 m cable length, Class 2

Cable structure

Conductor	Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core identification	Green-yellow
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Signal black (similar to RAL 9004)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10492 and 21218, 1000 V, 80 °C

Example image

Class 6.6.4.2

Basic requirements	low 1 2 3 4 5 **6** 7 highest
Travel distance	unsupported 1 2 3 4 5 **6** ≥ 400 m
Oil resistance	none 1 2 3 **4** highest
Torsion	none 1 **2** 3 4 ±360°

NFPA	Following NFPA 79-2018, chapter 12.9
DNV-GL	Type approval certificate No. 61 938-14 HH
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF34.UL.25.04.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For extremely heavy duty applications, Class 6
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ± 90°, with 1 m cable length, Class 2
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CFPE.15.01	1G1.5	4.5	15	29
CFPE.25.01	1G2.5	6.0	24	46
CFPE.40.01	1G4.0	6.5	39	63
CFPE.60.01	1G6.0	7.0	58	81
CFPE.100.01	1G10.0	8.0	96	123
CFPE.160.01	1G16.0	9.5	154	189
CFPE.250.01	1G25.0	11.5	240	287
CFPE.350.01	1G35.0	12.5	336	384
CFPE.500.01	1G50.0	14.5	480	535
CFPE.700.01	1G70.0	16.5	696	752
CFPE.950.01	1G95.0	20.0	917	1013

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

CFPE
TPE
7.5 x d

PVC | iguPUR | PUR | **TPE**

Motor cable | TPE | chainflex® CF310.UL

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Shielded
- Oil and bio-oil resistant
- Flame retardant
- UV-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-35 °C up to +90 °C
	flexible	-45 °C up to +90 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +90 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6

Cable structure

Conductor	Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Signal black (similar to RAL 9004)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10492 and 21218, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9

Example image

EPLAN download, configurators ▶ www.igus.eu/CF310.UL

Class 6.6.4.1

Basic requirements	low 1 2 3 4 5 **6** 7 highest
Travel distance	unsupported 1 2 3 4 5 **6** ≥ 400 m
Oil resistance	none 1 2 3 **4** highest
Torsion	none **1** 2 3 4 ±360°

DNV-GL	Type approval certificate No. 61 938-14 HH
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF34.UL.25.04.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application arease

- For extremely heavy duty applications, Class 6
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF310.UL.25.01	(1x2.5)C	6.5	39	61
CF310.UL.40.01	(1x4.0)C	7.0	54	78
CF310.UL.60.01	(1x6.0)C	7.5	76	102
CF310.UL.100.01	(1x10.0)C	8.5	117	150
CF310.UL.160.01	(1x16.0)C	10.0	178	217
CF310.UL.250.01	(1x25.0)C	12.0	271	319
CF310.UL.350.01	(1x35.0)C	13.0	383	431
CF310.UL.500.01	(1x50.0)C	15.0	525	575
CF310.UL.700.01	(1x70.0)C	17.5	763	829
CF310.UL.950.01	(1x95.0)C	21.0	995	1100
CF310.UL.1200.01	(1x120.0)C	22.0	1244	1347
CF310.UL.1500.01	(1x150.0)C	24.5	1460	1667
CF310.UL.1850.01	(1x185.0)C	27.5	2025	2157

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

EU04.2019

CF310.UL
TPE
7.5 x d

Motor cable | TPE | chainflex® CF330.D

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For heaviest duty applications
- TPE outer jacket
- Oil and bio-oil resistant
- PVC and halogen-free
- UV-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-35 °C up to +90 °C
	flexible	-50 °C up to +90 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +90 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
Torsion		± 90°, with 1 m cable length, Class 2

Cable structure

Conductor	Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Example image

Class 7.6.4.2

Basic requirements	low	1	2	3	4	5	6	**7**	highest
Travel distance	unsupported	1	2	3	4	5	**6**		≥ 400 m
Oil resistance	none	1	2	3	**4**				highest
Torsion	none	1	**2**	3	4				±360°

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application arease

- For extremely heavy duty applications, Class 7
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ± 90°, with 1 m cable length, Class 2
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF330.60.01.D	1x6.0	7.0	58	77
CF330.100.01.D	1x10.0	8.0	96	118
CF330.160.01.D	1x16.0	9.5	154	181
CF330.250.01.D	1x25.0	11.0	240	276
CF330.350.01.D	1x35.0	12.5	336	373
CF330.500.01.D	1x50.0	14.5	480	518
CF330.700.01.D	1x70.0	16.5	696	740
CF330.950.01.D	1x95.0	20.0	917	996
CF330.1200.01.D	1x120.0	21.5	1160	1241
CF330.1500.01.D	1x150.0	23.5	1440	1518
CF330.1850.01.D	1x185.0	26.5	1776	1978

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

CF330.D
TPE
7.5 x d

Motor cable | TPE | chainflex® CF340

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For heaviest duty applications
- TPE outer jacket
- Shielded
- Oil and bio-oil resistant
- PVC and halogen-free
- UV-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-35 °C up to +90 °C
	flexible	-50 °C up to +90 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +90 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6

Cable structure

Conductor	Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Example image

EU04.2019

Class 7.6.4.1

Basic requirements	low	1 2 3 4 5 6 **7** highest
Travel distance	unsupported	1 2 3 4 5 **6** ≥ 400 m
Oil resistance	none	1 2 3 **4** highest
Torsion	none	**1** 2 3 4 ±360°

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications, Class 7
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF340.40.01	(1x4.0)C	7.0	54	74
CF340.160.01	(1x16.0)C	10.0	178	209
CF340.250.01	(1x25.0)C	12.0	271	309
CF340.350.01	(1x35.0)C	13.5	383	420
CF340.500.01	(1x50.0)C	15.0	525	567
CF340.700.01	(1x70.0)C	17.5	763	816
CF340.950.01	(1x95.0)C	21.0	995	1072
CF340.1200.01	(1x120.0)C	22.0	1240	1315
CF340.1500.01	(1x150.0)C	24.5	1530	1608
CF340.1850.01	(1x185.0)C	27.5	1950	2160
CF340.2400.01	(1x240.0)C	30.5	2545	2610

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

EU04.2019

CF340
TPE
7.5 x d

Medium voltage cable | PUR | chainflex® CFCRANE.PUR

10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For maximum voltages and outputs
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	-20 °C up to +80 °C
	flexible	-25 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-30 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.	50 m/s²	
Travel distance	Unsupported travel distances and up to 400 m and more for gliding applications, Class 6	

Cable structure

Conductor	Highly-flexible cable consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Inner and outer semiconducting layer made of condutive rubber. Insulating sheath made of highly-quality, heat-resistant and ozone-proof ethylene propylene rubber (EPR).
Overall shield	Extremely bending-resistant, tinned copper shield. Coverage approx. 85 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Red

Electrical information

Nominal voltage	6/10 kV (following DIN VDE 0250), other voltages upon request.
Testing voltage	17 kV (following DIN VDE 0250, Part 813)

Example image

Class 6.6.3.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	5	**6**		≥ 400 m
Oil resistance	none	1	2	**3**	4		highest		
Torsion	none	**1**	2	3	4		±360°		

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Flame retardant	According to IEC 60332-1-2
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	12.5	13.5	14.5
-10/+70	10	11	12
+70/+80	12.5	13.5	14.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For maximum voltages and outputs, Class 6
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Ship to shore, crane applications, conveyor technique

Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight
	[mm²]	[mm]	[kg/km]	[kg/km]
CFCRANE.PUR.350.01.6/10kV	(1x35/16)C	24.5	568	852
CFCRANE.PUR.500.01.6/10kV	(1x50/16)C	25.5	722	1025
CFCRANE.PUR.700.01.6/10kV	(1x70/16)C	27.5	941	1249
CFCRANE.PUR.950.01.6/10kV	(1x95/16)C	29.5	1166	1523

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

CFCRANE.PUR
PUR
10 x d

Medium voltage cable | igupren | chainflex® CFCRANE

10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For maximum voltages and outputs
- igupren outer jacket
- Shielded
- Oil-resistant
- Flame retardant

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	-20 °C up to +80 °C
	flexible	-25 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-30 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		50 m/s²
Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6

Cable structure

Conductor	Highly-flexible cable consisting of tinned copper wires (following DIN EN 60228).
Core insulation	Inner and outer semiconducting layer made of condutive rubber. Insulating sheath made of highly-quality, heat-resistant and ozone-proof ethylene propylene rubber (EPR).
Overall shield	Extremely bending-resistant, tinned copper shield. Coverage approx. 95 % optical
Outer jacket	Low-adhesion iguprene mixture, especially abrasion resistant and highly flexible, adapted to suit the requirements in e-chains® (following VDE 0207, Part 21). Colour: Red

Electrical information

Nominal voltage	6/10 kV (following DIN VDE 0250), other voltages upon request.
Testing voltage	17 kV (following DIN VDE 0250, Part 813)

Class 6.6.3.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	5	**6**		≥ 400 m
Oil resistance	none	1	2	**3**	4		highest		
Torsion	none	**1**	2	3	4		±360°		

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 60811-404)
Flame retardant	According to IEC 60332-1-2
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU
Info	This cable series will be individually manufactured for your special project. Due to this we do not have this cable on stock, but can offer it exactly for your special demands. Medium Voltage cables from stock (CFCRANE.PUR) page 348

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	12.5	13.5	14.5
-10/+70	10	11	12
+70/+80	12.5	13.5	14.5

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application arease

- For maximum voltages and outputs, Class 6
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Ship to shore, crane applications, conveyor technique

CFCRANE
igupren
10 x d

Robot
Twistable cables

chainflex® cable	Jacket	Shield	Minimum bend radius. e-chain® [factor x d]	Temperature. e-chain® from/to [°C]	Approvals and standards	Oil-resistant	Torsion resistant	v max. twisted [°/s]	a max. twisted [°/s²]	Page
Twistable cables										
Information about twistable cables										354
Control cables										
CF77.UL.D	PUR		6.8	-25/+80		✓	✓	180	60	358 New
CFROBOT2	PUR	✓	10	-25/+80		✓	✓	180	60	362
Data cable										
CFROBOT3	PUR	✓	10	-25/+80		✓	✓	180	60	364
Measuring system cable										
CFROBOT4	PUR	✓	10	-25/+80		✓	✓	180	60	366
Fibre optic cable										
CFROBOT5	TPE		10	-35/+80		✓	✓	180	60	370
Motor cables										
CFROBOT6	PUR		10	-25/+80		✓	✓	180	60	372
CFROBOT7	PUR	✓	10	-25/+80		✓	✓	180	60	374
Spindle cables/Single cores										
CFROBOT	TPE	✓	10	-35/+90		✓	✓	180	60	378
Bus cable										
CFROBOT8	PUR	✓	10	-25/+70		✓	✓	180	60	380
CFROBOT8.PLUS	PUR	✓	10	-25/+70		✓	✓	360	60	384 New
Hybrid cable										
CFROBOT9	PUR	✓	10	-25/+80		✓	✓			388

Guarantee igus chainflex 36 month guarantee

36 month chainflex® guarantee
Guaranteed lifetime for predictable reliability
▶Selection table page 356

With the help of the chainflex® service life calculator, you can quickly and easily calculate the expected service life of chainflex® cables specifically for your application:

www.igus.eu/chainflexlife

chainflex® cables for robots

Ever more complex sequences of movements in industrial applications demand twistable or multi-axis flexible cables with a long service life, similar to the classic chainflex® cables for use in linear e-chain systems®.

Stranding, structure, shields and jacket materials must compensate both for major changes in bending load and changes in diameter due to torsional movements. To acheive this, different “soft” structural elements e.g. rayon fibres, PTFE elements or filling elements that absorb torsion forces are used in chainflex® CFROBOT cables.

Special demands are made on the braided shielding in torsion cables. Torsion-optimised shield structures are chosen that allow compensatory movements thanks to special PTFE gliding films.

With twistable bus cables in particular, the transmission characteristics such as attenuation, cable capacitance and signal quality must remain within very tight tolerance ranges over the whole service life. This is achieved through the use of particularly torsion optimised insulating materials and mechanical attenuation elements with matching capacitance values.

The highly abrasion-resistant, halogen-free and flamer-esistant PUR jacket material in motor, hybrid/control cables and bus cables protects the torsion-optimised stranded elements from possible damage.
The highly abrasion-resistant, halogen-free TPE jacket achives the special requirements of the twistable FOC and individual as well as the single core cables.

Unlike cables for linear e-chain systems®, the mechanical stress on these cables is in the combination of bending, torsion and centrifugal forces that cannot usually be determined by design or during use by means of measurement. For this reason, and unlike the situation with linear e-chain® applications, a clear “yes/no” statement cannot be made about the use of a particular cable in torsion applications.

To enable evaluation to take place, based on sensible and comparable test results, the igus® “torsion test standard” was developed.

According to this standard, all chainflex® CFROBOT cables of a triflex® energy chain are twisted with a fixed-point distance of one metre and a torsion of +/- 180° at least 3 million times.

In addition, a test is carried out on a test bench with a chain length of approx. 2500 mm with 270° torsion with an extreme load through centrifugal forces and heavy blows such as those that can occur on an industrial robot.

All the non-shielded, gusset-filled extruded standard chainflex® control cables of the series CF130.UL, CF5, CF9 and CF9.UL correspond to the above igus® standard and have been approved for use in torsion applications.

The following twistable CFROBOT cable types are currently available:

- Control cable (shielded and unshielded)
- Data and Measuring system cables
- Fibre optic cables
- Motor and Servo cables
- Bus cables
- Hybrid cables

We can also offer you chainflex® CFROBOT cables pre-fitted with the connectors of your choice as a readycable®, or as a ready-to-install readychain® cable assembly.

Test data ▶ page 43

chainflex® guarantee ▶▶ Guaranteed lifetime (1)

	chainflex® cable		Temperature, from/to [°C]	v max. [°/s] twisted	a max. [°/s²] twisted	Minimum bend radius [factor x d]	Minimum bend radius [factor x d]	Minimum bend radius [factor x d]	Page
Twistable cables						5 million cycles *	7.5 million cycles *	10 million cycles *	
Control cables									
	CF77.UL.D	New!	-25 / -15 -15 / +70 +70 / +80	180	60	±150 ±180 ±150	±90 ±120 ±90	±30 ±60 ±30	358
	CFROBOT2		-25 / -15 -15 / +70 +70 / +80	180	60	±150 ±180 ±150	±90 ±120 ±90	±30 ±60 ±30	362
Data cable									
	CFROBOT3		-25 / -15 -15 / +70 +70 / +80	180	60	±150 ±180 ±150	±90 ±120 ±90	±30 ±60 ±30	364
Measuring system cable									
	CFROBOT4		-25 / -15 -15 / +70 +70 / +80	180	60	±150 ±180 ±150	±90 ±120 ±90	±30 ±60 ±30	366
Fibre optic cable									
	CFROBOT5		-25 / -15 -15 / +70 +70 / +80	180	60	±150 ±180 ±150	±90 ±120 ±90	±30 ±60 ±30	370
Motor cables									
	CFROBOT6		-25 / -15 -15 / +70 +70 / +80	180	60	±150 ±180 ±150	±90 ±120 ±90	±30 ±60 ±30	372
	CFROBOT7		-25 / -15 -15 / +70 +70 / +80	180	60	±150 ±180 ±150	±90 ±120 ±90	±30 ±60 ±30	374
Spindle cables/Single cores									
	CFROBOT		-35 / -25 -15 / +80 +80 / +90	180	60	±150 ±180 ±150	±90 ±120 ±90	±30 ±60 ±30	378
Bus cable									
	CFROBOT8		-25 / -15 -15 / +60 +60 / +70	180	60	±150 ±180 ±150	±90 ±120 ±90	±30 ±60 ±30	380
	CFROBOT8.PLUS	New!	-25 / -15 -15 / +60 +60 / +70	360	60	±330 ±360 ±330	±240 ±270 ±240	±150 ±180 ±150	384
Hybrid cable									
	CFROBOT9		-25 / -15 -15 / +70 +70 / +80	180	60	±150 ±180 ±150	±90 ±120 ±90	±30 ±60 ±30	388

(1) Exclusive! Guaranteed lifetime for this series according to the guarantee conditions ▶ Page 22-23

* Higher number of cycles? Online lifetime calculation ▶ www.igus.eu/chainflexlife

PVC | iguPUR | **PUR** | TPE

New

Control cable | PUR | chainflex® CF77.UL.D

Example image

10 million Cycles guaranteed

±180°/m Torsion, e-chain®

3D movements Travel distance, e-chain®

- For torsion applications
- PUR outer jacket
- Oil resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® twisted**	minimum 6.8 x d
	flexible	minimum 5 x d
	fixed	minimum 4 x d
Temperature	**e-chain® twisted**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**twisted**	180 °/s
a max.	**twisted**	60 °/s²
Travel distance		Robots and 3D movements, Class 1
Torsion		± 180°, with 1 m cable length, Class 3 (except for 5-core types ≥ 4.0 mm² Product range table)

Cable structure

Conductor Finely stranded conductor consisting of bare copper wires (following DIN EN 60228).

Core insulation Mechanically high-quality TPE mixture.

Core structure
Number of cores < 12: Cores wound in a layer with short pitch length.
Number of cores ≥ 12: Cores in bundles and wound together around a centre for high tensile stresses with optimised short pitch length and directions, especially low-torsion structure.

Core identification
Cores < 0.5 mm²: Colour code in accordance with DIN 47100.
Cores ≥ 0.5 mm²: Black cores with white numbers, one green-yellow core.
CF77.UL.03.04.INI: brown, blue, black
CF77.UL.03.04.INI: brown, blue, black, white

Outer jacket Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2).
Colour: Window-grey (similar to RAL 7040)
Variants ▶ Product range table

Electrical information

Nominal voltage 300/500 V (following DIN VDE 0298-3)

Testing voltage 2000 V (following DIN EN 50395)

Class 5.1.3.3

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	1	2	**3**	4				±360°

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	**Cores < 0.5 mm²:** Style 10493 and 20233, 300 V, 80 °C **Cores ≥ 0.5 mm²:** Style 11323 and 21223, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
DNV-GL	Type approval certificate No. 61 935-14 HH
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1, material/cable tested by IPA according to DIN EN ISO standard 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Cycles*	5 million		7.5 million		10 million	
Temperature, from/to [°C]	< 10 m	≥ 10 m	< 10 m	≥ 10 m	< 10 m	≥ 10 m
	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	8.5	10	9.5	11	10.5	12
-15/+70	6.8	7.5	7.5	8.5	8.5	9.5
+70/+80	8.5	10	9.5	11	10.5	12

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heavy duty applications, Class 5
- Especially for robots and 3D movements, Class 1
- Almost unlimited resistance to oil, Class 3
- Torsion ± 180°, with 1 m cable length, Class 3
- Indoor and outdoor applications with average sun radiation
- Robots, handling, spindle drives

CF77.UL.D
PUR
±180°/m

PVC | iguPUR | **PUR** | TPE

Control cable | PUR | chainflex® CF77.UL.D

New

Class 5.1.3.3

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m
Oil resistance	none	1	2	**3**	4	highest		
Torsion	none	1	2	**3**	4	±360°		

CF77.UL.D
PUR
±180°/m

Example image

	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
	CF77.UL.02.03.INI [12]	3x0.25	5.0	8	29
	CF77.UL.02.04.D	4x0.25	5.5	11	35
New	**CF77.UL.02.05.D**	5x0.25	6	13	41
New	**CF77.UL.02.07.D**	7x0.25	6.5	18	51
	CF77.UL.02.12.D	12x0.25	9.0	30	77
	CF77.UL.02.18.D	18x0.25	10.5	45	114
New	**CF77.UL.02.25.D**	25x0.25	11.5	63	154
	CF77.UL.03.04.INI [12]	4x0.34	6.0	16	39
	CF77.UL.05.04.D	4G0.5	6.0	21	43
	CF77.UL.05.05.D	5G0.5	6.5	26	50
	CF77.UL.05.07.D	7G0.5	7.5	39	78
	CF77.UL.05.12.D	12G0.5	10.0	63	129
	CF77.UL.05.18.D	18G0.5	12.0	94	179
	CF77.UL.05.25.D	25G0.5	14.0	129	238
	CF77.UL.05.30.D	30G0.5	15.0	155	315
	CF77.UL.07.03.D	3G0.75	6.5	23	54
	CF77.UL.07.04.D	4G0.75	7.0	30	63
	CF77.UL.07.05.D	5G0.75	7.5	38	73
	CF77.UL.07.07.D	7G0.75	8.5	53	103
	CF77.UL.07.12.D	12G0.75	12.0	90	187
	CF77.UL.07.18.D	18G0.75	13.5	134	251
	CF77.UL.07.20.D	20G0.75	14.5	149	282
	CF77.UL.07.25.D	25G0.75	16.0	186	356
	CF77.UL.07.36.D	36G0.75	19.0	279	505
	CF77.UL.07.42.D	42G0.75	21.0	341	580
	CF77.UL.10.02.D	2x1.0	6.5	20	53
	CF77.UL.10.03.D	3G1.0	6.5	30	63
	CF77.UL.10.04.D	4G1.0	7.0	40	77
	CF77.UL.10.05.D	5G1.0	8.0	50	94
	CF77.UL.10.07.D	7G1.0	9.0	70	115
	CF77.UL.10.12.D	12G1.0	12.5	119	225
	CF77.UL.10.18.D	18G1.0	15.0	178	326
	CF77.UL.10.25.D	25G1.0	17.5	248	436
	CF77.UL.10.42.D	42G1.0	22.5	433	679

[12] Colour outer jacket: Yellow-green (RAL 6018)
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF77.UL.15.03.D	3G1.5	7.5	45	83
CF77.UL.15.04.D	4G1.5	8.0	60	102
CF77.UL.15.05.D	5G1.5	8.5	75	121
CF77.UL.15.07.D [17]	7G1.5	10.5	104	167
CF77.UL.15.12.D	12G1.5	14.0	178	296
CF77.UL.15.18.D	18G1.5	17.0	267	459
CF77.UL.15.25.D	25G1.5	19.5	371	605
CF77.UL.15.36.D	36G1.5	23.5	551	848
CF77.UL.15.42.D [11]	42G1.5	26.5	676	987
CF77.UL.25.03.D	3G2.5	8.5	75	119
CF77.UL.25.04.D	4G2.5	9.5	100	149
CF77.UL.25.05.D	5G2.5	10.5	124	183
CF77.UL.25.07.D [17]	7G2.5	12.5	174	259
CF77.UL.25.12.D	12G2.5	17.0	297	451
CF77.UL.40.04.D	4G4.0	11.5	165	245
CF77.UL.40.05.D	5G4.0	12.0	198	288
CF77.UL.60.05.D	5G6.0	14.0	297	407

[11] Phase-out model
[17] When using the cables with "7 G 1.5 mm²" and "7 G 2.5 mm²" minimum bend radius must be 17.5 x d with gliding travel distance ≥ 5 m.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CF77.UL.02.04.D – to your desired length (0.5 m steps)
CF77.UL.D chainflex® series .02 Code nominal cross section .04 Number of cores

Online order ▶ www.chainflex.eu/CF77.UL.D

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Guarantee igus chainflex 36 month guarantee

Control cable | PUR | chainflex® CFROBOT2

10 million
Cycles guaranteed

±180°/m
Torsion, e-chain®

3D movements
Travel distance, e-chain®

- For torsion applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® twisted**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® twisted**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**twisted**	180 °/s
a max.	**twisted**	60 °/s²
Travel distance		Robots and 3D movements, Class 1
Torsion		± 180°, with 1 m cable length, Class 3

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core identification	Black cores with white numbers, one green-yellow core.
Element shield	Extremely torsion-resistant tinned braided copper shield. Coverage approx. 85 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Steel-blue (similar to RAL 5011)

Electrical information

Nominal voltage	300/500 V (following DIN VDE 0298-3)
Testing voltage	2000 V (following DIN EN 50395)

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1

Example image

Class 6.1.3.3

Basic requirements	low	1 2 3 4 5 **6** 7 highest
Travel distance	unsupported	**1** 2 3 4 5 6 ≥ 400 m
Oil resistance	none	1 2 **3** 4 highest
Torsion	none	1 2 **3** 4 ±360°

Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	Style 10493 and 20317, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Cycles*	5 million	7.5 million	10 million
Temperature, from/to [°C]	Torsion max. [°/m]	Torsion max. [°/m]	Torsion max. [°/m]
-25/-15	±150	±90	±30
-15/+70	±180	±120	±60
+70/+80	±150	±90	±30

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications with torsion movements, Class 6
- Especially for robots and 3D movements, Class 1
- Almost unlimited resistance to oil, Class 3
- Torsion ± 180°, with 1 m cable length, Class 3
- Indoor and outdoor applications, UV-resistant
- Robots, handling, spindle drives

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CFROBOT2.07.04.C	(4G0.75)C	8.5	42	81
CFROBOT2.07.05.C	(5G0.75)C	8.5	51	91
CFROBOT2.07.07.C	(7G0.75)C	10.0	71	126
CFROBOT2.07.12.C	(12G0.75)C	14.0	122	208
CFROBOT2.07.18.C	(18G0.75)C	16.5	185	309

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

CFROBOT2
PUR
±180°/m

Data cable | PUR | chainflex® CFROBOT3

Example image

10 million Cycles guaranteed

±180°/m Torsion, e-chain®

3D movements Travel distance, e-chain®

- For torsion applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Flame retardant
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	e-chain® twisted	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	e-chain® twisted	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	twisted	180 °/s
a max.	twisted	60 °/s²
Travel distance	Robots and 3D movements, Class 1	
Torsion	± 180°, with 1 m cable length, Class 3	

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core identification	Colour code in accordance with DIN 47100.
Overall shield	Extremely torsion-resistant tinned braided copper shield. Coverage approx. 85 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Steel-blue (similar to RAL 5011)

Electrical information

Nominal voltage	300/500 V (following DIN VDE 0298-3)
Testing voltage	2000 V (following DIN EN 50395)

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1

Class 6.1.3.3

Basic requirements	low 1 2 3 4 5 **6** 7 highest
Travel distance	unsupported **1** 2 3 4 5 6 ≥ 400 m
Oil resistance	none 1 2 **3** 4 highest
Torsion	none 1 2 **3** 4 ±360°

Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10497 and 20911, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Cycles*	5 million	7.5 million	10 million
Temperature, from/to [°C]	Torsion max. [°/m]	Torsion max. [°/m]	Torsion max. [°/m]
-25/-15	±150	±90	±30
-15/+70	±180	±120	±60
+70/+80	±150	±90	±30

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications with torsion movements, Class 6
- Especially for robots and 3D movements, Class 1
- Almost unlimited resistance to oil, Class 3
- Torsion ± 180°, with 1 m cable length, Class 3
- Indoor and outdoor applications, UV-resistant
- Robots, handling, spindle drives

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CFROBOT3.02.03.02	(3x(2x0.25))C	9.0	32	83
CFROBOT3.02.04.02	(4x(2x0.25))C	10.5	38	100
CFROBOT3.02.06.02	(6x(2x0.25))C	11.5	52	136
CFROBOT3.02.08.02	(8x(2x0.25))C	14.0	66	153
CFROBOT3.05.05.02	(5x(2x0.5))C	12.5	75	159

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

CFROBOT3
PUR
±180°/m

Measuring system cable | PUR | chainflex® CFROBOT4

10 million
Cycles guaranteed

±180°/m
Torsion, e-chain®

3D movements
Travel distance, e-chain®

- For torsion applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Flame retardant
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® twisted**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® twisted**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**twisted**	180 °/s
a max.	**twisted**	60 °/s²
Travel distance		Robots and 3D movements, Class 1
Torsion		± 180°, with 1 m cable length, Class 3

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core identification	According to measuring system specification. ▶ Product range table
Element shield	Extremely torsion-resistant tinned braided copper shield.
Overall shield	Torsion resistant tinned braided copper shield. Coverage approx. 80 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Steel-blue (similar to RAL 5011) Variants ▶ Product range table

Electrical information

Nominal voltage	50 V
Testing voltage	500 V

Example image

Class 6.1.3.3

Basic requirements	low	1	2	3	4	5	**6**	7 highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m
Oil resistance	none	1	2	**3**	4	highest		
Torsion	none	1	2	**3**	4	±360°		

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	Style 1589 and 20236, 30 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01218 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Cycles*	5 million	7.5 million	10 million
Temperature, from/to [°C]	Torsion max. [°/m]	Torsion max. [°/m]	Torsion max. [°/m]
-25/-15	±150	±90	±30
-15/+70	±180	±120	±60
+70/+80	±150	±90	±30

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications with torsion movements, Class 6
- Especially for robots and 3D movements, Class 1
- Almost unlimited resistance to oil, Class 3
- Torsion ± 180°, with 1 m cable length, Class 3
- Indoor and outdoor applications, UV-resistant
- Robots, handling, spindle drives

CFROBOT4
PUR
±180°/m

PVC | iguPUR | **PUR** | TPE

Measuring system cable | PUR | chainflex® CFROBOT4

Class 6.1.3.3

Basic requirements	low	1	2	3	4	5	**6**	7	highest	
Travel distance	unsupported	**1**	2	3	4	5	6		≥ 400 m	
Oil resistance	none	1	2	**3**	4				highest	
Torsion	none	1	2	**3**	4				±360°	

CFROBOT4
PUR
±180°/m

Example image

Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight	Part No.	Core group	Colour code
	mm²	mm	kg/km	kg/km			
CFROBOT4.001	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	62	115	**CFROBOT4.001**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						4x0.14	Grey/blue/white-yellow/white-black
						2x0.5	brown-red/brown-blue
CFROBOT4.006	(3x(2x0.14)C+(4x0.14)+(4x0.22)+(2x0.5))C	11.5	74	138	**CFROBOT4.006**	3x(2x0.14)C	green/yellow, black/brown, red/orange
						(4x0.14)	Grey/blue/white-yellow/white-black
						(4x0.22)	brown-yellow/brown-grey/green-black/green-red
						(2x0.5)	brown-red/brown-blue
CFROBOT4.009	(4x(2x0.25)+(2x0.5))C	9.5	48	90	**CFROBOT4.009**	4x(2x0.25)	brown/green, blue/violet, Grey/pink, red/black
						2x0.5	white, brown
CFROBOT4.015	(4x(2x0.14)+4x0.5)C	9.0	49	93	**CFROBOT4.015**	4x(2x0.14)	brown/green, yellow/violet, Grey/pink, red/black
						4x0.5	blue, white, brown-green, white-green
CFROBOT4.028 [13)]	(2x(2x0.20)+(2x0.38))C	7.5	44	72	**CFROBOT4.028** [13)]	2x(2x0.20)	green/yellow, pink/blue
						(2x0.38)	red/black

[13)] Colour outer jacket: Yellow-green (RAL 6018)
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CFROBOT4.001 – to your desired length (0.5 m steps)
CFROBOT4 chainflex® series .009 Code measuring system type

Online order ▶ www.chainflex.eu/CFROBOT4

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

EU04.2019 igus 36 month guarantee ... 1,354 types from stock ... no cutting charges 369

Fibre Optic Cable | TPE | chainflex® CFROBOT5

10 million
Cycles guaranteed

±180°/m
Torsion, e-chain®

3D movements
Travel distance, e-chain®

- For torsion applications
- TPE outer jacket
- Oil and bio-oil resistant
- UV-resistant
- Low-temperature-flexible
- Hydrolysis and microbe-resistant
- PVC and halogen-free

Example image

Dynamic information

Bend radius	**e-chain® twisted**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® twisted**	-35 °C up to +80 °C
	flexible	-50 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +80 °C (following DIN EN 50305)
v max.	**twisted**	180 °/s
a max.	**twisted**	60 °/s²
Travel distance		Robots and 3D movements, Class 1
Torsion		± 180°, with 1 m cable length, Class 3

Cable structure

Fibre optic core	50/125 µm, 62.5/125 µm bending-resistant solid glass fibre optic cores, with aramid strain relief elements.
Core structure	FOC cores wound with high-tensile aramid dampers around a GRP central element.
Core identification	▶ Product range table
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005)

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Class 6.1.4.3

Basic requirements	low	1	2	3	4	5	**6**	7 highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m
Oil resistance	none	1	2	3	**4**	highest		
Torsion	none	1	2	**3**	4	±360°		

Guaranteed service life (details see page 22-23)

Cycles*	5 million	7.5 million	10 million
Temperature, from/to [°C]	Torsion max. [°/m]	Torsion max. [°/m]	Torsion max. [°/m]
-35/-25	±150	±90	±30
-25/+70	±180	±120	±60
+70/+80	±150	±90	±30

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications with torsion movements, Class 6
- Especially for robots and 3D movements, Class 1
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ± 180°, with 1 m cable length, Class 3
- Indoor and outdoor applications, UV-resistant
- robots, Handling

Part No.	Number of fibres/ Fibre diameter/ Conductor nominal cross section	Outer diameter (d) max. [mm]	Weight [kg/km]
CFROBOT5.500 11)	2x62.5/125	8.5	53
CFROBOT5.501 11)	2x50/125	8.5	53

Part No.	Bandwidth [MHz x km] @ 850 nm	Bandwidth [MHz x km] @ 1300 nm	Attenuation [dB/km] @ 850 nm	Attenuation [dB/km] @ 1300 nm	Fibre identification
CFROBOT5.500 11)	≥ 200	≥ 500	≤ 3.0	≤ 0.7	orange with white numbers
CFROBOT5.501 11)	≥ 500	≥ 500	≤ 2.5	≤ 0.7	blue with white numbers

11) Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CFROBOT5.501 – to your desired length (0.5 m steps)
CFROBOT5 chainflex® series .501 Code Type of fibres

Online order: ▶ www.chainflex.eu/CFROBOT5

Delivery time 24h or today.
Delivery time means time until shipping of goods.

CFROBOT5
TPE
±180°/m

Motor cable | PUR | chainflex® CFROBOT6

10 million Cycles guaranteed

±180°/m Torsion, e-chain®

3D movements Travel distance, e-chain®

- For torsion applications
- PUR outer jacket
- Oil resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant
- PVC and halogen-free

Dynamic information

Bend radius	e-chain® twisted	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	e-chain® twisted	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	twisted	180 °/s
a max.	twisted	60 °/s²
Travel distance		Robots and 3D movements, Class 1
Torsion		± 180°, with 1 m cable length, Class 3

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core identification	Black cores with white numbers 1-2, one green-yellow core
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Steel-blue (similar to RAL 5011)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1

Example image

Class 6.1.3.3

Basic requirements	low 1 2 3 4 5 **6** 7 highest
Travel distance	unsupported **1** 2 3 4 5 6 ≥ 400 m
Oil resistance	none 1 2 **3** 4 highest
Torsion	none 1 2 **3** 4 ±360°

Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	Style 10492 and 21223, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Cycles*	5 million	7.5 million	10 million
Temperature, from/to [°C]	Torsion max. [°/m]	Torsion max. [°/m]	Torsion max. [°/m]
-25/-15	±150	±90	±30
-15/+70	±180	±120	±60
+70/+80	±150	±90	±30

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications with torsion movements, Class 6
- Especially for robots and 3D movements, Class 1
- Almost unlimited resistance to oil, Class 3
- Torsion ± 180°, with 1 m cable length, Class 3
- Indoor and outdoor applications, UV-resistant
- Robots, handling, spindle drives

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CFROBOT6.100.03 [11]	3G10.0	15.5	297	388
CFROBOT6.160.03	3G16.0	18.0	475	578
CFROBOT6.250.03	3G25.0	25.5	737	895

[11] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x** = without earth core

CFROBOT6
PUR
±180°/m

Motor cable | PUR | chainflex® CFROBOT7

Class 6.1.3.3

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m	
Oil resistance	none	1	2	**3**	4	highest			
Torsion	none	1	2	**3**	4	±360°			

36 10 million Cycles guaranteed

±180°/m Torsion, e-chain®

3D movements Travel distance, e-chain®

- For torsion applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	e-chain® twisted	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	e-chain® twisted	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	twisted	180 °/s
a max.	twisted	60 °/s²
Travel distance	Robots and 3D movements, Class 1	
Torsion	± 180°, with 1 m cable length, Class 3	

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core identification	**Power cores:** Black cores with white numbers, one green-yellow core **2 Control pairs:** Black cores with white numbers. 1. Control core: 5 2. Control core: 6 3. Control core: 74. Control core: 8 **4 Control pairs:** Colour code in accordance with DIN 47100
Overall shield	Extremely torsion-resistant tinned braided copper shield. Coverage approx. 85 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Steel-blue (similar to RAL 5011)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	Style 10492 and 21223, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Cycles*	5 million	7.5 million	10 million
Temperature, from/to [°C]	Torsion max. [°/m]	Torsion max. [°/m]	Torsion max. [°/m]
-25/-15	±150	±90	±30
-15/+70	±180	±120	±60
+70/+80	±150	±90	±30

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications with torsion movements, Class 6
- Especially for robots and 3D movements, Class 1
- Almost unlimited resistance to oil, Class 3
- Torsion ± 180°, with 1 m cable length, Class 3
- Indoor and outdoor applications, UV-resistant
- Robots, handling, spindle drives

Example image

EU04.2019

CFROBOT7
PUR
±180°/m

Motor cable | PUR | chainflex® CFROBOT7

Class 6.1.3.3

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6		≥ 400 m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	1	2	**3**	4				±360°

CFROBOT7
PUR
±180°/m

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
without control pair				
CFROBOT7.15.03.C	(3G1.5)C	8.5	60	97
CFROBOT7.15.04.C	(4G1.5)C	9.0	77	120
CFROBOT7.25.03.C	(3G2.5)C	10.0	93	141
CFROBOT7.25.04.C	(4G2.5)C	10.5	119	172
CFROBOT7.60.04.C	(4G6.0)C	15.0	278	373
2 Control pairs				
CFROBOT7.15.15.02.02.C	(4G1.5+2x(2x1.5)C)C	16.5	197	304
CFROBOT7.25.15.02.02.C	(4G2.5+2x(2x1.5)C)C	16.5	243	348
4 Control pairs				
CFROBOT7.40.02.02.04.C	(4G4.0+4x(2x0.25)C)C	17.0	253	365

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CFROBOT7.15.03 – to your desired length (0.5 m steps)
CFROBOT7 **chainflex® series .15 Code nominal cross section .03 Code Number of cores**

Online order ▶ www.chainflex.eu/CFROBOT7

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Guarantee igus chainflex 36 month guarantee

igus EU04.2019 EU04.2019 igus

Spindle cable/Single core | TPE | chainflex® CFROBOT

10 million Cycles guaranteed

±180°/m Torsion, e-chain®

3D movements Travel distance, e-chain®

- For torsion applications
- TPE outer jacket
- Shielded
- Oil and bio-oil resistant
- PVC-free
- UV-resistant
- Flame retardant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® twisted**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® twisted**	-35 °C up to +90 °C
	flexible	-45 °C up to +100 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +100 °C (following DIN EN 50305)
v max.	**twisted**	180 °/s
a max.	**twisted**	60 °/s²
Travel distance		Robots and 3D movements, Class 1
Torsion		± 180°, with 1 m cable length, Class 3

Cable structure

Conductor	Extremely bend-resistant cable.
Core insulation	Mechanically high-quality TPE mixture.
Overall shield	Extremely torsion-resistant tinned braided copper shield. Coverage approx. 90 % optical
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Example image

Class 6.1.4.3

Basic requirements	low	1	2	3	4	5	**6**	7 highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m
Oil resistance	none	1	2	3	**4**	highest		
Torsion	none	1	2	**3**	4	±360°		

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 10258 and 21387, 1000 V, 90 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF34.UL.25.04.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Cycles*	5 million	7.5 million	10 million
Temperature, from/to [°C]	Torsion max. [°/m]	Torsion max. [°/m]	Torsion max. [°/m]
-35/-25	±150	±90	±30
-25/+70	±180	±120	±60
+70/+80	±150	±90	±30

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications with torsion movements, Class 6
- Especially for robots and 3D movements, Class 1
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ± 180°, with 1 m cable length, Class 3
- Indoor and outdoor applications, UV-resistant
- Robots, handling, spindle drives

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CFROBOT.035	(1x10.0)C	10.5	125	200
CFROBOT.036	(1x16.0)C	12.0	189	280
CFROBOT.037	(1x25.0)C	14.5	298	434
CFROBOT.038	(1x35.0)C	15.5	403	546

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

CFROBOT
TPE
±180°/m

Bus cable | PUR | chainflex® CFROBOT8

10 million Cycles guaranteed

±180°/m Torsion, e-chain®

3D movements Travel distance, e-chain®

- For torsion applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Flame retardant
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® twisted**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® twisted**	-25 °C up to +70 °C
	flexible	-40 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +70 °C (following DIN EN 50305)
v max.	**twisted**	180 °/s
a max.	**twisted**	60 °/s²
Travel distance		Robots and 3D movements, Class 1
Torsion		± 180°, with 1 m cable length, Class 3

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	According to bus specification.
Core structure	According to bus specification.
Core identification	According to bus specification. ▶ Product range table
Intermediate layer	Foil taping over the external layer.
Overall shield	Torsion resistant tinned braided copper shield. Coverage approx. 80 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Steel-blue (similar to RAL 5011)

Electrical information

Nominal voltage	50 V
Testing voltage	500 V

Example image

Class 6.1.3.3

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m	
Oil resistance	none	1	2	**3**	4	highest			
Torsion	none	1	2	**3**	4	±360°			

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL/CSA	Style 1589 and 20236, 30 V, 80 °C **CFROBOT8.045-CFROBOT8.049:** Style 1589 and 20236, 300 V, 80 °C
EAC	Certificate No. RU C-DE.ME77.B.01218 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Cycles*	5 million	7.5 million	10 million
Temperature, from/to [°C]	Torsion max. [°/m]	Torsion max. [°/m]	Torsion max. [°/m]
-25/-15	±150	±90	±30
-15/+60	±180	±120	±60
+60/+70	±150	±90	±30

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications with torsion movements, Class 6
- Especially for robots and 3D movements, Class 1
- Almost unlimited resistance to oil, also with bio-oils, Class 3
- Torsion ± 180°, with 1 m cable length, Class 3
- Indoor and outdoor applications, UV-resistant
- Robots, handling, spindle drives

CFROBOT8
PUR
±180°/m

PVC | iguPUR | **PUR** | TPE

Bus cable | PUR | chainflex® CFROBOT8

Class 6.1.3.3

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m
Oil resistance	none	1	2	**3**	4	highest		
Torsion	none	1	2	**3**	4	±360°		

CFROBOT8
PUR
±180°/m

Example image

Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight	Part No.	Characteristic wave impedance approx.	Core group	Colour code
	[mm²]	[mm]	[kg/km]	[kg/km]		[Ω]		
Profibus (1x2x0,64 mm)								
CFROBOT8.001	(2x0.35)C	8.0	27	60	**CFROBOT8.001**	150	(2x0.35)C	red, green
CAN-Bus								
CFROBOT8.022	(4x0.5)C	7.5	41	70	**CFROBOT8.022**	120	(4x0.5)C	white, green, brown, yellow(Star-quad)
DeviceNet								
CFROBOT8.030	(2xAWG24)C+(2xAWG22)C	9.5	29	74	**CFROBOT8.030**	120	(2xAWG24)C	white/blue
							2xAWG22	red, black
Ethernet/CAT5e/PoE								
CFROBOT8.045	4x(2x0.15)C	9.5	48	90	**CFROBOT8.045**	100	4x(2x0.15)C	white-green/green, white-orange/orange, white-blue/blue, white-brown/brown
Ethernet/CAT6/PoE								
CFROBOT8.049	4x(2x0.15)C	9.5	49	90	**CFROBOT8.049**	100	4x(2x0.15)C	white-green/green, white-orange/orange, white-blue/blue, white-brown/brown
Ethernet/CAT6A								
CFROBOT8.050	4x(2x0.15)C	10.5	51	124	**CFROBOT8.050**	100	4x(2x0.15)C	white-green/green, white-orange/orange, white-blue/blue, white-brown/brown
Ethernet/CAT7								
CFROBOT8.052	4x(2x0.15)C	10.5	52	126	**CFROBOT8.052**	100	4x(2x0.15)C	white-green/green, white-orange/orange, white-blue/blue, white-brown/brown
Profinet								
CFROBOT8.060	(2x(2x0.34))C	8.5	34	68	**CFROBOT8.060**	100	(2x(2x0.34))C	white/blue, yellow/orange

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CFROBOT8.052 – to your desired length (0.5 m steps)
CFROBOT8 **chainflex® series** .052 **Code Bus type**

Online order ▶ www.chainflex.eu/CFROBOT8

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Technical note on bus cableschainflex® bus cables have been specially developed and tested for continuously moving use in e-chains®. Depending on the material used for the outer jacket and on the underlying construction principle, the bus cables are designed for different mechanical requirements and resistance to diverse media. The cables have been electrically designed in such a way that, on the one hand, the electrical requirements of the respective bus specification are reliably met and, on the other, that greater value is placed on a high degree of EMC reliability.It is also ensured that the electrical values remain stable over the long term in spite of permanent movement. The overall quality of transmission in a complete bus communication system, however, is not solely dependent on the cable used. What is also essential is that all components (electronic parts, connecting system and cable) are precisely matched to each other and that the maximum transmission lengths, which are dependent on the respective system, are adhered to with regard to the data transmission rates needed. A cable is thus not solely responsible for the reliable transmission of signals.igus® advises you when you are designing your bus system so that all these factors are taken into account and, with extensive tests, helps you to ensure the process reliability of your system from the very beginning.

EU04.2019

PVC | iguPUR | **PUR** | TPE

Bus cable | PUR | chainflex® CFROBOT8.PLUS

New

Example image

36 10 million Cycles guaranteed

±360°/m Torsion, e-chain®

3D movements Travel distance, e-chain®

- For torsion applications
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

World first! 360°/m torsion for robots

Dynamic information

Bend radius	e-chain® twisted	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	e-chain® twisted	-25 °C up to +70 °C
	flexible	-40 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +70 °C (following DIN EN 50305)
v max.	twisted	360 °/s
a max.	twisted	60 °/s²
Travel distance		Robots and multi-axis movements, Class 1
Torsion		Torsion ±360°, with 1 m cable length, Class 4

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	According to bus specification.
Core structure	According to bus specification.
Core identification	According to bus specification. ▶ Product range table
Intermediate layer	Foil taping over the outer layer.
Overall shield	Torsion resistant tinned braided copper shield. Coverage approx. 80 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Steel-blue (similar to RAL 5011)

Electrical information

Nominal voltage	50 V
Testing voltage	500 V

Class 6.1.3.4

Basic requirements	low	1	2	3	4	5	**6**	7 highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m
Oil resistance	none	1	2	**3**	4	highest		
Torsion	none	1	2	3	**4**	±360°		

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	Style 1589 and 20236, 30 V, 80 °C
EAC	Certificate No. RU C-DE.ME77.B.01218 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Cycles*	5 million	7.5 million	10 million
Temperature, from/to [°C]	Torsion max. [°/m]	Torsion max. [°/m]	Torsion max. [°/m]
-25/-15	±330	±240	±150
-15/+60	±360	±270	±180
+60/+70	±330	±240	±150

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications with torsion movements, Class 6
- Especially for robots and 3D movements, Class 1
- Almost unlimited resistance to oil, Class 3
- Torsion ±360°, with 1 m cable length, Class 4, Class 4
- Indoor and outdoor applications, UV-resistant
- robots, Handling, spindle drives

CFROBOT8.
PLUS
PUR
±360°/m

PVC | iguPUR | **PUR** | TPE

Bus cable | PUR | chainflex® CFROBOT8.PLUS

New

Class 6.1.3.4

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m	
Oil resistance	none	1	2	**3**	4	highest			
Torsion	none	1	2	3	**4**	±360°			

CFROBOT8.
PLUS
PUR
±360°/m

Example image

Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight	Part No.	Characteristic wave impedance approx.	Core group	Colour code
	[mm²]	[mm]	[kg/km]	[kg/km]		[Ω]		
Profibus (1x2x0.64 mm)								
CFROBOT8.PLUS.001	(2x0.25)C	9.0	30	75	**CFROBOT8.PLUS.001**	150	(2x0.25)C	red, green
Ethernet/CAT5e/PoE								
CFROBOT8.PLUS.045	(4x(2x0.15))C	7.5	32	60	**CFROBOT8.PLUS.045**	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Profinet								
CFROBOT8.PLUS.060	(4x0.38)C	7.0	32	64	**CFROBOT8.PLUS.060**	100	(4x0.38)C	white, orange, blue, yellow (Star-quad)

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CFROBOT8.PLUS.060 – to your desired length (0.5 m steps)
CFROBOT8.PLUS chainflex® series .060 Code Bus type

Online order ▶ www.chainflex.eu/CFROBOT8.PLUS

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Technical note on bus cableschainflex® bus cables have been specially developed and tested for continuously moving use in e-chains®. Depending on the material used for the outer jacket and on the underlying construction principle, the bus cables are designed for different mechanical requirements and resistance to diverse media. The cables have been electrically designed in such a way that, on the one hand, the electrical requirements of the respective bus specification are reliably met and, on the other, that greater value is placed on a high degree of EMC reliability.It is also ensured that the electrical values remain stable over the long term in spite of permanent movement. The overall quality of transmission in a complete bus communication system, however, is not solely dependent on the cable used. What is also essential is that all components (electronic parts, connecting system and cable) are precisely matched to each other and that the maximum transmission lengths, which are dependent on the respective system, are adhered to with regard to the data transmission rates needed. A cable is thus not solely responsible for the reliable transmission of signals.igus® advises you when you are designing your bus system so that all these factors are taken into account and, with extensive tests, helps you to ensure the process reliability of your system from the very beginning.

Hybrid cable | PUR | chainflex® CFROBOT9

10 million Cycles guaranteed

±180°/m Torsion, e-chain®

3D movements Travel distance, e-chain®

- For torsion applications
- PUR outer jacket
- Unshielded/shielded
- Oil resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® twisted**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® twisted**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**twisted**	180 °/s
a max.	**twisted**	60 °/s²
Travel distance	Robots and 3D movements, Class 1	
Torsion	± 180°, with 1 m cable length, Class 3	

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core identification	▶ Product range table
Element shield	Extremely torsion-resistant tinned braided copper shield. Coverage approx. 85 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Steel-blue (similar to RAL 5011)

Electrical information

Nominal voltage	300/500 V (following DIN VDE 0298-3)
Testing voltage	2000 V (following DIN EN 50395)

Example image

Class 6.1.3.3

Basic requirements	low	1	2	3	4	5	**6**	7 highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m
Oil resistance	none	1	2	**3**	4	highest		
Torsion	none	1	2	**3**	4	±360°		

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	**Cores ≤ 0.5 mm²:** Style 10467 and 20317, 300 V, 80 °C **Cores > 0.5 mm²:** Style 10493 and 20317, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Cycles*	5 million	7.5 million	10 million
Temperature, from/to [°C]	Torsion max. [°/m]	Torsion max. [°/m]	Torsion max. [°/m]
-25/-15	±150	±90	±30
-15/+70	±180	±120	±60
+70/+80	±150	±90	±30

* Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Typical application areas

- For heaviest duty applications with torsion movements, Class 6
- Especially for robots and 3D movements, Class 1
- Almost unlimited resistance to oil, Class 3
- Torsion ± 180°, with 1 m cable length, Class 3
- Indoor and outdoor applications, UV-resistant
- Robots, handling, spindle drives

CFROBOT9
PUR
±180°/m

PVC | iguPUR | **PUR** | TPE

Hybrid cable | PUR | chainflex® CFROBOT9

Class 6.1.3.3

Basic requirements	low	1	2	3	4	5	**6**	7	highest	
Travel distance	unsupported	**1**	2	3	4	5	6		≥ 400 m	
Oil resistance	none	1	2	**3**	4				highest	
Torsion	none	1	2	**3**	4				±360°	

CFROBOT9
PUR
±180°/m

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]	Part No.	Core group	Colour code
CFROBOT9.001	5G1.0+(2x1.0)C	10.5	81	138	**CFROBOT9.001**	5G1.0	white with black numbers 1-4, one green-yellow core
						(2x1.0)C	white with black numbers 5-6
CFROBOT9.004	16G1.0+(2x1.0)C	16.0	194	311	**CFROBOT9.004**	16G1.0	white with black numbers 1-4, 7-17, one green-yellow core
						(2x1.0)C	white with black numbers 5-6
CFROBOT9.005 [11)]	23G1.0+(2x1.0)C	19.5	268	444	**CFROBOT9.005** [11)]	23G1.0	white with black numbers 1-4, 7-24, one green-yellow core
						(2x1.0)C	white with black numbers 5-6
CFROBOT9.006 [11)]	24G1.0+(2x1.0)C	20.0	280	457	**CFROBOT9.006** [11)]	24G1.0	white with black numbers 1-4, 7-25, one green-yellow core
						(2x1.0)C	white with black numbers 5-6
CFROBOT9.007	(15x(2x0.25)C+(4x0.25)C)C	18.5	229	368	**CFROBOT9.007**	15x(2x0.25)C	Colour code in accordance with DIN 47100.
						(4x0.25)C)C	white/green/brown/yellow(CAN-Bus)
CFROBOT9.010	(4x(2x0.25)C)C	10.5	62	117	**CFROBOT9.010**	4x(2x0.25)C)C	white/brown, green/yellow, Grey/pink, blue/red

[11)] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

igus® chainflex® cables in triflex® R e-chain® for 6-axis robots

cables

Special

chainflex® cable		Approvals and standards	Page
Special cables			
CFTHERMO	Thermocouple cable		394
CFFLAT	Single core flat cable		396
CFBRAID	Braided conductors		398
CFSPECIAL.182	Cables for hanging applications		400
CFSPECIAL.414	Cables for rail vehicles		402
CFSPECIAL.484	Cables for rail vehicles		404
CFSPECIAL.792	Cables for axis 7 on robots		406

The following chapter of special cables offers solutions for moving applications going beyond standard energy supply.

The constantly growing program of special cables is in response to our customer requirements.

At the same time this can be an inspiration for users. igus® can make cables for special applications using many different materials and production processes. Depending to the construction this is already possible from a length of 500 m.

Use our comprehensive knowledge about cables plus the experience of 2 billion test cycles that are annually achieved in the company's chainflex® laboratory.

The technical and material details of the CFSP families are documented in data sheets and are available on the internet. The respective web links can be recalled on the summary pages of the CFSP cables.

We look forward to hearing about your requirement!

Guarantee igus chainflex 36 month guarantee

chainflex® guarantee

As these are special cables for special applications, we ask you to contact us for information on the guaranteed lifetime:

Phone +49 2203 9649-800
info@igus.eu

Thermocouple cable | PUR | chainflex® CFTHERMO

Example image

- For heavy duty applications
- PUR outer jacket
- Oil resistant and coolant-resistant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 12.5 x d
	flexible	minimum 10 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	2 m/s
	gliding	1 m/s
a max.		20 m/s²
Travel distance		Unsupported travels and up to 50 m for gliding applications, Class 4

Cable structure

Conductor	Conductor consisting of a flexible special alloy. ▶ Product range table
Core insulation	Mechanically high-quality TPE mixture.
Core structure	The individual cores are wound in layers with a short pitch length.
Core identification	According to thermo specification. ▶ Product range table
Intermediate layer	Fleece taping over the external layer.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: According to thermo specification ▶ Product range table

Electrical information

Nominal voltage	300/300 V (following DIN VDE 0298-3)
Testing voltage	1500 V

Class 5.4.3.1

Basic requirements	low	1	2	3	4	**5**	6	7 highest
Travel distance	unsupported	1	2	3	**4**	5	6	≥ 400 m
Oil resistance	none	1	2	**3**	4	highest		
Torsion	none	**1**	2	3	4	±360°		

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
EAC	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Typical application areas

- For heavy duty applications
- Almost unlimited resistance to oil
- Indoor and outdoor applications with average sun radiation
- Unsupported travel distances and up to 50 m for gliding applications
- Machining units/machine tools, Storage and retrieval units for high-bay warehouses, Packaging industry, quick handling, refrigerating sector

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CFTHERMO.J.001*	(2x0.23)C	5.5	9	35
CFTHERMO.K.001	(2x0.23)C	5.5	9	35
CFTHERMO.K.002	(2x0.23)C+3G0.5	7.5	24	65

*The cross-section of the copper conductor is equivalent to the electrically effective cross-section.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Part No.	Thermo materials	Core group	Colour code	Outer jacket
CFTHERMO.J.001*	Fe-CuNi	(2x0.23)C	+ black, - white	black
CFTHERMO.K.001	NiCr-Ni	(2x0.23)C	+ green, - white	green
CFTHERMO.K.002	NiCr-Ni	(2x0.23)C	+ green, - white	green
	Cu	3G0.5	brown, blue, yellow-green	brown

*The cross-section of the copper conductor is equivalent to the electrically effective cross-section.
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

CFTHERMO
PUR
12.5 x d

Motor cable | TPE | chainflex® CFFLAT

Class 7.5.4.1

Basic requirements	low	1	2	3	4	5	6	**7**	highest	
Travel distance	unsupported	1	2	3	4	**5**	6	≥ 400 m		
Oil resistance	none	1	2	3	**4**	highest				
Torsion	none	**1**	2	3	4	±360°				

- For heaviest duty applications
- TPE outer jacket
- Oil and bio-oil resistant
- PVC and halogen-free
- UV-resistant
- Hydrolysis and microbe-resistant

Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 5 x d
	flexible	minimum 4 x d
	fixed	minimum 3 x d
Temperature	**e-chain® linear**	-35 °C up to +90 °C
	flexible	-50 °C up to +90 °C (following DIN EN 60811-504)
	fixed	-55 °C up to +90 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		Unsupported travels and up to 100 m for gliding applications, Class 5

Cable structure

Conductor	Highly flexible braided special conductor.
Core insulation	Mechanically high-quality TPE mixture.
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Steel-blue (similar to RAL 5011)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Typical application areas

- For heaviest duty applications, Class 7
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Indoor and outdoor applications, UV-resistant
- Unsupported travel distances and up to 100 m for gliding applications, Class 5
- Storage and retrieval units for high-bay warehouses, small installation spaces, small radii, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, low temperature applications
- No torsion, Class 1

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer dimensions [mm]	Copper index [kg/km]	Weight [kg/km]
CFFLAT.25.01 [11]	1x2.5	12.0x5x5	31	74
CFFLAT.40.01	1x4.0	14.0x5.5	48	116

[11] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Order example: CFFLAT.25.01 – to your desired length (in 0.5 m steps)
CFFLAT chainflex® series .25 Nominal cross section code .01 Number of cores

Online order ▶ www.chainflex.eu/CFFLAT

Delivery time 24h or today.
Delivery time means time until shipping of goods.

Motor cable | TPE | chainflex® CFBRAID

Example image

- For heaviest duty applications
- TPE outer jacket
- Unshielded/shielded
- Oil and bio-oil resistant
- Flame retardant
- UV-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-35 °C up to +70 °C
	flexible	-45 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +70 °C (following DIN EN 50305)
v max.	**gliding**	6 m/s
a max.		80 m/s²
Travel distance		Gliding travel distances up to 400 m and more, Class 6

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality PVC mixture.
Core structure	Cores braided together using a special technique.
Core identification	Black cores with white numbers, one green-yellow core.
Inner jacket	TPE mixture adapted to suit the requirements in e-chains® (for shielded types).
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Class 6.6.4.1

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	1	2	3	4	5	**6**		≥ 400 m
Oil resistance	none	1	2	3	**4**				highest
Torsion	none	**1**	2	3	4				±360°

Properties and approvals

UV resistance	High
Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1. The outer jacket material of this series complies with CF34.UL.25.04.D - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU
Info	What is special about the CFBRAID? Due to their design, especially for cross-sections > 2.5 mm² and long distances of travel with large numbers of cycles, cables with 7 cores have an increased tendency toward the formation of corkscrews. Due to the special design of the CFBRAID with 8 braided cores, corkscrews can be completely ruled out.

Typical application areas

- For heaviest duty applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Indoor and outdoor applications, UV-resistant
- Gliding travel distances up to 400 m and more, Class 6
- Storage and retrieval units for high-bay warehouses, quick handling, indoor/outdoor cranes, low temperature applications
- Especially for applications with corkscrew-risk
- No torsion, Class 1

Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight
	[mm²]	[mm]	[kg/km]	[kg/km]
CFBRAID.25.08 [8) 11)]	8G2.5	20.0	212	451
CFBRAID.25.08.C [11)]	(8G2.5)C	23.5	330	694

[8)] without DESINA
[11)] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

CFBRAID
TPE
7.5 x d

Bus cable | PUR | chainflex® CFSPECIAL.182

Example image

- For increased tensile load
- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		100 m/s²
Travel distance		For hanging applications up to 50 m

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	According to bus specification.
Core structure	According to bus specification.
Core identification	According to bus specification.
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	**1. Outer jacket:** PUR mixture adapted to suit the requirements in e-chains®. **Reinforcement:** High tensile-strength aramid braid embedded in the outer jacket. **2. Outer jacket:** Low-adhesion, halogen-free PUR mixture, highly abrasion- and bending-resistant, adapted to suit the requirements in hanging applications (following DIN EN 50363-10-2). Colour: Jet black (similar to RAL 9005)

Electrical information

Nominal voltage	50 V
Testing voltage	500 V

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	Style 10138 and 20233, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01218 (TR ZU)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Typical application areas

- For increased tensile load
- Almost unlimited resistance to oil, Class
- For hanging applications up to 50 m
- Storage and retrieval units for high-bay warehouses, hanging control units, Elevators

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
Ethernet/CAT5e/PoE				
CFSPECIAL.182.045	(4x(2x0.15))C	10.0	41	138
Profinet				
CFSPECIAL.182.060 [13]	(4x0.38)C	8.5	36	121

[13] Colour outer jacket: Yellow-green (vergleichbar RAL 6018)
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Part No.	Characteristic wave impedance approx. [Ω]	Core group	Colour code
Ethernet/CAT5e/PoE			
CFSPECIAL.182.045	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Profinet			
CFSPECIAL.182.060 [13]	100	(4x0.38)C	white, orange, blue, yellow (star-quad stranding)

PVC | iguPUR | PUR | TPE

Control cable for rail vehicles | chainflex® CFSPECIAL.414

Example image

- For heaviest duty applications in rail vehicles
- Special outer jacket
- PVC and halogen-free
- Oil-resistant
- Flame retardant
- Self-extinguishing
- Low toxicity
- Low gas density

Dynamic information

Bend radius	**e-chain® linear**	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	**e-chain® linear**	-20 °C up to +80 °C
	flexible	-25 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-30 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
a max.		20 m/s²
Travel distance		For unsupported travels up to 5 m

Cable structure

Conductor	Fine-wire stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality special mixture.
Core identification	Black cores with white numbers.
Outer jacket	Special mixture adapted to suit the requirements in e-chains® (following DIN EN 50264-1 EM 104). Colour: Jet black (similar to RAL 9005)

Electrical information

Nominal voltage	300/500 V
Testing voltage	2000 V

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 60811-2-1), Class 3
Flame retardant	Flame-retardant (following DIN EN 45545-2) Fire safety class 3 (HL3)
Halogen-free	Following DIN EN 60754
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU
Toxicity	Low toxicity according to EN 50305-9.2
Smoke gas density	Low smoke gas density according to EN 61034-2

Typical application areas

- Rail vehicles, automatic doors, buses, adjusting equipment, Storage and retrieval units for high-bay warehouses, hanging control units, Elevators

Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight
CFSPECIAL.414.03.04	4x0.34	5.0	15	35
CFSPECIAL.414.03.06	6x0.34	6.0	23	50

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Part No.	Core group	Colour code
CFSPECIAL.414.03.04	4x0.34	black with white numbers 1-4
CFSPECIAL.414.03.06	6x0.34	black with white numbers 1-6

Order example: CFSPECIAL.414.03.04 – to your desired length (in 0.5 m steps)
CFSPECIAL chainflex® series .414 igus® key .03 Nominal cross section code .04 Number of cores

Online order ▶ www.chainflex.eu/CFSP4

Delivery time 24h or today.
Delivery time means time until shipping of goods.

PVC | iguPUR | PUR | TPE

Bus cables for rail vehicles | chainflex® CFSPECIAL.484

- For heaviest duty applications in rail vehicles
- Special outer jacket
- PVC and halogen-free
- Oil-resistant
- Flame retardant
- Self-extinguishing
- Low toxicity
- Low gas density

Dynamic information

Bend radius	**e-chain® linear**	minimum 12.5 x d
	flexible	minimum 10 x d
	fixed	minimum 7 x d
Temperature	**e-chain® linear**	-20 °C up to +80 °C
	flexible	-25 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-30 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	10 m/s
a max.		20 m/s²
Travel distance		For unsupported travels up to 5 m

Cable structure

Conductor	Fine-wire stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	According to bus specification.
Core structure	According to bus specification.
Core identification	According to bus specification.
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Outer jacket	Special mixture adapted to suit the requirements in e-chains® (following DIN EN 50264-1 EM 104). Colour: Jet black (similar to RAL 9005)

Electrical information

Nominal voltage	50 V
Testing voltage	500 V

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 60811-2-1), Class 3
Flame retardant	Flame-retardant (following DIN EN 60332-1-2, DIN EN 45545-2) Fire safety class: 3 (in accordance to EN 45545-2) or 4 (in accordance to DIN 5510-2)
Halogen-free	Following DIN EN 60754
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU
Toxicity	Low toxicity according to EN 50305-9.2
Smoke gas density	Low smoke gas density according to EN 61034-2

Typical application areas

- Rail vehicles, automatic doors, buses, adjusting equipment, Storage and retrieval units for high-bay warehouses, hanging control units, elevators

Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight
Ethernet/CAT6				
CFSPECIAL.484.049	(4x(2x0.15))C	8.5	41	86

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Part No.	Characteristic wave impedance approx. [Ω]	Core group	Colour code
Ethernet/CAT6			
CFSPECIAL.484.049	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown

Example image

CFSP
484.049
12.5 x d

Hybrid cable | PUR | chainflex® CFSPECIAL.792

Example image

- PUR outer jacket
- Shielded
- Oil resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	**e-chain® linear**	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	**e-chain® linear**	-25 °C up to +80 °C
	flexible	-40 °C up to +80 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +80 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
	gliding	2 m/s
a max.	20 m/s²	
Travel distance	Unsupported travels and up to 100 m for gliding applications, Class 5	

Cable structure

Conductor	Fine-wired stranded conductor consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core identification	▶ Product range table
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage approx. 50 % linear, approx. 80 % optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Jet black (similar to RAL 9005)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL/CSA	Style 10258 and 20234, 1000 V, 80 °C **CFSPECIAL.792.012:** Style 11323 and 21223, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Typical application areas

- Reliable e-chain® cable for the seventh robot axis
- Electrical properties in line with Kuka (.011/.013/.014), ABB (.012) and Fanuc (.015/.016)

Hybrid cable | PUR | chainflex® CFSPECIAL.792

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]	Part No.	Core group	Colour code
ABB							
CFSPECIAL.792.012	(18G2.5)C	25.5	545	920	**CFSPECIAL.792.012**	(18G2.5)C	Black cores with white numbers 1-17, one green-yellow core
Fanuc							
CFSPECIAL.792.015	(7x(6x2.0))C	36.5	999	1680	**CFSPECIAL.792.015**	(7x(6x2.0))C	Black cores with white numbers 1-29 Blue cores with white numbers 1-4 Yellow cores with black numbers 1-9
CFSPECIAL.792.016	(5x(4x0.25)+10x(3x0.75))C	26.5	422	854	**CFSPECIAL.792.016**	5x(4x0.25)	(blue/violet/brown/green), (grey/violet/yellow/brown), (grey/blue/brown/green), (grey/blue/green/gelb), (green/violet/brown/yellow)
						10x(3x0.75)	Black cores with white numbers 1, 7, 24 & 30 Black cores with white numbers 16 to 21 Blue cores with white numbers 2, 8 & 25 Green cores with black numbers 3, 9 & 26 Yellow cores with black numbers 5, 22 & 28 Red cores with white numbers 11 bis 15 Violet cores with white numbers 4, 10 & 27 Grey cores with black numbers 6, 23 & 29
Kuka							
CFSPECIAL.792.011	(5x(2x6.0+2x2.5)+2x(6x1.0)C)C	35.5	1250	2026	**CFSPECIAL.792.011**	10x6.0	Black cores with white numbers 1-9, one green-yellow core
						10x2.5	Black cores with white numbers 10-18, one green-yellow core
						2x(6x1.0)C	Black cores with white numbers 19-30
CFSPECIAL.792.013	((6x1.5)C+3x(3x4)+1G6)C	28.0	679	1209	**CFSPECIAL.792.013**	(6x1.5)C	Black cores with white numbers 10-15
						3x(3x4)	Black cores with white numbers 1-9
						1G6	Green-yellow core
CFSPECIAL.792.014	(2x(3x1.5)C+3x(3x10)+1G10)C	36.0	1346	2089	**CFSPECIAL.792.014**	2x(3x1.5)C	Black cores with white numbers 10-15
						3x(3x10)	Black cores with white numbers 1-9
						1G10	Green-yellow core

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

CFSP792
PUR
10 x d

Pneumatic hose | chainflex® CFAIR

- For heaviest duty applications
- PUR hose
- Oil-resistant and coolant-resistant
- Abrasion-resistant
- Outside-toleranced
- PVC-free/halogen free

Dynamic information

Bend radius	**flexible**	10 x d
	fixed	7.5 x d
Temperature	**flexible**	-25 °C to +80 °C
	fixed	-40 °C to +85 °C
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		50 m/s²

Technical data

Material	Abrasion-resistant Polyurethane adapted to suit the requirements in e-chains®. Colour: blue
Dimensions	Outside-toleranced
Operating pressure	12 bar at +20 °C
Vacuum	-1 bar at +20 °C

Properties and approvals

Oil resistance	Oil-resistant
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
Lead-free	Following 2011/65/EC (RoHS-II)

Part No.	Max. package length [km]	Inner diameter approx. [mm]	Wall thickness approx. [mm]	Outer diameter (d) max.[mm]	Weight [g/m]
CAPU.A.04.0	1.0	2.7	0.65	4.0	8
CAPU.A.06.0	0.5	4.0	1.00	6.0	19
CAPU.A.08.0	0.5	5.7	1.15	8.0	30
CAPU.A.10.0	0.3	7.0	1.50	10.0	48
CAPU.A.12.0	0.2	8.0	2.00	12.0	76
CAPU.A.16.0	0.1	11.0	2.50	16.0	127

Order example: CAPU.A.04.0 – to your desired length (in 0.5 m steps)
CAPU chainflex® series .A Material code .04 Ø code .0 Special indentification

Order online ► www.chainflex.eu/CAPU

Delivery time 24h or today.
Delivery time means time until shipping of goods.

igus® chainflex® CFAir pneumatic hoses have been tested for several million bending cycles in e-chains®. Their outstanding features include flexibility, high abrasion resistance and very good resistance to oil and coolants.

Example image

Pneumatic hose | chainflex® CFCleanAIR

- For heaviest duty applications
- PE hose
- Oil-resistant and coolant-resistant
- Highly abrasion-resistant
- Outside-toleranced
- PVC-free/halogen free

Dynamic information

Bend radius	**flexible**	10 x d
	fixed	7.5 x d
Temperature	**flexible**	-25 °C to +60 °C
	fixed	-30 °C to +65 °C
v max.	**unsupported**	10 m/s
	gliding	6 m/s
a max.		50 m/s²

Technical data

Material	Highly abrasion-resistant Polyethylene adapted to suit the requirements in e-chains®. Colour: White
Dimensions	Outside-toleranced
Operating pressure	10 bar at +20 °C
Vacuum	-0.95 bar at +20 °C

Properties and approvals

Oil resistance	Oil-resistant
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
Lead-free	Following 2011/65/EC (RoHS-II)
Clean room	According to ISO Class 1, material/cable tested by ISO standard 14644-1.

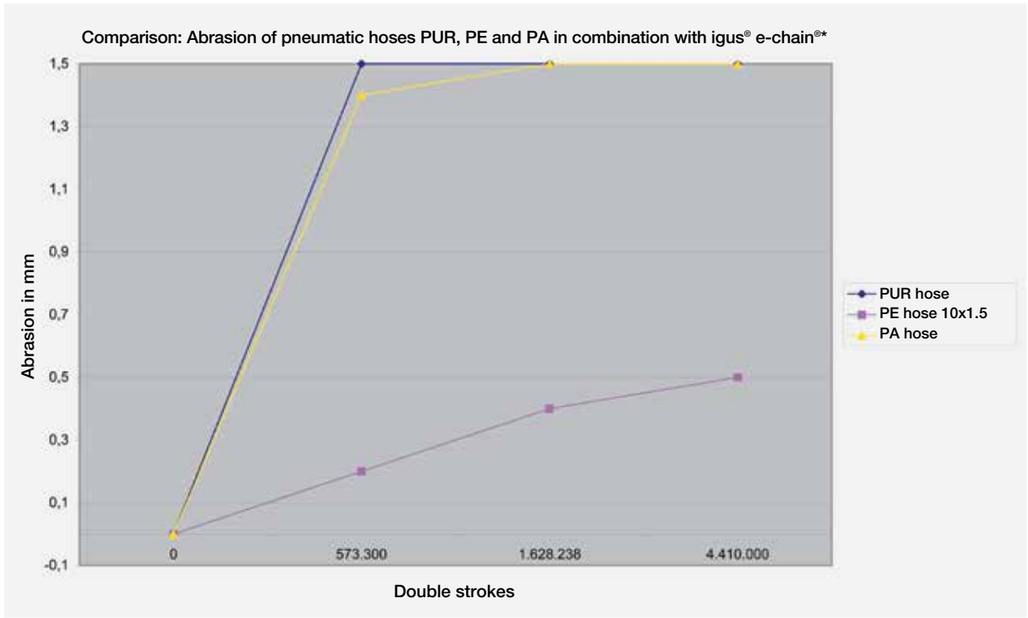
Part No.	Max. package length [km]	Inner diameter approx. [mm]	Wall thickness approx. [mm]	Outer diameter (d) max. [mm]	Weight [g/m]
CAPE.A.04.0	1.0	2.7	0.65	4.0	8
CAPE.A.06.0	0.5	4.0	1.00	6.0	15
CAPE.A.08.0	0.5	5.7	1.15	8.0	21
CAPE.A.10.0	0.3	7.0	1.50	10.0	38
CAPE.A.12.0	0.2	8.0	2.00	12.0	54
CAPE.A.16.0	0.1	11.0	2.50	16.0	90

Order example: CAPE.A.04.0 – to your desired length (in 0.5 m steps)
CAPE chainflex® series .A Code material .04 Code Ø .0 Special identification

Order online ▶ www.chainflex.eu/CAPU

Delivery time 24h or today.
Delivery time means time until shipping of goods.

igus® material abrasion test



* igus® e-chain® with crossbar 450.30

Example image

EPLAN download, configurators ▶ www.igus.eu/CAPE

Camera

Video / vision / bus technology

chainflex® readycable®

	Cable type		Jacket	Page
Harnessed Bus cables				
	FireWire	Pre-harnessed cable	TPE	416
	USB 2.0	Pre-harnessed cable	PVC/PUR/TPE	418
	USB 3.0	Pre-harnessed cable	PVC/PUR	420
	GigE	Pre-harnessed cable	PUR-ROBOT/TPE	421
Harnessed coax cables				
	Coax	Pre-harnessed cable (BNC/SMA)	TPE	422
	VGA	Pre-harnessed cable	TPE	425
	DVI-D/HDMI	Pre-harnessed cable	TPE	426

Harnessed Bus cables | FireWire

* Technical information on the cable quality:
TPE
from page 174

Harnessed Bus cables, FireWire, to your required length				
Part No.	**chainflex® cable**	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Socket A/Socket A Pre-harnessed at both ends				
MAT9048160	**CFBUS.055**	2x(2x0.15)C+2x(0.34)C	8.0	12.5
Socket A/Pin A Pre-harnessed at both ends				
MAT9048621	**CFBUS.055**	2x(2x0.15)C+2x(0.34)C	8.0	12.5
Socket A/Socket B Pre-harnessed at both ends				
MAT9048623	**CFBUS.055**	2x(2x0.15)C+2x(0.34)C	8.0	12.5
Socket A/Pin B Pre-harnessed at both ends				
MAT9048625	**CFBUS.055**	2x(2x0.15)C+2x(0.34)C	8.0	12.5
Pin B/Pin B Pre-harnessed at both ends				
MAT9048627	**CFBUS.055**	2x(2x0.15)C+2x(0.34)C	8.0	12.5
Pin A/Pin A Pre-harnessed at both ends				
MAT9048620	**CFBUS.055**	2x(2x0.15)C+2x(0.34)C	8.0	12.5
Pin A/Socket B Pre-harnessed at both ends				
MAT9048622	**CFBUS.055**	2x(2x0.15)C+2x(0.34)C	8.0	12.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Maximum transmission length: 10 m

Harnessed Bus cables, FireWire, to your required length				
Part No.	**chainflex® cable**	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Pin A/Pin B Pre-harnessed at both ends				
MAT9048624	**CFBUS.055**	2x(2x0.15)C+2x(0.34)C	8.0	12.5
Socket B/Socket B Pre-harnessed at both ends				
MAT9048626	**CFBUS.055**	2x(2x0.15)C+2x(0.34)C	8.0	12.5
Socket B/Pin B Pre-harnessed at both ends				
MAT9048628	**CFBUS.055**	2x(2x0.15)C+2x(0.34)C	8.0	12.5

Harnessed with these connectors

Socket A (Connector body), with clip

Pin A (Pin body), with clip

Socket B (Moulded connector), without clip

PIN B (Moulded connector), without clip

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Maximum transmission length: 10 m

Harnessed Bus cables | USB 2.0

* Technical information on the cable quality:
TPE
from page 174

Harnessed Bus cables, USB 2.0, to your required length				
Part No.	**chainflex® cable**	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
USB type A/open cable end				
Pre-harnessed at one end				
USB9040001	**CFBUS.065**	((2xAWG28)+2xAWG20)C	5.5	12.5
USB9040201 [1)]	**CFBUS.066**	((2xAWG24)+2xAWG20)C	6.5	12.5
USB type A/A				
Pre-harnessed at both ends				
USB9040010	**CFBUS.065**	((2xAWG28)+2xAWG20)C	5.5	12.5
USB9040210 [1)]	**CFBUS.066**	((2xAWG24)+2xAWG20)C	6.5	12.5
USB type B/open cable end				
Pre-harnessed at one end				
USB9040020	**CFBUS.065**	((2xAWG28)+2xAWG20)C	5.5	12.5
USB9040220 [1)]	**CFBUS.066**	((2xAWG24)+2xAWG20)C	6.5	12.5
USB type B/B				
Pre-harnessed at both ends				
USB9040030	**CFBUS.065**	((2xAWG28)+2xAWG20)C	5.5	12.5
USB9040230 [1)]	**CFBUS.066**	((2xAWG24)+2xAWG20)C	6.5	12.5
USB type A/B				
Pre-harnessed at both ends				
USB9040040	**CFBUS.065**	((2xAWG28)+2xAWG20)C	5.5	12.5
USB9040240 [1)]	**CFBUS.066**	((2xAWG24)+2xAWG20)C	6.5	12.5
USB type A/A (socket)				
Pre-harnessed at both ends				
USB9040060	**CFBUS.065**	((2xAWG28)+2xAWG20)C	5.5	12.5
USB9040260 [1)]	**CFBUS.066**	((2xAWG24)+2xAWG20)C	6.5	12.5

[1)]CFBUS.066 is delivered with heat shrink tubing over USB housing.

Harnessed with these connectors		
USB 2.0 Type A		
USB 2.0 Type B		
USB 2.0 Type A (socket)		

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Maximum transmission length: 3 m

Harnessed Bus cables | USB 3.0

* Technical information on the cable quality:

PVC, oil-res.	PUR
from page 162	from page 170

Harnessed Bus cables, USB 3.0, in fixed lengths

Cable quality	Part No.	Cable length [m]	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
USB 3.0 type A / open cable end					
Pre-harnessed at one end					
PVC, oil-res.	**USB9640200**	3	(2x(2xAWG28)+2x(2xAWG28)C)C	7.0	12.5
PVC, oil-res.	**USB9640201**	5	(2x(2xAWG28)+2x(2xAWG28)C)C	7.0	12.5
PVC, oil-res.	**USB9640202**	7	(2x(2xAWG28)+2x(2xAWG28)C)C	7.0	12.5
PUR	**USB9540200**	3	(2x(2xAWG28)+2x(2xAWG28)C)C	7.0	12.5
PUR	**USB9540201**	5	(2x(2xAWG28)+2x(2xAWG28)C)C	7.0	12.5
PUR	**USB9540202**	7	(2x(2xAWG28)+2x(2xAWG28)C)C	7.0	12.5
USB 3.0 Typ A/USB 3.0 micro-B					
Pre-harnessed at both ends					
PVC, oil-res.	**USB9640203**	2.5	(2x(2xAWG28)+2x(2xAWG28)C)C	7.0	12.5
PUR	**USB9540203**	2.5	(2x(2xAWG28)+2x(2xAWG28)C)C	7.0	12.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessed with these connectors

USB 3.0 Type A

USB 3.0 Type Micro-B

Maximum transmission length: 10 m

Harnessed Bus cables | GigE

* Technical information on the cable quality:

PUR-ROBOT	TPE
from page 374	from page 174

Harnessed Bus cables, GigE, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
RJ45 metal/RJ45 metal				
Pre-harnessed at both ends				
PUR-ROBOT	**GIG9045001**	4x(2x0.14)C	9.5	10
TPE	**GIG9040001**	(4x(2x0.15))C	8.5	10
RJ45 metal/RJ45 plastic				
Pre-harnessed at both ends				
PUR-ROBOT	**GIG9045002**	4x(2x0.14)C	9.5	10
TPE	**GIG9040002**	(4x(2x0.15))C	8.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessed with these connectors

RJ45 metal

RJ45 plastic, knurled screws

Maximum transmission length: 50 m

Harnessed coax cables | 50 Ω

* Technical information on the cable quality:
TPE
from page 146

Harnessed Coax cables, CFKoax 50 Ω, BNC, to your required length				
Part No.	**chainflex® cable**	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
BNC Connector/Connector Pre-harnessed at both ends				
MAT90455662	**CFKoax2.01**	1xHF50-0.9/2.95	5.5	10
BNC Connector/Socket Pre-harnessed at both ends				
MAT90455663	**CFKoax2.01**	1xHF50-0.9/2.95	5.5	10
BNC Socket/Socket Pre-harnessed at both ends				
MAT90455664	**CFKoax2.01**	1xHF50-0.9/2.95	5.5	10
BNC Connector/open cable end Pre-harnessed at one end				
MAT90455665	**CFKoax2.01**	1xHF50-0.9/2.95	5.5	10
BNC Socket/open cable end Pre-harnessed at one end				
MAT90455666	**CFKoax2.01**	1xHF50-0.9/2.95	5.5	10
Harnessed Coax cables, CFKoax 50 Ω, SMA, to your required length				
SMA Connector/Connector Pre-harnessed at both ends				
MAT90455667	**CFKoax2.01**	1xHF50-0.9/2.95	5.5	10
SMA Connector/Socket Pre-harnessed at both ends				
MAT90455668	**CFKoax2.01**	1xHF50-0.9/2.95	5.5	10
SMA Socket/Socket Pre-harnessed at one end				
MAT90455669	**CFKoax2.01**	1xHF50-0.9/2.95	5.5	10
SMA Connector/open cable end Pre-harnessed at both ends				
MAT90455670	**CFKoax2.01**	1xHF50-0.9/2.95	5.5	10
SMA Socket/open cable end Pre-harnessed at one end				
MAT90455671	**CFKoax2.01**	1xHF50-0.9/2.95	5.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessed Coax cables, CFKoax 50 Ω, BNC+SMA, to your required length				
Part No.	**chainflex® cable**	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
BNC Connector/SMA Connector Pre-harnessed at both ends				
MAT90478758	**CFKoax2.01**	1xHF50-0.9/2.95	5.5	10
BNC Connector/SMA Socket Pre-harnessed at both ends				
MAT90478759	**CFKoax2.01**	1xHF50-0.9/2.95	5.5	10
BNC Socket/SMA Connector Pre-harnessed at both ends				
MAT90478760	**CFKoax2.01**	1xHF50-0.9/2.95	5.5	10
BNC socket/SMA socket Pre-harnessed at both ends				
MAT90478761	**CFKoax2.01**	1xHF50-0.9/2.95	5.5	10

Maximum transmission length: 50 m

Harnessed coax cables | 75 Ω

* Technical information on the cable quality:
TPE
from page 146

Harnessed Coax cables, CFKoax 75 Ω, 1 coaxial element, to your required length				
Part No.	**chainflex® cable**	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
BNC Connector/Socket Pre-harnessed at both ends				
MAT90423400	**CFKoax1.01**	1xHF75-0.3/1.6	4.5	10
BNC Connector/Connector Pre-harnessed at both ends				
MAT90423401	**CFKoax1.01**	1xHF75-0.3/1.6	4.5	10
BNC Socket/Socket Pre-harnessed at both ends				
MAT90423402	**CFKoax1.01**	1xHF75-0.3/1.6	4.5	10
BNC Connector/open cable end Pre-harnessed at one end				
MAT90423403	**CFKoax1.01**	1xHF75-0.3/1.6	4.5	10
BNC Socket/open cable end Pre-harnessed at one end				
MAT90423404	**CFKoax1.01**	1xHF75-0.3/1.6	4.5	10
Harnessed Coax cables, CFKoax 75 Ω, 5 coaxial elements, to your required length				
BNC Connector/Socket Pre-harnessed at both ends				
MAT90423405	**CFKoax1.05**	5xHF75-0.3/1.6	10.0	10
BNC Connector/Connector Pre-harnessed at both ends				
MAT90423406	**CFKoax1.05**	5xHF75-0.3/1.6	10.0	10
BNC Socket/Socket Pre-harnessed at both ends				
MAT90423407	**CFKoax1.05**	5xHF75-0.3/1.6	10.0	10
BNC Connector/open cable end Pre-harnessed at one end				
MAT90423408	**CFKoax1.05**	5xHF75-0.3/1.6	10.0	10
BNC Socket/open cable end Pre-harnessed at one end				
MAT90423409	**CFKoax1.05**	5xHF75-0.3/1.6	10.0	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessed Coax cables, CFKoax 75 Ω, VGA/SUB-D, to your required length				
Part No.	**chainflex® cable**	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
SUB-D Pin/SUB-D Pin Pre-harnessed at both ends				
MAT90455658	**CFKoax1.05**	5xHF75-0.3/1.6	10.0	10
SUB-D Pin/ SUB-D Socket Pre-harnessed at both ends				
MAT90455659	**CFKoax1.05**	5xHF75-0.3/1.6	10.0	10
SUB-D Pin/BNC Connector Pre-harnessed at both ends				
MAT90455660	**CFKoax1.05**	5xHF75-0.3/1.6	10.0	10
SUB-D Socket/BNC Connector Pre-harnessed at both ends				
MAT90455661	**CFKoax1.05**	5xHF75-0.3/1.6	10.0	10

Maximum transmission length: 50 m

Harnessed DVI-D/HDMI cables | DVI/HDMI

* Technical information on the cable quality:
TPE
from page 174

Harnessed DVI-D/HDMI cables, to your required length				
Part No.	**chainflex® cable**	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
DVI-D Pin/ DVI-D Pin				
Pre-harnessed at both ends				
MAT90455657	**CFBUS.070**	(4x(2xAWG28)C+(2xAWG28)+3xAWG28)C	9.0	12.5
DVI-D Pin/HDMI Pin				
Pre-harnessed at both ends				
MAT90478691	**CFBUS.070**	(4x(2xAWG28)C+(2xAWG28)+3xAWG28)C	9.0	12.5
HDMI Pin/HDMI Pin				
Pre-harnessed at both ends				
MAT90478692	**CFBUS.070**	(4x(2xAWG28)C+(2xAWG28)+3xAWG28)C	9.0	12.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Video transmission only (no audio signals)
Maximum transmission length: 50 m

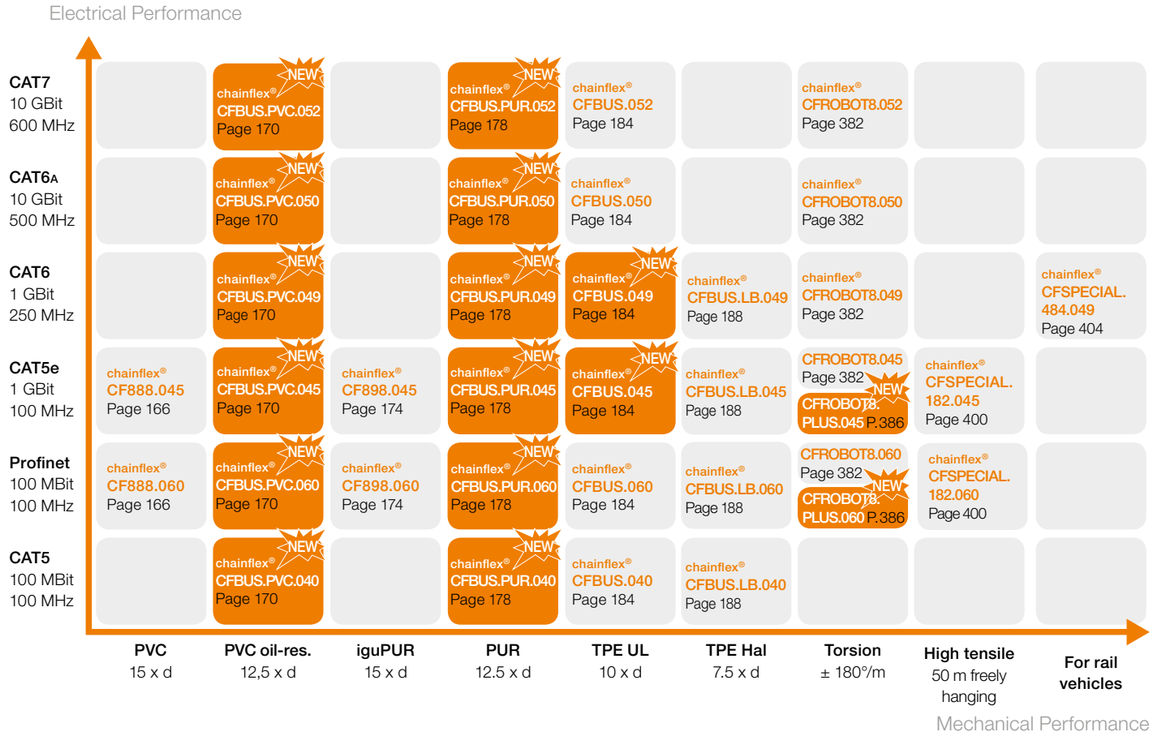
Network

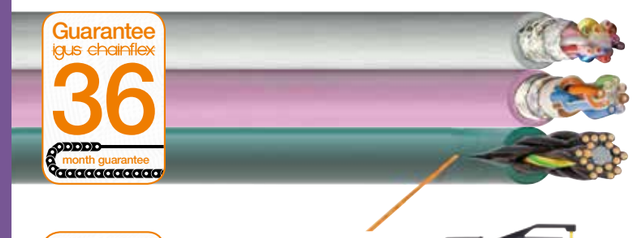
Network / Ethernet / Fieldbus

chainflex® readycable®

	Series	Jacket	Page	
Harnessed Ethernet cables				
	CAT5 Straight	PVC/PUR/TPE	431	
	CAT5e Straight	PVC/PUR/TPE	432	New
	CAT5e Straight	PVC/PUR/TPE	434	
	CAT5e Crossover	PVC/PUR/TPE	436	
	CAT5e with 615 connectors	PVC/PUR/TPE	437	
	CAT5e with angled connectors (L/T angle)	PVC/PUR/TPE	438	
	CAT6 Straight	PVC/PUR/TPE	442	
	CAT6 Straight/Crossover	TPE	444	
	CAT6A with M12 connectors	PVC/PUR/TPE	445	New
	CAT7 Straight	PUR/TPE	448	
	Industrial Ethernet molded	PVC/PUR	448	New
Harnessed Profibus cables				
	Profibus	PVC/PUR/TPE	450	
Harnessed Profinet cables				
	Profinet	PVC/PUR/TPE	456	
	Industrial Profinet molded	PVC/PUR	460	New

chainflex® Ethernet cable | Overview



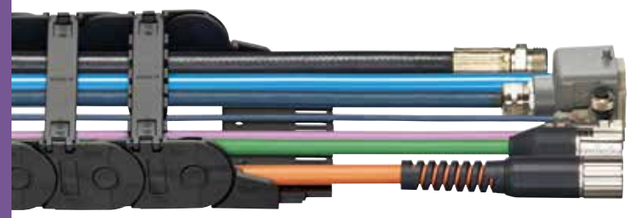


HIghly flexible chainflex® cables

- 1,354 cables from stock
- Tested, and in seven jacket materials
- No cutting charges, from 1 m
- 36 month or 10 million double strokes guarantee*
- Approvals and certificates

Harnessed cables readycable®

- New: more than 400 harnessed Ethernet cables
- In seven jacket materials
- 36 month or 10 million double stroke guarantee*
- Shipped in 24h**
- To your desired length, with centimetre accuracy



Assembled e-chain systems® readychain®

- Customised and ready to connect according to your specifications
- From basic solution to complex systems
- Optionally with assembly rack
- From batch size 1 to series production
- Assembly service by experts

* Whichever is first. Up to 5 million double strokes for the highly affordable chainflex® M cables. The number of double strokes depends on installation and cable quality. This is described in the current catalogue, in the data sheets and in the service life calculator at www.igus.eu/chainflexlife.

** Means time until shipping of goods.

Harnessed Ethernet cables | CAT5

* Technical information on the cable quality:

PVC, oil-res.	PUR	TPE
from page 162	from page 170	from page 174

Harnessed Ethernet cables, CAT5 Straight, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Harting CAT5 connector				
PVC, oil-res.	**CAT9311001**	(4x0.25)C	6.5	12.5
PUR	**CAT9411001**	(4x0.25)C	6.5	12.5
TPE	**CAT9511001**	(4x0.25)C	7.0	10
Harting CAT5 connector				
PVC, oil-res.	**CAT9311002**	(4x0.25)C	6.5	12.5
PUR	**CAT9411002**	(4x0.25)C	6.5	12.5
TPE	**CAT9511002**	(4x0.25)C	7.0	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

Harnessed Ethernet cables | CAT5e

* Technical information on the cable quality:

PVC page 164 | **PVC, oil-res.** page 168 | **iguPUR** page 172 | **PUR** page 176 | **PUR-ROBOT** page 380 | **PUR-SPECIAL** page 400 | **TPE** page 180

Harnessed Ethernet cables, CAT5e Straight, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Telegärtner CAT6A connector				
PVC	**CAT9121002**	(4x(2x0.14))C	7.5	15
PVC. oil-res.	**CAT9321002**	(4x(2x0.15))C	7.5	12.5
iguPUR	**CAT9221002**	(4x(2x0.14))C	7.5	15
PUR	**CAT9421002**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9621002**	4x(2x0.14)C	9.5	10
PUR-SPECIAL	**CAT9721001**	(4x(2x0.15))C	10.0	10
TPE	**CAT9521002**	(4x(2x0.15))C	8.5	10
Harting CAT6A connector				
PVC	**CAT9121003**	(4x(2x0.14))C	7.5	15
PVC. oil-res.	**CAT9321003**	(4x(2x0.15))C	7.5	12.5
iguPUR	**CAT9221003**	(4x(2x0.14))C	7.5	15
PUR	**CAT9421003**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9621003**	4x(2x0.14)C	9.5	10
PUR-SPECIAL	**CAT9721002**	(4x(2x0.15))C	10.0	10
TPE	**CAT9521003**	(4x(2x0.15))C	8.5	10
Telegärtner CAT6 connector				
PVC	**CAT9121004**	(4x(2x0.14))C	7.5	15
PVC. oil-res.	**CAT9321004**	(4x(2x0.15))C	7.5	12.5
iguPUR	**CAT9221004**	(4x(2x0.14))C	7.5	15
PUR	**CAT9421004**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9621004**	4x(2x0.14)C	9.5	10
PUR-SPECIAL	**CAT9721003**	(4x(2x0.15))C	10.0	10
TPE	**CAT9521004**	(4x(2x0.15))C	8.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

Network
Ethernet
CAT5e

Harnessed Ethernet cables | CAT5e

* Technical information on the cable quality:

PVC page 164 | **PVC, oil-res.** page 168 | **iguPUR** page 172 | **PUR** page 176 | **PUR-ROBOT** page 380 | **PUR-SPECIAL** page 400 | **TPE** page 180

Harnessed Ethernet cables, CAT5e Straight, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Telegärtner CAT6/CAT6A connector				
PVC	**CAT9121005**	(4x(2x0.14))C	7.5	15
PVC. oil-res.	**CAT9321005**	(4x(2x0.15))C	7.5	12.5
iguPUR	**CAT9221005**	(4x(2x0.14))C	7.5	15
PUR	**CAT9421005**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9621005**	4x(2x0.14)C	9.5	10
PUR-SPECIAL	**CAT9721004**	(4x(2x0.15))C	10.0	10
TPE	**CAT9521005**	(4x(2x0.15))C	8.5	10
Telegärtner CAT6 connector (RJ45/M12 x-coded)				
PVC	**CAT9121006**	(4x(2x0.14))C	7.5	15
PVC. oil-res.	**CAT9321006**	(4x(2x0.15))C	7.5	12.5
iguPUR	**CAT9221006**	(4x(2x0.14))C	7.5	15
PUR	**CAT9421006**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9621006**	4x(2x0.14)C	9.5	10
PUR-SPECIAL	**CAT9721005**	(4x(2x0.15))C	10.0	10
TPE	**CAT9521006**	(4x(2x0.15))C	8.5	10
Telegärtner CAT6A connector (M12 x-coded)				
PVC	**CAT9121007**	(4x(2x0.14))C	7.5	15
PVC. oil-res.	**CAT9321007**	(4x(2x0.15))C	7.5	12.5
iguPUR	**CAT9221007**	(4x(2x0.14))C	7.5	15
PUR	**CAT9421007**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9621007**	4x(2x0.14)C	9.5	10
PUR-SPECIAL	**CAT9721006**	(4x(2x0.15))C	10.0	10
TPE	**CAT9521007**	(4x(2x0.15))C	8.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

New

Harnessed Ethernet cables | CAT5e

* Technical information on the cable quality:

PVC	PVC, oil-res.	iguPUR	PUR	PUR-ROBOT	PUR-SPECIAL	TPE
page 164	page 168	page 172	page 176	page 380	page 400	page 180

Harnessed Ethernet cables, CAT5e Straight, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Phoenix Contact CAT6A connector				
PVC	**CAT9121010**	(4x(2x0.14))C	7.5	15
PVC. oil-res.	**CAT9321010**	(4x(2x0.15))C	7.5	12.5
iguPUR	**CAT9221010**	(4x(2x0.14))C	7.5	15
PUR	**CAT9421010**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9621010**	4x(2x0.14)C	9.5	10
TPE	**CAT9521010**	(4x(2x0.15))C	8.5	10
Phoenix Contact CAT6A connector (M12 x-coded)				
PVC	**CAT9121013**	(4x(2x0.14))C	7.5	15
PVC. oil-res.	**CAT9321013**	(4x(2x0.15))C	7.5	12.5
iguPUR	**CAT9221013**	(4x(2x0.14))C	7.5	15
PUR	**CAT9421013**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9621013**	4x(2x0.14)C	9.5	10
PUR-SPECIAL	**CAT9721011**	(4x(2x0.15))C	10.0	10
TPE	**CAT9521013**	(4x(2x0.15))C	8.5	10
HARTING CAT6A connector Socket/Pin (M12 x-coded)				
New **PVC**	**CAT9121014**	(4x(2x0.14))C	7.5	15
New **PVC. oil-res.**	**CAT9321014**	(4x(2x0.15))C	7.5	12.5
New **iguPUR**	**CAT9221014**	(4x(2x0.14))C	7.5	15
New **PUR**	**CAT9421014**	(4x(2x0.15))C	7.5	12.5
New **PUR-ROBOT**	**CAT9621014**	4x(2x0.15)C	9.5	10
New **TPE**	**CAT9521014**	(4x(2x0.15))C	8.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

Harnessed Ethernet cables | CAT5e Straight

* Technical information on the cable quality:

PVC, oil-res.	PUR	PUR-ROBOT	TPE
from page 168	from page 176	from page 380	from page 180

Harnessed Ethernet cables, CAT5e Straight, 4 and 8-pole, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Harting CAT5 connector				
TPE	**CAT9040001**	(4x0.25)C	7.0	10
Harting CAT5e connector				
PVC, oil-res.	**CAT9340020**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9240020**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9440020**	4x(2x0.14)C	9.5	10
TPE	**CAT9040020**	(4x(2x0.15))C	8.5	10
Yamaichi CAT5 connector				
PVC, oil-res.	**CAT9340060**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9240060**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9440060**	4x(2x0.14)C	9.5	10
TPE	**CAT9040060**	(4x(2x0.15))C	8.5	10
Phoenix Contact CAT5e connector				
PVC, oil-res.	**CAT9340100**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9240100**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9440100**	4x(2x0.14)C	9.5	10
TPE	**CAT9040100**	(4x(2x0.15))C	8.5	10
Yamaichi CAT5 connector in Hummel housing				
PVC, oil-res.	**CAT9340140**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9240140**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9440140**	4x(2x0.14)C	9.5	10
TPE	**CAT9040140**	(4x(2x0.15))C	8.5	10
Yamaichi CAT5 connector in Hummel housing/				
PVC, oil-res.	**CAT9340180**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9240180**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9440180**	4x(2x0.14)C	9.5	10
TPE	**CAT9040180**	(4x(2x0.15))C	8.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core
Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

Harnessed Ethernet cables | CAT5e Crossover

* Technical information on the cable quality:

PVC, oil-res.	PUR	PUR-ROBOT	TPE
from page 168	from page 176	from page 380	from page 180

Harnessed Ethernet cables, CAT5e Crossover, 8-pole, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Harting CAT5e connector				
PVC, oil-res.	**CAT9340040**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9240040**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9440040**	4x(2x0.14)C	9.5	10
TPE	**CAT9040040**	(4x(2x0.15))C	8.5	10
Yamaichi CAT5 connector				
PVC, oil-res.	**CAT9340080**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9240080**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9440080**	4x(2x0.14)C	9.5	10
TPE	**CAT9040080**	(4x(2x0.15))C	8.5	10
Phoenix Contact CAT5e connector				
PVC, oil-res.	**CAT9340120**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9240120**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9440120**	4x(2x0.14)C	9.5	10
TPE	**CAT9040120**	(4x(2x0.15))C	8.5	10
Yamaichi CAT5 connector in Hummel housing				
PVC, oil-res.	**CAT9340160**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9240160**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9440160**	4x(2x0.14)C	9.5	10
TPE	**CAT9040160**	(4x(2x0.15))C	8.5	10
Yamaichi CAT5 connector in Hummel housing/				
PVC, oil-res.	**CAT9340200**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9240200**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9440200**	4x(2x0.14)C	9.5	10
TPE	**CAT9040200**	(4x(2x0.15))C	8.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

Harnessed Ethernet cables | CAT5e

* Technical information on the cable quality:

PVC, oil-res.	PUR	PUR-ROBOT	TPE
from page 168	from page 176	from page 380	from page 180

Harnessed Ethernet cables, CAT5e, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Connection cable				
Hirose CAT5e-/ Intercontec connector				
PVC, oil-res.	**CAT9340800**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9240800**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9440800**	4x(2x0.14)C	9.5	10
TPE	**CAT9040800**	(4x(2x0.15))C	8.5	10
Extension cable				
Intercontec connector				
PVC, oil-res.	**CAT9340810**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9240810**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9440810**	4x(2x0.14)C	9.5	10
TPE	**CAT9040810**	(4x(2x0.15))C	8.5	10
Termination cable				
Intercontec-/ Hirose CAT5e connector				
PVC, oil-res.	**CAT9340820**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9240820**	(4x(2x0.15))C	7.5	12.5
PUR-ROBOT	**CAT9440820**	4x(2x0.14)C	9.5	10
TPE	**CAT9040820**	(4x(2x0.15))C	8.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

Harnessed Ethernet cables | CAT5e

PVC with Hirose connectors

* Technical information on the cable quality:
PVC, oil-res.
from page 168

Connector 1	Connector 2	Connector 3	Connector 4	Connector 5
L angle curve lower	L angle curve upper	T angle curve outer	T angle curve inner	straight

Product range Part No.	Harnessing with connector combination		Number of cores and conductor nominal cross section [mm²]	Outer diameter [mm]	Minimum bend radius
Product range Straight (PVC) 8 poles					
CAT9340380	1	2	(4x(2x0.15))C	7.0	12.5
CAT9340540	1	3	(4x(2x0.15))C	7.0	12.5
CAT9340560	1	4	(4x(2x0.15))C	7.0	12.5
CAT9340320	1	5	(4x(2x0.15))C	7.0	12.5
CAT9340360	2	1	(4x(2x0.15))C	7.0	12.5
CAT9340340	2	2	(4x(2x0.15))C	7.0	12.5
CAT9340500	2	3	(4x(2x0.15))C	7.0	12.5
CAT9340520	2	4	(4x(2x0.15))C	7.0	12.5
CAT9340300	2	5	(4x(2x0.15))C	7.0	12.5
CAT9340440	3	3	(4x(2x0.15))C	7.0	12.5
CAT9340480	3	4	(4x(2x0.15))C	7.0	12.5
CAT9340400	3	5	(4x(2x0.15))C	7.0	12.5
CAT9340460	4	4	(4x(2x0.15))C	7.0	12.5
CAT9340420	4	5	(4x(2x0.15))C	7.0	12.5
Product range Crossover (PVC) 8 poles					
CAT9340390	1	2	(4x(2x0.15))C	7.0	12.5
CAT9340550	1	3	(4x(2x0.15))C	7.0	12.5
CAT9340570	1	4	(4x(2x0.15))C	7.0	12.5
CAT9340330	1	5	(4x(2x0.15))C	7.0	12.5
CAT9340370	2	1	(4x(2x0.15))C	7.0	12.5
CAT9340350	2	2	(4x(2x0.15))C	7.0	12.5
CAT9340510	2	3	(4x(2x0.15))C	7.0	12.5
CAT9340530	2	4	(4x(2x0.15))C	7.0	12.5
CAT9340310	2	5	(4x(2x0.15))C	7.0	12.5
CAT9340450	3	3	(4x(2x0.15))C	7.0	12.5
CAT9340490	3	4	(4x(2x0.15))C	7.0	12.5
CAT9340410	3	5	(4x(2x0.15))C	7.0	12.5
CAT9340470	4	4	(4x(2x0.15))C	7.0	12.5
CAT9340430	4	5	(4x(2x0.15))C	7.0	12.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example images.
G = with green-yellow earth core **x =** without earth core

Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

Network
Ethernet
CAT5e

Harnessed Ethernet cables | CAT5e

PUR with Hirose connectors

* Technical information on the cable quality:
PUR
from page 176

Connector 1	Connector 2	Connector 3	Connector 4	Connector 5
L angle curve lower	L angle curve upper	T angle curve outer	T angle curve inner	straight

Product range Part No.	Harnessing with connector combination		Number of cores and conductor nominal cross section [mm²]	Outer diameter [mm]	Minimum bend radius
Product range Straight (PVC) 8 poles					
CAT9240380	1	2	(4x(2x0.15))C	7.0	12.5
CAT9240540	1	3	(4x(2x0.15))C	7.0	12.5
CAT9240560	1	4	(4x(2x0.15))C	7.0	12.5
CAT9240320	1	5	(4x(2x0.15))C	7.0	12.5
CAT9240360	2	1	(4x(2x0.15))C	7.0	12.5
CAT9240340	2	2	(4x(2x0.15))C	7.0	12.5
CAT9240500	2	3	(4x(2x0.15))C	7.0	12.5
CAT9240520	2	4	(4x(2x0.15))C	7.0	12.5
CAT9240300	2	5	(4x(2x0.15))C	7.0	12.5
CAT9240440	3	3	(4x(2x0.15))C	7.0	12.5
CAT9240480	3	4	(4x(2x0.15))C	7.0	12.5
CAT9240400	3	5	(4x(2x0.15))C	7.0	12.5
CAT9240460	4	4	(4x(2x0.15))C	7.0	12.5
CAT9240420	4	5	(4x(2x0.15))C	7.0	12.5
Product range Crossover (PUR) 8 poles					
CAT9240390	1	2	(4x(2x0.15))C	7.0	12.5
CAT9240550	1	3	(4x(2x0.15))C	7.0	12.5
CAT9240570	1	4	(4x(2x0.15))C	7.0	12.5
CAT9240330	1	5	(4x(2x0.15))C	7.0	12.5
CAT9240370	2	1	(4x(2x0.15))C	7.0	12.5
CAT9240350	2	2	(4x(2x0.15))C	7.0	12.5
CAT9240510	2	3	(4x(2x0.15))C	7.0	12.5
CAT9240530	2	4	(4x(2x0.15))C	7.0	12.5
CAT9240310	2	5	(4x(2x0.15))C	7.0	12.5
CAT9240450	3	3	(4x(2x0.15))C	7.0	12.5
CAT9240490	3	4	(4x(2x0.15))C	7.0	12.5
CAT9240410	3	5	(4x(2x0.15))C	7.0	12.5
CAT9240470	4	4	(4x(2x0.15))C	7.0	12.5
CAT9240430	4	5	(4x(2x0.15))C	7.0	12.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example images.
G = with green-yellow earth core **x =** without earth core

Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

Harnessed Ethernet cables | CAT5e

PUR-ROBOT with Hirose connectors

* Technical information on the cable quality:
PUR-ROBOT
from page 380

Connector 1	Connector 2	Connector 3	Connector 4	Connector 5
L angle curve lower	L angle curve upper	T angle curve outer	T angle curve inner	straight

Product range Part No.	Harnessing with connector combination		Number of cores and conductor nominal cross section [mm²]	Outer diameter [mm]	Minimum bend radius
Product range straight (PUR-ROBOT) 8 poles					
CAT9440380	1	2	(4x(2x0.15)C)	8.5	10
CAT9440540	1	3	(4x(2x0.15)C)	8.5	10
CAT9440560	1	4	(4x(2x0.15)C)	8.5	10
CAT9440320	1	5	(4x(2x0.15)C)	8.5	10
CAT9440360	2	1	(4x(2x0.15)C)	8.5	10
CAT9440340	2	2	(4x(2x0.15)C)	8.5	10
CAT9440500	2	3	(4x(2x0.15)C)	8.5	10
CAT9440520	2	4	(4x(2x0.15)C)	8.5	10
CAT9440300	2	5	(4x(2x0.15)C)	8.5	10
CAT9440440	3	3	(4x(2x0.15)C)	8.5	10
CAT9440480	3	4	(4x(2x0.15)C)	8.5	10
CAT9440400	3	5	(4x(2x0.15)C)	8.5	10
CAT9440460	4	4	(4x(2x0.15)C)	8.5	10
CAT9440420	4	5	(4x(2x0.15)C)	8.5	10
Product range Crossover (PUR-ROBOT) 8 poles					
CAT9440390	1	2	(4x(2x0.15)C)	8.5	10
CAT9440550	1	3	(4x(2x0.15)C)	8.5	10
CAT9440570	1	4	(4x(2x0.15)C)	8.5	10
CAT9440330	1	5	(4x(2x0.15)C)	8.5	10
CAT9440370	2	1	(4x(2x0.15)C)	8.5	10
CAT9440350	2	2	(4x(2x0.15)C)	8.5	10
CAT9440510	2	3	(4x(2x0.15)C)	8.5	10
CAT9440530	2	4	(4x(2x0.15)C)	8.5	10
CAT9440310	2	5	(4x(2x0.15)C)	8.5	10
CAT9440450	3	3	(4x(2x0.15)C)	8.5	10
CAT9440490	3	4	(4x(2x0.15)C)	8.5	10
CAT9440410	3	5	(4x(2x0.15)C)	8.5	10
CAT9440470	4	4	(4x(2x0.15)C)	8.5	10
CAT9440430	4	5	(4x(2x0.15)C)	8.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example images.
G = with green-yellow earth core **x =** without earth core

Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

Network
Ethernet
CAT5e

Harnessed Ethernet cables | CAT5e

TPE with Hirose connectors

* Technical information on the cable quality:
TPE
from page 180

Connector 1	Connector 2	Connector 3	Connector 4	Connector 5
L angle curve lower	L angle curve upper	T angle curve outer	T angle curve inner	straight

Product range Part No.	Harnessing with connector combination		Number of cores and conductor nominal cross section [mm²]	Outer diameter [mm]	Minimum bend radius
Product range straight (TPE) 8 poles					
CAT9040380	1	2	(4x(2x0.15))C	8.0	12.5
CAT9040540	1	3	(4x(2x0.15))C	8.0	12.5
CAT9040560	1	4	(4x(2x0.15))C	8.0	12.5
CAT9040320	1	5	(4x(2x0.15))C	8.0	12.5
CAT9040360	2	1	(4x(2x0.15))C	8.0	12.5
CAT9040340	2	2	(4x(2x0.15))C	8.0	12.5
CAT9040500	2	3	(4x(2x0.15))C	8.0	12.5
CAT9040520	2	4	(4x(2x0.15))C	8.0	12.5
CAT9040300	2	5	(4x(2x0.15))C	8.0	12.5
CAT9040440	3	3	(4x(2x0.15))C	8.0	12.5
CAT9040480	3	4	(4x(2x0.15))C	8.0	12.5
CAT9040400	3	5	(4x(2x0.15))C	8.0	12.5
CAT9040460	4	4	(4x(2x0.15))C	8.0	12.5
CAT9040420	4	5	(4x(2x0.15))C	8.0	12.5
Product range Crossover (TPE) 8 poles					
CAT9040390	1	2	(4x(2x0.15))C	8.0	12.5
CAT9040550	1	3	(4x(2x0.15))C	8.0	12.5
CAT9040570	1	4	(4x(2x0.15))C	8.0	12.5
CAT9040330	1	5	(4x(2x0.15))C	8.0	12.5
CAT9040370	2	1	(4x(2x0.15))C	8.0	12.5
CAT9040350	2	2	(4x(2x0.15))C	8.0	12.5
CAT9040510	2	3	(4x(2x0.15))C	8.0	12.5
CAT9040530	2	4	(4x(2x0.15))C	8.0	12.5
CAT9040310	2	5	(4x(2x0.15))C	8.0	12.5
CAT9040450	3	3	(4x(2x0.15))C	8.0	12.5
CAT9040490	3	4	(4x(2x0.15))C	8.0	12.5
CAT9040410	3	5	(4x(2x0.15))C	8.0	12.5
CAT9040470	4	4	(4x(2x0.15))C	8.0	12.5
CAT9040430	4	5	(4x(2x0.15))C	8.0	12.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example images.
G = with green-yellow earth core **x =** without earth core

Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

Harnessed Ethernet cables | CAT6

* Technical information on the cable quality:

PVC, oil-res.	PUR	TPE
from page 168	from page 176	from page 180

Harnessed Ethernet cables, CAT6 Straight, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Telegärtner CAT6A connector				
PVC, oil-res.	**CAT9331002**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9431002**	(4x(2x0.15))C	7.5	12.5
TPE	**CAT9531002**	(4x(2x0.15))C	8.5	10
Harting CAT6 connector				
PVC, oil-res.	**CAT9331003**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9431003**	(4x(2x0.15))C	7.5	12.5
TPE	**CAT9531003**	(4x(2x0.15))C	8.5	10
Telegärtner CAT6 connector				
PVC, oil-res.	**CAT9331004**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9431004**	(4x(2x0.15))C	7.5	12.5
TPE	**CAT9531004**	(4x(2x0.15))C	8.5	10
Telegärtner CAT6 connector (RJ45/M12 x-coded)				
PVC, oil-res.	**CAT9331005**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9431005**	(4x(2x0.15))C	7.5	12.5
TPE	**CAT9531005**	(4x(2x0.15))C	8.5	10
Telegärtner CAT6/CAT6A connector				
PVC, oil-res.	**CAT9331006**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9431006**	(4x(2x0.15))C	7.5	12.5
TPE	**CAT9531006**	(4x(2x0.15))C	8.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

Network
Ethernet
CAT6

Harnessed Ethernet cables | CAT6

* Technical information on the cable quality:

PVC, oil-res.	PUR	TPE
from page 168	from page 176	from page 180

Harnessed Ethernet cables, CAT6 Straight, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Phoenix Contact CAT6A connector				
PVC, oil-res.	**CAT9331009**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9431009**	(4x(2x0.15))C	7.5	12.5
TPE	**CAT9531009**	(4x(2x0.15))C	8.5	10
Phoenix Contact CAT6A connector (M12 x-coded)				
PVC, oil-res.	**CAT9331012**	(4x(2x0.15))C	7.5	12.5
PUR	**CAT9431012**	(4x(2x0.15))C	7.5	12.5
TPE	**CAT9531012**	(4x(2x0.15))C	8.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

Harnessed Ethernet cables | CAT6

* Technical information on the cable quality:

TPE
from page 180

Harnessed Ethernet cables, CAT6, 8-pole, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Straight				
Hirose CAT6A connector				
TPE	**CAT9040600**	(4x(2x0.15)C)C	10.5	12.5
Metz RJ45 E-DAT IP67 connector				
TPE	**CAT9040640**	(4x(2x0.15)C)C	10.5	12.5
Harting CAT6A connector				
TPE	**CAT9040680**	(4x(2x0.15)C)C	10.5	12.5
Crossover				
Hirose CAT6A connector				
TPE	**CAT9040620**	(4x(2x0.15)C)C	10.5	12.5
Metz RJ45 E-DAT IP67 connector				
TPE	**CAT9040660**	(4x(2x0.15)C)C	10.5	12.5
Harting CAT6A connector				
TPE	**CAT9040700**	(4x(2x0.15)C)C	10.5	12.5
M12 x-coded				
Telegärtner CAT6A connector				
TPE	**CAT9040720**	(4x(2x0.15)C)C	10.5	12.5
Telegärtner CAT6A connector				
TPE	**CAT9040760**	(4x(2x0.15)C)C	10.5	12.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

Harnessed Ethernet cables | CAT6A

* Technical information on the cable quality:

PVC, oil-res. from page 168 **PUR** from page 176 **PUR-ROBOT** from page 380 **TPE** from page 180

Harnessed Ethernet cables, CAT6A Straight, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Telegärtner CAT6A connector				
PUR-ROBOT	**CAT9641001**	4x(2x0.15)C	10.5	10
TPE	**CAT9541001**	(4x(2x0.15)C)C	10.5	12.5
Harting CAT6A connector				
PUR-ROBOT	**CAT9641002**	4x(2x0.15)C	10.5	10
TPE	**CAT9541002**	(4x(2x0.15)C)C	10.5	12.5
Telegärtner CAT6A connector				
PVC, oil-res.	**CAT9341016**	4x(2x0.20)C	9.5	12.5
PUR	**CAT9441016**	4x(2x0.20)C	9.5	12.5
PUR-ROBOT	**CAT9641015**	4x(2x0.15)C	10.5	10
TPE	**CAT9541015**	(4x(2x0.15)C)C	10.5	12.5
Telegärtner CAT6A connector (RJ45/M12 x-coded)				
PVC, oil-res.	**CAT9341017**	4x(2x0.20)C	9.5	12.5
PUR	**CAT9441017**	4x(2x0.20)C	9.5	12.5
PUR-ROBOT	**CAT9641016**	4x(2x0.15)C	10.5	10
TPE	**CAT9541016**	(4x(2x0.15)C)C	10.5	12.5
Telegärtner CAT6A connector				
PVC, oil-res.	**CAT9341018**	4x(2x0.20)C	9.5	12.5
PUR	**CAT9441018**	4x(2x0.20)C	9.5	12.5
PUR-ROBOT	**CAT9641017**	4x(2x0.15)C	10.5	10
TPE	**CAT9541017**	(4x(2x0.15)C)C	10.5	12.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

New

Harnessed Ethernet cables | CAT6A

* Technical information on the cable quality:

PVC, oil-res.	PUR	PUR-ROBOT	TPE
from page 168	from page 176	from page 380	from page 180

Harnessed Ethernet cables, CAT6A Straight, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Phoenix Contact CAT6A connector (M12 x-coded)				
PVC, oil-res.	**CAT9341010**	4x(2x0.20)C	9.5	12.5
PUR	**CAT9441010**	4x(2x0.20)C	9.5	12.5
PUR-ROBOT	**CAT9641009**	4x(2x0.15)C	10.5	10
TPE	**CAT9541009**	(4x(2x0.15)C)C	10.5	12.5
HARTING CAT6A connector Socket/Pin (M12 x-coded)				
New **PVC, oil-res.**	**CAT9341019**	4x(2x0.20)C	9.5	12.5
New **PUR**	**CAT9441019**	4x(2x0.20)C	9.5	12.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

Harnessed Ethernet cables | CAT7

* Technical information on the cable quality:

PVC, oil-res.	PUR	PUR-ROBOT	TPE
from page 168	from page 176	from page 380	from page 180

Harnessed Ethernet cables, CAT7 Straight, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Telegärtner CAT6A connector				
PUR-ROBOT	**CAT9651002**	4x(2x0.15)C	10.5	10
TPE	**CAT9551002**	(4x(2x0.15)C)C	10.5	12.5
Harting CAT6A connector				
PUR-ROBOT	**CAT9651003**	4x(2x0.15)C	10.5	10
TPE	**CAT9551003** [1]	(4x(2x0.15)C)C	10.5	12.5
Harting CAT6A connector				
PUR-ROBOT	**CAT9651004**	4x(2x0.15)C	10.5	10
TPE	**CAT9551004**	(4x(2x0.15)C)C	10.5	12.5
Telegärtner CAT6A/ Telegärtner CAT6A, angled				
PUR-ROBOT	**CAT9651005**	4x(2x0.15)C	10.5	10
TPE	**CAT9551005**	(4x(2x0.15)C)C	10.5	12.5
Phoenix Contact CAT6A connector (M12 x-coded)				
PUR-ROBOT	**CAT9651009**	4x(2x0.15)C	10.5	10
TPE	**CAT9551009**	(4x(2x0.15)C)C	10.5	12.5
Module PS-Tera/ Connector PS-Tera				
PUR-ROBOT	**CAT9651010**	4x(2x0.15)C	10.5	10
TPE	**CAT9551010**	(4x(2x0.15)C)C	10.5	12.5
Connector PS-Tera/ Connector PS-Tera				
PUR-ROBOT	**CAT9651011**	4x(2x0.15)C	10.5	10
TPE	**CAT9551011**	(4x(2x0.15)C)C	10.5	12.5

[1] This cable must be stripped before the connector and covered with a shrink-on tube so that the patch plug can be fitted.

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core
Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

New

Industrial Ethernet molded

* Technical information on the cable quality:
PVC, oil-res. from page 168 **PUR** from page 176

Industrial Ethernet molded, to your required length				
Cable quality	**Part No.**	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Minimum bend radius [x d]
M8 socket straight/ M8 pin straight				
PVC OIL	**MAT904125450**	(4x0.25)C	6.5	12.5
PUR	**MAT904125410**	(4x0.25)C	6.5	12.5
M8 pin straight/ M8 pin straight				
PVC OIL	**MAT904125451**	(4x0.25)C	6.5	12.5
PUR	**MAT904125411**	(4x0.25)C	6.5	12.5
M8 socket angled/ open cable end				
PVC OIL	**MAT904125452**	(4x0.25)C	6.5	12.5
PUR	**MAT904125412**	(4x0.25)C	6.5	12.5
M8 socket straight/ RJ45 straight				
PVC OIL	**MAT904125453**	(4x0.25)C	6.5	12.5
PUR	**MAT904125413**	(4x0.25)C	6.5	12.5
M12 d-coded pin straight/ M12 d-coded pin straight				
PVC OIL	**MAT904125454**	(4x0.25)C	6.5	12.5
PUR	**MAT904125414**	(4x0.25)C	6.5	12.5
M12 d-coded pin angled/ open cable end				
PVC OIL	**MAT904125455**	(4x0.25)C	6.5	12.5
PUR	**MAT904125415**	(4x0.25)C	6.5	12.5
M12 d-coded pin straight/ open cable end				
PVC OIL	**MAT904125456**	(4x0.25)C	6.5	12.5
PUR	**MAT904125416**	(4x0.25)C	6.5	12.5

Special production cables: delivery time upon request!
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
Harnessing **RJ45 at both ends** ▶ TIA56A

Industrial Ethernet molded, to your required length				
Cable quality	**Part No.**	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Minimum bend radius [x d]
M12 d-coded pin straight/ RJ45 straight				
PVC OIL	**MAT904125457**	(4x0.25)C	6.5	12.5
PUR	**MAT904125417**	(4x0.25)C	6.5	12.5
M12 d-coded pin angled/ RJ45 straight				
PVC OIL	**MAT904125458**	(4x0.25)C	6.5	12.5
PUR	**MAT904125418**	(4x0.25)C	6.5	12.5
M12 d-coded pin straight/ M8 pin straight				
PVC OIL	**MAT904125459**	(4x0.25)C	6.5	12.5
PUR	**MAT904125419**	(4x0.25)C	6.5	12.5
RJ45 straight/ RJ45 straight				
PVC OIL	**MAT904125460**	(4x0.25)C	6.5	12.5
PUR	**MAT904125420**	(4x0.25)C	6.5	12.5
RJ45 straight/ open cable end				
PVC OIL	**MAT904125461**	(4x0.25)C	6.5	12.5
PUR	**MAT904125421**	(4x0.25)C	6.5	12.5
M12 d-coded socket straight/ M12 d-coded pin straight				
PVC OIL	**MAT904125462**	(4x0.25)C	6.5	12.5
PUR	**MAT904125422**	(4x0.25)C	6.5	12.5
M12 d-coded socket straight/ M12 d-coded pin angled				
PVC OIL	**MAT904125463**	(4x0.25)C	6.5	12.5
PUR	**MAT904125423**	(4x0.25)C	6.5	12.5

Special production cables: delivery time upon request!
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
Harnessing **RJ45 at both ends** ▶ TIA56A

Harnessed Profibus cables | PVC

* Technical information on the cable quality:
PVC
from page 168

Harnessed Profibus cables, PVC, to your required length					
Product range Part No.	Harnessing with connector combination		Number of cores and nominal cross section [mm²]	Outer diameter [mm]	Minimum bend radius [x d]
BUS9041004	1	1	(2x0.25)C	8.0	12.5
BUS9041001	1	2	(2x0.25)C	8.0	12.5
BUS9041011	1	5	(2x0.25)C	8.0	12.5
BUS9041006	1	6	(2x0.25)C	8.0	12.5
BUS9041005	1	13	(2x0.25)C	8.0	12.5
BUS9041002	2	2	(2x0.25)C	8.0	12.5
BUS9041013	2	5	(2x0.25)C	8.0	12.5
BUS9041007	2	6	(2x0.25)C	8.0	12.5
BUS9041054	2	7	(2x0.25)C	8.0	12.5
BUS9041059	2	8	(2x0.25)C	8.0	12.5
BUS9041062	2	9	(2x0.25)C	8.0	12.5
BUS9041055	2	10	(2x0.25)C	8.0	12.5
BUS9041003	2	13	(2x0.25)C	8.0	12.5
BUS9041066	3	4	(2x0.25)C	8.0	12.5
BUS9041064	3	13	(2x0.25)C	8.0	12.5
BUS9041065	4	13	(2x0.25)C	8.0	12.5
BUS9041014	5	5	(2x0.25)C	8.0	12.5
BUS9041010	5	6	(2x0.25)C	8.0	12.5
BUS9041012	5	13	(2x0.25)C	8.0	12.5
BUS9041009	6	6	(2x0.25)C	8.0	12.5
BUS9041008	6	13	(2x0.25)C	8.0	12.5
BUS9041053	7	IN 2/OUT 1	(2x0.25)C	8.0	12.5
BUS9041056	7	13	(2x0.25)C	8.0	12.5
BUS9041061	8	IN 2/OUT 1	(2x0.25)C	8.0	12.5
BUS9041060	9	IN 2/OUT 1	(2x0.25)C	8.0	12.5
BUS9041063	9	13	(2x0.25)C	8.0	12.5
BUS9041052	10	IN 2/OUT 1	(2x0.25)C	8.0	12.5
BUS9041057	10	13	(2x0.25)C	8.0	12.5
BUS9041058	11	IN 13/OUT 13	(2x0.25)C	8.0	12.5
BUS9041051	12	IN 2/OUT 1	(2x0.25)C	8.0	12.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Connector 1	Connector 2	Connector 3	Connector 4	Connector 5
M12, 5 poles Socket, straight	M12, 5 poles Pin, straight	M12, 5 poles Pin, angled	M12, 5 poles Socket, angled	M12, 5 poles Socket, angled

Connector 6	Connector 7*	Connector 8*	Connector 9*	Connector 10*
M12, 5 poles Pin, angled	SUB-D, 9 poles Pin, straight	SUB-D, 9 poles Pin, end plug, 90°	SUB-D, 9 poles Pin, 45°, IP67	SUB-D, 9 poles Pin, end plug, 45°

Connector 11*	Connector 12*	Connector 13
SUB-D, 9 poles Socket/Pin, pass, angled 45°	SUB-D, 9 poles Socket/Pin, pass, angled 90°	open cable end

Harnessed Profibus cable | PUR

* Technical information on the cable quality:
PUR
from page 176

Harnessed Profibus cables, PUR, to your required length					
Product range Part No.	Harnessing with connector combination		Number of cores and conductor nominal cross section [mm²]	Outer diameter [mm]	Minimum bend radius [x d]
BUS9041104	1	1	(2x0.25)C	8.0	12.5
BUS9041101	1	2	(2x0.25)C	8.0	12.5
BUS9041111	1	5	(2x0.25)C	8.0	12.5
BUS9041106	1	6	(2x0.25)C	8.0	12.5
BUS9041105	1	13	(2x0.25)C	8.0	12.5
BUS9041102	2	2	(2x0.25)C	8.0	12.5
BUS9041113	2	5	(2x0.25)C	8.0	12.5
BUS9041107	2	6	(2x0.25)C	8.0	12.5
BUS9041154	2	7	(2x0.25)C	8.0	12.5
BUS9041159	2	8	(2x0.25)C	8.0	12.5
BUS9041162	2	9	(2x0.25)C	8.0	12.5
BUS9041155	2	10	(2x0.25)C	8.0	12.5
BUS9041103	2	13	(2x0.25)C	8.0	12.5
BUS9041166	3	4	(2x0.25)C	8.0	12.5
BUS9041164	3	13	(2x0.25)C	8.0	12.5
BUS9041165	4	13	(2x0.25)C	8.0	12.5
BUS9041114	5	5	(2x0.25)C	8.0	12.5
BUS9041110	5	6	(2x0.25)C	8.0	12.5
BUS9041112	5	13	(2x0.25)C	8.0	12.5
BUS9041109	6	6	(2x0.25)C	8.0	12.5
BUS9041108	6	13	(2x0.25)C	8.0	12.5
BUS9041153	7	IN 2/OUT 1	(2x0.25)C	8.0	12.5
BUS9041156	7	13	(2x0.25)C	8.0	12.5
BUS9041161	8	IN 2/OUT 1	(2x0.25)C	8.0	12.5
BUS9041160	9	IN 2/OUT 1	(2x0.25)C	8.0	12.5
BUS9041163	9	13	(2x0.25)C	8.0	12.5
BUS9041152	10	IN 2/OUT 1	(2x0.25)C	8.0	12.5
BUS9041157	10	13	(2x0.25)C	8.0	12.5
BUS9041158	11	IN 13/OUT 13	(2x0.25)C	8.0	12.5
BUS9041151	12	IN 2/OUT 1	(2x0.25)C	8.0	12.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Connector 1	Connector 2	Connector 3	Connector 4	Connector 5
M12, 5 poles Socket, straight	**M12, 5 poles Pin, straight**	**M12, 5 poles Pin, angled**	**M12, 5 poles Socket, angled**	**M12, 5 poles Socket, angled**

Connector 6	Connector 7*	Connector 8*	Connector 9*	Connector 10*
M12, 5 poles Pin, angled	**SUB-D, 9 poles Pin, straight**	**SUB-D, 9 poles Pin, end plug, 90°**	**SUB-D, 9 poles Pin, 45°, IP67**	**SUB-D, 9 poles Pin, end plug, 45°**

Connector 11*	Connector 12*	Connector 13
SUB-D, 9 poles Socket/Pin, pass, angled 45°	**SUB-D, 9 poles Socket/Pin, pass, angled 90°**	**open cable end**

Harnessed Profibus cables | TPE

* Technical information on the cable quality:
TPE
from page 180

Harnessed Profibus cables, TPE, to your required length					
Product range Part No.	Harnessing with connector combination		Number of cores and conductor nominal cross section [mm²]	Outer diameter [mm]	Minimum bend radius [x d]
BUS9041204	1	1	(2x0.25)C	8.0	12.5
BUS9041201	1	2	(2x0.25)C	8.0	12.5
BUS9041211	1	5	(2x0.25)C	8.0	12.5
BUS9041206	1	6	(2x0.25)C	8.0	12.5
BUS9041205	1	13	(2x0.25)C	8.0	12.5
BUS9041202	2	2	(2x0.25)C	8.0	12.5
BUS9041213	2	5	(2x0.25)C	8.0	12.5
BUS9041207	2	6	(2x0.25)C	8.0	12.5
BUS9041254	2	7	(2x0.25)C	8.0	12.5
BUS9041259	2	8	(2x0.25)C	8.0	12.5
BUS9041262	2	9	(2x0.25)C	8.0	12.5
BUS9041255	2	10	(2x0.25)C	8.0	12.5
BUS9041203	2	13	(2x0.25)C	8.0	12.5
BUS9041266	3	4	(2x0.25)C	8.0	12.5
BUS9041264	3	13	(2x0.25)C	8.0	12.5
BUS9041265	4	13	(2x0.25)C	8.0	12.5
BUS9041214	5	5	(2x0.25)C	8.0	12.5
BUS9041210	5	6	(2x0.25)C	8.0	12.5
BUS9041212	5	13	(2x0.25)C	8.0	12.5
BUS9041209	6	6	(2x0.25)C	8.0	12.5
BUS9041208	6	13	(2x0.25)C	8.0	12.5
BUS9041253	7	IN 2/OUT 1	(2x0.25)C	8.0	12.5
BUS9041256	7	13	(2x0.25)C	8.0	12.5
BUS9041261	8	IN 2/OUT 1	(2x0.25)C	8.0	12.5
BUS9041260	9	IN 2/OUT 1	(2x0.25)C	8.0	12.5
BUS9041263	9	13	(2x0.25)C	8.0	12.5
BUS9041252	10	IN 2/OUT 1	(2x0.25)C	8.0	12.5
BUS9041257	10	13	(2x0.25)C	8.0	12.5
BUS9041258	11	IN 13/OUT 13	(2x0.25)C	8.0	12.5
BUS9041251	12	IN 2/OUT 1	(2x0.25)C	8.0	12.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Connector 1	Connector 2	Connector 3	Connector 4	Connector 5
M12, 5 poles Socket, straight	**M12, 5 poles Pin, straight**	**M12, 5 poles Pin, angled**	**M12, 5 poles Socket, angled**	**M12, 5 poles Socket, angled**

Connector 6	Connector 7*	Connector 8*	Connector 9*	Connector 10*
M12, 5 poles Pin, angled	**SUB-D, 9 poles Pin, straight**	**SUB-D, 9 poles Pin, end plug, 90°**	**SUB-D, 9 poles Pin, 45°, IP67**	**SUB-D, 9 poles Pin, end plug, 45°**

Connector 11*	Connector 12*	Connector 13
SUB-D, 9 poles Socket/Pin, pass, angled 45°	**SUB-D, 9 poles Socket/Pin, pass, angled 90°**	**open cable end**

Harnessed Profinet cables

* Technical information on the cable quality:

PVC	PVC, oil-res.	iguPUR	PUR	PUR-ROBOT	TPE
from page 174	from page 168	from page 172	from page 176	from page 380	from page 180

Harnessed Profinet cables, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Yamaichi Profinet connector				
PVC	**CAT9161001**	(4x0.34)C	7.0	15
PVC, oil-res.	**CAT9361001**	(4x0.38)C	7.0	12.5
iguPUR	**CAT9261001**	(4x0.34)C	7.0	15
PUR	**CAT9461001**	(4x0.38)C	7.0	12.5
PUR-ROBOT	**CAT9661001**	(2x(2x0.34))C	8.5	10
TPE	**CAT9561001**	(4x0.38)C	7.5	10
Harting Profinet connector				
PVC	**CAT9161002**	(4x0.34)C	7.0	15
PVC, oil-res.	**CAT9361002**	(4x0.38)C	7.0	12.5
iguPUR	**CAT9261002**	(4x0.34)C	7.0	15
PUR	**CAT9461002**	(4x0.38)C	7.0	12.5
PUR-ROBOT	**CAT9661002**	(2x(2x0.34))C	8.5	10
TPE	**CAT9561002**	(4x0.38)C	7.5	10
Harting Profinet connector				
PVC	**CAT9161003**	(4x0.34)C	7.0	15
PVC, oil-res.	**CAT9361003**	(4x0.38)C	7.0	12.5
iguPUR	**CAT9261003**	(4x0.34)C	7.0	15
PUR	**CAT9461003**	(4x0.38)C	7.0	12.5
PUR-ROBOT	**CAT9661003**	(2x(2x0.34))C	8.5	10
TPE	**CAT9561003**	(4x0.38)C	7.5	10
Telegärtner Profinet connector				
PVC	**CAT9161004**	(4x0.34)C	7.0	15
PVC, oil-res.	**CAT9361004**	(4x0.38)C	7.0	12.5
iguPUR	**CAT9261004**	(4x0.34)C	7.0	15
PUR	**CAT9461004**	(4x0.38)C	7.0	12.5
PUR-ROBOT	**CAT9661004**	(2x(2x0.34))C	8.5	10
TPE	**CAT9561004**	(4x0.38)C	7.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

Network
Profinet

Harnessed Profinet cables

* Technical information on the cable quality:

PVC	PVC, oil-res.	iguPUR	PUR	PUR-ROBOT	TPE
from page 174	from page 168	from page 172	from page 176	from page 380	from page 180

Harnessed Profinet cables, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Telegärtner Profinet connector				
PVC	**CAT9161005**	(4x0.34)C	7.0	15
PVC, oil-res.	**CAT9361005**	(4x0.38)C	7.0	12.5
iguPUR	**CAT9261005**	(4x0.34)C	7.0	15
PUR	**CAT9461005**	(4x0.38)C	7.0	12.5
PUR-ROBOT	**CAT9661005**	(2x(2x0.34))C	8.5	10
TPE	**CAT9561005**	(4x0.38)C	7.5	10
Telegärtner Profinet connector/ M12 Profinet connector (x-coded)				
PVC	**CAT9161006**	(4x0.34)C	7.0	15
PVC, oil-res.	**CAT9361006**	(4x0.38)C	7.0	12.5
iguPUR	**CAT9261006**	(4x0.34)C	7.0	15
PUR	**CAT9461006**	(4x0.38)C	7.0	12.5
PUR-ROBOT	**CAT9661006**	(2x(2x0.34))C	8.5	10
TPE	**CAT9561006**	(4x0.38)C	7.5	10
Telegärtner M12 Profinet connector (x-coded)				
PVC	**CAT9161007**	(4x0.34)C	7.0	15
PVC, oil-res.	**CAT9361007**	(4x0.38)C	7.0	12.5
iguPUR	**CAT9261007**	(4x0.34)C	7.0	15
PUR	**CAT9461007**	(4x0.38)C	7.0	12.5
PUR-ROBOT	**CAT9661007**	(2x(2x0.34))C	8.5	10
TPE	**CAT9561007**	(4x0.38)C	7.5	10
Telegärtner and Binder Profinet connector (d-coded)				
PVC	**CAT9161008**	(4x0.34)C	7.0	15
PVC, oil-res.	**CAT9361008**	(4x0.38)C	7.0	12.5
iguPUR	**CAT9261008**	(4x0.34)C	7.0	15
PUR	**CAT9461008**	(4x0.38)C	7.0	12.5
PUR-ROBOT	**CAT9661008**	(2x(2x0.34))C	8.5	10
TPE	**CAT9561008**	(4x0.38)C	7.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

Harnessed Profinet cables

* Technical information on the cable quality:

PVC	PVC, oil-res.	iguPUR	PUR	PUR-ROBOT	TPE
from page 174	from page 168	from page 172	from page 176	from page 380	from page 180

Harnessed Profinet cables, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Telegärtner and Binder Profinet connector (RJ45/M12 d-coded)				
PVC	**CAT9161009**	(4x0.34)C	7.0	15
PVC, oil-res.	**CAT9361009**	(4x0.38)C	7.0	12.5
iguPUR	**CAT9261009**	(4x0.34)C	7.0	15
PUR	**CAT9461009**	(4x0.38)C	7.0	12.5
PUR-ROBOT	**CAT9661009**	(2x(2x0.34))C	8.5	10
TPE	**CAT9561009**	(4x0.38)C	7.5	10
Phoenix Contact Profinet connector				
PVC	**CAT9161012**	(4x0.34)C	7.0	15
PVC, oil-res.	**CAT9361012**	(4x0.38)C	7.0	12.5
iguPUR	**CAT9261012**	(4x0.34)C	7.0	15
PUR	**CAT9461012**	(4x0.38)C	7.0	12.5
PUR-ROBOT	**CAT9661012**	(2x(2x0.34))C	8.5	10
TPE	**CAT9561012**	(4x0.38)C	7.5	10
Phoenix Contact Profinet connector (x-coded)				
PVC	**CAT9161014**	(4x0.34)C	7.0	15
PVC, oil-res.	**CAT9361014**	(4x0.38)C	7.0	12.5
iguPUR	**CAT9261014**	(4x0.34)C	7.0	15
PUR	**CAT9461014**	(4x0.38)C	7.0	12.5
PUR-ROBOT	**CAT9661014**	(2x(2x0.34))C	8.5	10
TPE	**CAT9561014**	(4x0.38)C	7.5	10
Siemens Profinet connector				
PVC	**CAT9161015**	(4x0.34)C	7.0	15
PVC, oil-res.	**CAT9361015**	(4x0.38)C	7.0	12.5
iguPUR	**CAT9261015**	(4x0.34)C	7.0	15
PUR	**CAT9461015**	(4x0.38)C	7.0	12.5
PUR-ROBOT	**CAT9661015**	(2x(2x0.34))C	8.5	10
TPE	**CAT9561015**	(4x0.38)C	7.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessing **RJ45 at both ends** ▶ TIA56A
Harnessing **one end RJ45/one end M12 x-coded** ▶ TIA56B

Network
Profinet

Harnessed Profinet cables

* Technical information on the cable quality:

PVC	PVC, oil-res.	iguPUR	PUR	PUR-ROBOT	TPE
from page 174	from page 168	from page 172	from page 176	from page 380	from page 180

Harnessed Profinet cables, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
Siemens Profinet connector				
PVC	**CAT9161016**	(4x0.34)C	7.0	15
PVC, oil-res.	**CAT9361016**	(4x0.38)C	7.0	12.5
iguPUR	**CAT9261016**	(4x0.34)C	7.0	15
PUR	**CAT9461016**	(4x0.38)C	7.0	12.5
PUR-ROBOT	**CAT9661016**	(2x(2x0.34))C	8.5	10
TPE	**CAT9561016**	(4x0.38)C	7.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessed Profinet cables with moulded M12 connectors, in fixed lengths

Cable quality	Part No.	Cable length [m]	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Minimum bend radius [x d]
M12 connector straight 4-pole, D-coded					
PVC, oil-res.	**BUS9041070**	3	(4x0.38)C	7.0	12.5
PVC, oil-res.	**BUS9041071**	5	(4x0.38)C	7.0	12.5
PUR	**BUS9041170**	3	(4x0.38)C	7.0	12.5
PUR	**BUS9041171**	5	(4x0.38)C	7.0	12.5
TPE	**BUS9041270**	3	(4x0.38)C	7.5	10
TPE	**BUS9041271**	5	(4x0.38)C	7.5	10
M12 connector straight 4-pole, D-coded					
PVC, oil-res.	**BUS9041072**	3	(4x0.38)C	7.0	12.5
PVC, oil-res.	**BUS9041073**	5	(4x0.38)C	7.0	12.5
PUR	**BUS9041172**	3	(4x0.38)C	7.0	12.5
PUR	**BUS9041173**	5	(4x0.38)C	7.0	12.5
TPE	**BUS9041272**	3	(4x0.38)C	7.5	10
TPE	**BUS9041273**	5	(4x0.38)C	7.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

New

Industrial Profinet molded

* Technical information on the cable quality:

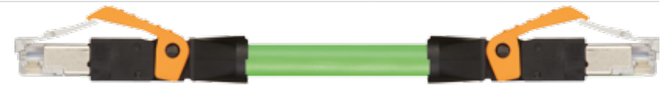
PVC, oil-res. from page 168 **PUR** from page 176

Industrial Profinet molded, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Minimum bend radius [x d]
M8 socket straight/ M8 pin straight				
PVC OIL	**MAT904125470**	(4x0.38)C	7.0	12.5
PUR	**MAT904125430**	(4x0.38)C	7.0	12.5
M8 pin straight/ M8 pin straight				
PVC OIL	**MAT904125471**	(4x0.38)C	7.0	12.5
PUR	**MAT904125431**	(4x0.38)C	7.0	12.5
M8 socket angled/ open cable end				
PVC OIL	**MAT904125472**	(4x0.38)C	7.0	12.5
PUR	**MAT904125432**	(4x0.38)C	7.0	12.5
M8 socket straight/ RJ45 straight				
PVC OIL	**MAT904125473**	(4x0.38)C	7.0	12.5
PUR	**MAT904125433**	(4x0.38)C	7.0	12.5
M12 d-coded pin straight/ M12 d-coded pin straight				
PVC OIL	**MAT904125474**	(4x0.38)C	7.0	12.5
PUR	**MAT904125434**	(4x0.38)C	7.0	12.5
M12 d-coded pin angled/ open cable end				
PVC OIL	**MAT904125475**	(4x0.38)C	7.0	12.5
PUR	**MAT904125435**	(4x0.38)C	7.0	12.5
M12 d-coded pin straight/ open cable end				
PVC OIL	**MAT904125476**	(4x0.38)C	7.0	12.5
PUR	**MAT904125436**	(4x0.38)C	7.0	12.5

Special production cables: delivery time upon request!
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
Harnessing **RJ45 at both ends** ▶ TIA56A

Industrial Profinet molded, to your required length

Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Minimum bend radius [x d]
M12 d-coded pin straight/ RJ45 straight				
PVC OIL	**MAT904125477**	(4x0.38)C	7.0	12.5
PUR	**MAT904125437**	(4x0.38)C	7.0	12.5
M12 d-coded pin angled/ RJ45 straight				
PVC OIL	**MAT904125478**	(4x0.38)C	7.0	12.5
PUR	**MAT904125438**	(4x0.38)C	7.0	12.5
M12 d-coded pin straight/ M8 pin straight				
PVC OIL	**MAT904125479**	(4x0.38)C	7.0	12.5
PUR	**MAT904125439**	(4x0.38)C	7.0	12.5
RJ45 straight/ RJ45 straight				
PVC OIL	**MAT904125480**	(4x0.38)C	7.0	12.5
PUR	**MAT904125440**	(4x0.38)C	7.0	12.5
RJ45 straight/ open cable end				
PVC OIL	**MAT904125481**	(4x0.38)C	7.0	12.5
PUR	**MAT904125441**	(4x0.38)C	7.0	12.5
M12 d-coded socket straight/ M12 d-coded pin straight				
PVC OIL	**MAT904125482**	(4x0.38)C	7.0	12.5
PUR	**MAT904125442**	(4x0.38)C	7.0	12.5
M12 d-coded socket straight/ M12 d-coded pin angled				
PVC OIL	**MAT904125483**	(4x0.38)C	7.0	12.5
PUR	**MAT904125443**	(4x0.38)C	7.0	12.5

Special production cables: delivery time upon request!
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
Harnessing **RJ45 at both ends** ▶ TIA56A

Connectors for network technology | Overview

Network Connectors

		igus® Part No.	Manufacturer	Cable diameter [mm]	Protection class	Number of contacts	Connection method	Bus type	Conductor cross section [mm²]	Cable quality	matching chainflex® cables	Maximum cable diameter [mm]	Number of cores and conductor cross section
		MAT01717352	HARTING	4.5-9.0	IP20	8	Cutting clamps	CAT6	0.14-0.34	PVC	CFBUS.PVC.049	7.5	(4x(2x0.15))C
										PUR	CFBUS.PUR.049	7.5	(4x(2x0.15))C
										TPE	CFBUS.049	8.5	(4x(2x0.15))C
										PUR-Robot	CFROBOT8.049	8.5	4x(2x0.14)C
		MAT01713662	HARTING	6.0-6.9	IP20	8	Hand tool needed	CAT6	0.09-0.25	PVC	CFBUS.PVC.049*	7.5	(4x(2x0.15))C
										PUR	CFBUS.PUR.049*	7.5	(4x(2x0.15))C
		MAT0176869	Phoenix Contact	4.5-8.0	IP20	8	Cutting clamps	CAT5e	0.14-0.25	PVC	CF888.045	7.5	(4x(2x0.15))C
										PVC	CFBUS.PVC.045	7.5	(4x(2x0.15))C
										iguPUR	CF898.045	7.5	(4x(2x0.15))C
										PUR	CFBUS.PUR.045	7.5	(4x(2x0.15))C
										TPE	CFBUS.045*	8.5	(4x(2x0.15))C
										PUR-Robot	CFROBOT8.045*	8.5	4x(2x0.14)C
		MAT01733149	Telegärtner	5.5-7.3	IP20	8	Hand tool needed	CAT6A CAT6	0.14-0.25	TPE	CFBUS.050*	10.5	4x(2x0.15)C)C
										PUR-Robot	CFROBOT8.050*	10.5	4x(2x0.15)C
										PVC	CFBUS.PVC.049	7.5	(4x(2x0.15))C
		MAT01733150	Telegärtner	max. 7.0	IP20	-	-	-	-	PUR	CFBUS.PUR.049	7.5	(4x(2x0.15))C
										TPE	CFBUS.049*	8.5	(4x(2x0.15))C
										PUR-Robot	CFROBOT8.049*	8.5	4x(2x0.14)C
		MAT0176370	Yamaichi	-	IP20	8	Hand tool needed	CAT6	0.14-0.25	PVC	CFBUS.PVC.049	7.5	(4x(2x0.15))C
		MAT0176371	Yamaichi	max. 7.5	IP20	-	-	-	-	PUR	CFBUS.PUR.049	7.5	(4x(2x0.15))C
										TPE	CFBUS.049*	8.5	(4x(2x0.15))C
		MAT0176372	Yamaichi	-	-	-	-	-	-	PUR-Robot	CFROBOT8.049*	8.5	4x(2x0.14)C
		MAT01717477	WEIDMÜLLER	5.5-8.5	IP20	8	Cutting clamps	Cat.6 (CAT6A acc. to datasheet)	0.14-0.34	PVC	CFBUS.PVC.049	7.5	(4x(2x0.15))C
										PUR	CFBUS.PUR.049	7.5	(4x(2x0.15))C
										TPE	CFBUS.049	8.5	(4x(2x0.15))C
										PUR-Robot	CFROBOT8.049	8.5	4x(2x0.14)C
		MAT01730294	Telegärtner	5.5-10.0	IP20	8	Cutting clamps	CAT6A	0.14-0.34	PVC	CFBUS.PVC.050	9.5	4x(2x0.20)C
										PUR	CFBUS.PUR.050	9.5	4x(2x0.20)C
										TPE	CFBUS.050*	10.5	(4x(2x0.15)C)C
										PUR-Robot	CFROBOT8.050*	10.5	4x(2x0.15)C
		MAT0173509	HARTING	6.0-7.0	IP20	4	Cutting clamps	CAT5/ Profinet	0.14-0.34	PVC	CF888.060	7	(4x0.38)C
										PVC	CFBUS.PVC.040	6.5	(4x0.25)C
										PVC	CFBUS.PVC.060	7	(4x0.38)C
										iguPUR	CF898.060	7	(4x0.38)C
										PUR	CFBUS.PUR.040	6.5	(4x0.25)C
										PUR	CFBUS.PUR.060	7	(4x0.38)C
										TPE	CFBUS.040	7	(4x0.25)C
										TPE	CFBUS.060*	7.5	(4x0.38)C
										PUR-Robot	CFROBOT8.060*	8.5	(2x(2x0.34))C
		MAT01733547	Datwyler	max. 8.9	IP20	8	Cutting clamps	CAT7A	0.15-0.34	PVC	CFBUS.PVC.052*	9.5	(4x(2x0.15)C)C
										PUR	CFBUS.PUR.052*	9.5	(4x(2x0.15)C)C
										TPE	CFBUS.052*	10.5	(4x(2x0.15)C)C
										PUR-Robot	CFROBOT8.052*	10.5	4x(2x0.15)C
		MAT01733548	Datwyler	max. 6.3	IP20	8	Cutting clamps	CAT7A	0.15-0.34	PVC	CFBUS.PVC.052*	9.5	(4x(2x0.15)C)C
										PUR	CFBUS.PUR.052*	9.5	(4x(2x0.15)C)C
										TPE	CFBUS.052*	10.5	(4x(2x0.15)C)C
										PUR-Robot	CFROBOT8.052*	10.5	4x(2x0.15)C
		MAT0179875	Binder	6.0-8.0	IP67	4	Screw clamps	CAT5/ Profinet	max. 0.75	PVC	CF888.060	7	(4x0.38)C
										PVC	CFBUS.PVC.040	6.5	(4x0.25)C
										PVC	CFBUS.PVC.060	7	(4x0.38)C
										iguPUR	CF898.060	7	(4x0.38)C
										PUR	CFBUS.PUR.040	6.5	(4x0.25)C
										PUR	CFBUS.PUR.060	7	(4x0.38)C
										TPE	CFBUS.040	7	(4x0.25)C
										TPE	CFBUS.060	7.5	(4x0.38)C
										PUR-Robot	CFROBOT8.060*	8.5	(2x(2x0.34))C

All connectors are compatible downward Please note the outer diameter of the cable and the conductor cross section

* According to data sheet, the connectors do not match these cables but the cables can nevertheless be manually modified/tapered.

Connectors for network technology | Overview

Network Connectors

		igus® Part No.	Manufacturer	Cable diameter [mm]	Protection class	Number of contacts	Connection type	Bus type	Conductor cross section [mm²]	Cable quality	matching chainflex® cables	Maximum cable diameter [mm]	Number of cores and conductor cross section
		615 Connector	Intercontec	4.5-10.5 (Plastic clamp ring) 4.5-12 mm (Metal clamp ring)	IP67	12	Hand tool needed	CAT5e/ Profinet	0.05-0.75	PVC	CF888.060	7	(4x0.38)C
										PVC	CFBUS.PVC.040	6.5	(4x0.25)C
										PVC	CFBUS.PVC.060	7	(4x0.38)C
										iguPUR	CF898.060	7	(4x0.38)C
										PUR	CFBUS.PUR.040	6.5	(4x0.25)C
										PUR	CFBUS.PUR.060	7	(4x0.38)C
										TPE	CFBUS.040	7	(4x0.25)C
										TPE	CFBUS.060	7.5	(4x0.38)C
										PUR-Robot	CFROBOT8.060*	8.5	(2x(2x0.34))C
		615 Coupling	Intercontec	4.5-10.5 (Plastic clamp ring) 4.5-12 mm (Metal clamp ring)	IP67	12	Hand tool needed	CAT5e/ Profinet	0.05-0.75	PVC	CF888.060	7	(4x0.38)C
										PVC	CFBUS.PVC.040	6.5	(4x0.25)C
										PVC	CFBUS.PVC.060	7	(4x0.38)C
										iguPUR	CF898.060	7	(4x0.38)C
										PUR	CFBUS.PUR.040	6.5	(4x0.25)C
										PUR	CFBUS.PUR.060	7	(4x0.38)C
										TPE	CFBUS.040	7	(4x0.25)C
										TPE	CFBUS.060	7.5	(4x0.38)C
										PUR-Robot	CFROBOT8.060*	8.5	(2x(2x0.34))C
		MAT01733199	Phoenix Contact	5.0-9.7	IP67	8	Cutting clamps	CAT6A/ Ethernet	0.14-0.34	PVC	CFBUS.PVC.050	9.5	4x(2x0.20)C
										PUR	CFBUS.PUR.050	9.5	4x(2x0.20)C
										TPE	CFBUS.050*	10.5	(4x(2x0.15)C)C
										PUR-Robot	CFROBOT8.050*	10.5	4x(2x0.15)C
		MAT01733200	Phoenix Contact	5.0-9.7	IP67	8	Cutting clamps	CAT6A/ Profinet	0.25-0.5	PVC	CF888.060	7	(4x0.38)C
										PVC	CFBUS.PVC.040	6.5	(4x0.25)C
										PVC	CFBUS.PVC.060	7	(4x0.38)C
										iguPUR	CF898.060	7	(4x0.38)C
										PUR	CFBUS.PUR.040	6.5	(4x0.25)C
										PUR	CFBUS.PUR.060	7	(4x0.38)C
										TPE	CFBUS.040	7	(4x0.25)C
										TPE	CFBUS.060	7.5	(4x0.38)C
										PUR-Robot	CFROBOT8.060	8.5	(2x(2x0.34))C
		MAT01734849	Phoenix Contact	5.0-9.7	IP67	8	Cutting clamps	CAT6A/ Ethernet	0.14-0.34	PVC	CFBUS.PVC.050	9.5	4x(2x0.20)C
										PUR	CFBUS.PUR.050	9.5	4x(2x0.20)C
										TPE	CFBUS.050*	10.5	(4x(2x0.15)C)C
										PUR-Robot	CFROBOT8.050*	10.5	4x(2x0.15)C
		MAT01735081	Phoenix Contact	5.0-9.7	IP67	8	Cutting clamps	CAT6A/ Profinet	0.25-0.5	PVC	CF888.060	7	(4x0.38)C
										PVC	CFBUS.PVC.040	6.5	(4x0.25)C
										PVC	CFBUS.PVC.060	7	(4x0.38)C
										iguPUR	CF898.060	7	(4x0.38)C
										PUR	CFBUS.PUR.040	6.5	(4x0.25)C
										PUR	CFBUS.PUR.060	7	(4x0.38)C
										TPE	CFBUS.040	7	(4x0.25)C
										TPE	CFBUS.060	7.5	(4x0.38)C
										PUR-Robot	CFROBOT8.060	8.5	(2x(2x0.34))C
		MAT01716619	Siemens	6.5-6.5	IP20	4	Cutting clamps	CAT5/ Profinet	0.14-0.38	PVC	CF888.060	7	(4x0.38)C
										PVC	CFBUS.PVC.040	6.5	(4x0.25)C
										PVC	CFBUS.PVC.060	7	(4x0.38)C
										iguPUR	CF898.060	7	(4x0.38)C
										PUR	CFBUS.PUR.040	6.5	(4x0.25)C
										PUR	CFBUS.PUR.060	7	(4x0.38)C
										TPE	CFBUS.040	7	(4x0.25)C
										TPE	CFBUS.060*	7.5	(4x0.38)C
		MAT01721074	Siemens	8.0-8.0	IP20	8	Cutting clamps	CAT6	0.14-0.25	PVC	CFBUS.PVC.049	7.5	(4x(2x0.15))C
										PUR	CFBUS.PUR.049	7.5	(4x(2x0.15))C
										TPE	CFBUS.049*	8.5	(4x(2x0.15))C
										PUR-Robot	CFROBOT8.049*	8.5	4x(2x0.14)C

All connectors are compatible downward Please note the outer diameter of the cable and the conductor cross section

* According to data sheet, the connectors do not match these cables but the cables can nevertheless be manually modified/tapered.

FOC

Harnessed Fibre Optic Cables

chainflex® readycable®

		Jacket	Page
Harnessed Fibre Optic Cables for Video			
	FOC 2 fibres	PVC/TPE	468
	FOC 4 fibres	TPE	469
Harnessed Fibre Optic Cables for Network			
	FOC 6 fibres	TPE	470
	FOC 12 fibres	TPE	470

Harnessed Fibre Optic Cables for Video

* Technical information on the cable quality:

PVC	TPE	TPE-ROBOT
from page 198	from page 204	from page 370

Harnessed Fibre Optic Cables, Glass-fibre, 2 fibres, to your required length

Cable quality	Part No.	chainflex® cable	No. of fibres	Fibre diameter [µm]	Ø [mm]	Minimum bend radius [x d]
ST/ST Connector						
Pre-harnessed at both ends						
PVC	LWL99230001	CFLG88.2.50/125	2	50/125	7.0	7.5
PVC	LWL99230002	CFLG88.2.62.5/125	2	62.5/125	7.0	7.5
TPE	LWL90412394	CFLG.2LB.50/125	2	50/125	8.5	5
TPE	LWL90412397	CFLG.2LB.62.5/125	2	62.5/125	8.5	5
TPE Robot	LWL90422492	CFROBOT5.501	2	50/125	8.5	10
TPE Robot	LWL90422495	CFROBOT5.500	2	62.5/125	8.5	10
TPE Patch	LWL90412400 [2]	FFLG.2G.50/125	2	50/125	6.5	5
TPE Patch	LWL90412403 [2]	FFLG.2G.62.5/125	2	50/125	6.5	5
ST/LC Connector						
Pre-harnessed at both ends						
PVC	LWL99230007	CFLG88.2.50/125	2	50/125	7.0	7.5
PVC	LWL99230008	CFLG88.2.62.5/125	2	62.5/125	7.0	7.5
TPE	LWL90412393 [1]	CFLG.2LB.50/125	2	50/125	8.5	5
TPE	LWL90412396 [1]	CFLG.2LB.62.5/125	2	62.5/125	8.5	5
TPE Robot	LWL90422491 [1]	CFROBOT5.501	2	50/125	8.5	10
TPE Robot	LWL90422494	CFROBOT5.500	2	62.5/125	8.5	10
TPE Patch	LWL90412399 [1], [2]	FFLG.2G.50/125	2	50/125	6.5	5
TPE Patch	LWL90412402 [1], [2]	FFLG.2G.62.5/125	2	50/125	6.5	5
LC/LC Connector						
Pre-harnessed at both ends						
PVC	LWL99230005	CFLG88.2.50/125	2	50/125	7.0	7.5
PVC	LWL99230006	CFLG88.2.62.5/125	2	62.5/125	7.0	7.5
TPE	LWL90412395	CFLG.2LB.50/125	2	50/125	8.5	5
TPE	LWL90412398	CFLG.2LB.62.5/125	2	62.5/125	8.5	5
TPE Robot	LWL90422493	CFROBOT5.501	2	50/125	8.5	10
TPE Robot	LWL90422496	CFROBOT5.500	2	62.5/125	8.5	10
TPE Patch	LWL90412401 [2]	FFLG.2G.50/125	2	50/125	6.5	5
TPE Patch	LWL90412404 [2]	FFLG.2G.62.5/125	2	50/125	6.5	5
SC/SC Connector						
Pre-harnessed at both ends						
PVC	LWL99230003	CFLG88.2.50/125	2	50/125	7.0	7.5
PVC	LWL99230004	CFLG88.2.62.5/125	2	62.5/125	7.0	7.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example images
Also available from the roll to your required length.

FOC
Camera
Glass-fibre

Harnessed Fibre Optic Cables for Video

* Technical information on the cable quality:

PVC	TPE	TPE-ROBOT
from page 198	from page 204	from page 370

Harnessed Fibre Optic Cables, Glass-fibre, 2 fibres, to your required length

Cable quality	Part No.	chainflex® cable	No. of fibres	Fibre diameter [µm]	Ø [mm]	Minimum bend radius [x d]
ST/SC Connector						
Pre-harnessed at both ends						
PVC	LWL99230009	CFLG88.2.50/125	2	50/125	7.0	7.5
PVC	LWL99230010	CFLG88.2.62.5/125	2	62.5/125	7.0	7.5
LC/SC Connector						
Pre-harnessed at both ends						
PVC	LWL99230011	CFLG88.2.50/125	2	50/125	7.0	7.5
PVC	LWL99230012	CFLG88.2.62.5/125	2	62.5/125	7.0	7.5

Harnessed Fibre Optic Cables, Glass-fibre, 4 fibres, to your required length

ST/LC Connector						
Pre-harnessed at both ends						
TPE	LWL9040093	CFLG.4LB.50/125	4	50/125	9.0	5
TPE	LWL9040094	CFLG.4LB.62.5/125	4	62.5/125	9.0	5
ST/ST Connector						
Pre-harnessed at both ends						
TPE	LWL9040086	CFLG.4LB.50/125	4	50/125	9.0	5
TPE	LWL9040085	CFLG.4LB.62.5/125	4	62.5/125	9.0	5
LC/LC Connector						
Pre-harnessed at both ends						
TPE	LWL90425050	CFLG.4LB.50/125	4	50/125	9.0	5
TPE	LWL9040092	CFLG.4LB.62.5/125	4	62.5/125	9.0	5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example images
Also available from the roll to your required length.

Harnessed with these connectors

Connector SC ST LC

Tube sinking

Tube sinking

LWL90428935	Closed corrugated tube to feed in fibre optic cables (shown cut open)

Harnessed Fibre Optic Cables for Network | TPE

* Technical information on the cable quality:
TPE
from page 204

Harnessed Fibre Optic Cables, glass-fibre, 6/12 fibres, to your required length

ST/ST Connector
Pre-harnessed at both ends

Product range	igus® Part No.	Number of fibres	Fibre diameter [µm]	Ø [mm]	Minimum bend radius [x d]
CFLG.6LB.50/125	LWL9040091	6	50/125	11.0	5.0 x d
CFLG.6LB.62,5/125	LWL9040090	6	62.5/125	11.0	5.0 x d
CFLG.12LB.50/125	LWL90428938	12	50/125	14.0	5.0 x d
CFLG.12LB.62,5/125	LWL90428937	12	62.5/125	14.0	5.0 x d

LC/LC Connector
Pre-harnessed at both ends

CFLG.6LB.50/125	LWL90428946	6	50/125	11.0	5.0 x d
CFLG.6LB.62,5/125	LWL90428945	6	62.5/125	11.0	5.0 x d
CFLG.12LB.50/125	LWL90428942	12	50/125	14.0	5.0 x d
CFLG.12LB.62,5/125	LWL90428941	12	62.5/125	14.0	5.0 x d

SC/SC Connector
Pre-harnessed at both ends

CFLG.6LB.50/125	LWL90428944	6	50/125	11.0	5.0 x d
CFLG.6LB.62,5/125	LWL90428943	6	62.5/125	11.0	5.0 x d
CFLG.12LB.50/125	LWL90428940	12	50/125	14.0	5.0 x d
CFLG.12LB.62,5/125	LWL90428939	12	62.5/125	14.0	5.0 x d

Harnessed with these connectors

Connector SC ST LC

Tube sinking

Tube sinking

LWL90428935	Closed corrugated tube to feed in fibre optic cables (shown cut open)

FOC
Network
Glass-fibre

Harnessed Fibre Optic Cables for Network | TPE

* Technical information on the cable quality:
TPE
from page 208

Harnessed Fibre Optic Cables, glass-fibre, 6/12 fibres, to your required length

ST/ST Connector
Pre-harnessed at both ends

Product range	igus® Part No.	Number of fibres	Fibre diameter [µm]	Outer diameter [mm]	Minimum bend radius
	LWL9040030	6	50/125	11.5	10 x d
incl. conversion to SC	LWL9040031	6	50/125	11.5	10 x d
incl. conversion to LC	LWL9040032	6	50/125	11.5	10 x d
	LWL9040045	6	62.5/125	11.5	10 x d
incl. conversion to SC	LWL9040046	6	62.5/125	11.5	10 x d
incl. conversion to LC	LWL9040047	6	62.5/125	11.5	10 x d

ST/ST Connector
Pre-harnessed at both ends

	LWL9040060	12	50/125	11.5	10 x d
incl. conversion to SC	LWL9040061	12	50/125	11.5	10 x d
incl. conversion to LC	LWL9040062	12	50/125	11.5	10 x d
	LWL9040075	12	62.5/125	11.5	10 x d
incl. conversion to SC	LWL9040076	12	62.5/125	11.5	10 x d
incl. conversion to LC	LWL9040077	12	62.5/125	11.5	10 x d

Tube sinking

Tube sinking

LWL90428936	Closed corrugated tube to feed in fibre optic cables (image shown cut open)

Fibre identification

Part No.	Fibre identification	Tube identification
CFLG.6G.62,5/125.TC	ecru, yellow, green, red, violet, blue	orange
CFLG.6G.50/125.TC	ecru, yellow, green, red, violet, blue	blue
CFLG.12G.62,5/125.TC	ecru, yellow, green, red, violet, blue, lightblue, grey, brown, black, orange, pink	orange
CFLG.12G.50/125.TC	ecru, yellow, green, red, violet, blue, lightblue, grey, brown, black, orange, pink	blue

CF.INI

Sensor/actuator

chainflex® readycable®

	Cable type	Jacket	Page
Sensor/actuator CF9 - CF.INI (minimum bend radius 5 x d)			
	Connection cable M12 x 1, straight/angled	TPE	475
	Linking cable M12 x 1, straight/angled	TPE	475
	Connection cable M12 x 1, straight/angled, LED	TPE	477
	Connection cable M8 x 1, straight/angled	TPE	479
	Linking cable M8 x 1, straight/angled	TPE	479
	Connection cable M8 x 1, angled, LED	TPE	481
Sensor/actuator CF10 – CF.INI (minimum bend radius 5 x d) 360° shielded			
	Connection cable M12 x 1, straight/angled	TPE	483
	Linking cable M12 x 1, straight/angled	TPE	483
Sensor/actuator CF98 - CF.INI (minimum bend radius 4 x d)			
	Connection cable M12 x 1, straight/angled	TPE	485
	Linking cable M12 x 1, straight/angled	TPE	485
	Connection cable M8 x 1, straight/angled	TPE	487
	Linking cable M8 x 1, straight/angled	TPE	487
chainflex® cables for actuator/sensor distribution box			
	Connection cable M23, straight	TPE	488
	Linking cable M23, straight/angled	TPE	488
	Connection cable M12, straight	TPE	489

Harnessed sensor/actuator cables

Connection and Linking cables M12 x 1: Bend radius, e-chain®: minimum 5 x d

Electrical information

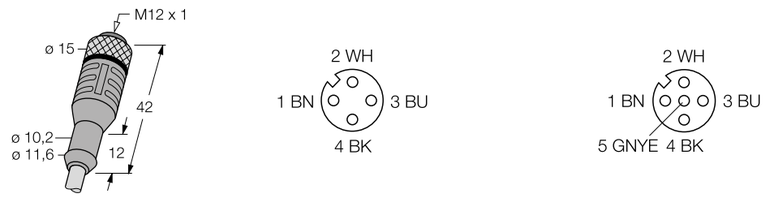
Number of poles	**5-pole**	**4-pole**
Ampacity	4 A	4 A
Rated voltage	60 V	250 V
Insulating resistance	≥ 10^9 Ω	≥ 10^9 Ω
Contact resistance	≤ 5 mΩ	≤ 5 mΩ
Pollution degree	3/2	3/2
Ambient temperature	-35 °C up to +105 °C	-35 °C up to +105 °C
Protection class	IP69K, in screwed state	IP69K, in screwed state
Mechanical service life	max. 100 insertion cycles	max. 100 insertion cycles

Technical data

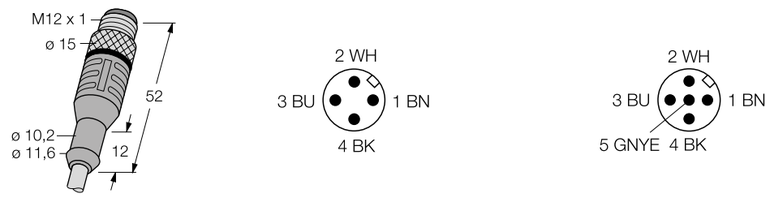
Design	**Coupling**	**Connector**
Connector	Coupling, M12 x 1	Connector, M12 x 1
Handle base	Plastic, PP, black	Plastic, PP, black
Union nut/screw	Metal, CuZn, nickel-plated	Metal, CuZn, nickel-plated
Contact base	Plastic, PP, black	Plastic, TPU, black
Contacts	Metal, CuZn, gold-plated	Metal, CuZn, gold-plated
Seal	Plastic, FPM (Viton)	

Harnessed with these connectors

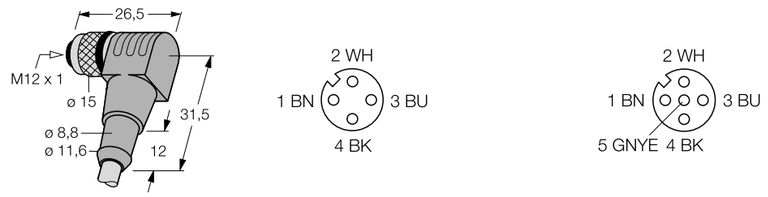
M12-BG



M12-SG



M12-BW



Connection cable M12

Type	igus® Part No.	Number of cores and conductor nominal cross section [mm²]	Number of poles	Cable length [m]
Connection cable, straight (Socket/open cable end)				
CF.INI-P4-M12-BG-3	MAT9043700	4x0,34	4	3
CF.INI-P4-M12-BG-5	MAT9043701	4x0,34	4	5
CF.INI-P4-M12-BG-7	MAT9043702	4x0,34	4	7
CF.INI-P4-M12-BG-10	MAT9043703	4x0,34	4	10
CF.INI-P4-M12-BG-15	MAT9049426	4x0,34	4	15
CF.INI-P5-M12-BG-3	MAT9043737	5x0,34	5	3
CF.INI-P5-M12-BG-5	MAT9043738	5x0,34	5	5
CF.INI-P5-M12-BG-7	MAT9043739	5x0,34	5	7
CF.INI-P5-M12-BG-10	MAT9043740	5x0,34	5	10
CF.INI-P5-M12-BG-15	MAT90410077	5x0,34	5	15
Connection cable, angled (Socket/open cable end)				
CF.INI-P4-M12-BW-3	MAT9043704	4x0,34	4	3
CF.INI-P4-M12-BW-5	MAT9043705	4x0,34	4	5
CF.INI-P4-M12-BW-7	MAT9043706	4x0,34	4	7
CF.INI-P4-M12-BW-10	MAT9043707	4x0,34	4	10
CF.INI-P4-M12-BW-15	MAT9049430	4x0,34	4	15
CF.INI-P5-M12-BW-3	MAT9043742	5x0,34	5	3
CF.INI-P5-M12-BW-5	MAT9043743	5x0,34	5	5
CF.INI-P5-M12-BW-7	MAT9043744	5x0,34	5	7
CF.INI-P5-M12-BW-10	MAT9043745	5x0,34	5	10
CF.INI-P5-M12-BW-15	MAT90410078	5x0,34	5	15
Linking cable M12				
Linking cable, straight (Socket/Pin)				
CF.INI-P4-M12-BG/M12-SG-2	MAT90410312 [1]	4x0,34	4	2
CF.INI-P4-M12-BG/M12-SG-5	MAT90410313 [1]	4x0,34	4	5
CF.INI-P4-M12-BG/M12-SG-10	MAT90410314 [1]	4x0,34	4	10
CF.INI-P5-M12-BG/M12-SG-2	MAT90410339 [1]	5x0,34	5	2
CF.INI-P5-M12-BG/M12-SG-5	MAT90410340 [1]	5x0,34	5	5
CF.INI-P5-M12-BG/M12-SG-10	MAT90410341 [1]	5x0,34	5	10
Linking cable, angled (Socket/Pin)				
CF.INI-P4-M12-BW/M12-SG-2	MAT90410315 [1]	4x0,34	4	2
CF.INI-P4-M12-BW/M12-SG-5	MAT90410316 [1]	4x0,34	4	5
CF.INI-P4-M12-BW/M12-SG-10	MAT90410317 [1]	4x0,34	4	10
CF.INI-P5-M12-BW/M12-SG-2	MAT90410342 [1]	5x0,34	5	2
CF.INI-P5-M12-BW/M12-SG-5	MAT90410343 [1]	5x0,34	5	5
CF.INI-P5-M12-BW/M12-SG-10	MAT90410344 [1]	5x0,34	5	10

[1] Delivery time upon request

Harnessed sensor/actuator cables

Connection cables with LED M12 x 1:
Bend radius, e-chain®: minimum 5 x d

Electrical information

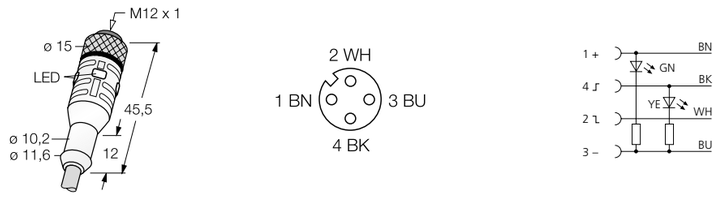
Number of poles	**4-pole**
Ampacity	4 A
Rated voltage	30 V
Insulating resistance	≥ 10^9 Ω
Contact resistance	≤ 5 mΩ
Pollution degree	3/2
Operating voltage display	LED green
Switching state display	LED yellow/yellow
Switching function	pnp
Ambient temperature	-35 °C up to +105 °C
Protection class	IP66, in screwed state
Mechanical service life	max. 100 insertion cycles

Technical data

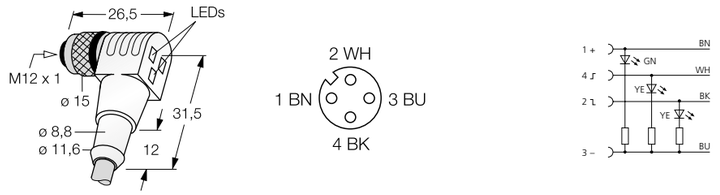
Design	
Connector	**Coupling, M12 x 1**
Handle base	Plastic, TPU, transparent
Union nut/screw	Metal, CuZn, nickel-plated
Contact base	Plastic, PA6GF, transparent
Contacts	Metal, CuZn, gold-plated
Seal	Plastic, FPM (Viton)

Harnessed with these connectors

M12-BGL



M12-BWL



Connection cable M12

Type	igus® Part No.	Number of cores and conductor nominal cross section [mm²]	Number of poles	Cable length [m]
Connection cable with LED, straight (Socket with LED/ open cable end)				
CF.INI-P4-M12-BGL2-3	MAT9043708	4x0,34	4	3
CF.INI-P4-M12-BGL2-5	MAT9043709	4x0,34	4	5
CF.INI-P4-M12-BGL2-7	MAT9043710	4x0,34	4	7
CF.INI-P4-M12-BGL2-10	MAT9043711	4x0,34	4	10
CF.INI-P4-M12-BGL2-15	MAT90410087	4x0,34	4	15
Connection cable with LED, angled (Socket with LED/ open cable end)				
CF.INI-P4-M12-BWL3-3	MAT9043712	4x0,34	4	3
CF.INI-P4-M12-BWL3-5	MAT9043713	4x0,34	4	5
CF.INI-P4-M12-BWL3-7	MAT9043714	4x0,34	4	7
CF.INI-P4-M12-BWL3-10	MAT9043715	4x0,34	4	10
CF.INI-P4-M12-BWL3-15	MAT90410088	4x0,34	4	15

Harnessed sensor/actuator cables

Connection and Linking cables M8 x 1:
Bend radius, e-chain®: minimum 5 x d

Electrical information

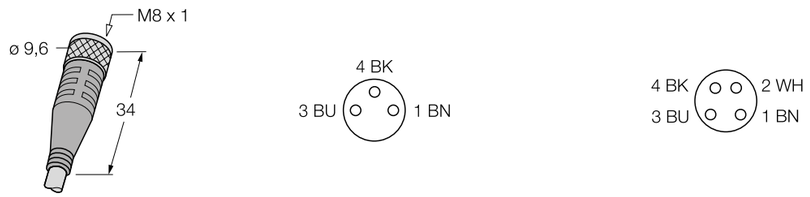
Number of poles	**3-pole**	**4-pole**
Ampacity	4 A	4 A
Rated voltage	60 V	30 V
Insulating resistance	≥ 10^9 Ω	≥ 10^9 Ω
Contact resistance	≤ 5 mΩ	≤ 5 mΩ
Pollution degree	3/2	3/2
Ambient temperature	-35 °C up to +105 °C	-35 °C up to +105 °C
Protection class	IP69K, in screwed state	IP69K, in screwed state
Mechanical service life	max. 100 insertion cycles	max. 100 insertion cycles

Technical data

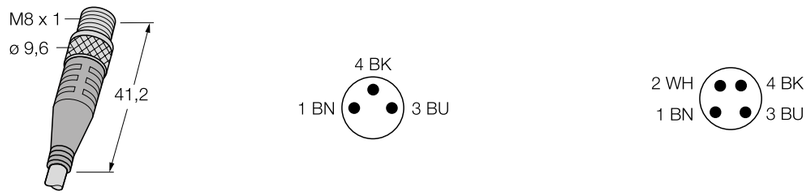
Design	**Coupling**	**Connector**
Connector	Coupling, M8 x 1	Connector, M8 x 1
Handle base	Plastic, PP, black	Plastic, PP, black
Union nut/screw	Metal, CuZn, nickel-plated	Metal, CuZn, nickel-plated
Contact base	Plastic, PP, black	Plastic, PP, black
Contacts	Metal, CuZn, gold-plated	Metal, CuZn, gold-plated
Seal	Plastic, FPM (Viton)	

Harnessed with these connectors

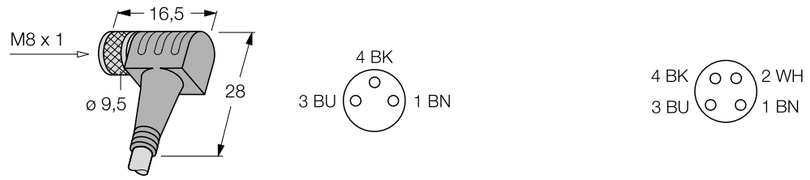
M8-BG



M8-SG



M8-BW



CF.INI
CF9
M8

Connection cable M8

Type	igus® Part No.	Number of cores and conductor nominal cross section [mm²]	Number of poles	Cable length [m]
Connection cable, straight (Socket/open cable end)				
CF.INI-P3-M8-BG-3	MAT9043716	3x0,25	3	3
CF.INI-P3-M8-BG-5	MAT9043717	3x0,25	3	5
CF.INI-P3-M8-BG-7	MAT9043718	3x0,25	3	7
CF.INI-P3-M8-BG-10	MAT9043719	3x0,25	3	10
CF.INI-P3-M8-BG-15	MAT9049416	3x0,25	3	15
CF.INI-P4-M8-BG-3	MAT9043728	4x0,34	4	3
CF.INI-P4-M8-BG-5	MAT9043729	4x0,34	4	5
CF.INI-P4-M8-BG-7	MAT9043730	4x0,34	4	7
CF.INI-P4-M8-BG-10	MAT9043731	4x0,34	4	10
CF.INI-P4-M8-BG-15	MAT9049466	4x0,34	4	15
Connection cable, angled (Socket/open cable end)				
CF.INI-P3-M8-BW-3	MAT9043724	3x0,25	3	3
CF.INI-P3-M8-BW-5	MAT9043725	3x0,25	3	5
CF.INI-P3-M8-BW-7	MAT9043726	3x0,25	3	7
CF.INI-P3-M8-BW-10	MAT9043727	3x0,25	3	10
CF.INI-P3-M8-BW-15	MAT9049419	3x0,25	3	15
CF.INI-P4-M8-BW-3	MAT9043732	4x0,34	4	3
CF.INI-P4-M8-BW-5	MAT9043733	4x0,34	4	5
CF.INI-P4-M8-BW-7	MAT9043734	4x0,34	4	7
CF.INI-P4-M8-BW-10	MAT9043735	4x0,34	4	10
CF.INI-P4-M8-BW-15	MAT9049467	4x0,34	4	15

Linking cable M8

Linking cable, straight (Socket/Pin)				
CF.INI-P3-M8-BG/M8-SG-2	MAT90410324 [1]	3x0,25	3	2
CF.INI-P3-M8-BG/M8-SG-5	MAT90410325 [1]	3x0,25	3	5
CF.INI-P3-M8-BG/M8-SG-10	MAT90410326 [1]	3x0,25	3	10
CF.INI-P4-M8-BG/M8-SG-2	MAT90410333 [1]	4x0,34	4	2
CF.INI-P4-M8-BG/M8-SG-5	MAT90410334 [1]	4x0,34	4	5
CF.INI-P4-M8-BG/M8-SG-10	MAT90410335 [1]	4x0,34	4	10
Linking cable, angled (Socket/Pin)				
CF.INI-P3-M8-BW/M8-SG-2	MAT90410330 [1]	3x0,25	3	2
CF.INI-P3-M8-BW/M8-SG-5	MAT90410331 [1]	3x0,25	3	5
CF.INI-P3-M8-BW/M8-SG-10	MAT90410332 [1]	3x0,25	3	10
CF.INI-P4-M8-BW/M8-SG-2	MAT90410336 [1]	4x0,34	4	2
CF.INI-P4-M8-BW/M8-SG-5	MAT90410337 [1]	4x0,34	4	5
CF.INI-P4-M8-BW/M8-SG-10	MAT90410338 [1]	4x0,34	4	10

[1] Delivery time upon request

CF.INI
CF9
M8

Harnessed sensor/actuator cables

Connection cables with LED M8 x 1:
Bend radius, e-chain®: minimum 5 x d

Electrical information

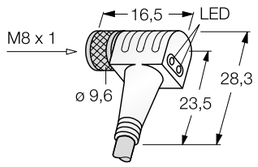
Number of poles	**3-pole**
Ampacity	4 A
Rated voltage	30 V
Insulating resistance	≥ 10^9 Ω
Contact resistance	≤ 5 mΩ
Pollution degree	3/2
Operating voltage display	LED green
Switching state display	LED yellow/yellow
Switching function	pnp
Ambient temperature	-35 °C up to +105 °C
Protection class	IP66, in screwed state
Mechanical service life	max. 100 insertion cycles

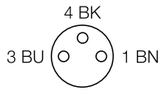
Technical data

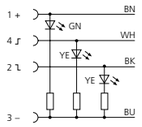
Design	**Coupling**
Connector	Coupling, M8 x 1
Handle base	Plastic, TPU, transparent
Union nut/screw	Metal, CuZn, nickel-plated
Contact base	Plastic, PA6GF, black
Contacts	Metal, CuZn, gold-plated
Seal	Plastic, FPM (Viton)

Harnessed with these connectors

M8-BWL







Connection cable M8				
Type	igus® Part No.	Number of cores and conductor nominal cross section [mm²]	Number of poles	Cable length [m]
Connection cable with LED, angled				
CF.INI-P3-M8-BWL2-3	MAT9043720	3x0,25	3	3
CF.INI-P3-M8-BWL2-5	MAT9043721	3x0,25	3	5
CF.INI-P3-M8-BWL2-7	MAT9043722	3x0,25	3	7
CF.INI-P3-M8-BWL2-10	MAT9043723	3x0,25	3	10
CF.INI-P3-M8-BWL2-15	MAT90410196	3x0,25	3	15

Harnessed sensor/actuator cables

Connection and Linking cables 360° shielded, M12 x 1: Bend radius, e-chain®: minimum 5 x d

Electrical information

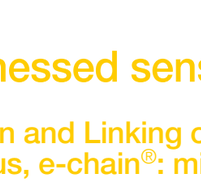
Number of poles	**5-pole (4-pole + PE)**
Ampacity	4 A
Rated voltage	60 V
Insulating resistance	≥ 10^9 Ω
Contact resistance	≤ 5 mΩ
Pollution degree	3/2
Ambient temperature	-35 °C up to +105 °C
Protection class	IP69K, in screwed state
Mechanical service life	max. 100 insertion cycles

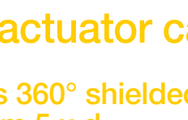
Technical data

Design	**Coupling**
Connector	Coupling, M12 x 1
Handle base	Plastic, PP, black
Union nut/screw	Metal, CuZn, nickel-plated
Contact base	Plastic, PP, black
Contacts	Metal, CuZn, gold-plated
Seal	Plastic, FPM (Viton)

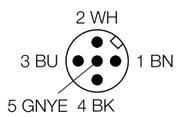
Harnessed with these connectors

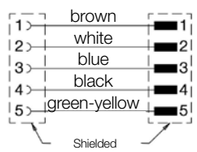
M12-BG



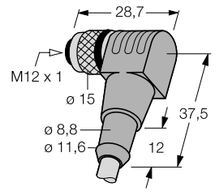


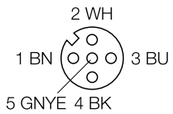
M12-SG

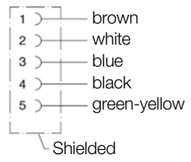




M12-BW







Connection cable M12

Type	igus® Part No.	Number of cores and conductor nominal cross section [mm²]	Number of poles	Cable length [m]
Connection cable 360° shielded, straight (Socket/open cable end)				
CF10.INI-P5-C-M12-BG-3	MAT90424072	(5x0,34)C	5	3
CF10.INI-P5-C-M12-BG-5	MAT90424073	(5x0,34)C	5	5
CF10.INI-P5-C-M12-BG-7	MAT90424074	(5x0,34)C	5	7
CF10.INI-P5-C-M12-BG-10	MAT90424075	(5x0,34)C	5	10
CF10.INI-P5-C-M12-BG-15	MAT90424076	(5x0,34)C	5	15
Connection cable 360° shielded, angled (Socket/open cable end)				
CF10.INI-P5-C-M12-BW-3	MAT90424077	(5x0,34)C	5	3
CF10.INI-P5-C-M12-BW-5	MAT90424078	(5x0,34)C	5	5
CF10.INI-P5-C-M12-BW-7	MAT90424079	(5x0,34)C	5	7
CF10.INI-P5-C-M12-BW-10	MAT90424080	(5x0,34)C	5	10
CF10.INI-P5-C-M12-BW-15	MAT90424081	(5x0,34)C	5	15

Linking cable M12

Linking cable 360° shielded, straight (Socket/Pin)				
CF10.INI-P5-C-M12-BG/M12-SG-2	MAT90424082 [1]	(5x0,34)C	5	2
CF10.INI-P5-C-M12-BG/M12-SG-5	MAT90424083 [1]	(5x0,34)C	5	5
CF10.INI-P5-C-M12-BG/M12-SG-10	MAT90424084 [1]	(5x0,34)C	5	10
Linking cable 360° shielded, angled (Socket/Pin)				
CF10.INI-P5-C-M12-BW/M12-SG-2	MAT90424085 [1]	(5x0,34)C	5	2
CF10.INI-P5-C-M12-BW/M12-SG-5	MAT90424086 [1]	(5x0,34)C	5	5
CF10.INI-P5-C-M12-BW/M12-SG-10	MAT90424087 [1]	(5x0,34)C	5	10

[1] Delivery time upon request

Harnessed sensor/actuator cables

Connection and Linking cables M12 x 1: Bend radius, e-chain®: minimum 4 x d

Electrical information

Number of poles	**4-pole**
Ampacity	4 A
Rated voltage	250 V
Insulating resistance	≥ 10^9 Ω
Contact resistance	≤ 5 mΩ
Pollution degree	3/2
Ambient temperature	-35 °C up to +105 °C
Protection class	IP69K, in screwed state
Mechanical service life	max. 100 insertion cycles

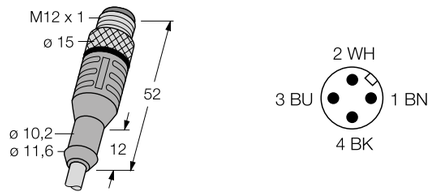
Technical data

	Coupling	**Connector**
Design		
Connector	Coupling, M12 x 1	Connector, M12x1
Handle base	Plastic, PP, black	Plastic, PP, black
Union nut/screw	Metal, CuZn, nickel-plated	Metal, CuZn, nickel-plated
Contact base	Plastic, TPU, black	Plastic, TPU, black
Contacts	Metal, CuZn, gold-plated	Metal, CuZn, gold-plated
Seal	Plastic, FPM (Viton)	

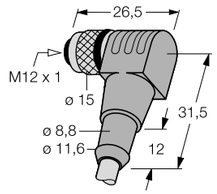
Harnessed with these connectors

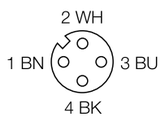
M12-BG

M12-SG



M12-BW





Connection cable M12

Type	igus® Part No.	Number of cores and conductor nominal cross section [mm²]	Number of poles	Cable length [m]
Connection cable, straight (Socket/open cable end)				
CF98.INI-P4-M12-BG-3	MAT90410235 [1]	4x0,34	4	3
CF98.INI-P4-M12-BG-5	MAT90410236 [1]	4x0,34	4	5
CF98.INI-P4-M12-BG-7	MAT90410237 [1]	4x0,34	4	7
CF98.INI-P4-M12-BG-10	MAT90410238 [1]	4x0,34	4	10
CF98.INI-P4-M12-BG-15	MAT90410239 [1]	4x0,34	4	15
Connection cable, angled (Socket/open cable end)				
CF98.INI-P4-M12-BW-3	MAT90410240 [1]	4x0,34	4	3
CF98.INI-P4-M12-BW-5	MAT90410241 [1]	4x0,34	4	5
CF98.INI-P4-M12-BW-7	MAT90410242 [1]	4x0,34	4	7
CF98.INI-P4-M12-BW-10	MAT90410243 [1]	4x0,34	4	10
CF98.INI-P4-M12-BW-15	MAT90410244 [1]	4x0,34	4	15

Linking cable M12

Linking cable, straight (Socket/Pin)				
CF98.INI-P4-M12-BG/M12-SG-2	MAT90410300 [1]	4x0,34	4	2
CF98.INI-P4-M12-BG/M12-SG-5	MAT90410301 [1]	4x0,34	4	5
CF98.INI-P4-M12-BG/M12-SG-10	MAT90410302 [1]	4x0,34	4	10
Linking cable, angled (Socket/Pin)				
CF98.INI-P4-M12-BW/M12-SG-2	MAT90410303 [1]	4x0,34	4	2
CF98.INI-P4-M12-BW/M12-SG-5	MAT90410304 [1]	4x0,34	4	5
CF98.INI-P4-M12-BW/M12-SG-10	MAT90410305 [1]	4x0,34	4	10

[1] Delivery time upon request

Harnessed sensor/actuator cables

Connection and linking cables M8 x 1:
Bend radius, e-chain®: minimum 4 x d

Electrical information

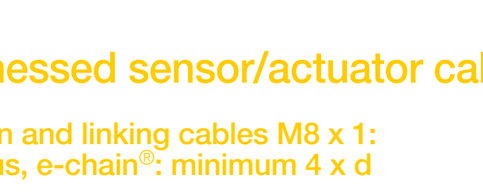
Number of poles	**3-pole**
Ampacity	4 A
Rated voltage	60 V
Insulating resistance	≥ 10^9 Ω
Contact resistance	≤ 5 mΩ
Pollution degree	3/2
Ambient temperature	-35 °C up to +105 °C
Protection class	IP69K, in screwed state
Mechanical service life	max. 100 insertion cycles

Technical data

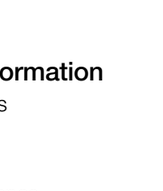
Design	**Coupling**	**Connector**
Connector	Coupling, M12 x 1	Connector, M12x1
Handle base	Plastic, PP, black	Plastic, PP, black
Union nut/screw	Metal, CuZn, nickel-plated	Metal, CuZn, nickel-plated
Contact base	Plastic, TPU, black	Plastic, TPU, black
Contacts	Metal, CuZn, gold-plated	Metal, CuZn, gold-plated
Seal	Plastic, FPM (Viton)	

Harnessed with these connectors

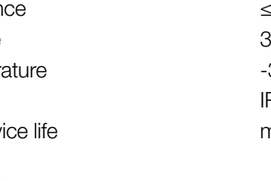
M8-BG

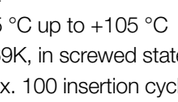


M8-SG



M8-BW





Connection cable M8

Type	igus® Part No.	Number of cores and conductor nominal cross section [mm²]	Number of poles	Cable length [m]
Connection cable, straight (Socket/open cable end)				
CF98.INI-P3-M8-BG-3	MAT90410245 [1]	3x0,25	3	3
CF98.INI-P3-M8-BG-5	MAT90410246 [1]	3x0,25	3	5
CF98.INI-P3-M8-BG-7	MAT90410247 [1]	3x0,25	3	7
CF98.INI-P3-M8-BG-10	MAT90410248 [1]	3x0,25	3	10
CF98.INI-P3-M8-BG-15	MAT90410249 [1]	3x0,25	3	15
Connection cable, angled (Socket/open cable end)				
CF98.INI-P3-M8-BW-3	MAT90410250 [1]	3x0,25	3	3
CF98.INI-P3-M8-BW-5	MAT90410251 [1]	3x0,25	3	5
CF98.INI-P3-M8-BW-7	MAT90410252 [1]	3x0,25	3	7
CF98.INI-P3-M8-BW-10	MAT90410253 [1]	3x0,25	3	10
CF98.INI-P3-M8-BW-15	MAT90410254 [1]	3x0,25	3	15

Linking cable M8

Linking cable, straight (Socket/Pin)				
CF98.INI-P3-M8-BG/M8-SG-2	MAT90410306 [1]	3x0,25	3	2
CF98.INI-P3-M8-BG/M8-SG-5	MAT90410307 [1]	3x0,25	3	5
CF98.INI-P3-M8-BG/M8-SG-10	MAT90410308	3x0,25	3	10
Linking cable, angled (Socket/Pin)				
CF98.INI-P3-M8-BW/M8-SG-2	MAT90410309 [1]	3x0,25	3	2
CF98.INI-P3-M8-BW/M8-SG-5	MAT90410310 [1]	3x0,25	3	5
CF98.INI-P3-M8-BW/M8-SG-10	MAT90410311 [1]	3x0,25	3	10

[1] Delivery time upon request

CF.INI | chainflex® sensor/actuator distribution box

To connect sensor/actuator distribution boxes

Connection cable M23
Bend radius, e-chain®: minimum 5 x d

- **Class 7.6.4.2**
- Oil resistant
- Hydrolysis-/microbe-resistant
- Temperature moved: -35 °C to +100 °C, minimum bend radius 5 x d
- Nominal voltage: 300/500 V
- Colour: steel blue, similar to RAL 5011

Connection cable M23

Part No.	Number of poles	Number of cores and conductor nominal cross section [mm²]	Outer diameter [mm]
Connection cable* Socket/open cable ende			
MAT90436630	16+3	(4x4x0.34+3x0.75)	11.0
Connection cable* Pin/open cable ende			
MAT90436631	16+3	(4x4x0.34+3x0.75)	11.0

Linking cable M23

Part No.	Number of poles	Number of cores and conductor nominal cross section [mm²]	Outer diameter [mm]
Linking cable, angled			
MAT90436628	16+3	(4x4x0.34+3x0.75)	11.0
Linking cable, straight			
MAT90436629	16+3	(4x4x0.34+3x0.75)	11.0

All cables available to your desired length.

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example images.
* igus® gladly pre-harnesses the cable according to your technical guidelines.
G = with green-yellow earth core **x** = without earth core

CF.INI | chainflex® sensor/actuator distribution box

To connect sensor/actuator distribution boxes

Connection cable M12
Bend radius, e-chain®: minimum 5 x d

Connection cable M12

Part No.	Number of poles	Number of cores and conductor nominal cross section [mm²]	Outer diameter [mm]
M12 8-pin socket/ M12 8-pin pin - A-coded			
MAT90478773	8	8 x 0.25	6.5
M12 8-pin socket - A-coded			
MAT90478774	8	8 x 0.25	6.5
M12 8-pin pin - A-coded			
MAT90478775	8	8 x 0.25	6.5
M12 12-pin socket/ M12 12-pin pin - A-coded			
MAT90478776	12	12 x 0.25	8.0
M12 12-pin socket - A-coded			
MAT90478777	12	12 x 0.25	8.0
M12 12-pin pin - A-coded			
MAT90478778	12	12 x 0.25	8.0

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example images.
G = with green-yellow earth core **x** = without earth core

Industry

chainflex® cables with industrial connectors

chainflex® readycable®

	Cable type		page
chainflex® cables with industrial connectors			
	Han 6B	Harnessed cable, Single locking lever at both ends, straight	492
	Han 6B	Harnessed cable, Double locking lever at both ends, angled	492
	Han 10B	Harnessed cable, Single locking lever at both ends, straight	494
	Han 10B	Harnessed cable, Single locking lever at both ends, angled	494
	Han 10B	Harnessed cable, Double locking lever at both ends, straight	494
	Han 10B	Harnessed cable, Double locking lever at both ends, angled	494
	Han 16B	Harnessed cable, Single locking lever at both ends, straight	496
	Han 16B	Harnessed cable, Single locking lever at both ends, angled	496
	Han 16B	Harnessed cable, Double locking lever at both ends, straight	496
	Han 16B	Harnessed cable, Double locking lever at both ends, angled	496
	Han 24B	Harnessed cable, Single locking lever at both ends, straight	498
	Han 24B	Harnessed cable, Single locking lever at both ends, angled	498
	Han 24B	Harnessed cable, Double locking lever at both ends, straight	498
	Han 24B	Harnessed cable, Double locking lever at both ends, angled	498

HARTING Connector sets ("Connectors" chapter ▶ page 688)		
	Connector sets with pin-inserts	XXX
	Connector sets Premium (pin + socket)	XXX

HARTING
Han 6B

Harnessed control cables | HARTING Han 6B

Harnessed control cables, Harting Han 6B, to your required length

Cable quality	igus® Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter [mm]	Copper index [kg/km]	Weight [kg/km]	Minimum bend radius [x d]	chainflex® cable	Insert 1 HARTING Part No.	Housing 1 HARTING Part No.	Insert 2 HARTING Part No.	Housing 2 HARTING Part No.
Han 6B Connector housing (pin) to Han 6B Connector housing (socket), Single locking lever at both ends, straight											
PVC	**MAT90489360**	7G1.5	12.5	104	243	12.5	CF880.15.07	09330062702	19300061440	09330062602	19300061440
PVC	**MAT90489361**	7G1.5	9.5	104	153	7.5	CF130.15.07.UL	09330062702	19300061440	09330062602	19300061440
PVC, oil-res.	**MAT90489362**	7G1.5	10.5	105	180	6.8	CF5.15.07	09330062702	19300061440	09330062602	19300061440
iguPUR	**MAT90489363**	7G1.5	12.5	104	225	12.5	CF890.15.07	09330062702	19300061440	09330062602	19300061440
PUR	**MAT90489364**	7G1.5	10.5	104	167	6.8	CF77.UL.15.07.D	09330062702	19300061440	09330062602	19300061440
PUR-ROBOT	**MAT90489367**	5G1.0+(2x1.0)C	10.5	81	138	10	CFROBOT9.001	09330062702	19300061440	09330062602	19300061440
TPE	**MAT90489365**	7G1.5	9.5	107	144	5	CF9.15.07	09330062702	19300061440	09330062602	19300061440
TPE	**MAT90489366**	7G1.5	11.5	104	199	5	CF9.UL.15.07	09330062702	19300061440	09330062602	19300061440
Han 6B Connector housing (pin) to Han 6B Connector housing (socket), Single locking lever at both ends, angled											
PVC	**MAT90489368**	7G1.5	12.5	104	243	12.5	CF880.15.07	09330062702	19300061541	09330062602	19300061541
PVC	**MAT90489369**	7G1.5	9.5	104	153	7.5	CF130.15.07.UL	09330062702	19300061540	09330062602	19300061540
PVC, oil-res.	**MAT90489370**	7G1.5	10.5	105	180	6.8	CF5.15.07	09330062702	19300061540	09330062602	19300061540
iguPUR	**MAT90489371**	7G1.5	12.5	104	225	12.5	CF890.15.07	09330062702	19300061541	09330062602	19300061541
PUR	**MAT90489372**	7G1.5	10.5	104	167	6.8	CF77.UL.15.07.D	09330062702	19300061540	09330062602	19300061540
PUR-ROBOT	**MAT90489375**	5G1.0+(2x1.0)C	10.5	81	138	10	CFROBOT9.001	09330062702	19300061540	09330062602	19300061540
TPE	**MAT90489373**	7G1.5	9.5	107	144	5	CF9.15.07	09330062702	19300061540	09330062602	19300061540
TPE	**MAT90489374**	7G1.5	11.5	104	199	5	CF9.UL.15.07	09330062702	19300061540	09330062602	19300061540

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

HARTING
Han 10B

Harnessed control cables | HARTING Han 10B

Harnessed control cables, Harting Han 10B, to your required length

Cable quality	igus® Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter [mm]	Copper index [kg/km]	Weight [kg/km]	Minimum bend radius [x d]	chainflex® cable	Insert 1 HARTING Part No.	Housing 1 HARTING Part No.	Insert 2 HARTING Part No.	Housing 2 HARTING Part No.
Han 10B Connector housing (pin) to Han 10B Connector housing (socket), Single locking lever at both ends, straight											
PVC	**MAT90489376**	12G1.5	14.5	178	360	12.5	CF880.15.12	09330102702	19300101441	09330102602	19300101441
PVC	**MAT90489377**	12G1.5	13.0	178	275	7.5	CF130.15.12.UL	09330102702	19300101441	09330102602	19300101441
PVC, oil-res.	**MAT90489378**	12G1.5	15.0	179	264	6.8	CF5.15.12	09330102702	19300101441	09330102602	19300101441
iguPUR	**MAT90489379**	12G1.5	14.5	178	340	12.5	CF890.15.12	09330102702	19300101441	09330102602	19300101441
PUR	**MAT90489380**	12G1.5	14.0	178	296	6.8	CF77.UL.15.12.D	09330102702	19300101441	09330102602	19300101441
PUR-ROBOT	**MAT90489383**	16G1.0+(2x1.0)C	16.0	194	311	10	CFROBOT9.004	09330102702	19300101441	09330102602	19300101441
TPE	**MAT90489381**	12G1.5	13.5	179	278	5	CF9.15.12	09330102702	19300101441	09330102602	19300101441
TPE	**MAT90489382**	12G1.5	16.0	178	372	5	CF9.UL.15.12	09330102702	19300101441	09330102602	19300101441
Han 10B Connector housing (pin) to Han 10B Connector housing (socket), Single locking lever at both ends, angled											
PVC	**MAT90489384**	12G1.5	14.5	178	360	12.5	CF880.15.12	09330102702	19300101541	09330102602	19300101541
PVC	**MAT90489385**	12G1.5	13.0	178	275	7.5	CF130.15.12.UL	09330102702	19300101541	09330102602	19300101541
PVC, oil-res.	**MAT90489386**	12G1.5	15.0	179	264	6.8	CF5.15.12	09330102702	19300101541	09330102602	19300101541
iguPUR	**MAT90489387**	12G1.5	14.5	178	340	12.5	CF890.15.12	09330102702	19300101541	09330102602	19300101541
PUR	**MAT90489388**	12G1.5	14.0	178	296	6.8	CF77.UL.15.12.D	09330102702	19300101541	09330102602	19300101541
PUR-ROBOT	**MAT90489391**	16G1.0+(2x1.0)C	16.0	194	311	10	CFROBOT9.004	09330102702	19300101541	09330102602	19300101541
TPE	**MAT90489389**	12G1.5	13.5	179	278	5	CF9.15.12	09330102702	19300101541	09330102602	19300101541
TPE	**MAT90489390**	12G1.5	16.0	178	372	5	CF9.UL.15.12	09330102702	19300101541	09330102602	19300101541
Han 10B Connector housing (pin) to Han 10B Connector housing (socket), Double locking lever at both ends, straight											
PVC	**MAT90489392**	12G1.5	14.5	178	360	12.5	CF880.15.12	09330102702	19300101421	09330102602	19300101421
PVC	**MAT90489393**	12G1.5	13.0	178	275	7.5	CF130.15.12.UL	09330102702	19300101421	09330102602	19300101421
PVC, oil-res.	**MAT90489394**	12G1.5	15.0	179	264	6.8	CF5.15.12	09330102702	19300101421	09330102602	19300101421
iguPUR	**MAT90489395**	12G1.5	14.5	178	340	12.5	CF890.15.12	09330102702	19300101421	09330102602	19300101421
PUR	**MAT90489396**	12G1.5	14.0	178	296	6.8	CF77.UL.15.12.D	09330102702	19300101421	09330102602	19300101421
PUR-ROBOT	**MAT90489399**	16G1.0+(2x1.0)C	16.0	194	311	10	CFROBOT9.004	09330102702	19300101421	09330102602	19300101421
TPE	**MAT90489397**	12G1.5	13.5	179	278	5	CF9.15.12	09330102702	19300101421	09330102602	19300101421
TPE	**MAT90489398**	12G1.5	16.0	178	372	5	CF9.UL.15.12	09330102702	19300101421	09330102602	19300101421
Han 10B Connector housing (pin) to Han 10B Connector housing (socket), Double locking lever at both ends, angled											
PVC	**MAT90489400**	12G1.5	14.5	178	360	12.5	CF880.15.12	09330102702	19300101521	09330102602	19300101521
PVC	**MAT90489401**	12G1.5	13.0	178	275	7.5	CF130.15.12.UL	09330102702	19300101521	09330102602	19300101521
PVC, oil-res.	**MAT90489402**	12G1.5	15.0	179	264	6.8	CF5.15.12	09330102702	19300101521	09330102602	19300101521
iguPUR	**MAT90489403**	12G1.5	14.5	178	340	12.5	CF890.15.12	09330102702	19300101521	09330102602	19300101521
PUR	**MAT90489404**	12G1.5	14.0	178	296	6.8	CF77.UL.15.12.D	09330102702	19300101521	09330102602	19300101521
PUR-ROBOT	**MAT90489407**	16G1.0+(2x1.0)C	16.0	194	311	10	CFROBOT9.004	09330102702	19300101521	09330102602	19300101521
TPE	**MAT90489405**	12G1.5	13.5	179	278	5	CF9.15.12	09330102702	19300101521	09330102602	19300101521
TPE	**MAT90489406**	12G1,5	16,0	178	372	5	CF9.UL.15.12	09330102702	19300101521	09330102602	19300101521

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

HARTING
Han 16B

Harnessed control cables | HARTING Han 16B

Harnessed control cables, Harting Han 16B, to your required length

Cable quality	igus® Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter [mm]	Copper index [kg/km]	Weight [kg/km]	Minimum bend radius [x d]	chainflex® cable	Insert 1 HARTING Part No.	Housing 1 HARTING Part No.	Insert 2 HARTING Part No.	Housing 2 HARTING Part No.
Han 16B Connector housing (pin) to Han 16B Connector housing (socket), Single locking lever at both ends, straight											
PVC	**MAT90489408**	18G1.5	17.5	267	530	12.5	CF880.15.18	09330162702	19300161442	09330162602	19300161442
PVC	**MAT90489409**	18G1.5	17.5	267	466	7.5	CF130.15.18.UL	09330162702	19300161442	09330162602	19300161442
PVC, oil-res.	**MAT90489410**	18G1.5	19.5	267	478	6.8	CF5.15.18	09330162702	19300161442	09330162602	19300161442
iguPUR	**MAT90489411**	18G1.5	17.5	267	502	12.5	CF890.15.18	09330162702	19300161442	09330162602	19300161442
PUR	**MAT90489412**	18G1.5	17.0	267	459	6.8	CF77.UL.15.18.D	09330162702	19300161442	09330162602	19300161442
PUR-ROBOT	**MAT90489415**	16G1.0+(2x1.0)C	16.0	194	311	10	CFROBOT9.004	09330162702	19300161442	09330162602	19300161442
TPE	**MAT90489413**	18G1.5	16.5	268	395	5	CF9.15.18	09330162702	19300161442	09330162602	19300161442
TPE	**MAT90489414**	18G1.5	19.0	267	535	5	CF9.UL.15.18	09330162702	19300161442	09330162602	19300161442
Han 16B Connector housing (pin) to Han 16B Connector housing (socket), Single locking lever at both ends, angled											
PVC	**MAT90489416**	18G1.5	17.5	267	530	12.5	CF880.15.18	09330162702	19300161542	09330162602	19300161542
PVC	**MAT90489417**	18G1.5	17.5	267	466	7.5	CF130.15.18.UL	09330162702	19300161542	09330162602	19300161542
PVC, oil-res.	**MAT90489418**	18G1.5	19.5	267	478	6.8	CF5.15.18	09330162702	19300161542	09330162602	19300161542
iguPUR	**MAT90489419**	18G1.5	17.5	267	502	12.5	CF890.15.18	09330162702	19300161542	09330162602	19300161542
PUR	**MAT90489420**	18G1.5	17.0	267	459	6.8	CF77.UL.15.18.D	09330162702	19300161542	09330162602	19300161542
PUR-ROBOT	**MAT90489423**	16G1.0+(2x1.0)C	16.0	194	311	10	CFROBOT9.004	09330162702	19300161542	09330162602	19300161542
TPE	**MAT90489421**	18G1.5	16.5	268	395	5	CF9.15.18	09330162702	19300161542	09330162602	19300161542
TPE	**MAT90489422**	18G1.5	19.0	267	535	5	CF9.UL.15.18	09330162702	19300161542	09330162602	19300161542
Han 16B Connector housing (pin) to Han 16B Connector housing (socket), Double locking lever at both ends, straight											
PVC	**MAT90489424**	18G1.5	17.5	267	530	12.5	CF880.15.18	09330162702	19300161422	09330162602	19300161422
PVC	**MAT90489425**	18G1.5	17.5	267	466	7.5	CF130.15.18.UL	09330162702	19300161422	09330162602	19300161422
PVC, oil-res.	**MAT90489426**	18G1.5	19.5	267	478	6.8	CF5.15.18	09330162702	19300161422	09330162602	19300161422
iguPUR	**MAT90489427**	18G1.5	17.5	267	502	12.5	CF890.15.18	09330162702	19300161422	09330162602	19300161422
PUR	**MAT90489428**	18G1.5	17.0	267	459	6.8	CF77.UL.15.18.D	09330162702	19300161422	09330162602	19300161422
PUR-ROBOT	**MAT90489431**	16G1.0+(2x1.0)C	16.0	194	311	10	CFROBOT9.004	09330162702	19300161422	09330162602	19300161422
TPE	**MAT90489429**	18G1.5	16.5	268	395	5	CF9.15.18	09330162702	19300161422	09330162602	19300161422
TPE	**MAT90489430**	18G1.5	19.0	267	535	5	CF9.UL.15.18	09330162702	19300161422	09330162602	19300161422
Han 16B Connector housing (pin) to Han 16B Connector housing (socket), Double locking lever at both ends, angled											
PVC	**MAT90489432**	18G1.5	17.5	267	530	12.5	CF880.15.18	09330162702	19300161522	09330162602	19300161522
PVC	**MAT90489433**	18G1.5	17.5	267	466	7.5	CF130.15.18.UL	09330162702	19300161522	09330162602	19300161522
PVC, oil-res.	**MAT90489434**	18G1.5	19.5	267	478	6.8	CF5.15.18	09330162702	19300161522	09330162602	19300161522
iguPUR	**MAT90489435**	18G1.5	17.5	267	502	12.5	CF890.15.18	09330162702	19300161522	09330162602	19300161522
PUR	**MAT90489436**	18G1.5	17.0	267	459	6.8	CF77.UL.15.18.D	09330162702	19300161522	09330162602	19300161522
PUR-ROBOT	**MAT90489439**	16G1.0+(2x1.0)C	16.0	194	311	10	CFROBOT9.004	09330162702	19300161522	09330162602	19300161522
TPE	**MAT90489437**	18G1.5	16.5	268	395	5	CF9.15.18	09330162702	19300161522	09330162602	19300161522
TPE	**MAT90489438**	18G1,5	19,0	267	535	5	CF9.UL.15.18	09330162702	19300161522	09330162602	19300161522

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

HARTING
Han 24B

Harnessed control cables | HARTING Han 24B

Harnessed control cables, Harting Han 24B, to your required length

Cable quality	igus® Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter [mm]	Copper index [kg/km]	Weight [kg/km]	Minimum bend radius [x d]	chainflex® cable	Insert 1 HARTING Part No.	Housing 1 HARTING Part No.	Insert 2 HARTING Part No.	Housing 2 HARTING Part No.
Han 24B Connector housing (pin) to Han 24B Connector housing (socket), Single locking lever at both ends, straight											
PVC	**MAT90489440**	25G1.5	21.0	371	743	12.5	CF880.15.25	09330242702	19300241442	09330242602	19300241442
PVC	**MAT90489441**	25G1.5	19.5	371	592	7.5	CF130.15.25.UL	09330242702	19300241442	09330242602	19300241442
PVC, oil-res.	**MAT90489442**	25G1.5	21.5	371	645	6.8	CF5.15.25	09330242702	19300241442	09330242602	19300241442
iguPUR	**MAT90489443**	25G1.5	21.0	371	708	12.5	CF890.15.25	09330242702	19300241442	09330242602	19300241442
PUR	**MAT90489444**	25G1.5	19.5	371	605	6.8	CF77.UL.15.25.D	09330242702	19300241442	09330242602	19300241442
PUR-ROBOT	**MAT90489447**	23G1.0+(2x1.0)C	19.5	268	444	10	CFROBOT9.005	09330242702	19300241442	09330242602	19300241442
TPE	**MAT90489445**	25G1.5	20.0	371	607	5	CF9.15.25	09330242702	19300241442	09330242602	19300241442
TPE	**MAT90489446**	25G1.5	22.0	371	731	5	CF9.UL.15.25	09330242702	19300241442	09330242602	19300241442
Han 24B Connector housing (pin) to Han 24B Connector housing (socket), Single locking lever at both ends, angled											
PVC	**MAT90489448**	25G1.5	21.0	371	743	12.5	CF880.15.25	09330242702	19300241542	09330242602	19300241542
PVC	**MAT90489449**	25G1.5	19.5	371	592	7.5	CF130.15.25.UL	09330242702	19300241542	09330242602	19300241542
PVC, oil-res.	**MAT90489450**	25G1.5	21.5	371	645	6.8	CF5.15.25	09330242702	19300241542	09330242602	19300241542
iguPUR	**MAT90489451**	25G1.5	21.0	371	708	12.5	CF890.15.25	09330242702	19300241542	09330242602	19300241542
PUR	**MAT90489452**	25G1.5	19.5	371	605	6.8	CF77.UL.15.25.D	09330242702	19300241542	09330242602	19300241542
PUR-ROBOT	**MAT90489455**	23G1.0+(2x1.0)C	19.5	268	444	10	CFROBOT9.005	09330242702	19300241542	09330242602	19300241542
TPE	**MAT90489453**	25G1.5	20.0	371	607	5	CF9.15.25	09330242702	19300241542	09330242602	19300241542
TPE	**MAT90489454**	25G1.5	22.0	371	731	5	CF9.UL.15.25	09330242702	19300241542	09330242602	19300241542
Han 24B Connector housing (pin) to Han 24B Connector housing (socket), Double locking lever at both ends, straight											
PVC	**MAT90489456**	25G1.5	21.0	371	743	12.5	CF880.15.25	09330242702	19300241422	09330242602	19300241422
PVC	**MAT90489457**	25G1.5	19.5	371	592	7.5	CF130.15.25.UL	09330242702	19300241422	09330242602	19300241422
PVC, oil-res.	**MAT90489458**	25G1.5	21.5	371	645	6.8	CF5.15.25	09330242702	19300241422	09330242602	19300241422
iguPUR	**MAT90489459**	25G1.5	21.0	371	708	12.5	CF890.15.25	09330242702	19300241422	09330242602	19300241422
PUR	**MAT90489460**	25G1.5	19.5	371	605	6.8	CF77.UL.15.25.D	09330242702	19300241422	09330242602	19300241422
PUR-ROBOT	**MAT90489463**	23G1.0+(2x1.0)C	19.5	268	444	10	CFROBOT9.005	09330242702	19300241422	09330242602	19300241422
TPE	**MAT90489461**	25G1.5	20.0	371	607	5	CF9.15.25	09330242702	19300241422	09330242602	19300241422
TPE	**MAT90489462**	25G1.5	22.0	371	731	5	CF9.UL.15.25	09330242702	19300241422	09330242602	19300241422
Han 24B Connector housing (pin) to Han 24B Connector housing (socket), Double locking lever at both ends, angled											
PVC	**MAT90489464**	25G1.5	21.0	371	743	12.5	CF880.15.25	09330242702	19300241522	09330242602	19300241522
PVC	**MAT90489465**	25G1.5	19.5	371	592	7.5	CF130.15.25.UL	09330242702	19300241522	09330242602	19300241522
PVC, oil-res.	**MAT90489466**	25G1.5	21.5	371	645	6.8	CF5.15.25	09330242702	19300241522	09330242602	19300241522
iguPUR	**MAT90489467**	25G1.5	21.0	371	708	12.5	CF890.15.25	09330242702	19300241522	09330242602	19300241522
PUR	**MAT90489468**	25G1.5	19.5	371	605	6.8	CF77.UL.15.25.D	09330242702	19300241522	09330242602	19300241522
PUR-ROBOT	**MAT90489471**	23G1.0+(2x1.0)C	19.5	268	444	10	CFROBOT9.005	09330242702	19300241522	09330242602	19300241522
TPE	**MAT90489469**	25G1.5	20.0	371	607	5	CF9.15.25	09330242702	19300241522	09330242602	19300241522
TPE	**MAT90489470**	25G1,5	22,0	371	731	5	CF9.UL.15.25	09330242702	19300241522	09330242602	19300241522

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example images.
G = with green-yellow earth core **x** = without earth core

Robot

Harnessed dress packs and cables for robots

chainflex® readycable®

	Cable type		Page	
Dress packs for robots				
	readychain® Robot	Harnessed dress packs for welding robots	503	
Harnessed cables for robots				
	readycable® Kuka	Harnessed cables for Kuka robots	504	
	readycable® Fanuc	Harnessed cables for Fanuc robots	507	
	readycable® ABB	Harnessed cables for ABB robots	509	New
Cables according to AIDA specifications				
	readycable® AIDA	Harnessed cables according to AIDA specifications	512	

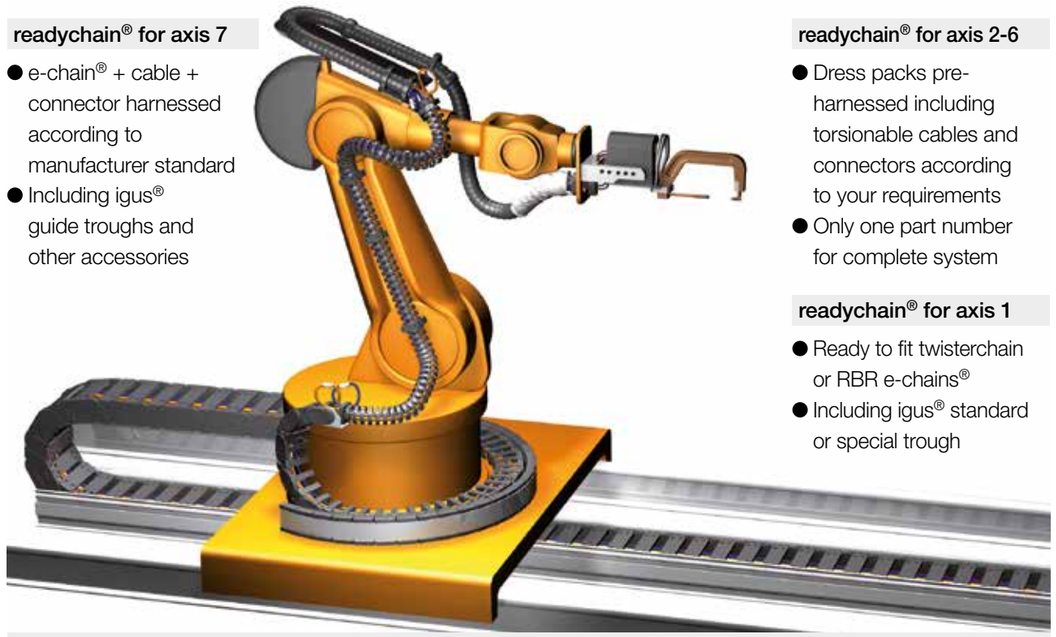
readychain® Robot

Ready-to-install harnessed e-chain systems® for robots

Assembled energy supply systems, connectors and cables from igus®. Everything from a single source. Directly from the manufacturer. Quick delivery to your robot, delivered in 1-10 days

readychain® for axis 7

- e-chain® + cable + connector harnessed according to manufacturer standard
- Including igus® guide troughs and other accessories



readychain® for axis 2-6

- Dress packs pre-harnessed including torsionable cables and connectors according to your requirements
- Only one part number for complete system

readychain® for axis 1

- Ready to fit twisterchain or RBR e-chains®
- Including igus® standard or special trough

Additional services for you

- Survey of existing systems on your robot by our sales engineers
- Optional system guarantee
- Worldwide readychain® specialists and 11 production sites for fast maintenance and spare part support

Moving energy made easy – even for robot applications

The modular igus® robot construction kit comprises over 5,000 different items. We can offer you the optimum, customised solution for almost any robot application. Our "Quick Robot" online tool can be used to create the ideal configuration in seconds – try it for yourself: www.igus.eu/quickrobot

All igus® robotic components are tested in our laboratory and have already been reliably used in real applications for many years. Our primary aim is to design a reliable energy supply system for your robot. We do not simply focus on mechanical protection but instead look at the entire application including the cables that have been specially developed for use on the robot. We will gladly find a solution for your application too – and look forward to receiving your enquiry.

triflex® readychain® dress packs

Product range dress packs for welding robots
Part No.

Welding axis 1-3

(1 m projection/side + 1 m e-chain® for each)

RRC.S.001

Consisting of:
- 1 m TRLF.85.135.0, including mounting brackets
- Welding cable (2x35 mm² + 1x25 mm²) including multi-contact TSB and TSS welding connector
- Control cable (18x0.75 mm² + 5x0.75 mm²) including rectangular connector on both ends
- Welding control cable (5x2x0.5 mm²) including rectangular connector on both ends
- 3x hoses - DN12 red, green, blue - including fixture at both ends

Welding axis 3-6

(1 m projection/side + 1 m e-chain® for each)

RRC.S.002

Consisting of:
- 1 m TRC.85.135.0 including protectors and mounting brackets
- Welding cable (2x35 mm² + 1x25 mm²) including multi-contact TSB and TSS welding connector
- Control cable (18x0.75 mm² + 5x0.75 mm²) including round connector and rectangular connector
- Welding control cable (5x2x0.5 mm²) including rectangular connector on both ends
- 3x hoses - DN12 red, green, blue - including fixture at both ends

Harnessed cables for robots
Kuka Quantec …

Harnessed cables for Kuka Quantec, to your required length

Cable type Part no.	chainflex® cable	Manufacturer description	Number of cores and conductor nominal cross section [mm²]	Ø [mm]
Motor cable (straight socket)				
MAT904105003	**CFSPECIAL.792.011**	X30/X30.1	(5x(2x6.0+2x2.5)+(2x(6x1.0)C)C	35.5
Motor cable (angled socket)				
MAT904105004	**CFSPECIAL.792.011**	X30/X30.1	(5x(2x6.0+2x2.5)+(2x(6x1.0)C)C	35.5
Data cable				
MAT904105005	**CFBUS.PUR.H01.060**	X31/X31.1	((4x0.38)C+4x1.5)C	11.5
Motor cable Single axis (axis 7)				
MAT904105006	**CF270.UL.25.15.02.01.D**	XM.../X...	(4G2.5+(2x1.5)C)C	14.0
MAT904105007	**CF270.UL.40.15.02.01.D**	XM.../X...	(4G4.0+(2x1.5)C)C	15.0
Motor cable Single axis (axis 7)				
MAT904105008	**CF270.UL.60.15.02.01.D**	XM.../X...	(4G6.0+(2x1.5)C)C	16.5
Control cable (axis 7)				
MAT904105009	**CF112.02.04.02**	Control cable single axis	(4x(2x0.25)C)C	11.0
Earth-core				
MAT904105010	**CFPE.160.01**	Connector plate/Robot	1G16	9.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessed cables for robots
Kuka Fortec …

Harnessed cables for Kuka Fortec, to your required length

Cable type Part no.	chainflex® cable	Manufacturer description	Number of cores and conductor nominal cross section [mm²]	Ø [mm]
Motor cable (angled socket)				
MAT904105011	**CFSPECIAL.792.014**	X30.1/X30.1.1	(2x(3x1.5)C+3x(3x10)+1G10)C	36.0
MAT904105012	**CFSPECIAL.792.014**	X30.4/X30.4.1	(2x(3x1.5)C+3x(3x10)+1G10)C	36.0
Data cable				
MAT904105005	**CFBUS.PUR.H01.060**	X31.1/X31.1	((4x0.38)C+4x1.5)C	11.5
Motor cable Single axis (axis 7)				
MAT904105006	**CF270.UL.25.15.02.01.D**	XM.../X...	(4G2.5+(2x1.5)C)C	14.0
MAT904105007	**CF270.UL.40.15.02.01.D**	XM.../X...	(4G4.0+(2x1.5)C)C	15.0
Motor cable Single axis (axis 7)				
MAT904105008	**CF270.UL.60.15.02.01.D**	XM.../X...	(4G6.0+(2x1.5)C)C	16.5
Control cable (axis 7)				
MAT904105013	**CF112.02.04.02**	Control cable single axis	(4x(2x0.25)C)C	11.0
Earth-core				
MAT904105010	**CFPE.160.01**	Connector plate/Robot	1G16	9.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessed cables for robots
Kuka Titan …

Harnessed cables for Kuka Titan, to your required length

Cable type Part no.	chainflex® cable	Manufacturer description	Number of cores and conductor nominal cross section [mm²]	Ø [mm]
Motor cable (angled socket)				
MAT904105011	CFSPECIAL.792.014	X30.1/X30.1.1	(2x(3x1.5)C+3x(3x10)+1G10)C	36.0
MAT904105014	CFSPECIAL.792.014	X30.2/X30.2.1	(2x(3x1.5)C+3x(3x10)+1G10)C	36.0
MAT904105015	CFSPECIAL.792.014	X30.3/X30.3.1	(2x(3x1.5)C+3x(3x10)+1G10)C	36.0
Data cable				
MAT904105005	CFBUS.PUR.H01.060	X31/X31.1	((4x0.38)C+4x1.5)C	11.5
Motor cable Single axis (axis 7)				
MAT904105006	CF270.UL.25.15.02.01.D	XM.../X...	(4G2.5+(2x1.5)C)C	14.0
MAT904105007	CF270.UL.40.15.02.01.D	XM.../X...	(4G4.0+(2x1.5)C)C	15.0
Motor cable Single axis (axis 7)				
MAT904105008	CF270.UL.60.15.02.01.D	XM.../X...	(4G6.0+(2x1.5)C)C	16.5
Control cable (axis 7)				
MAT904105013	CF112.02.04.02	Control cable single axis	(4x(2x0.25)C)C	11.0
Earth-core				
MAT904105010	CFPE.160.01	Connector plate/Robot	1G16	9.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessed cables for robots
Fanuc M-900iB …

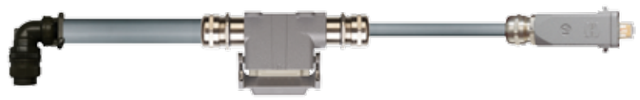
Harnessed cables for Fanuc M-900iB, to your required length

Cable type Part no.	chainflex® cable	Manufacturer description	Number of cores and conductor nominal cross section [mm²]	Ø [mm]
Motor cable (Extension cable axis 7)				
MAT904117141	CFSPECIAL.792.015	RM1.2	(7x(6x2.0))C	36.5
Motor cable (Extension cable axis 7)				
MAT904117142	CFSPECIAL.792.015	RM2.2	(7x(6x2.0))C	36.5
Pulse encoder (Extension cable axis 7)				
MAT904117143	CFSPECIAL.792.016	RP1.2	(5x(4x0.25)+10x(3x0.75))C	27.0
Earth-core (Extension cable axis 7)				
MAT904117144	CFPE.160.01	Earth-core	1G16	9.5
Earth-core (Extension cable axis 7)				
MAT904117145	CFPE.60.01	Earth-core	1G6.0	7.0
Motor cable Single axis (axis 7)				
MAT904117146	CF270.UL.60.15.02.01.D	RM7.2	(4G6.0+(2x1.5)C)C	16.5
Pulse encoder Single axis (axis 7)				
MAT904117147	CF240.PUR.03.03 + CF113.05.04.02	RP7.2	(3x0.34)C	6.0
			(4x(2x0.5))C	8.0

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessed cables for robots
Fanuc R-2000iC

Harnessed cables for Fanuc R-2000iC, to your required length

Cable type Part no.	chainflex® cable	Manufacturer description	Number of cores and conductor nominal cross section [mm²]	Ø [mm]
Motor cable (Extension cable axis 7)				
MAT904117141	**CFSPECIAL.792.015**	RM1.2	(7x(6x2.0))C	36.5
Pulse encoder (Extension cable axis 7)				
MAT904117143	**CFSPECIAL.792.016**	RP1.2	(5x(4x0.25)+10x(3x0.75))C	27.0
Earth-core (Extension cable axis 7)				
MAT904117144	**CFPE.160.01**	Earth-core	1G16	9.5
Earth-core (Extension cable axis 7)				
MAT904117145	**CFPE.60.01**	Earth-core	1G6.0	7.0
Motor cable Single axis (axis 7)				
MAT904117146	**CF270.UL.60.15.02.01.D**	RM7.2	(4G6.0+(2x1.5)C)C	16.5
Pulse encoder Single axis (axis 7)				
				
MAT904117147	**CF240.PUR.03.03 + CF113.05.04.02**	RP7.2	(3x0.34)C (4x(2x0.5))C	6.0 8.0

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessed cables for robots
ABB IRB 6620, IRB 6640, IRB 6650S, IRB 7600

New

Harnessed cables for ABB IRB 6620, IRB 6640, IRB 6650S, IRB 7600, to your required length

Cable type Part no.	chainflex® cable	Manufacturer description	Number of cores and conductor nominal cross section [mm²]	Ø [mm]
Power cable				
MAT904128539	**2xCFSPECIAL.792.012**	R1MP	(18G2.5)C	25.5
Signal cable				
MAT904128540	**CF211.PUR.02.06.02**	R1.SMB	(6x(2x0.25))C	9.0
Power cable				
MAT904128547	**CF270.UL.40.15.02.02.D**		(4G4.0+2x(2x1.5)C)C	17.0
Resolver cable				
MAT904128548	**CF211.PUR.02.03.02**		(3x(2x0.25))C	7.0
Earth-core (Extension cable axis 7)				
MAT904117144	**CFPE.160.01**	Earth-core	1G16	9,5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessed cables for robots
ABB IRB 6700

New

Harnessed cables for ABB IRB 6700, to your required length

Cable type Part no.	chainflex® cable	Manufacturer description	Number of cores and conductor nominal cross section [mm²]	Ø [mm]
Power cable				
MAT904128539	**2xCFSPECIAL.792.012**	R1MP	(18G2.5)C	25.5
Signal cable				
MAT904128541	**CF211.PUR.02.06.02**	R1.SMB	(6x(2x0.25))C	9.0
Power cable				
MAT904128547	**CF270.UL.40.15.02.02.D**		(4G4.0+2x(2x1.5)C)C	17.0
Resolver cable				
MAT904128548	**CF211.PUR.02.03.02**		(3x(2x0.25))C	7.0
Earth-core (Extension cable axis 7)				
MAT904117144	**CFPE.160.01**	Earth-core	1G16	9.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Harnessed cables for robots
ABB IRB 8700

New

Harnessed cables for ABB IRB 8700, to your required length

Cable type Part no.	chainflex® cable	Manufacturer description	Number of cores and conductor nominal cross section [mm²]	Ø [mm]
Power cable				
MAT904128542	**2xCFSPECIAL.792.012**	R1MP-A	(18G2.5)C	25.5
MAT904128543	**2xCFSPECIAL.792.012**	R1MP-B	(18G2.5)C	25.5
Signal cable				
MAT904128541	**CF211.PUR.02.06.02**	R1.SMB	(6x(2x0.25))C	9.0
Power cable				
MAT904128547	**CF270.UL.40.15.02.02.D**		(4G4.0+2x(2x1.5)C)C	17.0
Resolver cable				
MAT904128548	**CF211.PUR.02.03.02**		(3x(2x0.25))C	7.0
Earth-core (Extension cable axis 7)				
MAT904117144	**CFPE.160.01**	Earth-core	1G16	9.5

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Cables according to AIDA specifications*

* AIDA = **A**utomatisierungs**I**nitiative **D**eutscher **A**utomobilhersteller
(Automation Initiative of German Domestic Automobile manufacturers)

Technical information on cable quality:

CFBUS.PUR	**CFLK**	**CF77.UL.D**	**CF211.PUR**
from page 176	from page 196	from page 84	from page 134

Harnessed cables according to AIDA specifications, to your required length			
Part no.	chainflex® cable	Number of cores and conductor nominal cross section [mm²]	Ø [mm]
Extension cable axis 7			
AIDA Profinet - RJ-45			
MAT904117091	CFBUS.PUR.060	(4x0.38)C	7.0
AIDA Profinet FOC			
MAT904117092	CFLK.L1.02	1x980/1000 µm	7.0
AIDA Power			
MAT904117093	CF77.UL.25.05.D	5G2.5	10.5
AIDA Signal			
MAT904117094	CF211.PUR.05.05.02	(5x(2x0.5))C	10.5
Extension cable axis 1-6			
AIDA Profinet - RJ-45			
MAT904117095	CFROBOT8.060	(2x(2x0.34))C	8.5
AIDA Profinet FOC [1]			
upon request [1]	CFLK.L1.02	1x980/1000 µm	7.0
AIDA Power			
MAT904117097	CF77.UL.25.05.D	5G2.5	10.5
AIDA Signal			
MAT904117098	CFROBOT3.05.05.02	(5x(2x0.5))C	12.5

[1] **Offer made only after technical clarification of the application**
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Drive technology

... harnessed cables for Drive Technology ...

chainflex® readycable®

Selection according to manufacturer		Jacket	Page
Harnessed cables for Drive Technology			
	Allen Bradley/ Rockwell	Motor cables Servo cables Hybrid Servo cables Brake cables Feedback cables Adapter cables (Transition Cable)	PVC/PUR/TPE **522**
	B&R	Motor cables Servo cables EnDat cables Encoder cables Resolver cables Bus cables	PVC/PUR/TPE **523**
	Baumüller	Servo cables Resolver cables Pulse encoder cables	PVC/PUR/TPE **523**
	Beckhoff	Motor cables Servo cables Hybrid Servo cables Encoder cables Thermal protection cables Resolver cables Network cables EtherCat	PVC/PUR/TPE **526**
	Berger Lahr	Servo cables Resolver cables	PVC/PUR/TPE **526**
	Bosch Rexroth	Motor cables Servo cables Encoder cables	PVC/PUR/TPE **526**
	ELAU/ Schneider Electric	Servo cables Hybrid Servo cables Encoder cables	PVC/PUR/TPE **529**
	FAGOR	Path measuring cables	PUR/TPE **529**
	Fanuc	Motor cables Servo cables Brake cables Signal cables	PVC/PUR/TPE **529**
	Festo	Servo cables Control cables Encoder cables Data cables Bus cables	PVC/PUR/TPE **530**
	Heidenhain	Servo cables Adapter cables	PVC/PUR/TPE **530**

More harnessed cables for drive technology ▶ Page 516

To make the choice easier for you, we have classified all chainflex® cables according to the criteria "Basic requirements, oil resistance and travel distance". For detailed information see inside the front cover.

Selection according to manufacturer		Jacket	Page
Harnessed cables for Drive Technology			
Jetter	Motor cables Servo cables Resolver cables	PVC/PUR/TPE	**530**
Kolmorgen/ Danaher Motion	Motor cables Servo cables Signal cables	PVC/PUR/TPE	**531**
Lenze	Servo cables Fan cables Decoder cables Encoder cables Feedback cables Resolver cables	PVC/PUR/TPE	**533**
LinMot	Motor cables Servo cables Encoder cables	PVC/PUR	**534**
LTi DRiVES	Servo cables Encoder cables	PVC/PUR/TPE	**534**
Mitsubishi Electric	Motor cables Encoder cables	PVC/PUR	**534**
Nidec/Control Techniques	Motor cables Servo cables Encoder cables	PVC/PUR/TPE	**535**
NUM	Power cables Servo cables Fan cables Encoder cables	PVC/PUR/TPE	**535**
Omron	Motor cables Control cables Encoder cables	PVC/PUR/TPE	**536**
Parker	Motor cables Resolver cables	PVC/PUR/TPE	**537**
SEW	Motor cables Servo cables Hybrid Servo cables Control cables Encoder cables	PVC/PUR/TPE	**537**
Siemens	Power cables Servo cables Signal cables Signal cables DriveCliq	PVC/PUR/TPE	**538**
Stöber	Servo cables Encoder cables	PVC/PUR/TPE	**539**

More harnessed cables for drive technology ▶ Page 515

To make the choice easier for you, we have classified all chainflex® cables according to the criteria "Basic requirements, oil resistance and travel distance". For detailed information see inside the front cover.

... harnessed cables for Drive Technology ...
chainflex® readycable®

Harnessed cables for Drive Technology

Example: chainflex® PVC cables for the woodworking industry

Typical application areas – PVC

- For heavy duty applications
- Light oil influence
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Unsupported travel distances and up to 100 m for gliding applications
- Storage and retrieval units for high-bay warehouses, machining units/packaging machines, quick handling, indoor cranes, woodworking

Example: chainflex® PUR cables for the machine tools industry

Typical application areas – PUR

- For extremely heavy duty applications
- Almost unlimited resistance to oil
- Indoor and outdoor applications, UV-resistant
- Unsupported travel distances and up to 100 m for gliding applications
- Storage and retrieval units for high-bay warehouses, machining units/machine tools, quick handling, clean room, semiconductor insertion, outdoor cranes, low-temperature applications

Example: chainflex® TPE cables for outdoor use

Typical application areas – TPE

- For extremely heavy duty applications
- Almost unlimited resistance to oil, also with bio-oils
- Indoor and outdoor applications, UV-resistant
- Unsupported travel distances and up to 400 m and more for gliding applications
- Storage and retrieval units for high-bay warehouses, machining units/machine tools, quick handling, clean room, semiconductor insertion, ship to shore, outdoor cranes, low-temperature applications

Our product engineers will be happy to advise you in your choice of application-specific cables.

... harnessed cables for drive technology ...

chainflex® readycable®

Selection chart for igus® chainflex® cables (you can find the green number on the product pages of the respective manufacturers)

... harnessed cables for drive technology ...

chainflex® readycable®

readycable® Contents

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
chainflex® series	**CF31**	**CF35.UL**	**CF38**	**CF210.UL**	**CF21.UL**	**CF270.UL.D**	**CF27.D**	**CF211 Mess**	**CF111.D**	**CF113.D**	**CF11.D**	**CFBUS**	**CF240.PUR**	**CF211**	**CF113**	**CF11**
Class	5.5.2.1	6.6.4.1	7.6.4.1	4.2.2.1	5.5.2.1	4.2.3.1	6.5.3.1	4.2.2.1	4.2.3.1	6.5.3.1	6.6.4.1	6.6.4.1	4.4.3.1	5.5.2.1	6.5.3	6.6.4.1
Outer jacket	PVC	TPE	TPE	PVC	PVC	PUR	PUR	PVC	PUR	PUR	TPE	TPE	PUR	PVC	PUR	TPE
Shielded	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Minimum bend radius [x d]	7.5 x d	7.5 x d	7.5 x d	10 x d	7.5 x d	10 x d	7.5 x d	10 x d	10 x d	7.5 x d	7.5 x d	10 - 12.5 x d	10 x d	7.5 x d	10 x d	6.8 x d
Travel distance [m]	≤ 100	≤ 400	≤ 400	≤ 10	≤ 100	≤ 10	≤ 100	≤ 10	≤ 10	≤ 100	≤ 400	≤ 400	≤ 50	≤ 100	≤ 100	≤ 400
Oil-resistant	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Oil-/coolant-resistant						✓	✓		✓	✓			✓		✓	
Flame-retardant	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	
Halogen-free			✓			✓	✓		✓	✓	✓		✓		✓	✓
Notch-resistant						✓	✓		✓	✓			✓		✓	
Hydrolysis-/ microbe-resistant		✓	✓			✓	✓		✓	✓	✓	✓	✓		✓	✓
Temperature, from/to [°C]	-5/+70	-35/+90	-35/+90	+5/+70	+5/+70	-25/+80	-25/+80	+5/+70	-25/+80	-25/+80	-35/+90	-35/+70	-25/+80	+5/+70	-25/+80	-35/+100
Nominal voltage [V]	600/1000	600/1000	600/1000	600/1000	600/1000	600/1000	600/1000	50	50	50	50	50	300/300	300/300	300/300	300/300
Colour	Jet black	Signal black	Jet black	Pastel orange	Moss green	Pastel orange	Pastel orange	Yellow green	Yellow green	Yellow green	Yellow green	Red lilac	Silver grey	Silver grey	Anthracite grey	Steel blue
CE/CEI	CE CEI	CE CEI	CE	CE CEI	CE CEI	CE CEI	CE CEI	CE CEI	CE CEI	CE CEI	CE	CE CEI	CE CEI	CE CEI	CE CEI	CE
RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS
CleanRoom	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room
EAC/CTP	EAC CTP	EAC CTP	EAC	EAC CTP	EAC CTP	EAC CTP	EAC CTP	EAC CTP	EAC CTP	EAC CTP	EAC	EAC CTP	EAC CTP	EAC CTP	EAC CTP	EAC
UL/CSA + NFPA	c UL us NFPA	c UL us NFPA		c UL us NFPA	c UL us NFPA	c UL us NFPA	c UL us NFPA	c UL us NFPA	c UL us NFPA	c UL us NFPA		c UL us NFPA	c UL us NFPA	c UL us NFPA	c UL us NFPA	
Desina						DESINA	DESINA		DESINA	DESINA	DESINA	DESINA				
More Information																
▶ Catalogue page	296	316	322	252	260	266	274	216	226	232	238	174	120	124	-	132
www.igus.eu/	CF31	CF35UL	CF38	CF210UL	CF21UL	CF270ULD	CF27D	CF211M	CF111D	CF113D	CF11D	CFBUS	CF240PUR	CF211	CF113	CF11

... harnessed cables for drive technology ...

chainflex® readycable®

Selection chart for igus® chainflex® cables (you can find the green number on the product pages of the respective manufacturers)

... harnessed cables for drive technology ...

chainflex® readycable®

readycable® Contents

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
chainflex® series	**CF130.UL**	**CF140.UL**	**CF5**	**CF6**	**CF77.UL.D**	**CF78.UL**	**CF9**	**CF10**	**CF9.UL**	**CF211.PUR**	**CF220.UL.H**	**CF280.UL.H**	**CFBUS.PVC**	**CFBUS.PUR**	**CF240**	**CF29.D**
Class	4.4.1.1	4.4.1.1	5.5.2.1	5.5.2.1	5.5.3.1	5.5.3.1	7.6.4.2	7.6.4.1	6.6.4.2	5.5.3.1	4.2.2.1	4.2.3.1	4.3.2.1	4.3.3.1	4.4.2.1	7.6.4.1
Outer jacket	PVC	PVC	PVC	PVC	PUR	PUR	TPE	TPE	TPE	PUR	PVC	PUR	PVC	PUR	PVC	TPE
Shielded		✓		✓		✓		✓		✓	✓	✓	✓	✓	✓	✓
Minimum bend radius [x d]	7.5 x d	7.5 x d	6.8 x d	6.8 x d	6.8 x d	6.8 x d	5 x d	5 x d	5 x d	7.5 x d	10 x d	10 x d	12.5 x d	12.5 x d	10 x d	6.8 x d
Travel distance [m]	≤ 50	≤ 50	≤ 50	≤ 50	≤ 100	≤ 100	> 400	> 400	> 400	≤ 100	≤ 10	≤ 10	≤ 20	≤ 20	≤ 50	≤ 400
Oil-resistant			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Oil-/coolant-resistant					✓	✓				✓		✓		✓		✓
Flame-retardant	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	
Halogen-free					✓	✓	✓	✓				✓		✓		✓
Notch-resistant					✓	✓				✓		✓		✓		
Hydrolysis-/ microbe-resistant					✓	✓	✓	✓	✓	✓		✓		✓		✓
Temperature, from/to [°C]	+5/+70	+5/+70	+5/+70	+5/+70	-25/+80	-25/+80	-35/+100	-35/+100	-35/+100	-25/+80	+5/+70	-25/+80	+5/+70	-20/+70	-15/+70	-55/+100
Nominal voltage [V]	300/500	300/500	300/500	300/500	300/500	300/500	300/500	300/500	300/500	300/300	600/1000	600/1000	50	50	300/300	600/1000
Colour	Silver grey	Silver grey	Moss green	Moss green	Window grey	Window grey	Steel blue	Steel blue	Slate grey	Silver grey	Pastel orange	Pastel orange	Red lilac	Red lilac	Silver grey	Pastel orange
CE/CEI	CE CEI	CE CEI	CE CEI	CE CEI	CE CEI	CE CEI	CE	CE	CE CEI	CE CEI	CE CEI	CE CEI	CE CEI	CE CEI	CE CEI	CE
RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS	RoHS
CleanRoom	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room	Clean-Room
EAC/CTP	EAC CTP	EAC CTP	EAC CTP	EAC CTP	EAC CTP	EAC CTP	EAC	EAC	EAC CTP	EAC CTP	EAC CTP	EAC CTP	EAC CTP	EAC CTP	EAC CTP	EAC
UL/CSA + NFPA	cULus NFPA	cULus NFPA	cULus NFPA	cULus NFPA	cULus NFPA	cULus NFPA			cULus NFPA	cULus NFPA	cULus NFPA	cULus NFPA	cULus NFPA	cULus NFPA	cULus NFPA	
Desina					DESINA							DESINA		DESINA		DESINA
More Information																
▶ Catalogue page	50	54	58	62	78	82	90	94	98	128	256	270	162	170	116	278
www.igus.eu/	CF130	CF140	CF5	CF6	CF77	CF78	CF9	CF10	CF9UL	CF211PUR	CF220ULH	CF280ULH	CFBUSPVC	CFBUSPUR	CF240	CF29.D

Allen-Bradley/Rockwell ...

Selection by manufacturer part number

Basic cables	Jacket	Page	Extension cables	Jacket	Page
Allen-Bradley/Rockwell					
Motor cables					
2090-CPWM4DF-08AFxx	PVC/PUR/TPE	544			
2090-CPWM4DF-10AFxx	PVC/PUR/TPE	544			
2090-CPWM4DF-12AFxx	PVC/PUR/TPE	544			
2090-CPWM4DF-14AFxx	PVC/PUR/TPE	544			
2090-CPWM4DF-16AFxx	PVC/PUR/TPE	544			
2090-CPWM7DF-02AF	PVC/PUR	544			
2090-CPWM7DF-04AF	PVC/PUR/TPE	544			
2090-CPWM7DF-06AF	PVC/PUR/TPE	545			
2090-CPWM7DF-08AFxx	PVC/PUR/TPE	545			
2090-CPWM7DF-10AFxx	PVC/PUR/TPE	545			
2090-CPWM7DF-12AFxx	PVC/PUR/TPE	545			
2090-CPWM7DF-14AFxx	PVC/PUR/TPE	545			
2090-CPWM7DF-16AFxx	PVC/PUR/TPE	545			
2090-XX_PMP-10SXX	PVC/PUR/TPE	545			
2090-XX_PMP-14SXX	PVC/PUR/TPE	546			
2090-XX_PMP-16SXX	PVC/PUR/TPE	546			
Servo cables					
2090-CPBM4DF-08AFxx	PVC/PUR	546			
2090-CPBM4DF-10AFxx	PVC/PUR	546			
2090-CPBM4DF-12AFxx	PVC/PUR	547			
2090-CPBM4DF-14AFxx	PVC/PUR	547			
2090-CPBM4DF-16AFxx	PVC/PUR	547			
2090-CPBM4DF-14AFxx	PVC/PUR	547			
2090-CPBM4DF-16AFxx	PVC/PUR	547			
2090-CPBM7DF-02AF	PUR	547			
2090-CPBM7DF-04AF	PUR	547			
2090-CPBM7DF-06AF	PUR	547			
2090-CPBM7DF-08AFxx	PVC/PUR	547	2090-CPBM7E7-08AFxx	PVC/PUR	548
2090-CPBM7DF-10AFxx	PVC/PUR	547	2090-CPBM7E7-10AFxx	PVC/PUR	548
2090-CPBM7DF-12AFxx	PVC/PUR	547	2090-CPBM7E7-12AFxx	PVC/PUR	549
2090-CPBM7DF-14AFxx	PVC/PUR	548	2090-CPBM7E7-14AFxx	PVC/PUR	549
2090-CPBM7DF-16AFxx	PVC/PUR	548	2090-CPBM7E7-16AFxx	PVC/PUR	549
2090-XX_PMF-10SXX	PVC/PUR	548			
2090-XX_PMF-14SXX	PVC/PUR	548			
2090-XX_PMF-16SXX	PVC/PUR	548			
Hybrid servo cables					
2090-CSBM1DE-10AF	PUR	549			
2090-CSBM1DE-14AF	PVC/PUR	549			
2090-CSBM1DE-18AF	PVC/PUR	549			
2090-CSBM1DF-10AF	PUR	549			
2090-CSBM1DF-14AF	PVC/PUR	549			
2090-CSBM1DF-18AF	PVC/PUR	549			
2090-CSBM1DG-10AF	PUR	550			
2090-CSBM1DG-14AF	PVC/PUR	550			
2090-CSBM1DG-18AF	PVC/PUR	550			
2090-CSWM1DE-10AF	PUR	550			
2090-CSWM1DE-14AF	PVC/PUR	550			
2090-CSWM1DE-18AF	PVC/PUR	550			
2090-CSWM1DF-10AF	PUR	550			
2090-CSWM1DF-14AF	PVC/PUR	550			
2090-CSWM1DF-18AF	PVC/PUR	550			

readycable®
Contents

Selection by manufacturer part number

Basic cables	Jacket	Page	Extension cables	Jacket	Page
2090-CSWM1DG-10AF	PUR	550			
2090-CSWM1DG-14AF	PVC/PUR	551			
2090-CSWM1DG-18AF	PVC/PUR	551			
Brake cables					
2090-UX_BMP-18SXX	PVC/PUR	551			
Feedback cables					
2090-CFBM4DF-CDAFxx	PUR/TPE	552			
2090-CFBM4DF-CEAFxx	PUR/TPE	552			
2090-CFBM7DD-CDAFxx	PUR	552			
2090-CFBM7DD-CEAFxx	PUR	552			
2090-CFBM7DF-CDAFxx	PUR/TPE	552	2090-CFBM7E7-CDAFxx	PUR/TPE	552
2090-CFBM7DF-CEAFxx	PUR/TPE	552	2090-CFBM7E7-CEAFxx	PUR/TPE	553
2090-XX_FMF-Sxx	PUR/TPE	552			
2090-XX_FMP-Sxx	PUR/TPE	552			
Adapter cables (Transition Cable)					
2090-CFBM4E2-CATR	PUR	553			
2090-CPWM4E2-14TR	PUR	553			
B&R					
Motor cables					
8BCMxxxx.1011A-0	PUR/PVC	554			
8BCMxxxx.1034C-0	PUR/PVC	554			
8BCMxxxx.1312A-0	PUR/PVC	554			
8BCMxxxx.1322A-0	PUR/PVC	554			
8CMxxx.12-0	PUR/PVC	554			
8BCMxxxx.1322A-0	PUR/PVC	554			
8CMxxx.12-0	PUR/PVC	554			
Servo cables					
8BCMxxxx.1111A-0	PUR/PVC	554			
8BCMxxxx.1311A-0	PUR/PVC	555			
8CMxxx.12-1	PUR/PVC	555			
8CMxxx.12-3	PUR/PVC	555			
8CMxxx.12-5	PUR/PVC	555			
8ECHxxxx.1111A-0	PUR	555			
EnDat cables					
8BCExxxx.1111A-0	PVC/PUR/TPE	556			
8CExxx.12-1	PVC/PUR/TPE	556			
Encoder cables					
8BCFxxxx.1221B-0	PVC/PUR	556			
8BCRxxxx.1121A-0	PVC/PUR/TPE	556			
8BCSxxxx.1111A-0	PVC/PUR/TPE	556			
Resolver cables					
8BCRxxx.1111A-0	PVC/PUR/TPE	556			
8CRxxx.12-1	PVC/PUR/TPE	556			
Bus cables					
X20CA3E61.xxxx	PVC/PUR/TPE	557			
X67CA0E41.xxxx	PVC/PUR/TPE	557			
Baumüller					
Servo cables					
324781 (5 m)	PVC/PUR	558	324781 (5 m) (ext.)	PVC/PUR	559
324782 (7 m)	PVC/PUR	558	324781 (5 m) (ext.)	PVC/PUR	559
324783 (10 m)	PVC/PUR	558	324781 (5 m) (ext.)	PVC/PUR	559
324784 (15 m)	PVC/PUR	558	324781 (5 m) (ext.)	PVC/PUR	559
324785 (20 m)	PVC/PUR	558	324781 (5 m) (ext.)	PVC/PUR	559

... Baumüller ...

Selection by manufacturer part number

Basic cables	Jacket	Page	Extension cables	Jacket	Page
Baumüller					
Servo cables					
324786 (25 m)	PVC/PUR	558	324781 (5 m) (ext.)	PVC/PUR	559
324787 (30 m)	PVC/PUR	558	324781 (5 m) (ext.)	PVC/PUR	559
324788 (35 m)	PVC/PUR	558	324781 (5 m) (ext.)	PVC/PUR	559
324789 (40 m)	PVC/PUR	558	324781 (5 m) (ext.)	PVC/PUR	559
324790 (50 m)	PVC/PUR	559	324781 (5 m) (ext.)	PVC/PUR	559
324791 (75 m)	PVC/PUR	559	324781 (5 m) (ext.)	PVC/PUR	559
324792 (100 m)	PVC/PUR	559	324781 (5 m) (ext.)	PVC/PUR	559
326577 (5 m)	PVC/PUR	561	326577 (5 m) (ext.)	PVC/PUR	562
326578 (7 m)	PVC/PUR	561	326577 (5 m) (ext.)	PVC/PUR	562
326579 (10 m)	PVC/PUR	561	326577 (5 m) (ext.)	PVC/PUR	562
326580 (15 m)	PVC/PUR	561	326577 (5 m) (ext.)	PVC/PUR	562
326581 (20 m)	PVC/PUR	561	326577 (5 m) (ext.)	PVC/PUR	562
326582 (25 m)	PVC/PUR	561	326577 (5 m) (ext.)	PVC/PUR	562
326583 (30 m)	PVC/PUR	561	326577 (5 m) (ext.)	PVC/PUR	562
326584 (35 m)	PVC/PUR	562	326577 (5 m) (ext.)	PVC/PUR	562
326585 (40 m)	PVC/PUR	562	326577 (5 m) (ext.)	PVC/PUR	562
326586 (50 m)	PVC/PUR	562	326577 (5 m) (ext.)	PVC/PUR	562
326587 (75 m)	PVC/PUR	562	326577 (5 m) (ext.)	PVC/PUR	562
326588 (100 m)	PVC/PUR	562	326577 (5 m) (ext.)	PVC/PUR	562
326589 (5 m)	PVC/PUR	562	326589 (5 m) (ext.)	PVC/PUR	563
326591 (7 m)	PVC/PUR	562	326589 (5 m) (ext.)	PVC/PUR	563
326592 (10 m)	PVC/PUR	563	326589 (5 m) (ext.)	PVC/PUR	563
326593 (15 m)	PVC/PUR	563	326589 (5 m) (ext.)	PVC/PUR	563
326594 (20 m)	PVC/PUR	563	326589 (5 m) (ext.)	PVC/PUR	563
326596 (25 m)	PVC/PUR	563	326589 (5 m) (ext.)	PVC/PUR	563
326597 (30 m)	PVC/PUR	563	326589 (5 m) (ext.)	PVC/PUR	563
326598 (35 m)	PVC/PUR	563	326589 (5 m) (ext.)	PVC/PUR	563
326599 (40 m)	PVC/PUR	563	326589 (5 m) (ext.)	PVC/PUR	563
326600 (5 m)	PVC/PUR	564	326600 (5 m) (ext.)	PVC/PUR	565
326601 (7 m)	PVC/PUR	564	326600 (5 m) (ext.)	PVC/PUR	565
326602 (10 m)	PVC/PUR	564	326600 (5 m) (ext.)	PVC/PUR	565
326603 (15 m)	PVC/PUR	564	326600 (5 m) (ext.)	PVC/PUR	565
326604 (20 m)	PVC/PUR	564	326600 (5 m) (ext.)	PVC/PUR	565
326605 (25 m)	PVC/PUR	564	326600 (5 m) (ext.)	PVC/PUR	565
326606 (30 m)	PVC/PUR	564	326600 (5 m) (ext.)	PVC/PUR	565
326607 (35 m)	PVC/PUR	564	326600 (5 m) (ext.)	PVC/PUR	565
326608 (40 m)	PVC/PUR	564	326600 (5 m) (ext.)	PVC/PUR	565
326609 (5 m)	PVC/PUR	565	326609 (5 m) (ext.)	PVC/PUR	566
326610 (7 m)	PVC/PUR	565	326609 (5 m) (ext.)	PVC/PUR	566
326611 (10 m)	PVC/PUR	565	326609 (5 m) (ext.)	PVC/PUR	566
326612 (15 m)	PVC/PUR	565	326609 (5 m) (ext.)	PVC/PUR	566
326613 (20 m)	PVC/PUR	565	326609 (5 m) (ext.)	PVC/PUR	566
326614 (25 m)	PVC/PUR	565	326609 (5 m) (ext.)	PVC/PUR	566
326615 (30 m)	PVC/PUR	565	326609 (5 m) (ext.)	PVC/PUR	566
326616 (35 m)	PVC/PUR	565	326609 (5 m) (ext.)	PVC/PUR	566
326617 (40 m)	PVC/PUR	565	326609 (5 m) (ext.)	PVC/PUR	566
380967 (7 m)	PVC/PUR	559	414840 (5 m) (ext.)	PVC/PUR	561
413410 (10 m)	PVC/PUR	559	414840 (5 m) (ext.)	PVC/PUR	561
414840 (5 m)	PVC/PUR	559	414840 (5 m) (ext.)	PVC/PUR	561

Basic cables	Jacket	Page	Extension cables	Jacket	Page
414841 (15 m)	PVC/PUR	559	414840 (5 m) (ext.)	PVC/PUR	561
414842 (20 m)	PVC/PUR	560	414840 (5 m) (ext.)	PVC/PUR	561
414843 (25 m)	PVC/PUR	560	414840 (5 m) (ext.)	PVC/PUR	561
414846 (30 m)	PVC/PUR	560	414840 (5 m) (ext.)	PVC/PUR	561
414848 (35 m)	PVC/PUR	560	414840 (5 m) (ext.)	PVC/PUR	561
414849 (40 m)	PVC/PUR	560	414840 (5 m) (ext.)	PVC/PUR	561
414850 (50 m)	PVC/PUR	560	414840 (5 m) (ext.)	PVC/PUR	561
414851 (75 m)	PVC/PUR	560	414840 (5 m) (ext.)	PVC/PUR	561
414852 (100 m)	PVC/PUR	560	414840 (5 m) (ext.)	PVC/PUR	561
Resolver cables					
239540 (5 m)	PVC/PUR/TPE	566	246658 (3 m) (ext.)	PVC/PUR/TPE	568
239541 (8 m)	PVC/PUR/TPE	566	246658 (3 m) (ext.)	PVC/PUR/TPE	568
239542 (10 m)	PVC/PUR/TPE	566	246658 (3 m) (ext.)	PVC/PUR/TPE	568
239543 (15 m)	PVC/PUR/TPE	566	246658 (3 m) (ext.)	PVC/PUR/TPE	568
239544 (20 m)	PUR	566	246658 (3 m) (ext.)	PUR	568
239544 (20m)	PVC/TPE	566	246658 (3 m) (ext.)	PVC/TPE	568
239545 (25 m)	PVC/PUR/TPE	566	246658 (3 m) (ext.)	PVC/PUR/TPE	568
239546 (30 m)	PVC/PUR/TPE	566	246658 (3 m) (ext.)	PVC/PUR/TPE	568
239547 (35 m)	PVC/PUR/TPE	567	246658 (3 m) (ext.)	PVC/PUR/TPE	568
240520 (40 m)	PVC/PUR/TPE	567	246658 (3 m) (ext.)	PVC/PUR/TPE	568
240521 (45 m)	PVC/PUR/TPE	567	246658 (3 m) (ext.)	PVC/PUR/TPE	568
240522 (50 m)	PVC/PUR/TPE	567	246658 (3 m) (ext.)	PVC/PUR/TPE	568
242954 (6 m)	PVC/PUR/TPE	567	246658 (3 m) (ext.)	PVC/PUR/TPE	568
243379 (4 m)	PVC/PUR/TPE	567	246658 (3 m) (ext.)	PVC/PUR/TPE	568
244033 (55 m)	PVC/PUR/TPE	567	246658 (3 m) (ext.)	PVC/PUR/TPE	568
245484 (60 m)	PVC/PUR/TPE	567	246658 (3 m) (ext.)	PVC/PUR/TPE	568
246658 (3 m)	PVC/PUR/TPE	567	246658 (3 m) (ext.)	PVC/PUR/TPE	568
Pulse encoder cables					
198962 (3 m)	PVC/PUR/TPE	568	198962 (3m) (ext.)	PVC/PUR/TPE	569
198963 (5 m)	PVC/PUR/TPE	568	198962 (3m) (ext.)	PVC/PUR/TPE	569
198964 (8 m)	PVC/PUR/TPE	568	198962 (3m) (ext.)	PVC/PUR/TPE	569
198965 (10 m)	PVC/PUR/TPE	568	198962 (3m) (ext.)	PVC/PUR/TPE	569
198966 (15 m)	PVC/PUR/TPE	568	198962 (3m) (ext.)	PVC/PUR/TPE	569
198967 (20 m)	PVC/PUR/TPE	568	198962 (3m) (ext.)	PVC/PUR/TPE	569
198968 (25 m)	PVC/PUR/TPE	568	198962 (3m) (ext.)	PVC/PUR/TPE	569
198969 (30 m)	PVC/PUR/TPE	569	198962 (3m) (ext.)	PVC/PUR/TPE	569
208829 (40 m)	PVC/PUR/TPE	569	198962 (3m) (ext.)	PVC/PUR/TPE	569
225360 (35 m)	PVC/PUR/TPE	569	198962 (3m) (ext.)	PVC/PUR/TPE	569
369864 (3 m)	PVC/PUR/TPE	569	393889 (2 m) (ext.)	PVC/PUR/TPE	571
371494 (20 m)	PVC/PUR/TPE	569	393889 (2 m) (ext.)	PVC/PUR/TPE	571
378022 (50 m)	PVC/PUR/TPE	569	393889 (2 m) (ext.)	PVC/PUR/TPE	571
380358 (35 m)	PVC/PUR/TPE	569	393889 (2 m) (ext.)	PVC/PUR/TPE	571
382005 (45 m)	PVC/PUR/TPE	570	393889 (2 m) (ext.)	PVC/PUR/TPE	571
389807 (7 m)	PVC/PUR/TPE	570	393889 (2 m) (ext.)	PVC/PUR/TPE	571
389808 (9 m)	PVC/TPE	570	393889 (2 m) (ext.)	PVC/TPE	571
389808 (9m)	PUR	570	393889 (2 m) (ext.)	PUR	571
391216 (40 m)	PVC/PUR/TPE	570	393889 (2 m) (ext.)	PVC/PUR/TPE	571
393889 (2 m)	PVC/TPE	570	393889 (2 m) (ext.)	PVC/TPE	571
393889 (2m)	PUR	570	393889 (2 m) (ext.)	PUR	571
393890 (8 m)	PVC/PUR/TPE	570	393889 (2 m) (ext.)	PVC/PUR/TPE	571
393891 (10 m)	PVC/PUR/TPE	570	393889 (2 m) (ext.)	PVC/PUR/TPE	571

... Baumüller ... Beckhoff ... Berger Lahr ... Bosch Rexroth ...

Selection by manufacturer part number

Basic cables	Jacket	Page	Extension cables	Jacket	Page
Baumüller					
Pulse encoder cables					
393892 (15 m)	PVC/PUR/TPE	570	393889 (2 m) (ext.)	PVC/PUR/TPE	571
393893 (25 m)	PVC/PUR/TPE	570	393889 (2 m) (ext.)	PVC/PUR/TPE	571
393894 (30 m)	PVC/PUR/TPE	571	393889 (2 m) (ext.)	PVC/PUR/TPE	571
394014 (5 m)	PVC/PUR/TPE	571	393889 (2 m) (ext.)	PVC/PUR/TPE	571
Beckhoff					
Motor cables					
ZK4500-8015-xxx	PUR	572			
ZK4500-8024-xxx	PVC/PUR	572			
ZK4501-8024-xxx	PVC/PUR	572			
ZK4530-8110-xxxx	PVC/PUR	572			
Servo cables					
ZK4000-2111-xxxx	PVC/PUR	572			
ZK4000-2112-xxxx	PVC/PUR	572			
ZK4000-2711-xxxx	PVC/PUR	573			
ZK4500-0023-xxxx	PVC/PUR	573	ZK4501-0023-xxxx	PVC/PUR	573
ZK4500-0024-xxxx	PVC/PUR	573	ZK4501-0024-xxxx	PVC/PUR	573
Hybrid servo cables					
ZK4500-8022-xxxx	PVC/PUR	573	ZK4501-8022-xxxx	PVC/PUR	574
ZK4500-8023-xxxx	PVC/PUR	574	ZK4501-8023-xxxx	PVC/PUR	574
ZK4704-0421-xxxx	PVC/PUR	574			
Encoder cables					
ZK4000-2410-xxxx	PVC/PUR	574			
ZK4000-2610-xxxx	PVC/PUR	574			
ZK4510-0020-xxxx	PVC/PUR	574	ZK4511-0020-xxxx	PVC/PUR	575
ZK4520-0020-xxxx	PVC/PUR	574			
Thermal protection cables					
ZK4000-2510-xxxx	PVC/TPE	575			
Resolver cables					
ZK4000-2210-xxxx	PVC/PUR/TPE	575			
ZK4530-0010-xxxx	PVC/PUR/TPE	575	ZK4531-0020-xxxx	PVC/PUR/TPE	575
ZK4530-8010-xxxx	PVC/PUR/TPE	575			
Network cables EtherCAT					
ZK1090-9191-xxxx	PUR/TPE	576			
Berger Lahr					
Servo cables					
VW3M5101Rxxx	PUR/PVC	577			
VW3M5102Rxxx	PUR/PVC	577			
Resolver cables					
VW3M8101Rxxx	PVC/PUR/TPE	577			
Bosch Rexroth					
Power cables					
IKG0331	PUR/PVC	578	IKG0332	PUR/PVC	585
IKG4008	PUR/PVC	578	IKG4006	PUR/PVC	585
IKG4009	PUR/PVC	578	IKG4006	PUR/PVC	585
IKG4017	PUR/PVC	578	IKG4006	PUR/PVC	585
IKG4018	PUR/PVC	578			
IKG4020	PUR/PVC	578			
IKG4055	PUR/PVC	578			
IKG4060	PUR/PVC	578			

Basic cables	Jacket	Page	Extension cables	Jacket	Page
IKG4067	PUR/PVC	578	IKG4061	PUR/PVC	585
IKG4070	PUR/PVC	578	IKG4061	PUR/PVC	585
IKG4072	PUR/PVC	578	IKG4074	PUR/PVC	585
IKG4087	PUR/PVC	579	IKG4081	PUR/PVC	585
IKG4090	PUR/PVC	579	IKG4081	PUR/PVC	585
IKG4100	PUR/PVC	579			
IKG4103	PUR/PVC	579			
IKG4107	PUR/PVC	579			
IKG4118	PUR/PVC	579			
IKG4119	PUR/PVC	579			
IKG4147	PUR/PVC	579	IKG4141	PUR/PVC	586
IKG4150	PUR/PVC	579	IKG4141	PUR/PVC	586
IKG4155	PUR/PVC	579	IKG4141	PUR/PVC	586
IKG4164	PUR/PVC	580			
IKG4167	PUR/PVC	580	IKG4161	PUR/PVC	586
IKG4172	PUR/PVC	580			
IKG4173	PUR/PVC	580			
IKG4186	PUR/PVC	580			
IKG4200	PUR/PVC	580			
IKG4204	PUR/PVC	580			
IKL0001	PUR/PVC	580	IKL0003	PUR/PVC	586
IKL0002	PVC/PUR	580			
IKL0006	PUR/PVC	580			
IKL0011	PUR/PVC	580			
IKL0012	PVC/PUR	580			
IKL0021	PUR/PVC	581	IKL0023	PUR/PVC	586
IKL0022	PVC/PUR	581			
IKL0041	PUR/PVC	581			
IKL0042	PUR/PVC	581			
IKL0061	PUR/PVC	581			
IKL0081	PUR/PVC	581	IKL0089	PUR/PVC	586
IKL0101	PUR/PVC	581			
IKL0121	PUR/PVC	581			
IKL0161	PUR/PVC	581	IKL0168	PUR/PVC	586
RKL0006	PVC/PUR	582			
RKL0013	PVC/PUR	582			
RKL0014	PVC/PUR	582			
RKL0019	PVC/PUR	582			
RKL0053	PVC/PUR	582			
RKL0054	PVC/PUR	582			
RKL4300	PUR/PVC	582	RKL4304	PUR/PVC	586
RKL4301	PUR/PVC	582	RKL4304	PUR/PVC	586
RKL4302	PUR/PVC	582	RKL4305	PUR/PVC	586
RKL4303	PUR/PVC	582	RKL4305	PUR/PVC	586
RKL4306	PUR/PVC	582	RKL4311	PUR/PVC	586
RKL4307	PUR/PVC	583	RKL4311	PUR/PVC	586
RKL4308	PUR/PVC	583			
RKL4309	PUR/PVC	583			
RKL4310	PUR/PVC	583	RKL4312	PUR/PVC	587
RKL4313	PUR/PVC	583	RKL4316	PUR/PVC	587
RKL4314	PUR/PVC	583	RKL4316	PUR/PVC	587

... Bosch Rexroth ...

Selection by manufacturer part number

Basic cables	Jacket	Page	Extension cables	Jacket	Page
Bosch Rexroth					
Power cables					
RKL4315	PUR/PVC	583	RKL4316	PUR/PVC	587
RKL4317	PUR/PVC	583	RKL4319	PUR/PVC	587
RKL4318	PUR/PVC	583	RKL4319	PUR/PVC	587
RKL4320	PUR/PVC	584			
RKL4321	PUR/PVC	584	RKL4336	PUR/PVC	587
RKL4322	PUR/PVC	584			
RKL4323	PUR/PVC	584	RKL4338	PUR/PVC	587
RKL4324	PUR/PVC	584			
RKL4325	PUR/PVC	584			
RKL4326	PUR/PVC	584	RKL4336	PUR/PVC	587
RKL4327	PUR/PVC	584			
RKL4328	PUR/PVC	584	RKL4338	PUR/PVC	587
RKL4329	PUR/PVC	584			
RKL4330	PUR/PVC	585	RKL4340	PUR/PVC	587
RKL4331	PUR/PVC	585	RKL4341	PUR/PVC	587
RKL4332	PVC/PUR	585			
RKL4343	PVC/PUR	585			
RKL4344	PVC/PUR	585			
Servo cables					
RL2-002CBB-NN-xxx,x	PVC/PUR	588	RL2-500CBB-NN-xxx,x	PVC/PUR	588
RL2-022CBB-NN-xxx,x	PVC/PUR	588	RL2-521CBB-NN-xxx,x	PVC/PUR	588
RL2-045EBB-NN-xxx,x	PVC/PUR	588	RL2-542EBB-NN-xxx,x	PVC/PUR	588
Encoder cables					
IKS0230	PVC/PUR/TPE	588	IKS0232	PVC/PUR/TPE	590
IKS0251	TPE	588	IKS0255	TPE	591
IKS0253	TPE	588	IKS0255	TPE	591
IKS0259	TPE	588			
IKS0262	TPE	588			
IKS0301	PVC/PUR/TPE	588	IKS0303	PVC/PUR/TPE	591
IKS0315	PVC/PUR/TPE	589			
IKS0374	PVC/PUR/TPE	589			
IKS4001	PVC/PUR/TPE	589			
IKS4002	PVC/PUR/TPE	589			
IKS4020	PVC/PUR/TPE	589	IKS4376	PVC/PUR/TPE	591
IKS4038	PVC/PUR/TPE	589			
IKS4041	PVC/PUR/TPE	589			
IKS4042	PVC/PUR/TPE	589	IKS4151	PVC/PUR/TPE	591
IKS4066	PVC/PUR/TPE	589			
IKS4103	PVC/PUR/TPE	588	IKS4322	PVC/PUR/TPE	591
IKS4142	PVC/PUR/TPE	589	IKS4376	PVC/PUR/TPE	591
IKS4314	PVC/PUR/TPE	589			
IKS4374	PVC/PUR/TPE	589			
IKS4375	PVC/PUR/TPE	590			
IKS4384	PVC/PUR/TPE	590			
IKS4389	PVC/PUR/TPE	590			
RG2-002AAB-NN-xxx,x	PVC/TPE	590	RG2-510AAB-NN-xxx,x	PVC/TPE	591
RKG0014	PVC/PUR/TPE	590			
RKG0020	PVC/PUR/TPE	590			
RKG0026	PVC/PUR/TPE	590			

Selection by manufacturer part number

readycable®
Contents

Basic cables	Jacket	Page	Extension cables	Jacket	Page
RKG0028	PVC/PUR/TPE	590			
RKG4200	PVC/PUR/TPE	590	RKG4201	PVC/PUR/TPE	591
Elau/Schneider Electric					
Servo cables					
E-MO-067	PVC/PUR	592			
E-MO-087	PVC/PUR	592			
E-MO-092	PVC/PUR	592			
E-MO-111 SH-Motor 1.5	PVC/PUR	592			
E-MO-113 SH-Motor 2.5	PVC/PUR	592			
Hybrid servo cables					
E-MO-109, VW3E1109Rxxx	PUR	592			
E-MO-117, VW3E1117Rxxx	PUR	592			
E-MO-118, VW3E1118Rxxx	PUR	592			
E-MO-119, VW3E1119Rxxx	PUR	592			
E-MO-120, VW3E1120Rxxx	PUR	592			
E-MO-121, VW3E1121Rxxx	PUR	592			
E-MO-124, VW3E1124Rxxx	PUR	593			
E-MO-125, VW3E1125Rxxx	PUR	593			
E-MO-126, VW3E1126Rxxx	PUR	593			
E-MO-127, VW3E1127Rxxx	PUR	593			
Encoder cables					
E-FB-060	PVC/TPE	593			
E-FB-071	PVC/PUR/TPE	593			
E-FB-080	PVC/PUR/TPE	593			
Fanuc					
Power cables					
LX660-8077-T261	PVC/PUR/TPE	596			
LX660-8077-T264	PVC/PUR/TPE	596			
LX660-8077-T265	PVC/PUR/TPE	596			
LX660-8077-T266	PVC/PUR/TPE	596			
LX660-8077-T267	PVC/PUR/TPE	596			
LX660-8077-T270	PVC/PUR/TPE	596			
LX660-8077-T271	PVC/PUR/TPE	597			
LX660-8077-T272	PVC/PUR/TPE	597			
LX660-8077-T273	PVC/PUR/TPE	597			
LX660-8077-T291	PVC/PUR/TPE	597			
LX660-8077-T292	PVC/PUR/TPE	597			
LX660-8077-T293	PVC/PUR/TPE	597			
LX660-8077-T296	PVC/PUR/TPE	597			
LX660-8077-T298	PVC/PUR/TPE	598			
LX660-8077-T300	PVC/PUR/TPE	598			
Servo cables					
LX660-8077-T259	PUR	598			
LX660-8077-T274	PUR	598			
LX660-8077-T416		598			
LX660-8077-T451	PUR	598			
LX660-8077-T470	PUR	598			
LX660-8077-T471	PUR	598			
Brake cables					
LX660-8077-T311	PUR	598			

... Fanuc ... Festo ... Heidenhain ... Jetter ...

Selection by manufacturer part number

Basic cables	Jacket	Page	Extension cables	Jacket	Page
Fanuc					
Signal cables					
LX660-2018-T015	PVC	599			
LX660-4077-T296	PUR/TPE	599			
LX660-4077-T297	PUR/TPE	599			
LX660-4077-T302	PUR/TPE	599			
LX660-4077-T303	PUR/TPE	599			
LX660-4077-T310	TPE	599			
LX660-4077-T319	PUR/TPE	599			
Festo					
Servo cables					
NEBM-M16G8-E-xxx-Q7-LE8	PUR	600			
NEBM-M23G6-E-xxx-N-LE7	PVC/PUR	600			
NEBM-M23G8-E-xxx-N-LE8	PVC/PUR	600			
NEBM-M40G8-E-xxx-N-LE7	PVC/PUR	600			
Control cables					
KPWR-MC-1-SUB-9HC-xxx	PVC/PUR	600			
Encoder cables					
NEBM-M23G12-E-xxx-N-S1G9	PVC/PUR/TPE	600			
Data cables					
KDI-MC-M8-SUB-9-xxx	PVC/PUR	600			
KES-MC-1-SUB-9-xxx	PVC/PUR	601			
NEBM-M12G8-E-xxx-N-S1G15	PVC/PUR/TPE	601			
NEBM-M12G8-E-xxx-S1G9	PVC/PUR/TPE	601			
NEBM-M12W8-E-xxx-N-S1G15	PVC/PUR/TPE	601			
NEBM-S1G15-E-xxx-LE6	PVC/PUR/TPE	601			
NEBM-S1G9-E-xxx-LE6	PVC/PUR	601			
Bus cables					
FBA-CO-SUB-9-M12	PVC/PUR/TPE	602			
Heidenhain					
Adapter cables					
298 401-xx	PVC/PUR/TPE	603			
333 164-xx	PVC/PUR/TPE	603			
368 330-xx	PVC/PUR	603			
524 599-xx	PVC/PUR/TPE	603			
534 855-xx	PVC/PUR/TPE	604			
605 424-xx	PVC/PUR/TPE	604			
Jetter					
Motor cables					
Kabel Nr. 201	PVC/PUR/TPE	608			
Kabel Nr. 203	PVC/PUR/TPE	608			
Kabel Nr. 26.1	PVC/PUR/TPE	608			
Servo cables					
Kabel Nr. 202	PVC/PUR	608			
Kabel Nr. 204	PVC/PUR	608			
Kabel Nr. 24.1	PVC/PUR	608			
Resolver cables					
Kabel Nr. 23	PVC/PUR/TPE	608			
Kabel Nr. 423	PVC/PUR/TPE	608			
Kabel Nr. 523	PVC/PUR/TPE	609			
Kabel Nr. 723	PVC/PUR/TPE	609			

... Kollmorgen/Danaher Motion ...

Selection by manufacturer part number

Basic cables	Jacket	Page	Extension cables	Jacket	Page
Kollmorgen/Danaher Motion					
Motor cables					
102575 (5 m)	PVC/TPE	611			
102576 (10 m)	PVC/TPE	611			
102806 (15 m)	PVC/TPE	611			
102807 (20 m)	PVC/TPE	611			
102808 (25 m)	PVC/TPE	611			
107473 (5 m)	PVC/TPE	611			
107474 (10 m)	PVC/TPE	611			
107475 (15 m)	PVC/TPE	611			
107476 (20 m)	PVC/TPE	612			
107477 (25 m)	PVC/TPE	612			
107485 (5 m)	PVC/TPE	612			
107486 (10 m)	PVC/TPE	612			
107487 (15 m)	PVC/TPE	612			
107488 (20 m)	PVC/TPE	612			
107489 (25 m)	PVC/TPE	612			
200456 (5 m)	PVC/TPE	612			
200457 (10 m)	PVC/TPE	612			
200458 (15 m)	PVC/TPE	612			
200459 (20 m)	PVC/TPE	613			
200460 (25 m)	PVC/TPE	613			
200468 (5 m)	PVC/TPE	613			
200469 (10 m)	PVC/TPE	613			
200470 (15 m)	PVC/TPE	613			
200471 (20 m)	PVC/TPE	613			
200472 (25 m)	PVC/TPE	613			
200618 (5 m)	PVC/TPE	613			
200619 (10 m)	PVC/TPE	613			
200620 (15 m)	PVC/TPE	613			
200621 (20 m)	PVC/TPE	613			
200622 (25 m)	PVC/TPE	613			
88959 (5 m)	TPE	610			
88960 (10 m)	TPE	610			
88962 (15 m)	TPE	610			
88964 (20 m)	TPE	610			
88966 (25 m)	TPE	610			
89918 (5 m)	PVC/TPE	610			
89952 (10 m)	PVC/TPE	610			
89953 (15 m)	PVC/TPE	610			
89954 (20 m)	PVC/TPE	610			
89956 (25 m)	PVC/TPE	610			
89959 (5 m)	PVC/TPE	610			
89960 (10 m)	PVC/TPE	610			
89962 (15 m)	PVC/TPE	610			
89964 (20 m)	PVC/TPE	610			
89966 (25 m)	PVC/TPE	610			
90083 (5 m)	PVC/TPE	610			
90084 (10 m)	PVC/TPE	610			
90085 (15 m)	PVC/TPE	610			
90086 (20 m)	PVC/TPE	611			

... Kollmorgen/Danaher Motion ...

Selection by manufacturer part number

Basic cables	Jacket	Page	Extension cables	Jacket	Page
Kollmorgen/Danaher Motion					
Motor cables					
90087 (25 m)	PVC/TPE	611			
Servo cables					
102579 (5 m)	PVC/PUR	615			
102580 (10 m)	PVC/PUR	615			
102809 (15 m)	PVC/PUR	616			
102810 (20 m)	PVC/PUR	616			
102811 (25 m)	PVC/PUR	616			
107479 (5 m)	PVC/PUR	616			
107480 (10 m)	PVC/PUR	616			
107481 (15 m)	PVC/PUR	616			
107482 (20 m)	PVC/PUR	616			
107483 (25 m)	PVC/PUR	616			
107491 (5 m)	PVC/PUR	617			
107492 (10 m)	PVC/PUR	617			
107493 (15 m)	PVC/PUR	617			
107494 (20 m)	PVC/PUR	617			
107495 (25 m)	PVC/PUR	617			
200462 (5 m)	PVC/PUR	617			
200463 (10 m)	PVC/PUR	617			
200464 (15 m)	PVC/PUR	617			
200465 (20 m)	PVC/PUR	618			
200466 (25 m)	PVC/PUR	618			
200474 (5 m)	PVC/PUR	618			
200475 (10 m)	PVC/PUR	618			
200476 (15 m)	PVC/PUR	618			
200477 (20 m)	PVC/PUR	618			
200478 (25 m)	PVC/PUR	618			
200623 (5 m)	PVC/PUR	618			
200624 (10 m)	PVC/PUR	618			
200625 (15 m)	PVC/PUR	619			
200626 (20 m)	PVC/PUR	619			
200627 (25 m)	PVC/PUR	619			
89957 (5 m)	PVC/PUR	614			
89961 (10 m)	PVC/PUR	614			
89963 (15 m)	PVC/PUR	614			
89965 (20 m)	PVC/PUR	614			
89967 (25 m)	PVC/PUR	614			
89968 (5 m)	PVC/PUR	614			
89969 (25 m)	PVC/PUR	614			
89970 (10 m)	PVC/PUR	614			
89971 (15 m)	PVC/PUR	614			
89972 (20 m)	PVC/PUR	615			
90088 (5 m)	PVC/PUR	615			
90089 (10 m)	PVC/PUR	615			
90090 (15 m)	PVC/PUR	615			
90091 (20 m)	PVC/PUR	615			
90092 (25 m)	PVC/PUR	615			
Signal cables					
107915 (5 m)	PVC/TPE	619			

Basic cables	Jacket	Page	Extension cables	Jacket	Page
107916 (10 m)	PVC/TPE	619			
107917 (15 m)	PVC/TPE	619			
107918 (20 m)	PVC/TPE	619			
107919 (25 m)	PVC/TPE	619			
84972 (5 m)	PVC/PUR/TPE	619			
84973 (10 m)	PVC/PUR/TPE	619			
84974 (15 m)	PVC/PUR/TPE	619			
84975 (20 m)	PVC/PUR/TPE	619			
85034 (5 m)	PVC/PUR/TPE	620			
85035 (10 m)	PVC/PUR/TPE	620			
85036 (15 m)	PVC/PUR/TPE	620			
85037 (20 m)	PVC/PUR/TPE	620			
85039 (5 m)	PVC/PUR/TPE	620			
85040 (10 m)	PVC/PUR/TPE	620			
85041 (15 m)	PVC/PUR/TPE	621			
85042 (20 m)	PVC/PUR/TPE	621			
87655 (25 m)	PVC/PUR/TPE	620			
90287 (5 m)	PVC/TPE	620			
91019 (10 m)	PVC/TPE	620			
91807 (20 m)	PVC/TPE	620			
91811 (15 m)	PVC/TPE	620			
92205 (25 m)	PVC/TPE	620			
Lenze					
Servo cables					
EWLMxxxGMS-015C	PUR/PVC	622	EWLMxxxZM-015C	PUR/PVC	624
EWLMxxxGMS-025	PUR/PVC	622	EWLMxxxZM-025	PUR/PVC	624
EWLMxxxGMS-040I	PVC/PUR	622			
EYP0010AxxxxA00P01	PUR/PVC	622	EYP0010VxxxxM01P01	PUR/PVC	624
EYP0010AxxxxM01A00	PUR/PVC	622	EYP0010VxxxxM01P01	PUR/PVC	624
EYP0011AxxxxA00P01	PUR/PVC	622	EYP0011VxxxxM01P01	PUR/PVC	624
EYP0011AxxxxM01A00	PUR/PVC	622	EYP0011VxxxxM01P01	PUR/PVC	624
EYP0012AxxxxA00P01	PUR/PVC	622	EYP0012VxxxxM01P01	PUR/PVC	624
EYP0012AxxxxA00P02	PUR/PVC	622	EYP0012VxxxxM02P02	PUR/PVC	624
EYP0012AxxxxM01A00	PUR/PVC	623	EYP0012VxxxxM01P01	PUR/PVC	624
EYP0012AxxxxM02A00	PUR/PVC	623	EYP0012VxxxxM02P02	PUR/PVC	624
EYP0013AxxxxA00P02	PUR/PVC	623	EYP0013VxxxxM02P02	PUR/PVC	624
EYP0013AxxxxM02A00	PUR/PVC	623	EYP0013VxxxxM02P02	PUR/PVC	624
EYP0014AxxxxA00P03	PUR/PVC	623	EYP0014VxxxxM03P03	PUR/PVC	624
EYP0014AxxxxM03A00	PUR/PVC	623	EYP0014VxxxxM03P03	PUR/PVC	624
EYP0015AxxxxA00P03	PUR/PVC	623	EYP0015VxxxxM03P03	PUR/PVC	624
EYP0015AxxxxM03A00	PUR/PVC	623	EYP0015VxxxxM03P03	PUR/PVC	624
EYP0016AxxxxA00P03	PUR/PVC	623	EYP0016VxxxxM03P03	PUR/PVC	624
EYP0016AxxxxM03A00	PUR/PVC	623	EYP0016VxxxxM03P03	PUR/PVC	624
Fan cables					
EWLLxxxGMS	TPE/PVC	625	EWLLxxxZM	TPE/PVC	625
EYL002AxxxxL01A00	TPE/PVC	625	EYL002VxxxxL01J01	TPE/PVC	625
EYL002AxxxxL02A00	TPE/PVC	625	EYL002VxxxxL02J02	TPE/PVC	625
Encoder cables					
EWLExxxGM-T	PVC/PUR/TPE	626	EWLExxxZMST	PVC/PUR/TPE	626
EWLExxxGX-T	PVC/PUR/TPE	626			

... Lenze ... LinMot ... LTi DRiVES ... Mitsubishi Electric ...

Selection by manufacturer part number

Basic cables	Jacket	Page	Extension cables	Jacket	Page
Lenze					
Feedback cables					
EYF0017AxxxxA00W02	PUR	627			
EYF0018AxxxxA00S03	PVC/PUR/TPE	627			
EYF0018AxxxxA00W02	TPE/PVC	627			
EYF0018AxxxxF02S03	TPE/PVC	627			
EYF0018AxxxxF02W02	PVC/PUR/TPE	627			
EYF0019AxxxxF02S03	PUR	627	EYF0019VxxxxA00G02	PUR	629
EYF0020AxxxxA00S04	PVC/PUR/TPE	627			
EYF0020AxxxxA00S05	PVC/PUR/TPE	628			
EYF0020AxxxxF01S04	PVC/PUR/TPE	628			
EYF0020AxxxxF01S05	PVC/PUR/TPE	628			
EYF0021AxxxxA00S03	PUR/TPE	628			
EYF0021AxxxxF03S03	PUR/TPE	628			
EYF0021AxxxxF07S03	PUR/TPE	628			
Resolver cables					
EWLRxxxGM-T	PVC/PUR/TPE	629	EWLRxxxZMST	PVC/PUR/TPE	629
EWLRxxxGX-T	PVC/PUR/TPE	629			
LinMot					
Motor cables					
P10-70x…-D01/D02-MS	PVC/PUR	630			
Servo cables					
P10-70x…-D03-MS	PVC/PUR	630			
Encoder cables					
P10-70x…D0x-SMC20		630			
P10-70x…D0x-SME20		630			
LTi DRiVES					
Servo cables					
KM3-KSxxx	PUR/PVC	631	KM3-KSxxx (ext.)	PUR/PVC	631
KM3-KSxxx-24A	PUR/PVC	631	KM3-KSxxx-24A (ext.)	PUR/PVC	631
KM3-KSxxx-63A	PUR/PVC	631	KM3-KSxxx-63A (ext.)	PUR/PVC	631
Encoder cables					
KGH2-KSxxx	TPE/PVC	631	KGH2-KSxxx (ext.)	TPE/PVC	632
KGH3-KSxxx	TPE/PVC	631	KGH3-KSxxx (ext.)	TPE/PVC	632
KGS2-KSxxx	PUR/TPE	632	KGS2-KSxxx (ext.)	PUR/TPE	632
KRY2-CDF-KSxxx	PVC/PUR/TPE	632	KRY2-CDF-KSxxx (ext.)	PVC/PUR/TPE	632
KRY2-KSxxx	PVC/PUR/TPE	632	KRY2-KSxxx (ext.)	PVC/PUR/TPE	632
Mitsubishi Electric					
Motor cables					
MR-BKS1CBL-xxx-A1-H	PVC/PUR	633			
MR-BKS1CBL-xxx-A2-H	PVC/PUR	633			
MR-PWS1CBL-xxx-A1-H	PVC/PUR	633			
MR-PWS1CBL-xxx-A2-H	PVC/PUR	633			
PCS015N-xxx-0-0C4	PVC/PUR	633			
PCS025N-xxx-0-0C5	PVC/PUR	633			
PCS025N-xxx-C4	PVC/PUR	633			
PCS040N-xxx-0-0C4	PVC/PUR/TPE	633			
PCS040N-xxx-0-0C5	PVC/PUR/TPE	633			
PCS060N-xxx-0-0C5	PVC/PUR/TPE	633			
Encoder cables					
MR-J3ENCBL-xxx-A1-H	PVC/PUR	633			

Basic cables	Jacket	Page	Extension cables	Jacket	Page
MR-J3ENCBL-xxx-A2-H	PVC/PUR	634			
MR-J3ENSCBL-xxx-H	PVC/PUR	634			
Nidec/Control Techniques					
Motor cables					
PS B A A A XXX	TPE/PVC	635			
PS B A A B XXX	TPE/PVC	635			
PS B A B B XXX	TPE/PVC	635			
PS B A F A XXX	TPE/PVC	635			
PS B A F B XXX	TPE/PVC	635			
PS B B A A XXX	TPE/PVC	635			
PS B B A B XXX	TPE/PVC	635			
PS B B B B XXX	TPE/PVC	635			
PS B B F A XXX	TPE/PVC	635			
PS B B F B XXX	TPE/PVC	635			
PS B C A B XXX	TPE/PVC	636			
PS B C B B XXX	TPE/PVC	636			
PS B C F B XXX	TPE/PVC	636			
PS B D A B XXX	TPE/PVC	636			
PS B D B B XXX	TPE/PVC	636			
PS B D F B XXX	TPE/PVC	636			
PS B E A B XXX	TPE/PVC	636			
PS B E B B XXX	TPE/PVC	636			
PS B E F B XXX	TPE/PVC	636			
PS B G A A XXX	TPE/PVC	635			
PS B G A B XXX	TPE/PVC	636			
PS B G B B XXX	TPE/PVC	636			
PS B G F A XXX	TPE/PVC	635			
PS B G F B XXX	TPE/PVC	636			
Servo cables					
PB B A A A XXX	PUR/PVC	637			
PB B A A B XXX	PUR/PVC	637			
PB B A B B XXX	PUR/PVC	637			
PB B A F A XXX	PUR/PVC	637			
PB B A F B XXX	PUR/PVC	637			
PB B A G B XXX	PUR/PVC	637			
PB B B A A XXX	PUR/PVC	637			
PB B B A B XXX	PUR/PVC	637			
PB B B B B XXX	PUR/PVC	638			
PB B B F A XXX	PUR/PVC	637			
PB B B F B XXX	PUR/PVC	638			
PB B B G B XXX	PUR/PVC	638			
PB B C A B XXX	PUR/PVC	638			
PB B C B B XXX	PUR/PVC	638			
PB B C F B XXX	PUR/PVC	638			
PB B C G B XXX	PUR/PVC	638			
PB B D A B XXX	PUR/PVC	638			
PB B D B B XXX	PUR/PVC	638			
PB B D F B XXX	PUR/PVC	638			
PB B D G B XXX	PUR/PVC	638			
PB B E A B XXX	PUR/PVC	638			
PB B E B B XXX	PUR/PVC	638			

... Nidec/Control Techniques ... NUM ... Omron ...

Selection by manufacturer part number

Basic cables	Jacket	Page	Extension cables	Jacket	Page
Nidec/Control Techniques					
Servo cables					
PB B E F B XXX	PUR/PVC	638			
PB B E G B XXX	PUR/PVC	638			
PB B G A A XXX	PUR/PVC	637			
PB B G A B XXX	PUR/PVC	639			
PB B G B B XXX	PUR/PVC	639			
PB B G F A XXX	PUR/PVC	637			
PB B G F B XXX	PUR/PVC	639			
PB B G G B XXX	PUR/PVC	639			
Encoder cables					
SS B A H C XXX	PVC/PUR/TPE	639			
SS B A H H XXX	PVC/PUR/TPE	639			
SS B A H N XXX	PVC/PUR/TPE	639			
NUM					
Power cables					
AGOFRU018LMxxx	PVC/TPE	640	AGOFRU018LMxxx (ext.)	PVC/TPE	640
AGOFRU019LMxxx	PVC/TPE	640	AGOFRU019LMxxx (ext.)	PVC/TPE	640
Servo cables					
AGOFRU018Mxxx	PVC/PUR	640	AGOFRU018Mxxx (ext.)	PVC/PUR	640
AGOFRU019Mxxx	PVC/PUR	640	AGOFRU019Mxxx (ext.)	PVC/PUR	640
AGOFRU020Mxxx	PVC/PUR	640	AGOFRU020Mxxx (ext.)	PVC/PUR	641
Fan cables					
AGOFRU012Mxxx	PVC/TPE	641	AGOFRU012Mxxx (ext.)	PVC/TPE	641
Encoder cables					
AGOFRU029Mxxx	PVC/TPE	641	AGOFRU029Mxxx (ext.)	PVC/TPE	641
AGOFRU030Mxxx	PVC/TPE	641	AGOFRU030Mxxx (ext.)	PVC/TPE	641
Omron					
Motor cables					
R88A-CAWA-xxxS-DE	TPE	642			
R88A-CAWCxxx	PVC/TPE	642			
R88A-CAWCxxxS-E	PVC/TPE	642			
R88A-CAWDxxxS	PVC/TPE	642			
R88A-CAWDxxxS-E	PVC/TPE	642			
R88A-CAWFxxxS-E	PVC/TPE	642			
Control cables					
JZSP-CHM000-xx-E	PVC/PUR/TPE	642			
JZSP-CHM000-xx-ME	PVC/PUR/TPE	642			
JZSP-CHM030-xx-E	PVC/PUR/TPE	642			
JZSP-CHM030-xx-ME	PVC/PUR/TPE	643			
JZSP-CSM22-xx-E-G1	PVC/PUR/TPE	643			
R88A-CAWCxxxB-E	PVC/PUR/TPE	643			
R88A-CAWExxxB	PVC/PUR/TPE	643			
Encoder cables					
JZSP-CHP800-xx-E	PVC/PUR/TPE	643			
JZSP-CHP800-xx-ME	PVC/PUR/TPE	643			
JZSP-CSP21-xx-E-G1	PVC/PUR/TPE	644			
R88A-CRWA-xxxC-DE	PVC/PUR/TPE	644			
R88A-CRWBxxxN	PVC/PUR/TPE	644			
R88A-CRWBxxxN-E	PVC/PUR/TPE	644			

... Parker ... SEW ...

Selection by manufacturer part number

Basic cables	Jacket	Page	Extension cables	Jacket	Page
Parker					
Motor cables					
iMOK42	PVC/PUR	645			
iMOK43	PUR/PVC	645			
iMOK44	PUR/PVC	645			
iMOK45	PUR/PVC	645			
iMOK54	PVC/PUR	645			
iMOK55	PVC/PUR	645			
iMOK56	PVC/PUR	645			
iMOK57	PUR/PVC	645			
Resolver cables					
iREK32	PVC/PUR/TPE	645			
iREK33	PVC/PUR/TPE	646			
iREK41	PVC/PUR/TPE	646			
iREK42	PVC/PUR/TPE	646			
SEW					
Motor cables					
0590 4773	PVC/PUR/TPE	647	0590 3610	PVC/PUR/TPE	648
0590 4803	PVC/PUR/TPE	647			
0590 6245	PVC/PUR/TPE	647			
0590 6253	PVC/PUR/TPE	647			
1335 0293	PVC/PUR/TPE	647	1335 0021	PVC/PUR/TPE	649
1335 0307	PVC/PUR/TPE	647	1335 0048	PVC/PUR/TPE	649
1335 0315	PVC/PUR/TPE	648	1335 0056	PVC/PUR/TPE	649
Servo cables					
1332 4861	PUR/PVC	650	0593 6500	PUR/PVC	652
1333 1221	PVC/PUR/TPE	650			
1333 2155	PVC/PUR/TPE	650			
1335 0153	PVC/PUR	650	1335 0099	PVC/PUR	652
1335 0161	PVC/PUR	650	1335 0102	PVC/PUR	652
1335 0188	PVC/PUR	650	1335 0110	PVC/PUR	652
1335 0234	PVC/PUR	650	1335 4221	PUR	652
1335 0242	PVC/PUR	650	1335 4248	PVC/PUR	652
1335 0250	PVC/PUR	651			
1335 4302	PUR	651			
1335 4310	PVC/PUR	651			
1335 4329	PVC/PUR	651	1335 4337	PVC/PUR	652
1335 4388	PUR	651			
1335 4396	PUR	651			
Hybrid servo cables					
0186 725 3	PUR	653			
0187 889 5	PUR	653			
0593 278 5	PUR	653			
0593 755 8	PUR	653			
0816 208 5	PUR	653			
0816 325 1	PUR	653			
0816 326 X	PUR	653			
0817 886 0	PUR	653			
0817 887 9	PUR	653			
0817 888 7	PUR	653			
0817 948 4	PUR	653			

... SEW ... Siemens ...

Selection by manufacturer part number

Basic cables	Jacket	Page	Extension cables	Jacket	Page
SEW					
Hybrid servo cables					
1811 8119	PUR	653			
Control cables					
0199 560x	PVC/PUR/TPE	653			
Encoder cables					
0198 9308	PUR	653			
0199 3194	PUR	653	**0199 5413**	PUR	654
0199 4875	PVC	653	**0199 5421**	PVC	654
0595 1518	PVC/PUR/TPE	653			
1332 4535	PVC	653	**0199 5405**	PVC/PUR	654
1332 4551	PUR	653	**0199 5405**	PVC/PUR	654
1332 7429	PVC	653			
1332 7437	PUR	653			
Siemens					
Power cables					
6FX8002-5CN06	PVC/PUR/TPE	655			
6FX8002-5CN16	PVC/PUR/TPE	655			
6FX8002-5CN26	PVC/PUR/TPE	655			
6FX8002-5CN36	PVC/PUR/TPE	655			
6FX8002-5CN46	PVC/PUR/TPE	655			
6FX8002-5CN56	PVC/PUR/TPE	655			
6FX8002-5CS06	PVC/PUR/TPE	655			
6FX_002-5CA01	PVC/PUR/TPE	655	**6FX_002-5CA05**	PVC/PUR/TPE	665
6FX_002-5CA11	PVC/PUR/TPE	656	**6FX_002-5CA15**	PVC/PUR/TPE	665
6FX_002-5CA13	PVC/PUR/TPE	656			
6FX_002-5CA21	PVC/PUR/TPE	656	**6FX_002-5CA28**	PVC/PUR/TPE	665
6FX_002-5CA23	PVC/PUR/TPE	656	**6FX_002-5CX28**	PVC/PUR/TPE	666
6FX_002-5CA31	PVC/PUR/TPE	656	**6FX_002-5CA38**	PVC/PUR/TPE	665
6FX_002-5CA41	PVC/PUR/TPE	656	**6FX_002-5CA48**	PVC/PUR/TPE	665
6FX_002-5CA51	PVC/PUR/TPE	656	**6FX_002-5CA58**	PVC/PUR/TPE	665
6FX_002-5CA61	PVC/PUR/TPE	656	**6FX_002-5CA68**	PVC/PUR/TPE	665
6FX_002-5CG01	PVC/PUR/TPE	657			
6FX_002-5CG10	PVC/PUR/TPE	657			
6FX_002-5CG11	PVC/PUR/TPE	657	**6FX_002-5CA15**	PVC/PUR/TPE	665
6FX_002-5CG12	PVC/PUR/TPE	657			
6FX_002-5CG13	PVC/PUR/TPE	657	**6FX_002-5CX18**	PVC/PUR/TPE	666
6FX_002-5CG21	PVC/PUR/TPE	657	**6FX_002-5CA28**	PVC/PUR/TPE	665
6FX_002-5CG22	PVC/PUR/TPE	658			
6FX_002-5CG23	PVC/PUR/TPE	658	**6FX_002-5CX28**	PVC/PUR/TPE	666
6FX_002-5CG31	PVC/PUR/TPE	658			
6FX_002-5CG32	PVC/PUR/TPE	658	**6FX_002-5CQ38**	PVC/PUR/TPE	666
6FX_002-5CG41	PVC/PUR/TPE	658			
6FX_002-5CG42	PVC/PUR/TPE	658			
6FX_002-5CG51	PVC/PUR/TPE	659			
6FX_002-5CG52	PVC/PUR/TPE	659			
6FX_002-5CG61	PVC/PUR/TPE	659			
6FX_002-5CG62	PVC/PUR/TPE	659	**6FX_002-5CQ68**	PVC/PUR/TPE	666
6FX_002-5CK01	PUR/TPE	659			
6FX_002-5CL01	PVC/PUR/TPE	659			
6FX_002-5CL02	PVC/PUR/TPE	660			

Selection by manufacturer part number

readycable®
Contents

Basic cables	Jacket	Page	Extension cables	Jacket	Page
6FX_002-5CL12	PVC/PUR/TPE	660			
6FX_002-5CN01	PVC/PUR/TPE	660			
6FX_002-5CN11	PVC/PUR/TPE	660			
6FX_002-5CN21	PVC/PUR/TPE	660			
6FX_002-5CN31	PVC/PUR/TPE	660	**6FX_002-5CQ38**	PVC/PUR/TPE	666
6FX_002-5CN41	PVC/PUR/TPE	660			
6FX_002-5CN51	PVC/PUR/TPE	660			
6FX_002-5CN54	PVC/PUR/TPE	661			
6FX_002-5CN61	PVC/PUR/TPE	661	**6FX_002-5CQ68**	PVC/PUR/TPE	666
6FX_002-5CN64	PVC/PUR/TPE	661	**6FX_002-5CQ68**	PVC/PUR/TPE	666
6FX_002-5CQ01	PVC/PUR/TPE	661			
6FX_002-5CQ11	PVC/PUR/TPE	661			
6FX_002-5CQ21	PVC/PUR/TPE	661			
6FX_002-5CQ31	PVC/PUR/TPE	661	**6FX_002-5CQ38**	PVC/PUR/TPE	666
6FX_002-5CQ41	PVC/PUR/TPE	661			
6FX_002-5CQ51	PVC/PUR/TPE	662			
6FX_002-5CQ61	PVC/PUR/TPE	662	**6FX_002-5CQ68**	PVC/PUR/TPE	666
6FX_002-5CS01	PVC/PUR/TPE	662			
6FX_002-5CS02	PVC/PUR/TPE	662			
6FX_002-5CS11	PVC/PUR/TPE	662	**6FX_002-5CA15**	PVC/PUR/TPE	665
6FX_002-5CS12	PVC/PUR/TPE	662			
6FX_002-5CS13	PVC/PUR/TPE	663	**6FX_002-5CX18**	PVC/PUR/TPE	666
6FX_002-5CS21	PVC/PUR/TPE	663			
6FX_002-5CS23	PVC/PUR/TPE	663	**6FX_002-5CX28**	PVC/PUR/TPE	666
6FX_002-5CS24	PVC/PUR/TPE	663			
6FX_002-5CS31	PVC/PUR/TPE	663			
6FX_002-5CS41	PVC/PUR/TPE	663	**6FX_002-5CA48**	PVC/PUR/TPE	665
6FX_002-5CS42	PVC/PUR/TPE	663			
6FX_002-5CS51	PVC/PUR/TPE	664	**6FX_002-5CA58**	PVC/PUR/TPE	665
6FX_002-5CS52	PVC/PUR/TPE	664			
6FX_002-5CS54	PVC/PUR/TPE	664	**6FX_002-5CA68**	PVC/PUR/TPE	665
6FX_002-5CS61	PVC/PUR/TPE	664	**6FX_002-5CA68**	PVC/PUR/TPE	665
6FX_002-5CS62	PVC/PUR/TPE	664			
6FX_002-5CS64	PVC/PUR/TPE	664	**6FX_002-5CX18**	PVC/PUR/TPE	666
Servo cables					
6FX_002-5DA01	PUR/PVC	666	**6FX_002-5DA05**	PUR/PVC	676
6FX_002-5DA11	PUR/PVC	666	**6FX_002-5DA15**	PUR/PVC	677
6FX_002-5DA21	PUR/PVC	667	**6FX_002-5DA28**	PUR/PVC	677
6FX_002-5DA23	PUR/PVC	667	**6FX_002-5DX28**	PUR/PVC	678
6FX_002-5DA30	PVC/PUR	667			
6FX_002-5DA31	PUR/PVC	667	**6FX_002-5DA38**	PUR/PVC	677
6FX_002-5DA33	PUR/PVC	667	**6FX_002-5DX38**	PUR/PVC	678
6FX_002-5DA41	PUR/PVC	667	**6FX_002-5DA48**	PUR/PVC	677
6FX_002-5DA43	PUR/PVC	668	**6FX_002-5DX48**	PUR/PVC	678
6FX_002-5DA51	PUR/PVC	668	**6FX_002-5DA58**	PUR/PVC	677
6FX_002-5DA61	PUR/PVC	668	**6FX_002-5DA68**	PUR/PVC	677
6FX_002-5DG01	PVC/PUR	668	**6FX_002-5DA05**	PVC/PUR	676
6FX_002-5DG10	PVC/PUR	668	**6FX_002-5DN05**	PVC/PUR	677
6FX_002-5DG11	PVC/PUR	668	**6FX_002-5DA15**	PVC/PUR	677
6FX_002-5DG12	PVC/PUR	669	**6FX_002-5DN15**	PVC/PUR	677
6FX_002-5DG13	PVC/PUR	669			

... Siemens ...

Selection by manufacturer part number

Basic cables	Jacket	Page	Extension cables	Jacket	Page
Siemens					
Servo cables					
6FX_002-5DG21	PVC/PUR	669			
6FX_002-5DG22	PVC/PUR	669	6FX_002-5DQ28	PVC/PUR	678
6FX_002-5DG23	PUR	669			
6FX_002-5DG31	PVC/PUR	669			
6FX_002-5DG32	PVC/PUR	669	6FX_002-5DQ38	PVC/PUR	678
6FX_002-5DG33	PUR	670			
6FX_002-5DG41	PVC/PUR	670	6FX_002-5DA48	PVC/PUR	677
6FX_002-5DG42	PVC/PUR	670	6FX_002-5DQ48	PVC/PUR	678
6FX_002-5DG43	PUR	670			
6FX_002-5DG51	PVC/PUR	670			
6FX_002-5DG52	PVC/PUR	670	6FX_002-5DQ58	PVC/PUR	678
6FX_002-5DG61	PVC/PUR	670			
6FX_002-5DG62	PVC/PUR	671	6FX_002-5DQ68	PVC/PUR	678
6FX_002-5DN01	PVC/PUR	671	6FX_002-5DN05	PVC/PUR	677
6FX_002-5DN06	PVC/PUR	671			
6FX_002-5DN11	PVC/PUR	671	6FX_002-5DN15	PVC/PUR	677
6FX_002-5DN16	PVC/PUR	671			
6FX_002-5DN21	PVC/PUR	671	6FX_002-5DQ28	PVC/PUR	678
6FX_002-5DN26	PVC/PUR	672			
6FX_002-5DN27	PVC/PUR	672			
6FX_002-5DN30	PUR/PVC	672			
6FX_002-5DN31	PVC/PUR	672	6FX_002-5DQ38	PVC/PUR	678
6FX_002-5DN41	PVC/PUR	672	6FX_002-5DQ48	PVC/PUR	678
6FX_002-5DN46	PVC/PUR	672			
6FX_002-5DN51	PVC/PUR	673			
6FX_002-5DN54	PVC/PUR	673	6FX_002-5DQ58	PVC/PUR	678
6FX_002-5DN56	PVC/PUR	673			
6FX_002-5DN61	PVC/PUR	673	6FX_002-5DQ68	PVC/PUR	678
6FX_002-5DN64	PVC/PUR	673	6FX_002-5DQ68	PVC/PUR	678
6FX_002-5DQ01	PVC/PUR	673	6FX_002-5DN05	PVC/PUR	677
6FX_002-5DQ11	PVC/PUR	674	6FX_002-5DN15	PVC/PUR	677
6FX_002-5DQ21	PVC/PUR	674	6FX_002-5DQ28	PVC/PUR	678
6FX_002-5DQ31	PVC/PUR	674	6FX_002-5DQ38	PVC/PUR	678
6FX_002-5DQ41	PVC/PUR	674	6FX_002-5DQ48	PVC/PUR	678
6FX_002-5DQ51	PVC/PUR	674	6FX_002-5DQ58	PVC/PUR	678
6FX_002-5DQ61	PVC/PUR	674	6FX_002-5DQ68	PVC/PUR	678
6FX_002-5DS01	PUR/PVC	674			
6FX_002-5DS06	PVC/PUR	674			
6FX_002-5DS11	PVC/PUR	675	6FX_002-5DA15	PVC/PUR	677
6FX_002-5DS13	PVC/PUR	675			
6FX_002-5DS21	PUR/PVC	675			
6FX_002-5DS23	PUR	675			
6FX_002-5DS33	PUR	675			
6FX_002-5DS36	PVC/PUR	675			
6FX_002-5DS41	PVC/PUR	675	6FX_002-5DA48	PVC/PUR	677
6FX_002-5DS43	PUR	675			
6FX_002-5DS51	PVC/PUR	676			
6FX_002-5DS54	PVC/PUR	676			
6FX_002-5DS61	PUR/PVC	676			

Selection by manufacturer part number

readycable®
Contents

Basic cables	Jacket	Page	Extension cables	Jacket	Page
6FX_002-5DS64	PVC/PUR	676			
6FX_002-8QN04	PUR	676			
6FX_002-8QN08	PUR	676			
Signal cables					
6FX8002-2CF20	PVC/PUR/TPE	679			
6FX8002-2CQ31	PVC/PUR/TPE	679	6FX8002-2CQ34	PVC/PUR/TPE	684
6FX8002-2DC40	PVC/PUR	679			
6FX8002-2DC42	PVC/PUR	679			
6FX_002-1DC00	PUR/PVC	679	6FX_002-2DC34	PUR/PVC	684
6FX_002-2AD00	PVC/PUR/TPE	680	6FX_002-2AD04	PVC/PUR/TPE	684
6FX_002-2AH00	PVC/PUR/TPE	680	6FX_002-2AH04	PVC/PUR/TPE	684
6FX_002-2AH11	PVC/PUR/TPE	680			
6FX_002-2CA11	PVC/PUR/TPE	680	6FX_002-2CB54	PVC/PUR/TPE	684
6FX_002-2CA15	PVC/PUR/TPE	680	6FX_002-2CA54	PVC/PUR/TPE	684
6FX_002-2CA31	PVC/PUR/TPE	680	6FX_002-2CA34	PVC/PUR/TPE	684
6FX_002-2CA51	PVC/PUR/TPE	680	6FX_002-2CA54	PVC/PUR/TPE	684
6FX_002-2CA71	PVC/PUR/TPE	681			
6FX_002-2CB31	PUR/TPE	681			
6FX_002-2CB51	PVC/PUR/TPE	681	6FX_002-2CC14	PVC/PUR/TPE	684
6FX_002-2CC11	PVC/PUR/TPE	681	6FX_002-2CB54	PVC/PUR/TPE	684
6FX_002-2CD01	PVC/PUR/TPE	681	6FX_002-2CB54	PVC/PUR/TPE	684
6FX_002-2CF01	PVC/PUR/TPE	681			
6FX_002-2CF02	PVC/PUR/TPE	681	6FX_002-2CF04	PVC/PUR/TPE	684
6FX_002-2CG00	PVC/PUR/TPE	681	6FX_002-2CB54	PVC/PUR/TPE	684
6FX_002-2CH00	PVC/PUR/TPE	681	6FX_002-2AD04	PVC/PUR/TPE	684
6FX_002-2CK00	PVC/PUR/TPE	682			
6FX_002-2CL00	PVC/PUR/TPE	682			
6FX_002-2CR00	PVC/PUR/TPE	682			
6FX_002-2CT12	PVC/PUR/TPE	682			
6FX_002-2DB10	PUR	682			
6FX_002-2DC10	PUR/PVC	682	6FX_002-2DC34	PUR/PVC	684
6FX_002-2DC20	PUR/PVC	682	6FX_002-2DC34	PUR/PVC	684
6FX_002-2DC36	PVC/PUR	682			
6FX_002-2EQ00	PVC/PUR/TPE	683			
6FX_002-2EQ10	PVC/PUR/TPE	683	6FX_002-2EQ14	PVC/PUR/TPE	685
6FX_002-2EQ20	PVC/PUR/TPE	683			
6FX_002-2EQ31	PVC/PUR/TPE	683			
6FX_002-5BL03	PVC/PUR	683			
6fx3002-2CT10	PVC/PUR/TPE	683			
Signal cables DriveCliq					
i6FX8002-2DC30-1AD0(3m)	PUR	685	i6FX8002-2DC34-1DA0(30m)	PUR	685
i6FX8002-2DC30-1AF0(5m)	PUR	685	i6FX8002-2DC34-1AF0(5m)	PUR	685
i6FX8002-2DC30-1BA0(10m)	PUR	685	i6FX8002-2DC34-1BA0(10m)	PUR	685
i6FX8002-2DC30-1BF0(15m)	PUR	685	i6FX8002-2DC34-1BF0(15m)	PUR	685
i6FX8002-2DC30-1CA0(20m)	PUR	685	i6FX8002-2DC34-1CA0(20m)	PUR	685
i6FX8002-2DC30-1CF0(25m)	PUR	685	i6FX8002-2DC34-1CF0(25m)	PUR	685
i6FX8002-2DC30-1DA0(30m)	PUR	685	i6FX8002-2DC34-1DA0(30m)	PUR	685
Stöber					
Servo cables					
Gr.1,5-Motor-10,0mm²	PUR/PVC	686			
Gr.1,5-Motor-4,0mm²	PUR/PVC	686			

... Stöber ...

Selection by manufacturer part number

Basic cables Stöber	Jacket	Page	Extension cables	Jacket	Page
Servo cables					
Gr.1,5-Motor-6,0mm²	PUR/PVC	686			
Gr.1-Motor-1,0mm²	PUR/PVC	686			
Gr.1-Motor-1,5mm²	PUR/PVC	686			
Gr.1-Motor-2,5mm²	PUR/PVC	686			
Gr.1-Motor-4,0mm²	PUR/PVC	686			
Encoder cables					
Encoder ED/EK iSDS4000	PVC/PUR/TPE	686			
Encoder ES iSDS4000	PUR/TPE	687			
Encoder HTL	PVC/PUR/TPE	687			
Encoder iMDS5000	PVC/PUR/TPE	687			
Resolver iMDS5000	PVC/PUR/TPE	687			
Resolver iSDS4000	PVC/PUR/TPE	687			

... 4,600 drive cables ... in 8 seconds ...

readycable® finder 2.0

**Ready-to-connect drive cables -
Find and choose online in seconds**

- Find drive cables similar to 24 manufacturers quickly and easily online
- Price for different cable lengths and batch sizes available instantly
- Search by manufacturer or igus® part number
- Important information such as jacket material, oil resistance or bend radius at a glance
- Submit an enquiry or order with just one click
- 4,600 drive cables similar to 24 manufacturers to choose from

1. Enter manufacturer or igus® part number
2. Compare cables with different jacket materials
3. Choose and order directly/ submit enquiry

www.igus.eu/readycable-finder

Harnessed drive cables | Allen-Bradley/Rockwell PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chainflex® cable
Allen-Bradley/Rockwell Motor cables						
Basic cable						
2090-CPWM4DF-08AFxx	**PVC M.I.**	MAT9761795	(4G10)C	20.5	7.5	**01**
	PUR O.I.	MAT9861793	(4G10)C	18.0	10	**06**
	TPE F	MAT9961791	(4G10)C	19.5	7.5	**02**
	TPE H*	MAT9961790	(4G10)C	19.5	7.5	**03**
2090-CPWM4DF-10AFxx	**PVC M.I.**	MAT9761796	(4G6.0)C	16.0	7.5	**01**
	PUR O.I.	MAT9861794	(4G6.0)C	14.5	10	**06**
	TPE F	MAT9961793	(4G6.0)C	16.0	7.5	**02**
	TPE H*	MAT9961792	(4G6.0)C	16.0	7.5	**03**
Basic cable						
2090-CPWM4DF-12AFxx	**PVC M.I.**	MAT9761797	(4G4.0)C	13.5	7.5	**01**
	PUR O.I.	MAT9861795	(4G4.0)C	12.5	10	**06**
	TPE F	MAT9961795	(4G4.0)C	13.5	7.5	**02**
	TPE H*	MAT9961794	(4G4.0)C	13.5	7.5	**03**
2090-CPWM4DF-14AFxx	**PVC M.I.**	MAT9761798	(4G2.5)C	12.0	7.5	**01**
	PUR O.I.	MAT9861796	(4G2.5)C	11.5	10	**06**
	PUR M.I.	MAT9861798	(4G2.5)C	12.5	7.5	**07**
	TPE F	MAT9961797	(4G2.5)C	11.5	7.5	**02**
	TPE H*	MAT9961796	(4G2.5)C	11.5	7.5	**03**
2090-CPWM4DF-16AFxx	**PVC M.I.**	MAT9761799	(4G1.5)C	10.5	7.5	**01**
	PUR O.I.	MAT9861797	(4G1.5)C	9.5	10	**06**
	PUR M.I.	MAT9861799	(4G1.5)C	10.5	7.5	**07**
	TPE F	MAT9961799	(4G1.5)C	10.0	7.5	**02**
	TPE H*	MAT9961798	(4G1.5)C	10.0	7.5	**03**
Basic cable						
2090-CPWM7DF-02AF	**PVC M.I.**	MAT9761715	(4G35)C	32.5	7.5	**01**
	PUR O.I.	MAT9861711	(4G35)C	33.0	10	**06**
2090-CPWM7DF-04AF	**PVC M.I.**	MAT9761714	(4G25)C	28.5	7.5	**01**
	PUR O.I.	MAT9861710	(4G25)C	25.5	10	**06**
	TPE F	MAT9961725	(4G25)C	28.0	7.5	**02**
	TPE H*	MAT9961726	(4G25)C	28.0	7.5	**03**

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Allen-Bradley/Rockwell PVC/PUR/TPE

Allen-Bradley/Rockwell

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chainflex® cable
Allen-Bradley/Rockwell Motor cables						
Basic cable						
2090-CPWM7DF-06AF	**PVC M.I.**	MAT9761713	(4G16)C	23.5	7.5	**01**
	PUR O.I.	MAT9861709	(4G16)C	22.0	10	**06**
	TPE F	MAT9961723	(4G16)C	23.0	7.5	**02**
	TPE H*	MAT9961724	(4G16)C	22.5	7.5	**03**
2090-CPWM7DF-08AFxx	**PVC M.I.**	MAT9761704	(4G10)C	20.5	7.5	**01**
	PUR O.I.	MAT9861706	(4G10)C	18.0	10	**06**
	TPE F	MAT9961707	(4G10)C	19.5	7.5	**02**
	TPE H*	MAT9961708	(4G10)C	19.5	7.5	**03**
2090-CPWM7DF-10AFxx	**PVC M.I.**	MAT9761703	(4G6.0)C	16.0	7.5	**01**
	PUR O.I.	MAT9861705	(4G6.0)C	14.5	10	**06**
	TPE F	MAT9961705	(4G6.0)C	16.0	7.5	**02**
	TPE H*	MAT9961706	(4G6.0)C	16.0	7.5	**03**
Basic cable						
2090-CPWM7DF-12AFxx	**PVC M.I.**	MAT9761702	(4G4.0)C	13.5	7.5	**01**
	PUR O.I.	MAT9861704	(4G4.0)C	12.5	10	**06**
	TPE F	MAT9961709	(4G4.0)C	13.5	7.5	**02**
	TPE H*	MAT9961704	(4G4.0)C	13.5	7.5	**03**
2090-CPWM7DF-14AFxx	**PVC M.I.**	MAT9761701	(4G2.5)C	12.0	7.5	**01**
	PUR O.I.	MAT9861703	(4G2.5)C	11.5	10	**06**
	PUR M.I.	MAT9861702	(4G2.5)C	12.5	7.5	**07**
	TPE F	MAT9961710	(4G2.5)C	11.5	7.5	**02**
	TPE H*	MAT9961711	(4G2.5)C	11.5	7.5	**03**
2090-CPWM7DF-16AFxx	**PVC M.I.**	MAT9761758	(4G1.5)C	10.5	7.5	**01**
	PUR O.I.	MAT9861760	(4G1.5)C	9.5	10	**06**
	PUR M.I.	MAT9861759	(4G1.5)C	10.5	7.5	**07**
	TPE F	MAT9961761	(4G1.5)C	10.0	7.5	**02**
Basic cable						
2090-XX_PMP-10SXX	**PVC M.I.**	MAT9761712	(4G6.0)C	16.0	7.5	**01**
	PUR O.I.	MAT9961718	(4G6.0)C	14.5	10	**06**
	TPE F	MAT9961703	(4G6.0)C	16.0	7.5	**02**
	TPE H*	MAT9961715	(4G6.0)C	16.0	7.5	**03**

Harnessed drive cables | Allen-Bradley/Rockwell PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chainflex® cable
Allen-Bradley/Rockwell Motor cables						
Basic cable						
2090-XX_PMP-14SXX	**PVC M.I.**	MAT9761711	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9961717	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9851711	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9961702	(4G2.5)C	11.5	7.5	02
	TPE H*	MAT9961714	(4G2.5)C	11.5	7.5	03
2090-XX_PMP-16SXX	**PVC M.I.**	MAT9761710	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9961716	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT9861701	(4G1.5)C	10.5	7.5	07
	TPE F	MAT9961701	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9961713	(4G1.5)C	10.0	7.5	03
Extension cable						
2090-CPWM7E7-08AF	**PUR O.I.**	MAT9861716	(4G10)C	18.0	10	06
2090-CPWM7E7-10AF	**PUR O.I.**	MAT9861715	(4G6.0)C	14.5	10	06
Extension cable						
2090-CPWM7E7-12AF	**PUR O.I.**	MAT9861714	(4G4.0)C	12.5	10	06
2090-CPWM7E7-14AF	**PUR O.I.**	MAT9861713	(4G2.5)C	11.5	10	06
2090-CPWM7E7-16AF	**PUR O.I.**	MAT9861712	(4G1.5)C	9.5	10	06
Allen-Bradley/Rockwell Servo cables						
Basic cable						
2090-CPBM4DF-08AFxx	**PVC M.I.**	MAT9751799	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT9851798	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT9851799	(4G10+(2x1.5)C)C	21.0	7.5	07
2090-CPBM4DF-10AFxx	**PVC O.I.**	MAT9751797	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9751798	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.	MAT9851796	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.	MAT9851797	(4G6.0+(2x1.5)C)C	18.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Allen-Bradley/Rockwell PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chainflex® cable
Allen-Bradley/Rockwell Servo cables						
Basic cable						
2090-CPBM4DF-12AFxx	**PVC O.I.**	MAT9751795	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9751796	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9851794	(4G4.0+(2x1.5)C)C	15.0	10	06
	PUR M.I.	MAT9851795	(4G4.0+(2x1.5)C)C	16.0	7.5	07
2090-CPBM4DF-14AFxx	**PVC O.I.**	MAT9751791	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9751792	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851790	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9851791	(4G2.5+(2x1.5)C)C	14.5	7.5	07
2090-CPBM4DF-16AFxx	**PVC O.I.**	MAT9751757	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9751756	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851755	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9851754	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable						
2090-CPBM7DF-02AF	**PUR M.I.**	MAT9851745	(4G35+(2x1.5)C)C	32.5	7.5	07
2090-CPBM7DF-04AF	**PUR O.I.**	MAT9851743	(4G25+(2x1.5)C)C	28.5	10	06
	PUR M.I.	MAT9851744	(4G25+(2x1.5)C)C	28.5	7.5	07
Basic cable						
2090-CPBM7DF-06AF	**PUR O.I.**	MAT9851741	(4G16+(2x1.5)C)C	24.0	10	06
	PUR M.I.	MAT9851742	(4G16+(2x1.5)C)C	24.5	7.5	07
Basic cable						
2090-CPBM7DF-08AFxx	**PVC M.I.**	MAT9751745	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT9851736	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT9851735	(4G10+(2x1.5)C)C	21.0	7.5	07
2090-CPBM7DF-10AFxx	**PVC O.I.**	MAT9751706	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9751705	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.	MAT9851712	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.	MAT9851705	(4G6.0+(2x1.5)C)C	18.0	7.5	07
2090-CPBM7DF-12AFxx	**PVC O.I.**	MAT9751793	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9751794	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9851792	(4G4.0+(2x1.5)C)C	15.0	10	06
	PUR M.I.	MAT9851793	(4G4.0+(2x1.5)C)C	16.0	7.5	07

Harnessed drive cables | Allen-Bradley/Rockwell PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chainflex® cable
Allen-Bradley/Rockwell Servo cables						
Basic cable						
2090-CPBM7DF-14AFxx	**PVC O.I.**	MAT9751744	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9751743	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851734	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9851733	(4G2.5+(2x1.5)C)C	14.5	7.5	07
2090-CPBM7DF-16AFxx	**PVC O.I.**	MAT9751742	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9751741	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851732	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9851731	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable						
2090-XX_PMF-10SXX	**PVC O.I.**	MAT9711730	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9961722	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.	MAT9811726	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.	MAT9851708	(4G6.0+(2x1.5)C)C	18.0	7.5	07
Basic cable						
2090-XX_PMF-14SXX	**PVC O.I.**	MAT9711729	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9961721	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9811725	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9851707	(4G2.5+(2x1.5)C)C	14.5	7.5	07
2090-XX_PMF-16SXX	**PVC O.I.**	MAT9711728	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9961720	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9811724	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9851706	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Extension cable						
2090-CPBM7E7-08AFxx	**PVC M.I.**	MAT9751709	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT9851710	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT9851709	(4G10+(2x1.5)C)C	21.0	7.5	07
2090-CPBM7E7-10AFxx	**PVC O.I.**	MAT9751708	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9751707	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.	MAT9851714	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.	MAT9851713	(4G6.0+(2x1.5)C)C	18.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Allen-Bradley/Rockwell PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chainflex® cable
Allen-Bradley/Rockwell Servo cables						
Extension cable						
2090-CPBM7E7-12AFxx	**PVC O.I.**	MAT9751789	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9751790	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851788	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9851789	(4G2.5+(2x1.5)C)C	14.5	7.5	07
2090-CPBM7E7-14AFxx	**PVC O.I.**	MAT9751747	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9751746	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851738	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9851737	(4G2.5+(2x1.5)C)C	14.5	7.5	07
2090-CPBM7E7-16AFxx	**PVC O.I.**	MAT9751749	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9751748	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851740	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9851739	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Allen-Bradley/Rockwell Hybrid servo cables						
Basic cable						
2090-CSBM1DE-10AF	**PUR O.I.**	MAT9851723	(4G6.0+(2x1.0)C+(2xAWG22)C)C	18.0	10	28
Basic cable						
2090-CSBM1DE-14AF	**PVC O.I.**	MAT9751711	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	27
	PUR O.I.	MAT9851720	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	28
2090-CSBM1DE-18AF	**PVC O.I.**	MAT9751710	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	27
	PUR O.I.	MAT9851719	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	28
Basic cable						
2090-CSBM1DF-10AF	**PUR O.I.**	MAT9851717	(4G6.0+(2x1.0)C+(2xAWG22)C)C	18.0	10	28
Basic cable						
2090-CSBM1DF-14AF	**PVC O.I.**	MAT9751703	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	27
	PUR O.I.	MAT9851703	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	28
2090-CSBM1DF-18AF	**PVC O.I.**	MAT9751701	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	27
	PUR O.I.	MAT9851701	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	28

Harnessed drive cables | Allen-Bradley/Rockwell PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chainflex® cable
Allen-Bradley/Rockwell Hybrid servo cables						
Basic cable						
2090-CSBM1DG-10AF	**PUR O.I.**	MAT9851750	(4G6.0+(2x1.0)C+(2xAWG22)C)C	18.0	10	28
Basic cable						
2090-CSBM1DG-14AF	**PVC O.I.**	MAT9751719	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	27
	PUR O.I.	MAT9851747	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	28
2090-CSBM1DG-18AF	**PVC O.I.**	MAT9751718	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	27
	PUR O.I.	MAT9851746	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	28
Basic cable						
2090-CSWM1DE-10AF	**PUR O.I.**	MAT9851724	(4G6.0+(2x1.0)C+(2xAWG22)C)C	18.0	10	28
Basic cable						
2090-CSWM1DE-14AF	**PVC O.I.**	MAT9751713	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	27
	PUR O.I.	MAT9851722	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	28
2090-CSWM1DE-18AF	**PVC O.I.**	MAT9751712	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	27
	PUR O.I.	MAT9851721	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	28
Basic cable						
2090-CSWM1DF-10AF	**PUR O.I.**	MAT9851718	(4G6.0+(2x1.0)C+(2xAWG22)C)C	18.0	10	28
Basic cable						
2090-CSWM1DF-14AF	**PVC O.I.**	MAT9751704	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	27
	PUR O.I.	MAT9851704	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	28
2090-CSWM1DF-18AF	**PVC O.I.**	MAT9751702	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	27
	PUR O.I.	MAT9851702	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	28
Basic cable						
2090-CSWM1DG-10AF	**PUR O.I.**	MAT9851751	(4G6.0+(2x1.0)C+(2xAWG22)C)C	18.0	10	28

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Allen-Bradley/Rockwell PVC/PUR

Allen-Bradley/Rockwell

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chainflex® cable
Allen-Bradley/Rockwell Hybrid servo cables						
Basic cable						
2090-CSWM1DG-14AF	**PVC O.I.**	MAT9751721	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	27
	PUR O.I.	MAT9851749	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	28
2090-CSWM1DG-18AF	**PVC O.I.**	MAT9751720	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	27
	PUR O.I.	MAT9851748	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	28
Extension cable						
2090-CSBM1E1-10AF	**PUR O.I.**	MAT9851729	(4G6.0+(2x1.0)C+(2xAWG22)C)C	18.0	10	28
Extension cable						
2090-CSBM1E1-14AF	**PVC O.I.**	MAT9751715	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	27
	PUR O.I.	MAT9851726	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	28
2090-CSBM1E1-18AF	**PVC O.I.**	MAT9751714	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	27
	PUR O.I.	MAT9851725	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	28
Extension cable						
2090-CSWM1E1-10AF	**PUR O.I.**	MAT9851730	(4G6.0+(2x1.0)C+(2xAWG22)C)C	18.0	10	28
Extension cable						
2090-CSWM1E1-14AF	**PVC O.I.**	MAT9751717	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	27
	PUR O.I.	MAT9851728	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	28
2090-CSWM1E1-18AF	**PVC O.I.**	MAT9751716	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	27
	PUR O.I.	MAT9851727	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	28
Allen-Bradley/Rockwell Brake cables						
Basic cable						
2090-UX_BMP-18SXX	**PVC M.I.**	MAT9711727	(3G0.75)C	8.0	7.5	18
	PVC OIL	MAT9961719	(3G0.75)C	8.0	6.8	20
	PUR M.I.	MAT9811705	(3G0.75)C	8.0	6.8	22

Harnessed drive cables | Allen-Bradley/Rockwell PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chainflex® cable
Allen-Bradley/Rockwell Feedback cables						
Basic cable						
2090-CFBM4DF-CDAFxx	**PUR O.I.**	MAT9841775	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	9.0	10	09
	PUR M.I.	MAT9841753	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	10
	TPE H*	MAT9941768	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	11
2090-CFBM4DF-CEAFxx	**PUR O.I.**	MAT9841796	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	9.0	10	09
	PUR M.I.	MAT9841798	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	10
	TPE H*	MAT9941799	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	11
Basic cable						
2090-CFBM7DD-CDAFxx	**PUR M.I.**	MAT9841795	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	10
2090-CFBM7DD-CEAFxx	**PUR M.I.**	MAT9841797	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	10
Basic cable						
2090-CFBM7DF-CDAFxx	**PUR O.I.**	MAT9841771	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	9.0	10	09
	PUR M.I.	MAT9841750	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	10
	TPE H*	MAT9941764	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	11
2090-CFBM7DF-CEAFxx	**PUR O.I.**	MAT9841774 [1)]	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	9.0	10	09
	PUR M.I.	MAT9841752 [1)]	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	10
	TPE H*	MAT9941767 [1)]	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	11
Basic cable						
2090-XX_FMF-Sxx	**PUR O.I.**	MAT9941709	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	9.0	10	09
	PUR M.I.	MAT9841770	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	10
	TPE H*	MAT9941763	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	11
Basic cable						
2090-XX_FMP-Sxx	**PUR O.I.**	MAT9841769	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	9.0	10	09
	PUR M.I.	MAT9941704	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	10
	TPE H*	MAT9941762	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	11
Extension cable						
2090-CFBM7E7-CDAFxx	**PUR O.I.**	MAT9841772	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	9.0	10	09
	PUR M.I.	MAT9841751	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	10
	TPE H*	MAT9941765	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	11

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Allen-Bradley/Rockwell

Harnessed drive cables | Allen-Bradley/Rockwell PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chainflex® cable
Allen-Bradley/Rockwell Feedback cables						
Extension cable						
2090-CFBM7E7-CEAFxx	**PUR O.I.**	MAT9841773	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	9.0	10	09
	PUR M.I.	MAT9741776	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	10
	TPE H*	MAT9941766	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	7.5	11
Allen-Bradley/Rockwell Adapter cables (Transition Cable)						
Basic cable						
2090-CFBM4E2-CATR	**PUR O.I.**	MAT9841799	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	9.0	10	09
Basic cable						
2090-CPWM4E2-14TR	**PUR O.I.**	MAT9861792	(4G2.5)C	11.5	10	06

[1)] Alternative cable construction possible for Hiperface DSL applications

Harnessed drive cables | B&R PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
B&R Motor cables						
Basic cable						
8BCMxxxx.1011A-0	**PVC M.I.**	MAT9610008	(4G0.75+2x(2x0.34)C)C	12.5	7.5	05
	PUR O.I.	MAT9850108	(4G0.75+2x(2x0.34)C)C	11.5	10	06
	PUR M.I.	MAT9600008	(4G0.75+2x(2x0.34)C)C	12.5	7.5	07
Basic cable						
8BCMxxxx.1034C-0	**PVC M.I.**	MAT9610009	(4G0.75+2x(2x0.34)C)C	12.5	7.5	05
	PUR O.I.	MAT9850109	(4G0.75+2x(2x0.34)C)C	11.5	10	06
	PUR M.I.	MAT9600009	(4G0.75+2x(2x0.34)C)C	12.5	7.5	07
Basic cable						
8BCMxxxx.1312A-0	**PVC O.I.**	MAT9750106	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9610012	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9850106	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9600012	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
Basic cable						
8BCMxxxx.1322A-0	**PVC O.I.**	MAT9750107	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9610013	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9850107	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9600013	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
Basic cable						
8CMxxx.12-0	**PVC M.I.**	MAT9610000	(4G0.75+2x(2x0.34)C)C	12.5	7.5	05
	PUR O.I.	MAT9850100	(4G0.75+2x(2x0.34)C)C	11.5	10	06
	PUR M.I.	MAT9600000	(4G0.75+2x(2x0.34)C)C	12.5	7.5	07
B&R Servo cables						
Basic cable						
8BCMxxxx.1111A-0	**PVC O.I.**	MAT9750104	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9610010	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850104	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9600010	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x** = without earth core
* Cable qualities: **M.I** = with inner jacket, **O.I.** = without inner jacket, **F** = flame-retardant, **H** = halogen-free, **OIL** = oil-resistant

Harnessed drive cables | B&R PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
B&R Servo cables						
Basic cable						
8BCMxxxx.1311A-0	**PVC O.I.**	MAT9750105	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9610011	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850105	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9600011	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
Basic cable						
8CMxxx.12-1	**PVC O.I.**	MAT9750101	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9610001	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850101	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9600001	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
8CMxxx.12-3	**PVC O.I.**	MAT9750102	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9610002	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9850102	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9600002	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
8CMxxx.12-5	**PVC M.I.**	MAT9610003	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9850103	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9600003	(4G10+2x(2x1.5)C)C	23.5	7.5	07
Basic cable						
8ECHxxxx.1111A-0	**PUR O.I.**	MAT9850114	(4G1.5+(2x0.75)C+(2x2x0.14+2x0.25)C)C	15.0	10	28
Extension cable						
8BCFxxxx.12230-0	**PVC**	MAT9740101	((4x0.14)+2x(2x0.34))C	7.0	10	08
	PUR O.I.	MAT9840115	((4x0.14)+2x(2x0.34))C	7.0	10	09
Extension cable						
8BCMxxxx.10360-0	**PVC M.I.**	MAT9750108	(4G0.75+2x(2x0.34)C)C	12.5	7.5	05
	PUR O.I.	MAT9850115	(4G0.75+2x(2x0.34)C)C	11.5	10	06
	PUR M.I.	MAT9850116	(4G0.75+2x(2x0.34)C)C	12.5	7.5	07
Extension cable						
8ECH00xx.11140-0	**PUR O.I.**	MAT9850117	(4G1.5+(2x0.75)C+(2x2x0.14+2x0.25)C)C	15.0	10	28

Harnessed drive cables | B&R PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
B&R EnDat cables						
Basic cable						
8BCExxxx.1111A-0	**PVC**	MAT9670002	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9820102	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9660002	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
8CExxx.12-1	**PVC**	MAT9670001	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9820101	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9660001	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
B&R Encoder cables						
Basic cable						
8BCFxxxx.1221B-0	**PVC**	MAT9670003	((4x0.14)+2x(2x0.34))C	7.0	10	08
	PUR O.I.	MAT9840103	((4x0.14)+2x(2x0.34))C	7.0	10	09
Basic cable						
8BCRxxxx.1121A-0	**PVC**	MAT9640015	(3x(2x0.25))C	7.0	7.5	14
	PUR	MAT9840105	(3x(2x0.25))C	7.0	7.5	26
	TPE H*	MAT9630015	(3x(2x0.25))C	8.0	6.8	16
Basic cable						
8BCSxxxx.1111A-0	**PVC**	MAT9670004	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9840114	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9820104	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9660004	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
B&R Resolver cables						
Basic cable						
8BCRxxx.1111A-0	**PVC**	MAT9640010	(3x(2x0.25))C	7.0	7.5	14
	PUR M.I.	MAT9840102	(3x(2x0.25))C	8.5	10	15
	TPE H*	MAT9630010	(3x(2x0.25))C	8.0	6.8	16
8CRxxx.12-1	**PVC**	MAT9640001	(3x(2x0.25))C	7.0	7.5	14
	PUR M.I.	MAT9840101	(3x(2x0.25))C	8.5	10	15
	TPE H*	MAT9630001	(3x(2x0.25))C	8.0	6.8	16

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | B&R PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
B&R Bus cables						
Basic cable						
X20CA3E61.xxxx	**PVC OIL**	MAT9630100	(4x0.38)C	7.0	12.5	29
	PUR	MAT9730101	(4x0.38)C	7.0	12.5	30
	TPE	MAT9930102	(4x0.38)C	7.5	10	12
Basic cable						
X67CA0E41.xxxx	**PVC OIL**	MAT9630103	(4x0.38)C	7.0	12.5	29
	PUR	MAT9730104	(4x0.38)C	7.0	12.5	30
	TPE	MAT9930105	(4x0.38)C	7.5	10	12

Harnessed drive cables | Baumüller PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Baumüller Servo cables						
15 A Basic cable						
324781 (5 m)	**PVC O.I.**	MAT9750201	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9295001	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850201	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9296001	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
324782 (7 m)	**PVC O.I.**	MAT9750202	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9295002	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850202	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9296002	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
324783 (10 m)	**PVC O.I.**	MAT9750203	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9295003	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850203	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9296003	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
324784 (15 m)	**PVC O.I.**	MAT9750204	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9295004	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850204	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9296004	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
324785 (20 m)	**PVC O.I.**	MAT9750205	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9295005	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850205	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9296005	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
324786 (25 m)	**PVC O.I.**	MAT9750206	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9295006	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850206	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9296006	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
324787 (30 m)	**PVC O.I.**	MAT9750207	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9295007	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850207	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9296007	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
324788 (35 m)	**PVC O.I.**	MAT9750208	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9295008	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850208	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9296008	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
324789 (40 m)	**PVC O.I.**	MAT9750209	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9295009	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850209	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9296009	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Baumüller PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Baumüller Servo cables						
15 A Basic cable						
324790 (50 m)	**PVC O.I.**	MAT9750210	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9295010	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850210	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9296010	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
324791 (75 m)	**PVC O.I.**	MAT9750211	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9295011	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850211	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9296011	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
324792 (100 m)	**PVC O.I.**	MAT9750212	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9295012	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850212	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9296012	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
15 A Extension cable						
324781 (5 m) (ext.)	**PVC O.I.**	MAT9750213	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9297001	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850213	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9298001	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
20 A Basic cable						
380967 (7 m)	**PVC O.I.**	MAT9750215	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295021	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850215	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296021	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
413410 (10 m)	**PVC O.I.**	MAT9750216	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295022	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850216	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296022	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
414840 (5 m)	**PVC O.I.**	MAT9750214	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295020	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850214	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296020	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
414841 (15 m)	**PVC O.I.**	MAT9750217	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295023	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850217	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296023	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07

Harnessed drive cables | Baumüller PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Baumüller Servo cables						
20 A Basic cable						
414842 (20 m)	**PVC O.I.**	MAT9750218	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295024	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850218	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296024	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
414843 (25 m)	**PVC O.I.**	MAT9750219	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295025	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850219	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296025	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
414846 (30 m)	**PVC O.I.**	MAT9750220	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295026	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850220	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296026	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
414848 (35 m)	**PVC O.I.**	MAT9750221	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295027	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850221	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296027	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
414849 (40 m)	**PVC O.I.**	MAT9750222	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295028	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850222	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296028	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
414850 (50 m)	**PVC O.I.**	MAT9750223	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295029	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850223	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296029	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
414851 (75 m)	**PVC O.I.**	MAT9750224	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295030	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850224	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296030	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
414852 (100 m)	**PVC O.I.**	MAT9750225	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295031	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850225	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296031	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Baumüller PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Baumüller Servo cables						
20 A Extension cable						
414840 (5 m) (ext.)	**PVC O.I.**	MAT9750226	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9297020	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850226	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9298020	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
21 A Basic cable						
326577 (5 m)	**PVC O.I.**	MAT9750227	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295040	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850227	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296040	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
326578 (7 m)	**PVC O.I.**	MAT9750228	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295041	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850228	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296041	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
326579 (10 m)	**PVC O.I.**	MAT9750229	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295042	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850229	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296042	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
326580 (15 m)	**PVC O.I.**	MAT9750230	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295043	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850230	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296043	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
326581 (20 m)	**PVC O.I.**	MAT9750231	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295044	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850231	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296044	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
326582 (25 m)	**PVC O.I.**	MAT9750232	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295045	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850232	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296045	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
326583 (30 m)	**PVC O.I.**	MAT9750233	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295046	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850233	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296046	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07

Harnessed drive cables | Baumüller PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Baumüller Servo cables						
21 A Basic cable						
326584 (35 m)	**PVC O.I.**	MAT9750234	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295047	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850234	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296047	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
326585 (40 m)	**PVC O.I.**	MAT9750235	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295048	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850235	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296048	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
326586 (50 m)	**PVC O.I.**	MAT9750236	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295049	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850236	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296049	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
326587 (75 m)	**PVC O.I.**	MAT9750237	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295050	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850237	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296050	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
326588 (100 m)	**PVC O.I.**	MAT9750238	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9295051	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850238	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9296051	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
21 A Extension cable						
326577 (5 m) (ext.)	**PVC O.I.**	MAT9750239	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9297040	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850239	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9298040	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
28 A Basic cable						
326589 (5 m)	**PVC O.I.**	MAT9750240	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9295060	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9850240	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9296060	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
326591 (7 m)	**PVC O.I.**	MAT9750241	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9295061	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9850241	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9296061	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Baumüller PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Baumüller Servo cables						
28 A Basic cable						
326592 (10 m)	**PVC O.I.**	MAT9750242	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9295062	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9850242	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9296062	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
326593 (15 m)	**PVC O.I.**	MAT9750243	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9295063	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9850243	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9296063	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
326594 (20 m)	**PVC O.I.**	MAT9750244	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9295064	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9850244	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9296064	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
326596 (25 m)	**PVC O.I.**	MAT9750245	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9295065	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9850245	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9296065	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
326597 (30 m)	**PVC O.I.**	MAT9750246	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9295066	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9850246	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9296066	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
326598 (35 m)	**PVC O.I.**	MAT9750247	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9295067	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9850247	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9296067	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
326599 (40 m)	**PVC O.I.**	MAT9750248	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9295068	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9850248	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9296068	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
28 A Extension cable						
326589 (5 m) (ext.)	**PVC O.I.**	MAT9750249	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9297060	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9850249	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9298060	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07

Harnessed drive cables | Baumüller PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Baumüller Servo cables						
36 A Basic cable						
326600 (5 m)	**PVC O.I.**	MAT9750250	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9295070	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9850250	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9296070	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
326601 (7 m)	**PVC O.I.**	MAT9750251	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9295071	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9850251	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9296071	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
326602 (10 m)	**PVC O.I.**	MAT9750252	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9295072	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9850252	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9296072	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
326603 (15 m)	**PVC O.I.**	MAT9750253	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9295073	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9850253	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9296073	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
326604 (20 m)	**PVC O.I.**	MAT9750254	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9295074	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9850254	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9296074	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
326605 (25 m)	**PVC O.I.**	MAT9750255	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9295075	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9850255	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9296075	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
326606 (30 m)	**PVC O.I.**	MAT9750256	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9295076	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9850256	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9296076	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
326607 (35 m)	**PVC O.I.**	MAT9750257	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9295077	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9850257	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9296077	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
326608 (40 m)	**PVC O.I.**	MAT9750258	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9295078	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9850258	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9296078	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Baumüller PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Baumüller Servo cables						
36 A Extension cable						
326600 (5 m) (ext.)	**PVC O.I.**	MAT9750259	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9297070	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9850259	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9298070	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
50 A Basic cable						
326609 (5 m)	**PVC M.I.**	MAT9295080	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9850260	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9296080	(4G10+2x(2x1.5)C)C	23.5	7.5	07
326610 (7 m)	**PVC M.I.**	MAT9295081	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9850261	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9296081	(4G10+2x(2x1.5)C)C	23.5	7.5	07
326611 (10 m)	**PVC M.I.**	MAT9295082	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9850262	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9296082	(4G10+2x(2x1.5)C)C	23.5	7.5	07
326612 (15 m)	**PVC M.I.**	MAT9295083	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9850263	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9296083	(4G10+2x(2x1.5)C)C	23.5	7.5	07
326613 (20 m)	**PVC M.I.**	MAT9295084	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9850264	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9296084	(4G10+2x(2x1.5)C)C	23.5	7.5	07
326614 (25 m)	**PVC M.I.**	MAT9295085	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9850265	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9296085	(4G10+2x(2x1.5)C)C	23.5	7.5	07
326615 (30 m)	**PVC M.I.**	MAT9295086	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9850266	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9296086	(4G10+2x(2x1.5)C)C	23.5	7.5	07
326616 (35 m)	**PVC M.I.**	MAT9295087	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9850267	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9296087	(4G10+2x(2x1.5)C)C	23.5	7.5	07
326617 (40 m)	**PVC M.I.**	MAT9295088	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9850268	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9296088	(4G10+2x(2x1.5)C)C	23.5	7.5	07

Harnessed drive cables | Baumüller PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Baumüller Servo cables						
50 A Extension cable						
326609 (5 m) (ext.)	**PVC M.I.**	MAT9297080	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9850269	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9298080	(4G10+2x(2x1.5)C)C	23.5	7.5	07
Baumüller Resolver cables						
SRS/SRM50 & SKS/SKM36 Basic cable						
239540 (5 m)	**PVC**	MAT9290003	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940203	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840203	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291003	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
239541 (8 m)	**PVC**	MAT9290005	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940205	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840205	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291005	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
239542 (10 m)	**PVC**	MAT9290006	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940206	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840206	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291006	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
239543 (15 m)	**PVC**	MAT9290007	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940207	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840207	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291007	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
239544 (20 m)	**PUR O.I.**	MAT9940208	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840208	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
239544 (20m)	**PVC**	MAT9290008	(5x(2x0.14)+2x0.5)C	8.0	10	08
	TPE H*	MAT9291008	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
239545 (25 m)	**PVC**	MAT9290009	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940209	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840209	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291009	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
239546 (30 m)	**PVC**	MAT9290010	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940210	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840210	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291010	(5x(2x0.14)+2x0.5)C	9.0	7.5	11

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Baumüller PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Baumüller Resolver cables						
SRS/SRM50 & SKS/SKM36 Basic cable						
239547 (35 m)	**PVC**	MAT9290011	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940211	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840211	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291011	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
240520 (40 m)	**PVC**	MAT9290012	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940212	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840212	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291012	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
240521 (45 m)	**PVC**	MAT9290013	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940213	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840213	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291013	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
240522 (50 m)	**PVC**	MAT9290014	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940214	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840214	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291014	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
242954 (6 m)	**PVC**	MAT9290004	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940204	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840204	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291004	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
243379 (4 m)	**PVC**	MAT9290002	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940202	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840202	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291002	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
244033 (55 m)	**PVC**	MAT9290015	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940215	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840215	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291015	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
245484 (60 m)	**PVC**	MAT9290016	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940216	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840216	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291016	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
246658 (3 m)	**PVC**	MAT9290001	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940201	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840201	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291001	(5x(2x0.14)+2x0.5)C	9.0	7.5	11

Harnessed drive cables | Baumüller PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Baumüller Resolver cables						
SRS/SRM50 & SKS/SKM36 Extension cable						
246658 (3 m) (ext.)	**PVC**	MAT9292001	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940217	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840217	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9293001	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
Baumüller Pulse encoder cables						
Pulse encoder Basic cable						
198962 (3 m)	**PVC**	MAT9290020	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940218	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840218	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291020	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
198963 (5 m)	**PVC**	MAT9290021	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940219	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840219	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291021	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
198964 (8 m)	**PVC**	MAT9290022	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940220	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840220	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291022	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
198965 (10 m)	**PVC**	MAT9290023	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940221	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840221	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291023	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
198966 (15 m)	**PVC**	MAT9290024	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940222	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840222	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291024	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
198967 (20 m)	**PVC**	MAT9290025	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940223	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840223	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291025	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
198968 (25 m)	**PVC**	MAT9290026	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940224	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840224	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291026	(5x(2x0.14)+2x0.5)C	9.0	7.5	11

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Baumüller PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Baumüller Pulse encoder cables						
Pulse encoder Basic cable						
198969 (30 m)	**PVC**	MAT9290027	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940225	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840225	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291027	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
208829 (40 m)	**PVC**	MAT9290029	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940227	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840227	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291029	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
225360 (35 m)	**PVC**	MAT9290028	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940226	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840226	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291028	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
Pulse encoder Extension cable						
198962 (3 m) (ext.)	**PUR O.I.**	MAT9940228	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840228	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9293020	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
198962 (3m) (ext.)	**PVC**	MAT9292020	(5x(2x0.14)+2x0.5)C	8.0	10	08
ECN1313/EQN1325 Basic cable						
369864 (3 m)	**PVC**	MAT9290031	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940230	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840230	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291031	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
371494 (20 m)	**PVC**	MAT9290038	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940237	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840237	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291038	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
378022 (50 m)	**PVC**	MAT9290044	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940243	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840243	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291044	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
380358 (35 m)	**PVC**	MAT9290041	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940240	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840240	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291041	(5x(2x0.14)+2x0.5)C	9.0	7.5	11

Harnessed drive cables | Baumüller
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Baumüller Pulse encoder cables						
ECN1313/EQN1325 Basic cable						
382005 (45 m)	**PVC**	MAT9290043	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940242	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840242	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291043	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
389807 (7 m)	**PVC**	MAT9290033	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940232	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840232	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291033	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
389808 (9 m)	**PVC**	MAT9290035	(5x(2x0.14)+2x0.5)C	8.0	10	08
	TPE H*	MAT9291035	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
389808 (9m)	**PUR O.I.**	MAT9940234	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840234	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
391216 (40 m)	**PVC**	MAT9290042	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940241	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840241	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291042	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
393889 (2 m)	**PVC**	MAT9290030	(5x(2x0.14)+2x0.5)C	8.0	10	08
	TPE H*	MAT9291030	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
393889 (2m)	**PUR O.I.**	MAT9940229	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840229	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
393890 (8 m)	**PVC**	MAT9290034	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940233	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840233	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291034	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
393891 (10 m)	**PVC**	MAT9290036	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940235	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840235	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291036	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
393892 (15 m)	**PVC**	MAT9290037	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940236	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840236	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291037	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
393893 (25 m)	**PVC**	MAT9290039	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940238	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840238	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291039	(5x(2x0.14)+2x0.5)C	9.0	7.5	11

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Baumüller
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Baumüller Pulse encoder cables						
ECN1313/EQN1325 Basic cable						
393894 (30 m)	**PVC**	MAT9290040	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940239	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840239	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291040	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
394014 (5 m)	**PVC**	MAT9290032	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR O.I.	MAT9940231	(5x(2x0.14)+2x0.5)C	8.0	10	09
	PUR M.I.	MAT9840231	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9291032	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
ECN1313/EQN1325 Extension cable						
393889 (2 m) (ext.)	**PVC**	MAT9292030	(5x(2x0.14)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9840244	(5x(2x0.14)+2x0.5)C	9.0	7.5	10
	TPE H*	MAT9293030	(5x(2x0.14)+2x0.5)C	9.0	7.5	11
393889 (2m) (ext.)	**PUR O.I.**	MAT9940244	(5x(2x0.14)+2x0.5)C	8.0	10	09

Harnessed drive cables | Beckhoff
PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality		Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Beckhoff Motor cables							
Basic cable							
ZK4500-8015-xxx	**PUR O.I.**		MAT9850314	(4G4.0+(2x1.0)C+(2xAWG22)C)C	16.0	10	06
ZK4500-8024-xxx	**PVC O.I.**		MAT9750312	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	04
	PUR O.I.		MAT9850312	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	06
Basic cable							
ZK4501-8024-xxx	**PVC O.I.**		MAT9750313	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	04
	PUR O.I.		MAT9850313	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	06
Basic cable							
ZK4530-8110-xxxx	**PVC**		MAT9381006	(4x(2x0.25))C	8.0	7.5	14
	PUR M.I.		MAT9382006	(4x(2x0.25))C	9.0	10	15
Extension cable							
ZK4704-0411-xxxx	**PVC M.I.**	New	MAT9371008	(4G0.75+(2x0.5)C)C	11.5	7.5	05
	PUR M.I.	New	MAT9750316	(4G0.75+(2x0.5)C)C	11.5	7.5	07
Beckhoff Servo cables							
Basic cable							
ZK4000-2111-xxxx	**PVC O.I.**		MAT9750305	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.		MAT9371005	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.		MAT9850305	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.		MAT9372005	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable							
ZK4000-2112-xxxx	**PVC O.I.**		MAT9750306	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.		MAT9371006	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.		MAT9850306	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.		MAT9372006	(4G2.5+(2x1.5)C)C	14.5	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Beckhoff
PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Beckhoff Servo cables						
Basic cable						
ZK4000-2711-xxxx	**PVC O.I.**	MAT9750307	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9371007	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850307	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9372007	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable						
ZK4500-0023-xxxx	**PVC O.I.**	MAT9750301	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9371001	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850301	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9372001	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
Basic cable						
ZK4500-0024-xxxx	**PVC O.I.**	MAT9750302	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9371002	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850302	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9372002	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
Extension cable						
ZK4501-0023-xxxx	**PVC O.I.**	MAT9750303	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9371003	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850303	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9372003	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
Extension cable						
ZK4501-0024-xxxx	**PVC O.I.**	MAT9750304	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9371004	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850304	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9372004	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
Beckhoff Hybrid servo cables						
Basic cable						
ZK4500-8022-xxxx	**PVC O.I.**	MAT9750308	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	27
	PUR O.I.	MAT9850308	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	28

Harnessed drive cables | Beckhoff
PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Beckhoff Hybrid servo cables						
Basic cable						
ZK4500-8023-xxxx	**PVC O.I.**	MAT9750309	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	27
	PUR O.I.	MAT9850309	(4G2.5+(2x1.0)C+(2xAWG22)C)C	15.0	10	28
Basic cable						
ZK4704-0421-xxxx	**PVC O.I.**	MAT9750315	(4G0.75+(2x0.34)C+(2xAWG22)C)C	12.0	10	27
	PUR O.I.	MAT9850315	(4G0.75+(2x0.34)C+(2xAWG22)C)C	12.0	10	28
Extension cable						
ZK4501-8022-xxxx	**PVC O.I.**	MAT9750310	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	27
	PUR O.I.	MAT9850310	(4G1.0+(2x0.75)C+(2xAWG22)C)C	12.5	10	28
Extension cable						
ZK4501-8023-xxxx	**PVC O.I.**	MAT9750311	(4G1.5+(2x0.75)C+(2xAWG22)C)C	13.5	10	27
	PUR O.I.	MAT9850311	(4G1.5+(2x0.75)C+(2xAWG22)C)C	13.5	10	28
Beckhoff Encoder cables						
Basic cable						
ZK4000-2410-xxxx	**PVC**	MAT9381005	(8x(2x0.25))C	10.5	7.5	14
	PUR M.I.	MAT9382005	(8x(2x0.25))C	11.5	10	15
Basic cable						
ZK4000-2610-xxxx	**PVC**	MAT9381004	(8x(2x0.25))C	10.5	7.5	14
	PUR M.I.	MAT9382004	(8x(2x0.25))C	11.5	10	15
Basic cable						
ZK4510-0020-xxxx	**PVC**	MAT9381001	(8x(2x0.25))C	10.5	7.5	14
	PUR M.I.	MAT9382001	(8x(2x0.25))C	11.5	10	15
Basic cable						
ZK4520-0020-xxxx	**PVC**	MAT9381002	(6x(2x0.25))C	9.0	7.5	14
	PUR M.I.	MAT9382002	(6x(2x0.25))C	10.0	10	15

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Beckhoff
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality		Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Beckhoff Encoder cables							
Extension cable							
ZK4511-0020-xxxx	**PVC**		MAT9381003	(8x(2x0.25))C	10.5	7.5	14
	PUR M.I.		MAT9382003	(8x(2x0.25))C	11.5	10	15
Beckhoff Thermal protection cables							
Basic cable							
ZK4000-2510-xxxx	**PVC**		MAT9386001	(2x0.25)C	5.0	7.5	14
	TPE H*		MAT9387001	(4x0.34)C	6.5	7.5	11
Beckhoff Resolver cables							
Basic cable							
ZK4000-2210-xxxx	**PVC**		MAT9383003	(4x(2x0.25))C	8.0	7.5	14
	PUR M.I.		MAT9384003	(4x(2x0.25))C	9.0	10	15
	TPE H*		MAT9920303	(4x(2x0.25))C	8.5	6.8	16
Basic cable							
ZK4530-0010-xxxx	**PVC**		MAT9383001	(4x(2x0.25))C	8.0	7.5	14
	PUR M.I.		MAT9384001	(4x(2x0.25))C	9.0	10	15
	TPE H*		MAT9920301	(4x(2x0.25))C	8.5	6.8	16
Basic cable							
ZK4530-8010-xxxx	**PVC**	New	MAT9383005	(4x(2x0.25))C	8.0	7.5	14
	PUR	New	MAT9384005	(4x(2x0.25))C	7.5	7.5	26
	TPE H*	New	MAT9920306	(4x(2x0.25))C	8.5	6.8	16
Extension cable							
ZK4531-0020-xxxx	**PVC**		MAT9383002	(4x(2x0.25))C	8.0	7.5	14
	PUR M.I.		MAT9384002	(4x(2x0.25))C	9.0	10	15
	TPE H*		MAT9920302	(4x(2x0.25))C	8.5	6.8	16

Harnessed drive cables | Beckhoff
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality		Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Beckhoff Resolver cables							
Extension cable							
ZK4724-0410-xxxx	**PVC**	New	MAT9383004	(3x(2x0.25))C	7.0	7.5	14
	PUR	New	MAT9384004	(3x(2x0.25))C	7.0	7.5	26
	TPE H*	New	MAT9920305	(3x(2x0.25))C	8.0	6.8	16
Beckhoff Network cables EtherCAT							
Basic cable							
ZK1090-9191-xxxx	**PUR**		MAT9385003	(4x(2x0.15))C	7.5	12.5	30
	TPE		MAT9385002	(4x(2x0.15))C	8.5	10	12

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Berger Lahr
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Berger Lahr Servo cables						
Basic cable						
VW3M5101Rxxx	**PVC O.I.**	MAT94503001	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT94502001	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT94501001	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT94500001	(4G1.5+(2x1.5)C)C	13.0	7.5	07
VW3M5102Rxxx	**PVC O.I.**	MAT94503002	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT94502003	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT94501003	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT94500003	(4G2.5+(2x1.5)C)C	14.5	7.5	07
Berger Lahr Resolver cables						
Basic cable						
VW3M8101Rxxx	**PVC**	MAT94603001	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR M.I.	MAT94601001	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*	MAT94600001	(4x(2x0.34)+4x0.5)C	10.5	7.5	11

Harnessed drive cables | Bosch Rexroth PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Bosch Rexroth Power cables						
Basic cable						
IKG0331	**PVC M.I.**	MAT9190014	(4G0.75+(2x0.5)C)C	11.5	7.5	05
	PUR M.I.	MAT9090014	(4G0.75+(2x0.5)C)C	11.5	7.5	07
IKG4008	**PVC M.I.**	MAT9190064	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851315	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9090064	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
IKG4009	**PVC M.I.**	MAT9190001	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851316	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9090001	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
IKG4017	**PVC M.I.**	MAT9190002	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851317	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9090002	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
IKG4018	**PVC M.I.**	MAT9190003	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851318	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9090003	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
IKG4020	**PVC M.I.**	MAT9190004	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851319	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9090004	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
IKG4055	**PVC O.I.**	MAT9751309	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9190005	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851320	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9090005	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
IKG4060	**PVC O.I.**	MAT9751310	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9190006	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851321	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9090006	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
IKG4067	**PVC O.I.**	MAT9751311	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9190007	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9851322	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9090007	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
IKG4070	**PVC O.I.**	MAT9751312	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9190008	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9851323	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9090008	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
IKG4072	**PVC O.I.**	MAT9751313	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9190068	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9851324	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9090068	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Bosch Rexroth PVC/PUR

Bosch Rexroth

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Bosch Rexroth Power cables						
Basic cable						
IKG4087	**PVC O.I.**	MAT9751314	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9190009	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9851325	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9090009	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
IKG4090	**PVC O.I.**	MAT9751315	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9190010	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9851326	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9090010	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
IKG4100	**PVC M.I.**	MAT9190020	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851327	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9090020	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
IKG4103	**PVC O.I.**	MAT9751316	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9190076	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851328	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9090076	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
IKG4107	**PVC O.I.**	MAT9751317	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9190011	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851329	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9090011	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
IKG4118	**PVC O.I.**	MAT9751318	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9190070	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851330	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9090070	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
IKG4119	**PVC M.I.**	MAT9190027	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851331	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9090027	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
IKG4147	**PVC O.I.**	MAT9751319	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9190038	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851332	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9090038	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
IKG4150	**PVC O.I.**	MAT9751320	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9190012	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851333	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9090012	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
IKG4155	**PVC O.I.**	MAT9751321	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9190028	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851334	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9090028	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07

Harnessed drive cables | Bosch Rexroth PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Bosch Rexroth Power cables						
Basic cable						
IKG4164	**PVC M.I.**	MAT9190035	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9851335	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9090035	(4G10+2x(2x1.5)C)C	23.5	7.5	07
IKG4167	**PVC M.I.**	MAT9190013	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9851336	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9090013	(4G10+2x(2x1.5)C)C	23.5	7.5	07
IKG4172	**PVC M.I.**	MAT9190069	(4G16+2x(2x1.5)C)C	27.5	7.5	05
	PUR O.I.	MAT9851337	(4G16+2x(2x1.5)C)C	26.0	10	06
	PUR M.I.	MAT9090069	(4G16+2x(2x1.5)C)C	26.5	7.5	07
IKG4173	**PVC M.I.**	MAT9190072	(4G25+2x(2x1.5)C)C	31.0	7.5	05
	PUR O.I.	MAT9851338	(4G25+2x(2x1.5)C)C	28.5	10	06
	PUR M.I.	MAT9090072	(4G25+2x(2x1.5)C)C	31.0	7.5	07
IKG4186	**PVC M.I.**	MAT9190021	(4G16+2x(2x1.5)C)C	27.5	7.5	05
	PUR O.I.	MAT9851339	(4G16+2x(2x1.5)C)C	26.0	10	06
	PUR M.I.	MAT9090021	(4G16+2x(2x1.5)C)C	26.5	7.5	07
IKG4200	**PVC M.I.**	MAT9190032	(4G16+2x(2x1.5)C)C	27.5	7.5	05
	PUR O.I.	MAT9851340	(4G16+2x(2x1.5)C)C	26.0	10	06
	PUR M.I.	MAT9090032	(4G16+2x(2x1.5)C)C	26.5	7.5	07
IKG4204	**PVC M.I.**	MAT9190052	(4G25+2x(2x1.5)C)C	31.0	7.5	05
	PUR O.I.	MAT9851341	(4G25+2x(2x1.5)C)C	28.5	10	06
	PUR M.I.	MAT9090052	(4G25+2x(2x1.5)C)C	31.0	7.5	07
IKL0001	**PVC M.I.**	MAT9190022	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851301	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9090022	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
IKL0002	**PVC M.I.**	MAT9751354	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851385	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9851384	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
IKL0006	**PVC M.I.**	MAT9190067	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851302	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9090067	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
IKL0011	**PVC M.I.**	MAT9190023	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851303	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9090023	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
IKL0012	**PVC M.I.**	MAT9751355	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851387	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9851386	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Bosch Rexroth PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Bosch Rexroth Power cables						
Basic cable						
IKL0021	**PVC O.I.**	MAT9751301	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9190024	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851304	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9090024	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
IKL0022	**PVC O.I.**	MAT9751357	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9751356	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851389	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9851388	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
IKL0041	**PVC O.I.**	MAT9751302	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9190017	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851305	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9090017	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
IKL0042	**PVC O.I.**	MAT9751303	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9190077	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851306	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9090077	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
IKL0061	**PVC O.I.**	MAT9751304	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9190018	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9851307	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9090018	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
IKL0081	**PVC O.I.**	MAT9751305	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9190030	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851308	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9090030	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
IKL0101	**PVC O.I.**	MAT9751306	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9190025	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851309	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9090025	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
IKL0121	**PVC M.I.**	MAT9190019	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9851310	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9090019	(4G10+2x(2x1.5)C)C	23.5	7.5	07
IKL0161	**PVC M.I.**	MAT9190063	(4G25+2x(2x1.5)C)C	31.0	7.5	05
	PUR O.I.	MAT9851311	(4G25+2x(2x1.5)C)C	28.5	10	06
	PUR M.I.	MAT9090063	(4G25+2x(2x1.5)C)C	31.0	7.5	07

Harnessed drive cables | Bosch Rexroth PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Bosch Rexroth Power cables						
Basic cable						
RKL0006	**PVC M.I.**	MAT9751359	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851393	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9851392	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
RKL0013	**PVC M.I.**	MAT9751360	(4G0.75+(2x0.5)C)C	11.5	7.5	05
	PUR M.I.	MAT9851394	(4G0.75+(2x0.5)C)C	11.5	7.5	07
RKL0014	**PVC M.I.**	MAT9751361	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851396	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9851395	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
RKL0019	**PVC O.I.**	MAT9751363	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9751362	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851398	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9851397	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
RKL0053	**PVC M.I.**	MAT9751364	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT98513100	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9851399	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
RKL0054	**PVC O.I.**	MAT9751366	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9751365	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT98513102	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT98513101	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
RKL4300	**PVC O.I.**	MAT9751326	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9190071	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851349	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9090071	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
RKL4301	**PVC O.I.**	MAT9751327	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9190037	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851350	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9090037	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
RKL4302	**PVC M.I.**	MAT9190026	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851351	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9090026	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
RKL4303	**PVC M.I.**	MAT9190029	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851352	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9090029	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
RKL4306	**PVC O.I.**	MAT9751328	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9190040	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851353	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9090040	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Bosch Rexroth PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Bosch Rexroth Power cables						
Basic cable						
RKL4307	**PVC O.I.**	MAT9751329	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9190041	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851354	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9090041	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
RKL4308	**PVC O.I.**	MAT9751330	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9190033	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9851355	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9090033	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
RKL4309	**PVC O.I.**	MAT9751331	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9190042	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9851356	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9090042	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
RKL4310	**PVC O.I.**	MAT9751332	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9190043	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9851357	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9090043	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
RKL4313	**PVC O.I.**	MAT9751333	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9190062	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9851358	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9090062	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
RKL4314	**PVC O.I.**	MAT9751334	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9190060	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9851359	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9090060	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
RKL4315	**PVC O.I.**	MAT9751335	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9190059	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9851360	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9090059	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
RKL4317	**PVC O.I.**	MAT9751336	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9190061	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851361	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9090061	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
RKL4318	**PVC O.I.**	MAT9751337	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9190047	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851362	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9090047	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07

Harnessed drive cables | Bosch Rexroth PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Bosch Rexroth Power cables						
Basic cable						
RKL4320	**PVC O.I.**	MAT9751338	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9190039	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851363	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9090039	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
RKL4321	**PVC O.I.**	MAT9751339	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9190075	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9851364	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9090075	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
RKL4322	**PVC O.I.**	MAT9751340	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9190078	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9851365	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9090078	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
RKL4323	**PVC O.I.**	MAT9751341	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9190073	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851366	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9090073	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
RKL4324	**PVC M.I.**	MAT9190079	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9851367	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9090079	(4G10+2x(2x1.5)C)C	23.5	7.5	07
RKL4325	**PVC O.I.**	MAT9751342	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9190049	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851368	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9090049	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
RKL4326	**PVC O.I.**	MAT9751343	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9190045	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9851369	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9090045	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
RKL4327	**PVC O.I.**	MAT9751344	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9190050	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9851370	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9090050	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
RKL4328	**PVC O.I.**	MAT9751345	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9190057	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851371	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9090057	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
RKL4329	**PVC M.I.**	MAT9190051	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9851372	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9090051	(4G10+2x(2x1.5)C)C	23.5	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Bosch Rexroth PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Bosch Rexroth Power cables						
Basic cable						
RKL4330	**PVC M.I.**	MAT9190080	(4G16+2x(2x1.5)C)C	27.5	7.5	05
	PUR O.I.	MAT9851373	(4G16+2x(2x1.5)C)C	26.0	10	06
	PUR M.I.	MAT9090080	(4G16+2x(2x1.5)C)C	26.5	7.5	07
RKL4331	**PVC M.I.**	MAT9190081	(4G25+2x(2x1.5)C)C	31.0	7.5	05
	PUR O.I.	MAT9851374	(4G25+2x(2x1.5)C)C	28.5	10	06
	PUR M.I.	MAT9090081	(4G25+2x(2x1.5)C)C	31.0	7.5	07
RKL4332	**PVC M.I.**	MAT9751367	(4G35+2x(2x1.5)C)C	34.0	7.5	05
	PUR O.I.	MAT98513104	(4G35+2x(2x1.5)C)C	35.0	10	06
RKL4343	**PVC O.I.**	MAT9751369	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9751368	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT98513106	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT98513105	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
RKL4344	**PVC M.I.**	MAT9751370	(4G16+2x(2x1.5)C)C	27.5	7.5	05
	PUR O.I.	MAT98513108	(4G16+2x(2x1.5)C)C	26.0	10	06
	PUR M.I.	MAT98513107	(4G16+2x(2x1.5)C)C	26.5	7.5	07
Linking cable with adapter plug						
IKG0332	**PVC M.I.**	MAT9190015	(4G0.75+(2x0.5)C)C	11.5	7.5	05
	PUR M.I.	MAT9090015	(4G0.75+(2x0.5)C)C	11.5	7.5	07
IKG4006	**PVC M.I.**	MAT9191001	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851342	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9091001	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
IKG4016	**PVC M.I.**	MAT9191002	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851343	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9091002	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
IKG4061	**PVC O.I.**	MAT9751322	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9191004	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9851344	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9091004	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
IKG4074	**PVC O.I.**	MAT9751323	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9191014	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9851345	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9091014	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
IKG4081	**PVC O.I.**	MAT9751324	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9191016	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9851346	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9091016	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07

Harnessed drive cables | Bosch Rexroth PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Bosch Rexroth Power cables						
Linking cable with adapter plug						
IKG4141	**PVC O.I.**	MAT9751325	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9191003	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851347	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9091003	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
IKG4161	**PVC M.I.**	MAT9190036	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9851348	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9090036	(4G10+2x(2x1.5)C)C	23.5	7.5	07
IKL0003	**PVC M.I.**	MAT9751358	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851391	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9851390	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
IKL0023	**PVC O.I.**	MAT9751307	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9191013	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851312	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9091013	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
IKL0089	**PVC O.I.**	MAT9751308	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9191005	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851313	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9091005	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
IKL0168	**PVC M.I.**	MAT9191006	(4G25+2x(2x1.5)C)C	31.0	7.5	05
	PUR O.I.	MAT9851314	(4G25+2x(2x1.5)C)C	28.5	10	06
	PUR M.I.	MAT9091006	(4G25+2x(2x1.5)C)C	31.0	7.5	07
Extension cable						
RKL0035	**PVC M.I.**	MAT9751371	(4G0.75+(2x0.5)C)C	11.5	7.5	05
	PUR M.I.	MAT98513109	(4G0.75+(2x0.5)C)C	11.5	7.5	07
RKL4304	**PVC O.I.**	MAT9751346	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9191007	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851375	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9091007	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
RKL4305	**PVC M.I.**	MAT9191008	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851376	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9091008	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
RKL4311	**PVC O.I.**	MAT9751347	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9191009	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851377	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9091009	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Bosch Rexroth PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Bosch Rexroth Power cables						
Extension cable						
RKL4312	**PVC O.I.**	MAT9751348	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9191010	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9851378	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9091010	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
RKL4316	**PVC O.I.**	MAT9751349	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9191011	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9851379	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9091011	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
RKL4319	**PVC O.I.**	MAT9751350	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9191012	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851380	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9091012	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
RKL4335	**PVC O.I.**	MAT9751373	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9751372	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT98513111	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT98513110	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
RKL4336	**PVC O.I.**	MAT9751351	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9191018	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9851381	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9091018	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
RKL4337	**PVC O.I.**	MAT9751375	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9751374	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT98513113	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT98513112	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
RKL4338	**PVC O.I.**	MAT9751352	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9191017	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851382	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9091017	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
RKL4339	**PVC M.I.**	MAT9751376	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT98513115	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT98513114	(4G10+2x(2x1.5)C)C	23.5	7.5	07
RKL4340	**PVC M.I.**	MAT9191015	(4G16+2x(2x1.5)C)C	27.5	7.5	05
	PUR O.I.	MAT9851383	(4G16+2x(2x1.5)C)C	26.0	10	06
	PUR M.I.	MAT9091015	(4G16+2x(2x1.5)C)C	26.5	7.5	07
RKL4341	**PVC M.I.**	MAT9751377	(4G25+2x(2x1.5)C)C	31.0	7.5	05
	PUR O.I.	MAT98513117	(4G25+2x(2x1.5)C)C	28.5	10	06
	PUR M.I.	MAT98513116	(4G25+2x(2x1.5)C)C	31.0	7.5	07

Harnessed drive cables | Bosch Rexroth PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Bosch Rexroth Servo cables						
Basic cable						
RL2-002CBB-NN-xxx,x	**PVC M.I.**	MAT97513150	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT98513156	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT98513150	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
RL2-022CBB-NN-xxx,x	**PVC M.I.**	MAT97513152	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT98513158	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT98513152	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
RL2-045EBB-NN-xxx,x	**PVC M.I.**	MAT97513154	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT98513160	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT98513154	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
Extension cable						
RL2-500CBB-NN-xxx,x	**PVC M.I.**	MAT97513151	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT98513157	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT98513151	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
RL2-521CBB-NN-xxx,x	**PVC M.I.**	MAT97513153	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT98513159	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT98513153	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
RL2-542EBB-NN-xxx,x	**PVC M.I.**	MAT97513155	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT98513161	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT98513155	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
Bosch Rexroth Encoder cables						
Basic cable						
IKS4103	**TPE H***	MAT9100001	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
IKS0230	**PVC**	MAT9110008	(2x(2x0.25)+2x0.5)C	6.5	10	08
	PUR M.I.	MAT9841307	(2x(2x0.25)+2x0.5)C	7.0	7.5	10
	TPE H*	MAT9100008	(2x(2x0.25)+2x0.5)C	7.0	7.5	11
IKS0251	**TPE H***	MAT9100014	(12x0.5)C	12.0	5	24
IKS0253	**TPE H***	MAT9100023	(12x0.5)C	12.0	5	24
IKS0259	**TPE H***	MAT9100032	(12x0.5)C	12.0	5	24
IKS0262	**TPE H***	MAT9100016	(12x0.5)C	12.0	5	24
IKS0301	**PVC**	MAT9110015	(4x(2x0.25)+2x1.0)C	8.5	10	08
	PUR M.I.	MAT9841308	(4x(2x0.25)+2x1.0)C	9.5	7.5	10
	TPE H*	MAT9100015	(4x(2x0.25)+2x1.0)C	9.5	7.5	11

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Bosch Rexroth PVC/PUR/TPE

Bosch Rexroth

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Bosch Rexroth Encoder cables						
Basic cable						
IKS0315	**PVC**	MAT9110020	(4x(2x0.25)+2x1.0)C	8.5	10	08
	PUR M.I.	MAT9841309	(4x(2x0.25)+2x1.0)C	9.5	7.5	10
	TPE H*	MAT9100020	(4x(2x0.25)+2x1.0)C	9.5	7.5	11
IKS0374	**PVC**	MAT9110011	(4x(2x0.25)+2x1.0)C	8.5	10	08
	PUR M.I.	MAT9841310	(4x(2x0.25)+2x1.0)C	9.5	7.5	10
	TPE H*	MAT9100011	(4x(2x0.25)+2x1.0)C	9.5	7.5	11
IKS4001	**PVC**	MAT9110026	(4x(2x0.14)+(4x0.14)C+4x1.0)C	10.0	10	08
	PUR M.I.	MAT9841311	(4x(2x0.14)+(4x0.14)C+4x1.0)C	11.0	7.5	10
	TPE H*	MAT9100026	(4x(2x0.14)+(4x0.14)C+4x1.0)C	11.0	7.5	11
IKS4002	**PVC**	MAT9110010	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.0	10	08
	PUR M.I.	MAT9841312	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.5	7.5	10
	TPE H*	MAT9100010	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.5	7.5	11
IKS4020	**PVC**	MAT9110006	(4x(2x0.14)+(4x0.14)C+4x1.0)C	10.0	10	08
	PUR M.I.	MAT9841313	(4x(2x0.14)+(4x0.14)C+4x1.0)C	11.0	7.5	10
	TPE H*	MAT9100006	(4x(2x0.14)+(4x0.14)C+4x1.0)C	11.0	7.5	11
IKS4038	**PVC**	MAT9110027	(4x(2x0.14)+(4x0.14)C+4x1.0)C	10.0	10	08
	PUR M.I.	MAT9841314	(4x(2x0.14)+(4x0.14)C+4x1.0)C	11.0	7.5	10
	TPE H*	MAT9100027	(4x(2x0.14)+(4x0.14)C+4x1.0)C	11.0	7.5	11
IKS4041	**PVC**	MAT9110028	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.0	10	08
	PUR M.I.	MAT9841315	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.5	7.5	10
	TPE H*	MAT9100028	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.5	7.5	11
IKS4042	**PVC**	MAT9110017	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9841316	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9100017	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
IKS4066	**PVC**	MAT9110025	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9841317	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9100025	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
IKS4103	**PVC**	MAT9110001	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9841318	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
IKS4142	**PVC**	MAT9110007	(4x(2x0.14)+(4x0.14)C+4x1.0)C	10.0	10	08
	PUR M.I.	MAT9841319	(4x(2x0.14)+(4x0.14)C+4x1.0)C	11.0	7.5	10
	TPE H*	MAT9100007	(4x(2x0.14)+(4x0.14)C+4x1.0)C	11.0	7.5	11
IKS4314	**PVC**	MAT9110004	(4x(2x0.25)+2x1.0)C	8.5	10	08
	PUR M.I.	MAT9841320	(4x(2x0.25)+2x1.0)C	9.5	7.5	10
	TPE H*	MAT9100004	(4x(2x0.25)+2x1.0)C	9.5	7.5	11
IKS4374	**PVC**	MAT9110002	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9841321	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9100002	(4x(2x0.25)+2x0.5)C	9.5	7.5	11

Harnessed drive cables | Bosch Rexroth PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Bosch Rexroth Encoder cables						
Basic cable						
IKS4375	**PVC**	MAT9110003	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9841322	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9100003	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
IKS4384	**PVC**	MAT9110005	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.0	10	08
	PUR M.I.	MAT9841323	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.5	7.5	10
	TPE H*	MAT9100005	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.5	7.5	11
IKS4389	**PVC**	MAT9110033	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.0	10	08
	PUR M.I.	MAT9841324	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.5	7.5	10
	TPE H*	MAT9100033	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.5	7.5	11
Basic cable						
RG2-002AAB-NN-xxx,x	**PVC**	MAT9741301	(2x(2x0.25)+2x0.5)C	6.5	10	08
	TPE H*	MAT9941301	(2x(2x0.25)+2x0.5)C	7.0	7.5	11
Basic cable						
RKG0014	**PVC**	MAT9110030	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.0	10	08
	PUR M.I.	MAT9841301	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.5	7.5	10
	TPE H*	MAT9100030	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.5	7.5	11
RKG0020	**PVC**	MAT9110034	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9841302	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9100034	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
RKG0026	**PVC**	MAT9110029	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.0	10	08
	PUR M.I.	MAT9841303	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.5	7.5	10
	TPE H*	MAT9100029	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.5	7.5	11
RKG0028	**PVC**	MAT9110031	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.0	10	08
	PUR M.I.	MAT9841304	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.5	7.5	10
	TPE H*	MAT9100031	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.5	7.5	11
RKG4200	**PVC**	MAT9110013	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9841305	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9100013	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
Linking cable with adapter plug						
IKS0232	**PVC**	MAT9110009	(2x(2x0.25)+2x0.5)C	6.5	10	08
	PUR M.I.	MAT9841325	(2x(2x0.25)+2x0.5)C	7.0	7.5	10
	TPE H*	MAT9100009	(2x(2x0.25)+2x0.5)C	7.0	7.5	11

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Bosch Rexroth PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Bosch Rexroth Encoder cables						
Linking cable with adapter plug						
IKS0255	**TPE H***	MAT9100018	(12x0.5)C	12.0	5	24
IKS0303	**PVC**	MAT9110019	(4x(2x0.25)+2x1.0)C	8.5	10	08
	PUR M.I.	MAT9841326	(4x(2x0.25)+2x1.0)C	9.5	7.5	10
	TPE H*	MAT9100019	(4x(2x0.25)+2x1.0)C	9.5	7.5	11
IKS4065	**PVC**	MAT9111001	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9841327	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9101001	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
IKS4151	**PVC**	MAT9111002	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9841328	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9101002	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
IKS4153	**PVC**	MAT9111003	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9841329	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9101003	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
IKS4322	**PVC**	MAT9111005	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9841331	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9101005	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
IKS4376	**PVC**	MAT9111004	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9841330	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9101004	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
Extension cable with adapter plug						
RG2-510AAB-NN-xxx,x	**PVC**	MAT9741302	(2x(2x0.25)+2x0.5)C	6.5	10	08
	TPE H*	MAT9941302	(2x(2x0.25)+2x0.5)C	7.0	7.5	11
Linking cable with adapter plug						
RKG4201	**PVC**	MAT9111006	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9841306	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9101006	(4x(2x0.25)+2x0.5)C	9.5	7.5	11

Harnessed drive cables | Elau/Schneider Electric PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Elau/Schneider Electric Servo cables						
Basic cable						
E-MO-067	**PVC O.I.**	MAT9750701	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9470001	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850701	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9470101	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
E-MO-092	**PVC O.I.**	MAT9750704	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9470004	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850704	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9470104	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
Basic cable						
E-MO-087	**PVC O.I.**	MAT9750703	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9470003	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850703	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9470103	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
Basic cable						
E-MO-111 SH-Motor 1.5	**PVC O.I.**	MAT9750702	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9470002	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9850702	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9470102	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
Basic cable						
E-MO-113 SH-Motor 2.5	**PVC O.I.**	MAT9750705	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9470005	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9850705	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9470105	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
Elau/Schneider Electric Hybrid servo cables						
Basic cable						
E-MO-109, VW3E1109Rxxx	**PUR O.I.**	MAT9850706	(4G25+2x(2x1.5)C)C	28.5	10	06
E-MO-117, VW3E1117Rxxx	**PUR O.I.**	MAT9850707	5G2.5+(4xAWG24)C+(2x0.25)C	14.5	10	28
E-MO-118, VW3E1118Rxxx	**PUR O.I.**	MAT9850708	5G2.5+(4xAWG24)C+(2x0.25)C	14.5	10	28
E-MO-119, VW3E1119Rxxx	**PUR O.I.**	MAT9850709	5G2.5+(4xAWG24)C+(2x0.25)C	14.5	10	28
E-MO-120, VW3E1120Rxxx	**PUR O.I.**	MAT9850710	5G2.5+(4xAWG24)C+(2x0.25)C	14.5	10	28
E-MO-121, VW3E1121Rxxx	**PUR O.I.**	MAT9850711	5G2.5+(4xAWG24)C+(2x0.25)C	14.5	10	28

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Elau/Schneider Electric PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Elau/Schneider Electric Hybrid servo cables						
Basic cable						
E-MO-124, VW3E1124Rxxx	**PUR O.I.**	MAT9850712	5G2.5+(4xAWG24)C+(2x0.25)C	14.5	10	28
E-MO-125, VW3E1125Rxxx	**PUR O.I.**	MAT9850713	5G2.5+(4xAWG24)C+(2x0.25)C	14.5	10	28
E-MO-126, VW3E1126Rxxx	**PUR O.I.**	MAT9850714	5G2.5+(4xAWG24)C+(2x0.25)C	14.5	10	28
E-MO-127, VW3E1127Rxxx	**PUR O.I.**	MAT9850715	5G2.5+(4xAWG24)C+(2x0.25)C	14.5	10	28
Elau/Schneider Electric Encoder cables						
Basic cable						
E-FB-060	**PVC**	MAT9480001	(4x(2x0.25)+2x0.5)C	8.0	10	08
	TPE H*	MAT9480101	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
E-FB-071	**PVC**	MAT9480002	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9940702	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9480102	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
Basic cable						
E-FB-080	**PVC**	MAT9480003	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9940703	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9480103	(4x(2x0.25)+2x0.5)C	9.5	7.5	11

Harnessed drive cables | Fagor PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Fagor Path measuring cables						
Extension cable						
iEEC-x	**PUR O.I.**	MAT9950808	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT9850808	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT9520070	(4x(2x0.14)+4x0.5)C	9.0	7.5	11
Extension cable						
iXC-C2-D	**PUR O.I.**	MAT9950801	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT9850801	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT9520001	(4x(2x0.14)+4x0.5)C	9.0	7.5	11
Extension cable						
iXC-C2-FN2	**PUR O.I.**	MAT9950807	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT9850807	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT9520060	(4x(2x0.14)+4x0.5)C	9.0	7.5	11
Extension cable						
iXC-C2-H	**PUR O.I.**	MAT9950803	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT9850803	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT9520020	(4x(2x0.14)+4x0.5)C	9.0	7.5	11
Extension cable						
iXC-C4-D	**PUR O.I.**	MAT9950802	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT9850802	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT9520010	(4x(2x0.14)+4x0.5)C	9.0	7.5	11
Extension cable						
iXC-C8-F-C9	**PUR O.I.**	MAT9950805	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	10.5	10	09
	PUR M.I.	MAT9850805	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	10
	TPE H*	MAT9520040	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	11
Extension cable						
iXC-C8-F-D	**PUR O.I.**	MAT9950804	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	10.5	10	09
	PUR M.I.	MAT9850804	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	10
	TPE H*	MAT9520030	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	11

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Fagor PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Fagor Path measuring cables						
Extension cable						
iXC-C8-FN	**PUR O.I.**	MAT9950806	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT9850806	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT9520050	(4x(2x0.14)+4x0.5)C	9.0	7.5	11

Harnessed drive cables | Fanuc PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Fanuc Power cables						
Basic cable						
LX660-8077-T261	**PVC M.I.**	MAT9760901	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9200061	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT9210061	(4G1.5)C	10.5	7.5	07
	TPE F	MAT9960901	(4G1.5)C	10.0	7.5	02
Basic cable						
LX660-8077-T264	**PVC M.I.**	MAT9760902	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9200064	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9210064	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9960902	(4G2.5)C	11.5	7.5	02
LX660-8077-T266	**PVC M.I.**	MAT9760904	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9200066	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9210066	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9960904	(4G2.5)C	11.5	7.5	02
Basic cable						
LX660-8077-T265	**PVC M.I.**	MAT9760903	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9200065	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9210065	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9960903	(4G2.5)C	11.5	7.5	02
LX660-8077-T267	**PVC M.I.**	MAT9760905	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9200067	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9210067	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9960905	(4G2.5)C	11.5	7.5	02
Basic cable						
LX660-8077-T270	**PVC M.I.**	MAT9760906	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9200070	(4G4.0)C	12.5	10	06
	PUR M.I.	MAT9210070	(4G4.0+(2x1.5)C)C	16.0	7.5	07
	TPE F	MAT9960906	(4G4.0)C	13.5	7.5	02

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Fanuc PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Fanuc Power cables						
Basic cable						
LX660-8077-T271	**PVC M.I.**	MAT9760907	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9200071	(4G4.0)C	12.5	10	06
	PUR M.I.	MAT9210071	(4G4.0+(2x1.5)C)C	16.0	7.5	07
	TPE F	MAT9960907	(4G4.0)C	13.5	7.5	02
LX660-8077-T272	**PVC M.I.**	MAT9760908	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9200072	(4G10)C	18.0	10	06
	PUR M.I.	MAT9210072	(4G10+(2x1.5)C)C	21.0	7.5	07
	TPE F	MAT9960908	(4G10)C	19.5	7.5	02
LX660-8077-T273	**PVC M.I.**	MAT9760909	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9200073	(4G10)C	18.0	10	06
	PUR M.I.	MAT9210073	(4G10+(2x1.5)C)C	21.0	7.5	07
	TPE F	MAT9960909	(4G10)C	19.5	7.5	02
Basic cable						
LX660-8077-T291	**PVC M.I.**	MAT9760910	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9200091	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9210091	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9960910	(4G2.5)C	11.5	7.5	02
LX660-8077-T293	**PVC M.I.**	MAT9760912	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9200093	(4G4.0)C	12.5	10	06
	PUR M.I.	MAT9210093	(4G4.0+(2x1.5)C)C	16.0	7.5	07
	TPE F	MAT9960912	(4G4.0)C	13.5	7.5	02
Basic cable						
LX660-8077-T292	**PVC M.I.**	MAT9760911	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9200092	(4G4.0)C	12.5	10	06
	PUR M.I.	MAT9210092	(4G4.0+(2x1.5)C)C	16.0	7.5	07
	TPE F	MAT9960911	(4G4.0)C	13.5	7.5	02
Basic cable						
LX660-8077-T296	**PVC M.I.**	MAT9760913	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9200096	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9210096	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9960913	(4G2.5)C	11.5	7.5	02

Harnessed drive cables | Fanuc PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Fanuc Power cables						
Basic cable						
LX660-8077-T298	**PVC M.I.**	MAT9760914	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9200098	(4G4.0)C	12.5	10	06
	PUR M.I.	MAT9210098	(4G4.0+(2x1.5)C)C	16.0	7.5	07
	TPE F	MAT9960914	(4G4.0)C	13.5	7.5	02
Basic cable						
LX660-8077-T300	**PVC M.I.**	MAT9760915	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9200300	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9210300	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9960915	(4G2.5)C	11.5	7.5	02
Fanuc Servo cables						
Basic cable						
LX660-8077-T259	**PUR O.I.**	MAT9850916	(4G1.5)C	9.5	10	06
Basic cable						
LX660-8077-T274	**PUR O.I.**	MAT9850921	(4G2.5)C	11.5	10	06
LX660-8077-T416		MAT9850923				
LX660-8077-T451	**PUR O.I.**	MAT9850920	(4G2.5)C	11.5	10	06
Basic cable						
LX660-8077-T470	**PUR O.I.**	MAT9850925	(4G4.0)C	12.5	10	06
Basic cable						
LX660-8077-T471	**PUR O.I.**	MAT9850917	(4G4.0)C	12.5	10	06
Fanuc Brake cables						
Basic cable						
LX660-8077-T311	**PUR M.I.**	MAT9810919	(3G0.75)C	8.0	6.8	22

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Fanuc PVC/PUR/TPE

Fanuc

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Fanuc Signal cables						
Basic cable						
LX660-2018-T015	**PVC**	MAT9840924	(10x(2x0.25))C	12.0	7.5	14
Basic cable						
LX660-4077-T296	**PUR O.I.**	MAT9300296	((2x0.25)+5x0.5)C	7.0	10	09
	PUR M.I.	MAT9840901	((2x0.25)+5x0.5)C	8.5	7.5	10
	TPE H*	MAT9310296	((2x0.25)+5x0.5)C	8.5	7.5	11
Basic cable						
LX660-4077-T297	**PUR O.I.**	MAT9300297	((2x0.25)+5x0.5)C	7.0	10	09
	PUR M.I.	MAT9840902	((2x0.25)+5x0.5)C	8.5	7.5	10
	TPE H*	MAT9310297	((2x0.25)+5x0.5)C	8.5	7.5	11
Basic cable						
LX660-4077-T302	**PUR O.I.**	MAT9300302	((4x0.25)+3x(2x0.25+2x0.5))C	9.5	10	09
	PUR M.I.	MAT9840903	((4x0.25)+3x(2x0.25+2x0.5))C	11.0	7.5	10
	TPE H*	MAT9310302	((4x0.25)+3x(2x0.25+2x0.5))C	11.0	7.5	11
Basic cable						
LX660-4077-T303	**PUR O.I.**	MAT9300303	((4x0.25)+3x(2x0.25+2x0.5))C	9.5	10	09
	PUR M.I.	MAT9840904	((4x0.25)+3x(2x0.25+2x0.5))C	11.0	7.5	10
	TPE H*	MAT9310303	((4x0.25)+3x(2x0.25+2x0.5))C	11.0	7.5	11
LX660-4077-T310	**TPE H***	MAT9940922	((4x0.25)+3x(2x0.25+2x0.5))C	11.0	7.5	11
Basic cable						
LX660-4077-T319	**PUR O.I.**	MAT9300319	((4x0.25)+3x(2x0.25+2x0.5))C	9.5	10	09
	PUR M.I.	MAT9840905	((4x0.25)+3x(2x0.25+2x0.5))C	11.0	7.5	10
	TPE H*	MAT9310319	((4x0.25)+3x(2x0.25+2x0.5))C	11.0	7.5	11

Harnessed drive cables | Festo PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Festo Servo cables						
Basic cable						
NEBM-M16G8-E-xxx-Q7-LE8	**PUR O.I.**	MAT9852303	(4G0.75+2x(2x0.34)C)C	11.5	10	06
Basic cable						
NEBM-M23G6-E-xxx-N-LE7	**PVC O.I.**	MAT9752301	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9752317	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9852301	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9852317	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
NEBM-M23G8-E-xxx-N-LE8	**PVC O.I.**	MAT9752300	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9752316	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9852300	(4G2.5+(4x0.5)C)C	13.5	10	06
	PUR M.I.	MAT9852316	(4G2.5+(4x0.5)C)C	14.5	7.5	07
Basic cable						
NEBM-M40G8-E-xxx-N-LE7	**PVC O.I.**	MAT9752302	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9752318	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9852302	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9852318	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
Festo Control cables						
Basic cable						
KPWR-MC-1-SUB-9HC-xxx	**PVC M.I.**	MAT9712320	(3G1.5)C	9.0	7.5	18
	PUR M.I.	MAT9812320	(3G1.5)C	9.5	6.8	22
Festo Encoder cables						
Basic cable						
NEBM-M23G12-E-xxx-N-S1G9	**PVC**	MAT9742308	(3x(2x0.14)C+2x(0.5)C)C	9.5	10	08
	PUR O.I.	MAT9842308	(3x(2x0.14)C+2x(0.5)C)C	9.5	10	09
	PUR M.I.	MAT9842324	(3x(2x0.14)C+2x(0.5)C)C	10.5	7.5	10
	TPE H*	MAT9942308	(3x(2x0.14)C+2x(0.5)C)C	10.0	7.5	11
Festo Data cables						
Basic cable						
KDI-MC-M8-SUB-9-xxx	**PVC**	MAT9722311	(3x0.25)C	5.0	10	31
	PUR	MAT9822311	(3x0.25)C	6.0	10	13

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x** = without earth core
* Cable qualities: **M.I** = with inner jacket, **O.I.** = without inner jacket, **F** = flame-retardant, **H** = halogen-free, **OIL** = oil-resistant

Harnessed drive cables | Festo PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Festo Data cables						
Basic cable						
KES-MC-1-SUB-9-xxx	**PVC**	MAT9722310	(14x0.14)C	7.5	10	31
	PUR	MAT9822310	(14x0.14)C	8.0	10	13
Basic cable						
NEBM-M12G8-E-xxx-N-S1G15	**PVC**	MAT9722305	(4x(2x0.25))C	8.0	7.5	14
	PUR M.I.	MAT9822321	(4x(2x0.25))C	9.0	10	15
	PUR	MAT9822305	(4x(2x0.25))C	7.5	7.5	26
	TPE H*	MAT9922305	(4x(2x0.25))C	8.5	6.8	16
Basic cable						
NEBM-M12G8-E-xxx-S1G9	**PVC**	MAT9722306	(4x(2x0.25))C	8.0	7.5	14
	PUR M.I.	MAT9822322	(4x(2x0.25))C	9.0	10	15
	PUR	MAT9822306	(4x(2x0.25))C	7.5	7.5	26
	TPE H*	MAT9922306	(4x(2x0.25))C	8.5	6.8	16
Basic cable						
NEBM-M12W8-E-xxx-N-S1G15	**PVC**	MAT9722307	(4x(2x0.25))C	8.0	7.5	14
	PUR M.I.	MAT9822323	(4x(2x0.25))C	9.0	10	15
	PUR	MAT9822307	(4x(2x0.25))C	7.5	7.5	26
	TPE H*	MAT9922307	(4x(2x0.25))C	8.5	6.8	16
Basic cable						
NEBM-S1G15-E-xxx-LE6	**PVC**	MAT9722309	(4x(2x0.5))C	9.5	7.5	14
	PUR M.I.	MAT9822325	(4x(2x0.5))C	11.0	10	15
	PUR	MAT9822309	(4x(2x0.5))C	9.5	7.5	26
	TPE H*	MAT9922309	(4x(2x0.5))C	9.5	6.8	16
Basic cable						
NEBM-S1G9-E-xxx-LE6	**PVC**	MAT9722313	(7x0.34)C	7.5	10	31
	PUR	MAT9822313	(7x0.34)C	8.0	10	13

Harnessed drive cables | Festo
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Festo Bus cables						
Basic cable						
FBA-CO-SUB-9-M12	**PVC OIL**	MAT9732312	(4x0.5)C	8.5	12.5	29
	PUR	MAT9832312	(4x0.5)C	8.5	12.5	30
	TPE	MAT9932312	(4x0.5)C	8.5	10	12

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Heidenhain
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Heidenhain Servo cables						
Linking cable						
352 960-xx	**PVC O.I.**	MAT94907005	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9761001	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT93907005	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9861001	(4G1.5+(2x1.5)C)C	13.0	7.5	07
352 962-xx	**PVC O.I.**	MAT94907008	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9761003	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT93907008	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9861003	(4G1.5+(2x1.5)C)C	13.0	7.5	07
352 963-xx	**PVC O.I.**	MAT94907006	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9761002	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT93907006	(4G4.0+(2x1.5)C)C	15.0	10	06
	PUR M.I.	MAT9861002	(4G4.0+(2x1.5)C)C	16.0	7.5	07
Heidenhain Adapter cables						
Basic cable						
298 401-xx	**PVC**	MAT9741006	(4x(2x0.14)+4x0.5)C	8.0	10	08
	PUR O.I.	MAT9841008	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT9841007	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT9941021	(4x(2x0.14)+4x0.5)C	9.0	7.5	11
Basic cable						
333 164-xx	**PVC**	MAT9741008	(4x(2x0.14)+4x0.5)C	8.0	10	08
	PUR O.I.	MAT9841009	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT9841004	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT9941019	(4x(2x0.14)+4x0.5)C	9.0	7.5	11
Basic cable						
368 330-xx	**PVC**	MAT9741010	((4x0.14)+2x(2x0.34))C	7.0	10	08
	PUR O.I.	MAT9841006	((4x0.14)+2x(2x0.34))C	7.0	10	09
Basic cable						
524 599-xx	**PVC**	MAT9741007	(4x(2x0.14)+4x0.5)C	8.0	10	08
	PUR O.I.	MAT9841003	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT9841002	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT9941018	(4x(2x0.14)+4x0.5)C	9.0	7.5	11

Harnessed drive cables | Heidenhain PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Heidenhain Adapter cables						
Basic cable						
534 855-xx	**PVC**	MAT9741009	(4x(2x0.14)+(4x0.14)C+4x1.0)C	10.0	10	08
	PUR M.I.	MAT9841005	(4x(2x0.14)+(4x0.14)C+4x1.0)C	11.0	7.5	10
	TPE H*	MAT9941020	(4x(2x0.14)+(4x0.14)C+4x1.0)C	11.0	7.5	11
Basic cable						
605 424-xx	**PVC**	MAT9741000	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	10.0	10	08
	PUR O.I.	MAT9841001	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	10.0	10	09
	PUR M.I.	MAT9841000	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	10
	TPE H*	MAT9941000	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	11
Linking cable						
289 440-xx	**PVC**	MAT9741002	(4x(2x0.14)+(4x0.14)C+4x1.0)C	10.0	10	08
	PUR M.I.	MAT94901005	(4x(2x0.14)+(4x0.14)C+4x1.0)C	11.0	7.5	10
	TPE H*	MAT93901005	(4x(2x0.14)+(4x0.14)C+4x1.0)C	11.0	7.5	11
298 399-xx	**PUR O.I.**	MAT9941011	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT94905001	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT93905001	(4x(2x0.14)+4x0.5)C	9.0	7.5	11
298 400-xx	**PUR O.I.**	MAT9941012	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT94906002	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT93906002	(4x(2x0.14)+4x0.5)C	9.0	7.5	11
309 783-xx	**PUR O.I.**	MAT9941008	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT94903003	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT93903003	(4x(2x0.14)+4x0.5)C	9.0	7.5	11
336 376-xx	**PVC**	MAT9741001	(4x(2x0.14)+(4x0.14)C+4x1.0)C	10.0	10	08
	PUR M.I.	MAT94901004	(4x(2x0.14)+(4x0.14)C+4x1.0)C	11.0	7.5	10
	TPE H*	MAT93901004	(4x(2x0.14)+(4x0.14)C+4x1.0)C	11.0	7.5	11
604 419-xx	**PUR O.I.**	MAT9941003	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT94901003	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT93901003	(4x(2x0.14)+4x0.5)C	9.0	7.5	11
Linking cable						
298 402-xx	**PUR O.I.**	MAT9941016	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT94909001	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT93909001	(4x(2x0.14)+4x0.5)C	9.0	7.5	11

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x** = without earth core
* Cable qualities: **M.I** = with inner jacket, **O.I.** = without inner jacket, **F** = flame-retardant, **H** = halogen-free, **OIL** = oil-resistant

Harnessed drive cables | Heidenhain PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Heidenhain Adapter cables						
Linking cable						
309 738-xx	**PUR O.I.**	MAT9941007	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT94903001	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT93903001	(4x(2x0.14)+4x0.5)C	9.0	7.5	11
Linking cable						
309 774-xx	**PUR M.I.**	MAT94906001	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT93906001	(4x(2x0.14)+4x0.5)C	9.0	7.5	11
Linking cable						
368 172-xx	**PVC**	MAT9741003	(3x(2x0.14)C+2x(0.5)C)C	9.5	10	08
	PUR M.I.	MAT94903002	(3x(2x0.14)C+2x(0.5)C)C	10.5	7.5	10
	TPE H*	MAT93903002	(4x(2x0.14)+(4x0.14)C+4x1.0)C	11.0	7.5	11
Linking cable						
309 777-xx	**PUR O.I.**	MAT9941013	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT94907001	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT93907001	(4x(2x0.14)+4x0.5)C	9.0	7.5	11
309 778-xx	**PUR O.I.**	MAT9941014	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	10.5	10	09
	PUR M.I.	MAT94907002	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	10
	TPE H*	MAT93907002	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	11
533 627-xx	**PUR O.I.**	MAT9941004	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT94901006	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT93901006	(4x(2x0.14)+4x0.5)C	9.0	7.5	11
Linking cable						
310 193-xx	**PUR M.I.**	MAT94907003	(3x(2x0.14)C+(2x0.5)C)C	11.0	7.5	10
	TPE H*	MAT93907003	(3x(2x0.14)C+(2x0.5)C)C	10.5	7.5	11
Linking cable						
310 197-xx	**PUR M.I.**	MAT94902001	(3x(2x0.14)C+(2x0.5)C)C	11.0	7.5	10
	TPE H*	MAT93902001	(3x(2x0.14)C+(2x0.5)C)C	10.5	7.5	11

Harnessed drive cables | Heidenhain
PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Heidenhain Adapter cables						
Linking cable						
310 199-xx	**PUR O.I.**	MAT9941006	(4x(2x0.14)+4x0.5)C	8.5	10	09
	PUR M.I.	MAT94902003	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT93902003	(4x(2x0.14)+4x0.5)C	9.0	7.5	11
Linking cable						
323 897-xx	**PUR O.I.**	MAT9941015	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	10.5	10	09
	PUR M.I.	MAT94907004	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	10
	TPE H*	MAT93907004	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	11
Linking cable						
324 544-xx	**PUR O.I.**	MAT9941005	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	10.5	10	09
	PUR M.I.	MAT94902002	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	10
	TPE H*	MAT93902002	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	11
Linking cable						
332 115-xx	**PUR O.I.**	MAT9941001	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	10.5	10	09
	PUR M.I.	MAT94901001	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	10
	TPE H*	MAT93901001	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	11
Linking cable						
335 077-xx	**PUR M.I.**	MAT94908001	(4x(2x0.14)+4x0.5)C	9.5	7.5	10
	TPE H*	MAT93908001	(4x(2x0.14)+4x0.5)C	9.0	7.5	11
Linking cable						
354 411-xx	**PUR O.I.**	MAT9941009	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	10.5	10	09
	PUR M.I.	MAT94904001	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	10
	TPE H*	MAT93904001	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	11
355 398-xx	**PUR O.I.**	MAT9941010	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	10.5	10	09
	PUR M.I.	MAT94904002	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	10
	TPE H*	MAT93904002	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	11

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Heidenhain
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Heidenhain Adapter cables						
Linking cable						
360 472-xx	**PUR O.I.**	MAT9941002	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	10.5	10	09
	PUR M.I.	MAT94901002	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	10
	TPE H*	MAT93901002	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	11
Linking cable						
309 779-xx	**PUR O.I.**	MAT99411017	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	10.5	10	09
	PUR M.I.	MAT94907007	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	10
	TPE H*	MAT93907007	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	11
Linking cable						
309 780-xx	**PVC**	MAT9741004	(3x(2x0.14)C+2x(0.5)C)C	9.5	10	08
	PUR M.I.	MAT94909002	(3x(2x0.14)C+2x(0.5)C)C	10.5	7.5	10
	TPE H*	MAT93909002	(3x(2x0.14)C+2x(0.5)C)C	10.0	7.5	11
Linking cable						
354 770-xx	**TPE**	MAT94910001	((2xAWG28)+2xAWG20)C	5.5	12.5	12
	TPE	MAT94910002	((2xAWG24)+2xAWG20)C	6.5	12.5	12

Harnessed drive cables | Jetter
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Jetter Motor cables						
Basic cable						
Kabel Nr. 201	**PVC M.I.**	MAT9761805	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9861806	(4G4.0)C	12.5	10	06
	PUR M.I.	MAT9851807	(4G4.0+(2x1.5)C)C	16.0	7.5	07
	TPE F	MAT9961808	(4G4.0)C	13.5	7.5	02
Kabel Nr. 203	**PVC M.I.**	MAT9761809	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9861810	(4G4.0)C	12.5	10	06
	PUR M.I.	MAT9851811	(4G4.0+(2x1.5)C)C	16.0	7.5	07
	TPE F	MAT9961812	(4G4.0)C	13.5	7.5	02
Kabel Nr. 26.1	**PVC M.I.**	MAT9761801	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861802	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT9861803	(4G1.5)C	10.5	7.5	07
	TPE F	MAT9961804	(4G1.5)C	10.0	7.5	02
Jetter Servo cables						
Basic cable						
Kabel Nr. 202	**PVC M.I.**	MAT9751806	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9861807	(4G4.0+(2x1.5)C)C	15.0	10	06
	PUR M.I.	MAT9851808	(4G4.0+(2x1.5)C)C	16.0	7.5	07
Kabel Nr. 204	**PVC M.I.**	MAT9751810	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.	MAT9861811	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.	MAT9851812	(4G6.0+(2x1.5)C)C	18.0	7.5	07
Basic cable						
Kabel Nr. 24.1	**PVC M.I.**	MAT9751802	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851803	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9851804	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Jetter Resolver cables						
Basic cable						
Kabel Nr. 23	**PVC**	MAT9741801	(3x(2x0.14)C+2x(0.5)C)C	9.5	10	08
	PUR M.I.	MAT9841802	(3x(2x0.14)C+(2x0.5)C)C	11.0	7.5	10
	TPE H*	MAT9941803	(3x(2x0.14)C+(2x0.5)C)C	10.5	7.5	11
Kabel Nr. 423	**PVC**	MAT9741804	(3x(2x0.14)C+2x(0.5)C)C	9.5	10	08
	PUR M.I.	MAT9841805	(3x(2x0.14)C+(2x0.5)C)C	11.0	7.5	10
	TPE H*	MAT9941806	(3x(2x0.14)C+(2x0.5)C)C	10.5	7.5	11

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Jetter
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Jetter Resolver cables						
Basic cable						
Kabel Nr. 523	**PVC**	MAT9741807	(5x(2x0.25))C	8.5	7.5	14
	PUR M.I.	MAT9841808	(5x(2x0.25))C	9.5	10	15
	TPE H*	MAT9941809	(5x(2x0.25))C	9.0	6.8	16
Kabel Nr. 723	**PVC**	MAT9741810	(5x(2x0.25))C	8.5	7.5	14
	PUR M.I.	MAT9841811	(5x(2x0.25))C	9.5	10	15
	TPE H*	MAT9941812	(5x(2x0.25))C	9.0	6.8	16

Harnessed drive cables | Kollmorgen/Danaher Motion PVC/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Kollmorgen/Danaher Motion Motor cables						
Basic cable						
88959 (5 m)	**TPE H***	MAT9960626	(4G2.5)C	11.5	7.5	03
88960 (10 m)	**TPE H***	MAT9960627	(4G2.5)C	11.5	7.5	03
88962 (15 m)	**TPE H***	MAT9960628	(4G2.5)C	11.5	7.5	03
88964 (20 m)	**TPE H***	MAT9960629	(4G2.5)C	11.5	7.5	03
88966 (25 m)	**TPE H***	MAT9960630	(4G2.5)C	11.5	7.5	03
89918 (5 m)	**PVC M.I.**	MAT9340068	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440068	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960621	(4G1.5)C	10.0	7.5	03
89952 (10 m)	**PVC M.I.**	MAT9340069	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440069	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960622	(4G1.5)C	10.0	7.5	03
89953 (15 m)	**PVC M.I.**	MAT9340070	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440070	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960623	(4G1.5)C	10.0	7.5	03
89954 (20 m)	**PVC M.I.**	MAT9340071	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440071	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960624	(4G1.5)C	10.0	7.5	03
89956 (25 m)	**PVC M.I.**	MAT9340072	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440072	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960625	(4G1.5)C	10.0	7.5	03
89959 (5 m)	**PVC M.I.**	MAT9340004	(4G2.5)C	12.0	7.5	01
	TPE F	MAT9440004	(4G2.5)C	11.5	7.5	02
89960 (10 m)	**PVC M.I.**	MAT9340073	(4G2.5)C	12.0	7.5	01
	TPE F	MAT9440073	(4G2.5)C	11.5	7.5	02
89962 (15 m)	**PVC M.I.**	MAT9340074	(4G2.5)C	12.0	7.5	01
	TPE F	MAT9440074	(4G2.5)C	11.5	7.5	02
89964 (20 m)	**PVC M.I.**	MAT9340075	(4G2.5)C	12.0	7.5	01
	TPE F	MAT9440075	(4G2.5)C	11.5	7.5	02
89966 (25 m)	**PVC M.I.**	MAT9340076	(4G2.5)C	12.0	7.5	01
	TPE F	MAT9440076	(4G2.5)C	11.5	7.5	02
90083 (5 m)	**PVC M.I.**	MAT9340063	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440063	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960616	(4G1.5)C	10.0	7.5	03
90084 (10 m)	**PVC M.I.**	MAT9340064	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440064	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960617	(4G1.5)C	10.0	7.5	03
90085 (15 m)	**PVC M.I.**	MAT9340065	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440065	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960618	(4G1.5)C	10.0	7.5	03

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Kollmorgen/Danaher Motion PVC/TPE

Kollmorgen/ Danaher Motion

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Kollmorgen/Danaher Motion Motor cables						
Basic cable						
90086 (20 m)	**PVC M.I.**	MAT9340066	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440066	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960619	(4G1.5)C	10.0	7.5	03
90087 (25 m)	**PVC M.I.**	MAT9340067	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440067	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960620	(4G1.5)C	10.0	7.5	03
Basic cable						
102575 (5 m)	**PVC M.I.**	MAT9340058	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440058	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960611	(4G1.5)C	10.0	7.5	03
102576 (10 m)	**PVC M.I.**	MAT9340059	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440059	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960612	(4G1.5)C	10.0	7.5	03
102806 (15 m)	**PVC M.I.**	MAT9340060	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440060	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960613	(4G1.5)C	10.0	7.5	03
102807 (20 m)	**PVC M.I.**	MAT9340061	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440061	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960614	(4G1.5)C	10.0	7.5	03
102808 (25 m)	**PVC M.I.**	MAT9340062	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440062	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960615	(4G1.5)C	10.0	7.5	03
Basic cable						
107473 (5 m)	**PVC M.I.**	MAT9340053	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440053	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960606	(4G1.5)C	10.0	7.5	03
107474 (10 m)	**PVC M.I.**	MAT9340054	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440054	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960607	(4G1.5)C	10.0	7.5	03
107475 (15 m)	**PVC M.I.**	MAT9340055	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440055	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960608	(4G1.5)C	10.0	7.5	03

Harnessed drive cables | Kollmorgen/Danaher Motion PVC/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Kollmorgen/Danaher Motion Motor cables						
Basic cable						
107476 (20 m)	**PVC M.I.**	MAT9340056	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440056	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960609	(4G1.5)C	10.0	7.5	03
107477 (25 m)	**PVC M.I.**	MAT9340057	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440057	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960610	(4G1.5)C	10.0	7.5	03
Basic cable						
107485 (5 m)	**PVC M.I.**	MAT9340002	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440002	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960601	(4G1.5)C	10.0	7.5	03
107486 (10 m)	**PVC M.I.**	MAT9340049	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440049	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960602	(4G1.5)C	10.0	7.5	03
107487 (15 m)	**PVC M.I.**	MAT9340050	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440050	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960603	(4G1.5)C	10.0	7.5	03
107488 (20 m)	**PVC M.I.**	MAT9340051	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440051	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960604	(4G1.5)C	10.0	7.5	03
107489 (25 m)	**PVC M.I.**	MAT9340052	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440052	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960605	(4G1.5)C	10.0	7.5	03
Basic cable						
200456 (5 m)	**PVC M.I.**	MAT9340077	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440077	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960631	(4G1.5)C	10.0	7.5	03
200457 (10 m)	**PVC M.I.**	MAT9340078	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440078	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960632	(4G1.5)C	10.0	7.5	03
200458 (15 m)	**PVC M.I.**	MAT9340079	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440079	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960633	(4G1.5)C	10.0	7.5	03

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Kollmorgen/Danaher Motion PVC/TPE

Kollmorgen/ Danaher Motion

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Kollmorgen/Danaher Motion Motor cables						
Basic cable						
200459 (20 m)	**PVC M.I.**	MAT9340080	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440080	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960634	(4G1.5)C	10.0	7.5	03
200460 (25 m)	**PVC M.I.**	MAT9340081	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9440081	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960635	(4G1.5)C	10.0	7.5	03
200468 (5 m)	**PVC M.I.**	MAT9340082	(4G2.5)C	12.0	7.5	01
	TPE F	MAT9440082	(4G2.5)C	11.5	7.5	02
	TPE H*	MAT9960636	(4G2.5)C	11.5	7.5	03
200469 (10 m)	**PVC M.I.**	MAT9340083	(4G2.5)C	12.0	7.5	01
	TPE F	MAT9440083	(4G2.5)C	11.5	7.5	02
	TPE H*	MAT9960637	(4G2.5)C	11.5	7.5	03
200470 (15 m)	**PVC M.I.**	MAT9340084	(4G2.5)C	12.0	7.5	01
	TPE F	MAT9440084	(4G2.5)C	11.5	7.5	02
	TPE H*	MAT9960638	(4G2.5)C	11.5	7.5	03
200471 (20 m)	**PVC M.I.**	MAT9340085	(4G2.5)C	12.0	7.5	01
	TPE F	MAT9440085	(4G2.5)C	11.5	7.5	02
	TPE H*	MAT9960639	(4G2.5)C	11.5	7.5	03
200472 (25 m)	**PVC M.I.**	MAT9340086	(4G2.5)C	12.0	7.5	01
	TPE F	MAT9440086	(4G2.5)C	11.5	7.5	02
	TPE H*	MAT9960640	(4G2.5)C	11.5	7.5	03
200618 (5 m)	**PVC M.I.**	MAT9340087	(4G4.0)C	13.5	7.5	01
	TPE F	MAT9440087	(4G4.0)C	13.5	7.5	02
	TPE H*	MAT9960641	(4G4.0)C	13.5	7.5	03
200619 (10 m)	**PVC M.I.**	MAT9340088	(4G4.0)C	13.5	7.5	01
	TPE F	MAT9440088	(4G4.0)C	13.5	7.5	02
	TPE H*	MAT9960642	(4G4.0)C	13.5	7.5	03
200620 (15 m)	**PVC M.I.**	MAT9340089	(4G4.0)C	13.5	7.5	01
	TPE F	MAT9440089	(4G4.0)C	13.5	7.5	02
	TPE H*	MAT9960643	(4G4.0)C	13.5	7.5	03
200621 (20 m)	**PVC M.I.**	MAT9340090	(4G4.0)C	13.5	7.5	01
	TPE F	MAT9440090	(4G4.0)C	13.5	7.5	02
	TPE H*	MAT9960644	(4G4.0)C	13.5	7.5	03
200622 (25 m)	**PVC M.I.**	MAT9340091	(4G4.0)C	13.5	7.5	01
	TPE F	MAT9440091	(4G4.0)C	13.5	7.5	02
	TPE H*	MAT9960645	(4G4.0)C	13.5	7.5	03

Harnessed drive cables | Kollmorgen/Danaher Motion PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Kollmorgen/Danaher Motion Servo cables						
Basic cable						
89957 (5 m)	**PVC O.I.**	MAT9750621	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340024	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850621	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440024	(4G1.5+(2x1.5)C)C	13.0	7.5	07
89961 (10 m)	**PVC O.I.**	MAT9750622	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340025	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850622	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440025	(4G1.5+(2x1.5)C)C	13.0	7.5	07
89963 (15 m)	**PVC O.I.**	MAT9750623	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340026	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850623	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440026	(4G1.5+(2x1.5)C)C	13.0	7.5	07
89965 (20 m)	**PVC O.I.**	MAT9750624	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340027	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850624	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440027	(4G1.5+(2x1.5)C)C	13.0	7.5	07
89967 (25 m)	**PVC O.I.**	MAT9750625	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340028	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850625	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440028	(4G1.5+(2x1.5)C)C	13.0	7.5	07
89968 (5 m)	**PVC O.I.**	MAT9750626	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9340029	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9850626	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9440029	(4G2.5+(2x1.5)C)C	14.5	7.5	07
89969 (25 m)	**PVC O.I.**	MAT9750630	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9340033	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9850630	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9440033	(4G2.5+(2x1.5)C)C	14.5	7.5	07
89970 (10 m)	**PVC O.I.**	MAT9750627	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9340030	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9850627	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9440030	(4G2.5+(2x1.5)C)C	14.5	7.5	07
89971 (15 m)	**PVC O.I.**	MAT9750628	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9340031	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9850628	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9440031	(4G2.5+(2x1.5)C)C	14.5	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Kollmorgen/Danaher Motion PVC/PUR

Kollmorgen/ Danaher Motion

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Kollmorgen/Danaher Motion Servo cables						
Basic cable						
89972 (20 m)	**PVC O.I.**	MAT9750629	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9340032	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9850629	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9440032	(4G2.5+(2x1.5)C)C	14.5	7.5	07
90088 (5 m)	**PVC O.I.**	MAT9750616	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340019	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850616	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440019	(4G1.5+(2x1.5)C)C	13.0	7.5	07
90089 (10 m)	**PVC O.I.**	MAT9750617	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340020	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850617	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440020	(4G1.5+(2x1.5)C)C	13.0	7.5	07
90090 (15 m)	**PVC O.I.**	MAT9750618	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340021	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850618	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440021	(4G1.5+(2x1.5)C)C	13.0	7.5	07
90091 (20 m)	**PVC O.I.**	MAT9750619	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340022	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850619	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440022	(4G1.5+(2x1.5)C)C	13.0	7.5	07
90092 (25 m)	**PVC O.I.**	MAT9750620	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340023	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850620	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440023	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable						
102579 (5 m)	**PVC O.I.**	MAT9750611	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340014	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850611	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440014	(4G1.5+(2x1.5)C)C	13.0	7.5	07
102580 (10 m)	**PVC O.I.**	MAT9750612	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340015	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850612	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440015	(4G1.5+(2x1.5)C)C	13.0	7.5	07

Harnessed drive cables | Kollmorgen/Danaher Motion PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Kollmorgen/Danaher Motion Servo cables						
Basic cable						
102809 (15 m)	**PVC O.I.**	MAT9750613	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340016	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850613	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440016	(4G1.5+(2x1.5)C)C	13.0	7.5	07
102810 (20 m)	**PVC O.I.**	MAT9750614	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340017	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850614	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440017	(4G1.5+(2x1.5)C)C	13.0	7.5	07
102811 (25 m)	**PVC O.I.**	MAT9750615	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340018	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850615	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440018	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable						
107479 (5 m)	**PVC O.I.**	MAT9750606	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340009	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850606	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440009	(4G1.5+(2x1.5)C)C	13.0	7.5	07
107480 (10 m)	**PVC O.I.**	MAT9750607	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340010	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850607	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440010	(4G1.5+(2x1.5)C)C	13.0	7.5	07
107481 (15 m)	**PVC O.I.**	MAT9750608	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340011	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850608	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440011	(4G1.5+(2x1.5)C)C	13.0	7.5	07
107482 (20 m)	**PVC O.I.**	MAT9750609	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340012	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850609	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440012	(4G1.5+(2x1.5)C)C	13.0	7.5	07
107483 (25 m)	**PVC O.I.**	MAT9750610	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340013	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850610	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440013	(4G1.5+(2x1.5)C)C	13.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Kollmorgen/Danaher Motion PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Kollmorgen/Danaher Motion Servo cables						
Basic cable						
107491 (5 m)	**PVC O.I.**	MAT9750601	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340001	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850601	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440001	(4G1.5+(2x1.5)C)C	13.0	7.5	07
107492 (10 m)	**PVC O.I.**	MAT9750602	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340005	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850602	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440005	(4G1.5+(2x1.5)C)C	13.0	7.5	07
107493 (15 m)	**PVC O.I.**	MAT9750603	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340006	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850603	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440006	(4G1.5+(2x1.5)C)C	13.0	7.5	07
107494 (20 m)	**PVC O.I.**	MAT9750604	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340007	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850604	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440007	(4G1.5+(2x1.5)C)C	13.0	7.5	07
107495 (25 m)	**PVC O.I.**	MAT9750605	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340008	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850605	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440008	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable						
200462 (5 m)	**PVC O.I.**	MAT9750631	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340034	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850631	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440034	(4G1.5+(2x1.5)C)C	13.0	7.5	07
200463 (10 m)	**PVC O.I.**	MAT9750632	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340035	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850632	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440035	(4G1.5+(2x1.5)C)C	13.0	7.5	07
200464 (15 m)	**PVC O.I.**	MAT9750633	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340036	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850633	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440036	(4G1.5+(2x1.5)C)C	13.0	7.5	07

Harnessed drive cables | Kollmorgen/Danaher Motion PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Kollmorgen/Danaher Motion Servo cables						
Basic cable						
200465 (20 m)	**PVC O.I.**	MAT9750634	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340037	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850634	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440037	(4G1.5+(2x1.5)C)C	13.0	7.5	07
200466 (25 m)	**PVC O.I.**	MAT9750635	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9340038	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9850635	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440038	(4G1.5+(2x1.5)C)C	13.0	7.5	07
200474 (5 m)	**PVC O.I.**	MAT9750636	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9340039	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9850636	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440039	(4G2.5+(2x1.5)C)C	14.5	7.5	07
200475 (10 m)	**PVC O.I.**	MAT9750637	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9340040	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9850637	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440040	(4G2.5+(2x1.5)C)C	14.5	7.5	07
200476 (15 m)	**PVC O.I.**	MAT9750638	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9340041	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9850638	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440041	(4G2.5+(2x1.5)C)C	14.5	7.5	07
200477 (20 m)	**PVC O.I.**	MAT9750639	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9340042	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9850639	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440042	(4G2.5+(2x1.5)C)C	14.5	7.5	07
200478 (25 m)	**PVC O.I.**	MAT9750640	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9340043	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9850640	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440043	(4G2.5+(2x1.5)C)C	14.5	7.5	07
200623 (5 m)	**PVC O.I.**	MAT9750641	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9340044	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9850641	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440044	(4G4.0+(2x1.5)C)C	16.0	7.5	07
200624 (10 m)	**PVC O.I.**	MAT9750642	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9340045	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9850642	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440045	(4G4.0+(2x1.5)C)C	16.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Kollmorgen/ Danaher Motion

Harnessed drive cables | Kollmorgen/Danaher Motion PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Kollmorgen/Danaher Motion Servo cables						
Basic cable						
200625 (15 m)	**PVC O.I.**	MAT9750643	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9340046	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9850643	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440046	(4G4.0+(2x1.5)C)C	16.0	7.5	07
200626 (20 m)	**PVC O.I.**	MAT9750644	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9340047	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9850644	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440047	(4G4.0+(2x1.5)C)C	16.0	7.5	07
200627 (25 m)	**PVC O.I.**	MAT9750645	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9340048	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9850645	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9440048	(4G4.0+(2x1.5)C)C	16.0	7.5	07
Kollmorgen/Danaher Motion Signal cables						
Basic cable						
107915 (5 m)	**PVC**	MAT9320004	(8x(2x0.25))C	10.5	7.5	14
	TPE H*	MAT9330004	(8x(2x0.34))C	13.0	6.8	16
107916 (10 m)	**PVC**	MAT9320017	(8x(2x0.25))C	10.5	7.5	14
	TPE H*	MAT9330017	(8x(2x0.34))C	13.0	6.8	16
107917 (15 m)	**PVC**	MAT9320018	(8x(2x0.25))C	10.5	7.5	14
	TPE H*	MAT9330018	(8x(2x0.34))C	13.0	6.8	16
107918 (20 m)	**PVC**	MAT9320019	(8x(2x0.25))C	10.5	7.5	14
	TPE H*	MAT9330019	(8x(2x0.34))C	13.0	6.8	16
107919 (25 m)	**PVC**	MAT9320020	(8x(2x0.25))C	10.5	7.5	14
	TPE H*	MAT9330020	(8x(2x0.34))C	13.0	6.8	16
84972 (5 m)	**PVC**	MAT9320001	(4x(2x0.25))C	8.0	7.5	14
	PUR M.I.	MAT9840601	(4x(2x0.25))C	9.0	10	15
	TPE H*	MAT9330001	(4x(2x0.25))C	8.5	6.8	16
84973 (10 m)	**PVC**	MAT9320009	(4x(2x0.25))C	8.0	7.5	14
	PUR M.I.	MAT9840602	(4x(2x0.25))C	9.0	10	15
	TPE H*	MAT9330009	(4x(2x0.25))C	8.5	6.8	16
84974 (15 m)	**PVC**	MAT9320010	(4x(2x0.25))C	8.0	7.5	14
	PUR M.I.	MAT9840603	(4x(2x0.25))C	9.0	10	15
	TPE H*	MAT9330010	(4x(2x0.25))C	8.5	6.8	16
84975 (20 m)	**PVC**	MAT9320011	(4x(2x0.25))C	8.0	7.5	14
	PUR M.I.	MAT9840604	(4x(2x0.25))C	9.0	10	15
	TPE H*	MAT9330011	(4x(2x0.25))C	8.5	6.8	16

Harnessed drive cables | Kollmorgen/Danaher Motion PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Kollmorgen/Danaher Motion Signal cables						
Basic cable						
87655 (25 m)	**PVC**	MAT9320012	(4x(2x0.25))C	8.0	7.5	14
	PUR M.I.	MAT9840605	(4x(2x0.25))C	9.0	10	15
	TPE H*	MAT9330012	(4x(2x0.25))C	8.5	6.8	16
90287 (5 m)	**PVC**	MAT9320002	(8x(2x0.25))C	10.5	7.5	14
	TPE H*	MAT9330002	(8x(2x0.34))C	13.0	6.8	16
91019 (10 m)	**PVC**	MAT9320013	(8x(2x0.25))C	10.5	7.5	14
	TPE H*	MAT9330013	(8x(2x0.34))C	13.0	6.8	16
91807 (20 m)	**PVC**	MAT9320015	(8x(2x0.25))C	10.5	7.5	14
	TPE H*	MAT9330015	(8x(2x0.34))C	13.0	6.8	16
91811 (15 m)	**PVC**	MAT9320014	(8x(2x0.25))C	10.5	7.5	14
	TPE H*	MAT9330014	(8x(2x0.34))C	13.0	6.8	16
92205 (25 m)	**PVC**	MAT9320016	(8x(2x0.25))C	10.5	7.5	14
	TPE H*	MAT9330016	(8x(2x0.34))C	13.0	6.8	16
Basic cable						
85034 (5 m)	**PVC**	MAT9320007	(6x(2x0.25))C	9.0	7.5	14
	PUR M.I.	MAT9840606	(6x(2x0.25))C	10.0	10	15
	TPE H*	MAT9330007	(6x(2x0.25))C	10.0	6.8	16
85035 (10 m)	**PVC**	MAT9320021	(6x(2x0.25))C	9.0	7.5	14
	PUR M.I.	MAT9840607	(6x(2x0.25))C	10.0	10	15
	TPE H*	MAT9330021	(6x(2x0.25))C	10.0	6.8	16
85036 (15 m)	**PVC**	MAT9320022	(6x(2x0.25))C	9.0	7.5	14
	PUR M.I.	MAT9840608	(6x(2x0.25))C	10.0	10	15
	TPE H*	MAT9330022	(6x(2x0.25))C	10.0	6.8	16
85037 (20 m)	**PVC**	MAT9320023	(6x(2x0.25))C	9.0	7.5	14
	PUR M.I.	MAT9840609	(6x(2x0.25))C	10.0	10	15
	TPE H*	MAT9330023	(6x(2x0.25))C	10.0	6.8	16
Basic cable						
85039 (5 m)	**PVC**	MAT9320008	(6x(2x0.25))C	9.0	7.5	14
	PUR M.I.	MAT9840610	(6x(2x0.25))C	10.0	10	15
	TPE H*	MAT9330008	(6x(2x0.25))C	10.0	6.8	16
85040 (10 m)	**PVC**	MAT9320024	(6x(2x0.25))C	9.0	7.5	14
	PUR M.I.	MAT9840611	(6x(2x0.25))C	10.0	10	15
	TPE H*	MAT9330024	(6x(2x0.25))C	10.0	6.8	16

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Kollmorgen/Danaher Motion PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Kollmorgen/Danaher Motion Signal cables						
Basic cable						
85041 (15 m)	**PVC**	MAT9320025	(6x(2x0.25))C	9.0	7.5	14
	PUR M.I.	MAT9840612	(6x(2x0.25))C	10.0	10	15
	TPE H*	MAT9330025	(6x(2x0.25))C	10.0	6.8	16
85042 (20 m)	**PVC**	MAT9320026	(6x(2x0.25))C	9.0	7.5	14
	PUR M.I.	MAT9840613	(6x(2x0.25))C	10.0	10	15
	TPE H*	MAT9330026	(6x(2x0.25))C	10.0	6.8	16

Harnessed drive cables | Lenze
PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Lenze Servo cables						
Basic cable						
EWLMxxxGMS-015C	**PVC O.I.**	MAT9751101	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9130001	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851101	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9120001	(4G1.5+(2x1.5)C)C	13.0	7.5	07
EWLMxxxGMS-025	**PVC O.I.**	MAT9751102	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9130002	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851102	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9120002	(4G2.5+(2x1.5)C)C	14.5	7.5	07
EWLMxxxGMS-040I	**PVC O.I.**	MAT9751130	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9751129	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9851130	(4G4.0+(2x1.5)C)C	15.0	10	06
	PUR M.I.	MAT9851129	(4G4.0+(2x1.5)C)C	16.0	7.5	07
EYP0010AxxxxA00P01	**PVC O.I.**	MAT9751116	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9130063	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851118	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9120063	(4G1.5+(2x1.5)C)C	13.0	7.5	07
EYP0010AxxxxM01A00	**PVC O.I.**	MAT9751107	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9130050	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851105	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9120050	(4G1.5+(2x1.5)C)C	13.0	7.5	07
EYP0011AxxxxA00P01	**PVC O.I.**	MAT9751117	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9130064	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851119	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9120064	(4G1.5+(2x1.5)C)C	13.0	7.5	07
EYP0011AxxxxM01A00	**PVC O.I.**	MAT9751108	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9130051	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851106	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9120051	(4G1.5+(2x1.5)C)C	13.0	7.5	07
EYP0012AxxxxA00P01	**PVC O.I.**	MAT9751118	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9130065	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851120	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9120065	(4G2.5+(2x1.5)C)C	14.5	7.5	07
EYP0012AxxxxA00P02	**PVC O.I.**	MAT9751113	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9130058	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851113	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9120058	(4G2.5+(2x1.5)C)C	14.5	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Lenze

Harnessed drive cables | Lenze
PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Lenze Servo cables						
Basic cable						
EYP0012AxxxxM01A00	**PVC O.I.**	MAT9751109	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9130052	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851107	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9120052	(4G2.5+(2x1.5)C)C	14.5	7.5	07
EYP0012AxxxxM02A00	**PVC O.I.**	MAT9751110	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9130053	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851108	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9120053	(4G2.5+(2x1.5)C)C	14.5	7.5	07
EYP0013AxxxxA00P02	**PVC O.I.**	MAT9751114	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9130059	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9851114	(4G4.0+(2x1.5)C)C	15.0	10	06
	PUR M.I.	MAT9120059	(4G4.0+(2x1.5)C)C	16.0	7.5	07
EYP0013AxxxxM02A00	**PVC O.I.**	MAT9751111	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9130054	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9851109	(4G4.0+(2x1.5)C)C	15.0	10	06
	PUR M.I.	MAT9120054	(4G4.0+(2x1.5)C)C	16.0	7.5	07
EYP0014AxxxxA00P03	**PVC O.I.**	MAT9751115	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9130060	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.	MAT9851115	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.	MAT9120060	(4G6.0+(2x1.5)C)C	18.0	7.5	07
EYP0014AxxxxM03A00	**PVC O.I.**	MAT9751112	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9130055	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PVC M.I.	MAT9851110	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR M.I.	MAT9120055	(4G6.0+(2x1.5)C)C	18.0	7.5	07
EYP0015AxxxxA00P03	**PVC M.I.**	MAT9130061	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT9851116	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT9120061	(4G10+(2x1.5)C)C	21.0	7.5	07
EYP0015AxxxxM03A00	**PVC M.I.**	MAT9130056	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT9851111	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT9120056	(4G10+(2x1.5)C)C	21.0	7.5	07
EYP0016AxxxxA00P03	**PVC M.I.**	MAT9130062	(4G16+(2x1.5)C)C	25.0	7.5	05
	PUR O.I.	MAT9851117	(4G16+(2x1.5)C)C	24.0	10	06
	PUR M.I.	MAT9120062	(4G16+(2x1.5)C)C	24.5	7.5	07
EYP0016AxxxxM03A00	**PVC M.I.**	MAT9130057	(4G16+(2x1.5)C)C	25.0	7.5	05
	PUR O.I.	MAT9851112	(4G16+(2x1.5)C)C	24.0	10	06
	PUR M.I.	MAT9120057	(4G16+(2x1.5)C)C	24.5	7.5	07

Harnessed drive cables | Lenze PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Lenze Servo cables						
Linking cable						
EWLMxxxZM-015C	**PVC O.I.**	MAT9751103	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9130006	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851103	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9120006	(4G1.5+(2x1.5)C)C	13.0	7.5	07
EWLMxxxZM-025	**PVC O.I.**	MAT9751104	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9130007	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851104	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9120007	(4G2.5+(2x1.5)C)C	14.5	7.5	07
EYP0010VxxxxM01P01	**PVC O.I.**	MAT9751122	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9130071	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851126	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9120071	(4G1.5+(2x1.5)C)C	13.0	7.5	07
EYP0011VxxxxM01P01	**PVC O.I.**	MAT9751123	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9130072	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851127	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9120072	(4G1.5+(2x1.5)C)C	13.0	7.5	07
EYP0012VxxxxM01P01	**PVC O.I.**	MAT9751124	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9130073	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9851128	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9120073	(4G2.5+(2x1.5)C)C	14.5	7.5	07
EYP0012VxxxxM02P02	**PVC O.I.**	MAT9751119	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9130066	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851121	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9120066	(4G2.5+(2x1.5)C)C	14.5	7.5	07
EYP0013VxxxxM02P02	**PVC O.I.**	MAT9751120	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9130067	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9851122	(4G4.0+(2x1.5)C)C	15.0	10	06
	PUR M.I.	MAT9120067	(4G4.0+(2x1.5)C)C	16.0	7.5	07
EYP0014VxxxxM03P03	**PVC O.I.**	MAT9751121	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9130068	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.	MAT9851123	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.	MAT9120068	(4G6.0+(2x1.5)C)C	18.0	7.5	07
EYP0015VxxxxM03P03	**PVC M.I.**	MAT9130069	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT9851124	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT9120069	(4G10+(2x1.5)C)C	21.0	7.5	07
EYP0016VxxxxM03P03	**PVC M.I.**	MAT9130070	(4G16+(2x1.5)C)C	25.0	7.5	05
	PUR O.I.	MAT9851125	(4G16+(2x1.5)C)C	24.0	10	06
	PUR M.I.	MAT9120070	(4G16+(2x1.5)C)C	24.5	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Lenze PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Lenze Fan cables						
Basic cable						
EWLLxxxGMS	**PVC**	MAT9761101	3G1.0	6.5	7.5	17
	PVC OIL	MAT9130031	3G1.0	6.5	6.8	19
	TPE H*	MAT9120031	3G1.0	6.0	5	23
	TPE F	MAT9961101	3G1.0	7.5	5	25
EYL002AxxxxL01A00	**PVC OIL**	MAT9130040	5G1.0	8.0	6.8	19
	TPE H*	MAT9120040	5G1.0	7.5	5	23
EYL002AxxxxL02A00	**PVC OIL**	MAT9130041	5G1.0	8.0	6.8	19
	TPE H*	MAT9120041	5G1.0	7.5	5	23
Linking cable						
EWLLxxxZM	**PVC**	MAT9761102	3G1.0	6.5	7.5	17
	PVC OIL	MAT9130032	3G1.0	6.5	6.8	19
	TPE H*	MAT9120032	3G1.0	6.0	5	23
	TPE F	MAT9961102	3G1.0	7.5	5	25
EYL002VxxxxL01J01	**PVC OIL**	MAT9130044	5G1.0	8.0	6.8	19
	TPE H*	MAT9120044	5G1.0	7.5	5	23
EYL002VxxxxL02J02	**PVC OIL**	MAT9130045	5G1.0	8.0	6.8	19
	TPE H*	MAT9120045	5G1.0	7.5	5	23
Extension cable						
EYL002VxxxxA00J01	**PVC OIL**	MAT9130042	5G1.0	8.0	6.8	19
	TPE H*	MAT9120042	5G1.0	7.5	5	23
EYL002VxxxxA00J02	**PVC OIL**	MAT9130043	5G1.0	8.0	6.8	19
	PUR	MAT9861110	5G1.0	8.0	6.8	21
	TPE H*	MAT9120043	5G1.0	7.5	5	23
	TPE F	MAT9961106	5G1.0	9.0	5	25
Lenze Decoder cables						
Linking cable						
EYD0017AxxxxW01S01	**PVC**	MAT9130100	3x(2x0.14)C+(3x0.14)C	8.0	10	08
	PUR M.I.	MAT9841107	3x(2x0.14)C+(3x0.14)C	8.0	7.5	10
	TPE H*	MAT9120100	3x(2x0.14)C+(3x0.14)C	8.0	7.5	11

Harnessed drive cables | Lenze
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Lenze Decoder cables						
Linking cable						
EYD0017AxxxxW01S02	**PVC**	MAT9130101	3x(2x0.14)C+(3x0.14)C	8.0	10	08
	PUR M.I.	MAT9841108	3x(2x0.14)C+(3x0.14)C	8.0	7.5	10
	TPE H*	MAT9120101	3x(2x0.14)C+(3x0.14)C	8.0	7.5	11
Linking cable						
EYD0017AxxxxW03S01	**PVC**	MAT9130102	3x(2x0.14)C+(3x0.14)C	8.0	10	08
	PUR M.I.	MAT9841109	3x(2x0.14)C+(3x0.14)C	8.0	7.5	10
	TPE H*	MAT9120102	3x(2x0.14)C+(3x0.14)C	8.0	7.5	11
Linking cable						
EYD0017AxxxxW03S02	**PVC**	MAT9130103	3x(2x0.14)C+(3x0.14)C	8.0	10	08
	PUR M.I.	MAT9841110	3x(2x0.14)C+(3x0.14)C	8.0	7.5	10
	TPE H*	MAT9120103	3x(2x0.14)C+(3x0.14)C	8.0	7.5	11
Lenze Encoder cables						
Basic cable						
EWLExxxGM-T	**PVC**	MAT9130026	(4x(2x0.25)+2x1.0)C	8.5	10	08
	PUR M.I.	MAT9841104	(4x(2x0.25)+2x1.0)C	9.5	7.5	10
	TPE H*	MAT9120026	(4x(2x0.25)+2x1.0)C	9.5	7.5	11
Linking cable						
EWLExxxZMST	**PVC**	MAT9130027	(4x(2x0.25)+2x1.0)C	8.5	10	08
	PUR M.I.	MAT9841105	(4x(2x0.25)+2x1.0)C	9.5	7.5	10
	TPE H*	MAT9120027	(4x(2x0.25)+2x1.0)C	9.5	7.5	11
Terminal box connection cable						
EWLExxxGX-T	**PVC**	MAT9130028	(4x(2x0.25)+2x1.0)C	8.5	10	08
	PUR M.I.	MAT9841106	(4x(2x0.25)+2x1.0)C	9.5	7.5	10
	TPE H*	MAT9120028	(4x(2x0.25)+2x1.0)C	9.5	7.5	11

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Lenze
PVC/PUR/TPE

Lenze

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Lenze Feedback cables						
Basic cable						
EYF0017AxxxxA00W02	**PUR M.I.**	MAT9121091	4x(2x0.14)C+2x(1.0)C	10.0	7.5	10
Basic cable						
EYF0018AxxxxA00S03	**PVC**	MAT9130095	4x(2x0.14)C+2x(1.0)C	9.5	10	08
	PUR M.I.	MAT9121095	4x(2x0.14)C+2x(1.0)C	10.0	7.5	10
	TPE H*	MAT9120095	4x(2x0.14)C+2x(1.0)C	10.0	7.5	11
Basic cable						
EYF0018AxxxxA00W02	**PVC**	MAT9130091	4x(2x0.14)C+2x(1.0)C	9.5	10	08
	TPE H*	MAT9120091	4x(2x0.14)C+2x(1.0)C	10.0	7.5	11
Basic cable						
EYF0018AxxxxF02S03	**PVC**	MAT9130088	4x(2x0.14)C+2x(1.0)C	9.5	10	08
	TPE H*	MAT9120088	4x(2x0.14)C+2x(1.0)C	10.0	7.5	11
Basic cable						
EYF0018AxxxxF02W02	**PVC**	MAT9130087	4x(2x0.14)C+2x(1.0)C	9.5	10	08
	PUR M.I.	MAT9121087	4x(2x0.14)C+2x(1.0)C	10.0	7.5	10
	TPE H*	MAT9120087	4x(2x0.14)C+2x(1.0)C	10.0	7.5	11
Basic cable						
EYF0019AxxxxF02S03	**PUR M.I.**	MAT9121088	4x(2x0.14)C+2x(1.0)C	10.0	7.5	10
Basic cable						
EYF0020AxxxxA00S04	**PVC**	MAT9130092	3x(2x0.14)C+(3x0.14)C	8.0	10	08
	PUR M.I.	MAT9121092	3x(2x0.14)C+(3x0.14)C	8.0	7.5	10
	TPE H*	MAT9120092	3x(2x0.14)C+(3x0.14)C	8.0	7.5	11

Harnessed drive cables | Lenze PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Lenze Feedback cables						
Basic cable						
EYF0020AxxxxA00S05	**PVC**	MAT9130093	3x(2x0.14)C+(3x0.14)C	8.0	10	08
	PUR M.I.	MAT9121093	3x(2x0.14)C+(3x0.14)C	8.0	7.5	10
	TPE H*	MAT9120093	3x(2x0.14)C+(3x0.14)C	8.0	7.5	11
Basic cable						
EYF0020AxxxxF01S04	**PVC**	MAT9130089	3x(2x0.14)C+(3x0.14)C	8.0	10	08
	PUR M.I.	MAT9121089	3x(2x0.14)C+(3x0.14)C	8.0	7.5	10
	TPE H*	MAT9120089	3x(2x0.14)C+(3x0.14)C	8.0	7.5	11
Basic cable						
EYF0020AxxxxF01S05	**PVC**	MAT9130090	3x(2x0.14)C+(3x0.14)C	8.0	10	08
	PUR M.I.	MAT9121090	3x(2x0.14)C+(3x0.14)C	8.0	7.5	10
	TPE H*	MAT9120090	3x(2x0.14)C+(3x0.14)C	8.0	7.5	11
Basic cable						
EYF0021AxxxxA00S03	**PUR M.I.**	MAT9121094	3x(2x0.14)C+(4x0.14)C+2x(2x0.5)C	11.5	7.5	10
	TPE H*	MAT9120094	3x(2x0.14)C+(4x0.14)C+2x(2x0.5)C	11.5	7.5	11
Basic cable						
EYF0021AxxxxF03S03	**PUR M.I.**	MAT9121086	3x(2x0.14)C+(4x0.14)C+2x(2x0.5)C	11.5	7.5	10
	TPE H*	MAT9120086	3x(2x0.14)C+(4x0.14)C+2x(2x0.5)C	11.5	7.5	11
EYF0021AxxxxF07S03	**PUR M.I.**	MAT9841111	3x(2x0.14)C+(4x0.14)C+2x(2x0.5)C	11.5	7.5	10
	TPE H*	MAT9941111	3x(2x0.14)C+(4x0.14)C+2x(2x0.5)C	11.5	7.5	11
Linking cable						
EYF0019VxxxxF02G02	**PVC**	MAT9130084	4x(2x0.14)C+2x(1.0)C	9.5	10	08
	PUR M.I.	MAT9121084	4x(2x0.14)C+2x(1.0)C	10.0	7.5	10
	TPE H*	MAT9120084	4x(2x0.14)C+2x(1.0)C	10.0	7.5	11
EYF0019VxxxxF06G07	**PUR M.I.**	MAT9121096	4x(2x0.14)C+2x(1.0)C	10.0	7.5	10
	TPE H*	MAT9120096	4x(2x0.14)C+2x(1.0)C	10.0	7.5	11
EYF0020VxxxxF01G01	**PVC**	MAT9130083	3x(2x0.14)C+(3x0.14)C	8.0	10	08
	PUR M.I.	MAT9121083	3x(2x0.14)C+(3x0.14)C	8.0	7.5	10
	TPE H*	MAT9120083	3x(2x0.14)C+(3x0.14)C	8.0	7.5	11

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Lenze PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Lenze Feedback cables						
Linking cable						
EYF0022VxxxxF03G03	**PUR M.I.**	MAT9121085	3x(2x0.14)C+(4x0.14)C+2x(2x0.5)C	11.5	7.5	10
	TPE H*	MAT9120085	3x(2x0.14)C+(4x0.14)C+2x(2x0.5)C	11.5	7.5	11
Extension cable						
EYF0019VxxxxA00G02	**PVC**	MAT9130081	4x(2x0.14)C+2x(1.0)C	9.5	10	08
	PUR M.I.	MAT9121081	4x(2x0.14)C+2x(1.0)C	10.0	7.5	10
	TPE H*	MAT9120081	4x(2x0.14)C+2x(1.0)C	10.0	7.5	11
EYF0020VxxxxA00G01	**PVC**	MAT9130080	3x(2x0.14)C+(3x0.14)C	8.0	10	08
	PUR M.I.	MAT9121080	3x(2x0.14)C+(3x0.14)C	8.0	7.5	10
	TPE H*	MAT9120080	3x(2x0.14)C+(3x0.14)C	8.0	7.5	11
EYF0022VxxxxA00G03	**PUR M.I.**	MAT9121082	3x(2x0.14)C+(4x0.14)C+2x(2x0.5)C	11.5	7.5	10
	TPE H*	MAT9120082	3x(2x0.14)C+(4x0.14)C+2x(2x0.5)C	11.5	7.5	11
Lenze Resolver cables						
Basic cable						
EWLRxxxGM-T	**PVC**	MAT9130021	(3x(2x0.14)C+2x(0.5)C)C	9.5	10	08
	PUR M.I.	MAT9841101	(3x(2x0.14)C+(2x0.5)C)C	11.0	7.5	10
	TPE H*	MAT9120021	(3x(2x0.14)C+(2x0.5)C)C	10.5	7.5	11
Linking cable						
EWLRxxxZMST	**PVC**	MAT9130022	(3x(2x0.14)C+2x(0.5)C)C	9.5	10	08
	PUR M.I.	MAT9841102	(3x(2x0.14)C+(2x0.5)C)C	11.0	7.5	10
	TPE H*	MAT9120022	(3x(2x0.14)C+(2x0.5)C)C	10.5	7.5	11
Terminal box connection cable						
EWLRxxxGX-T	**PVC**	MAT9130023	(3x(2x0.14)C+2x(0.5)C)C	9.5	10	08
	PUR M.I.	MAT9841103	(3x(2x0.14)C+(2x0.5)C)C	11.0	7.5	10
	TPE H*	MAT9120023	(3x(2x0.14)C+(2x0.5)C)C	10.5	7.5	11

Harnessed drive cables | LinMot
PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
LinMot Motor cables						
Basic cable						
P10-70x…-D01/D02-MS	**PVC M.I.**	MAT9762401	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9862401	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT9862402	(4G1.5)C	10.5	7.5	07
LinMot Servo cables						
Basic cable						
P10-70x…-D03-MS	**PVC O.I.**	MAT9752401	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9752402	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9852402	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9852401	(4G1.5+(2x1.5)C)C	13.0	7.5	07
LinMot Encoder cables						
Basic cable						
P10-70x…D0x-SMC20		MAT9842401				
P10-70x…D0x-SME20		MAT9842402				

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | LTi DRiVES
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
LTi DRiVES Servo cables						
Basic cable						
KM3-KSxxx	**PVC O.I.**	MAT9020004	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9020003	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9020002	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9020001	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
KM3-KSxxx-24A	**PVC O.I.**	MAT9020014	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9020013	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9020012	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9020011	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
Basic cable						
KM3-KSxxx-63A	**PVC M.I.**	MAT9020023	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9020022	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9020021	(4G10+2x(2x1.5)C)C	23.5	7.5	07
Extension cable						
KM3-KSxxx (ext.)	**PVC O.I.**	MAT9022004	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PUR O.I.	MAT9022002	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9022001	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
	PVC M.I.	MAT9022003	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
KM3-KSxxx-24A (ext.)	**PVC O.I.**	MAT9022014	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9022013	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9022012	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9022011	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
Extension cable						
KM3-KSxxx-63A (ext.)	**PVC M.I.**	MAT9022023	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR M.I.	MAT9022021	(4G10+2x(2x1.5)C)C	23.5	7.5	07
	PUR O.I.	MAT9022022	(4G10+2x(2x1.5)C)C	22.5	10	06
LTi DRiVES Encoder cables						
Basic cable						
KGH2-KSxxx	**PVC**	MAT9021004	(4x(2x0.25)+2x1.0)C	8.5	10	08
	TPE H*	MAT9021001	(4x(2x0.25)+2x1.0)C	9.5	7.5	11
KGH3-KSxxx	**PVC**	MAT9021014	(4x(2x0.25)+2x1.0)C	8.5	10	08
	TPE H*	MAT9021011	(4x(2x0.25)+2x1.0)C	9.5	7.5	11

Harnessed drive cables | LTi DRiVES
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
LTi DRiVES Encoder cables						
Basic cable						
KGS2-KSxxx	**PUR O.I.**	MAT9021023	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	10.5	10	09
	PUR M.I.	MAT9021022	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	10
	TPE H*	MAT9021021	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	11
KRY2-CDF-KSxxx	**PVC**	MAT9021034	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9021032	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9021031	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
KRY2-KSxxx	**PVC**	MAT9021044	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9021042	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9021041	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
Extension cable						
KGH2-KSxxx (ext.)	**PVC**	MAT9023004	(4x(2x0.25)+2x1.0)C	8.5	10	08
	TPE H*	MAT9023001	(4x(2x0.25)+2x1.0)C	9.5	7.5	11
KGH3-KSxxx (ext.)	**PVC**	MAT9023014	(4x(2x0.25)+2x1.0)C	8.5	10	08
	TPE H*	MAT9023011	(4x(2x0.25)+2x1.0)C	9.5	7.5	11
KGS2-KSxxx (ext.)	**PUR O.I.**	MAT9023023	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	10.5	10	09
	PUR M.I.	MAT9023022	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	10
	TPE H*	MAT9023021	(2x(2x(2x0.14))+(4x0.14)C+(4x0.5))C	11.5	7.5	11
KRY2-CDF-KSxxx (ext.)	**PVC**	MAT9023034	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9023032	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9023031	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
KRY2-KSxxx (ext.)	**PVC**	MAT9023044	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9023042	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9023041	(4x(2x0.25)+2x0.5)C	9.5	7.5	11

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Mitsubishi Electric
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Mitsubishi Electric Motor cables						
Basic cable						
MR-BKS1CBL-xxx-A1-H	**PVC OIL**	MAT9712002	3G0.75	6.5	6.8	19
	PUR	MAT9812002	3G0.75	6.5	6.8	21
MR-BKS1CBL-xxx-A2-H	**PVC OIL**	MAT9712004	3G0.75	6.5	6.8	19
	PUR	MAT9812004	3G0.75	6.5	6.8	21
Basic cable						
MR-PWS1CBL-xxx-A1-H	**PVC OIL**	MAT9712001	4G0.75	7.0	6.8	19
	PUR	MAT9812001	4G0.75	7.0	6.8	21
MR-PWS1CBL-xxx-A2-H	**PVC OIL**	MAT9712003	4G0.75	7.0	6.8	19
	PUR	MAT9812003	4G0.75	7.0	6.8	21
Basic cable						
PCS015N-xxx-0-0C4	**PVC M.I.**	MAT9752002	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9852002	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT9952002	(4G1.5)C	10.5	7.5	07
PCS025N-xxx-0-0C5	**PVC M.I.**	MAT9752003	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9852003	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9952003	(4G2.5)C	12.5	7.5	07
PCS025N-xxx-C4	**PVC O.I.**	MAT9752001	(4G2.5+(2x1.5)C)C	14.0	10	04
	PUR O.I.	MAT9852001	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9952001	(4G2.5)C	12.5	7.5	07
PCS040N-xxx-0-0C4	**PVC M.I.**	MAT9752004	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9852004	(4G4.0)C	12.5	10	06
	TPE F	MAT9952004	(4G4.0)C	13.5	7.5	02
PCS040N-xxx-0-0C5	**PVC M.I.**	MAT9752005	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9852005	(4G4.0)C	12.5	10	06
	TPE F	MAT9952005	(4G4.0)C	13.5	7.5	02
PCS060N-xxx-0-0C5	**PVC M.I.**	MAT9752006	(4G6.0)C	16.0	7.5	01
	PUR O.I.	MAT9852006	(4G6.0)C	14.5	10	06
	TPE F	MAT9952006	(4G6.0)C	16.0	7.5	02
Mitsubishi Electric Encoder cables						
Basic cable						
MR-J3ENCBL-xxx-A1-H	**PVC**	MAT9722002	(3x(2x0.25))C	7.0	7.5	14
	PUR	MAT9822002	(3x(2x0.25))C	7.0	7.5	26

Harnessed drive cables | Mitsubishi Electric
PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Mitsubishi Electric Encoder cables						
Basic cable						
MR-J3ENCBL-xxx-A2-H	**PVC**	MAT9722003	(3x(2x0.25))C	7.0	7.5	14
	PUR	MAT9822003	(3x(2x0.25))C	7.0	7.5	26
Basic cable						
MR-J3ENSCBL-xxx-H	**PVC**	MAT9722001	(3x(2x0.25))C	7.0	7.5	14
	PUR	MAT9822001	(3x(2x0.25))C	7.0	7.5	26

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Nidec/Control Techniques
PVC/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Nidec/Control Techniques Motor cables						
Basic cable						
PS B A A A XXX	**PVC M.I.**	MAT9560002	(4G2.5)C	12.0	7.5	01
	TPE F	MAT9540002	(4G2.5)C	11.5	7.5	02
	TPE H*	MAT9960502	(4G2.5)C	11.5	7.5	03
PS B A F A XXX	**PVC M.I.**	MAT9560005	(4G2.5)C	12.0	7.5	01
	TPE F	MAT9540005	(4G2.5)C	11.5	7.5	02
	TPE H*	MAT9960505	(4G2.5)C	11.5	7.5	03
PS B B A A XXX	**PVC M.I.**	MAT9560003	(4G4.0)C	13.5	7.5	01
	TPE F	MAT9540003	(4G4.0)C	13.5	7.5	02
	TPE H*	MAT9960503	(4G4.0)C	13.5	7.5	03
PS B B F A XXX	**PVC M.I.**	MAT9560006	(4G4.0)C	13.5	7.5	01
	TPE F	MAT9540006	(4G4.0)C	13.5	7.5	02
	TPE H*	MAT9960506	(4G4.0)C	13.5	7.5	03
PS B G A A XXX	**PVC M.I.**	MAT9560001	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9540001	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960501	(4G1.5)C	10.0	7.5	03
PS B G F A XXX	**PVC M.I.**	MAT9560004	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9540004	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960504	(4G1.5)C	10.0	7.5	03
Basic cable						
PS B A A B XXX	**PVC M.I.**	MAT9560008	(4G2.5)C	12.0	7.5	01
	TPE F	MAT9540008	(4G2.5)C	11.5	7.5	02
	TPE H*	MAT9960508	(4G2.5)C	11.5	7.5	03
PS B A B B XXX	**PVC M.I.**	MAT9560020	(4G2.5)C	12.0	7.5	01
	TPE F	MAT9540020	(4G2.5)C	11.5	7.5	02
	TPE H*	MAT9960520	(4G2.5)C	11.5	7.5	03
PS B A F B XXX	**PVC M.I.**	MAT9560014	(4G2.5)C	12.0	7.5	01
	TPE F	MAT9540014	(4G2.5)C	11.5	7.5	02
	TPE H*	MAT9960514	(4G2.5)C	11.5	7.5	03
PS B B A B XXX	**PVC M.I.**	MAT9560009	(4G4.0)C	13.5	7.5	01
	TPE F	MAT9540009	(4G4.0)C	13.5	7.5	02
	TPE H*	MAT9960509	(4G4.0)C	13.5	7.5	03
PS B B B B XXX	**PVC M.I.**	MAT9560021	(4G4.0)C	13.5	7.5	01
	TPE F	MAT9540021	(4G4.0)C	13.5	7.5	02
	TPE H*	MAT9960521	(4G4.0)C	13.5	7.5	03
PS B B F B XXX	**PVC M.I.**	MAT9560015	(4G4.0)C	13.5	7.5	01
	TPE F	MAT9540015	(4G4.0)C	13.5	7.5	02
	TPE H*	MAT9960515	(4G4.0)C	13.5	7.5	03

Harnessed drive cables | Nidec/Control Techniques PVC/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Nidec/Control Techniques Motor cables						
Basic cable						
PS B C A B XXX	**PVC M.I.**	MAT9560010	(4G6.0)C	16.0	7.5	01
	TPE F	MAT9540010	(4G6.0)C	16.0	7.5	02
	TPE H*	MAT9960510	(4G6.0)C	16.0	7.5	03
PS B C B B XXX	**PVC M.I.**	MAT9560022	(4G6.0)C	16.0	7.5	01
	TPE F	MAT9540022	(4G6.0)C	16.0	7.5	02
	TPE H*	MAT9960522	(4G6.0)C	16.0	7.5	03
PS B C F B XXX	**PVC M.I.**	MAT9560016	(4G6.0)C	16.0	7.5	01
	TPE F	MAT9540016	(4G6.0)C	16.0	7.5	02
	TPE H*	MAT9960516	(4G6.0)C	16.0	7.5	03
PS B D A B XXX	**PVC M.I.**	MAT9560011	(4G10)C	20.5	7.5	01
	TPE F	MAT9540011	(4G10)C	19.5	7.5	02
	TPE H*	MAT9960511	(4G10)C	19.5	7.5	03
PS B D B B XXX	**PVC M.I.**	MAT9560023	(4G10)C	20.5	7.5	01
	TPE F	MAT9540023	(4G10)C	19.5	7.5	02
	TPE H*	MAT9960523	(4G10)C	19.5	7.5	03
PS B D F B XXX	**PVC M.I.**	MAT9560017	(4G10)C	20.5	7.5	01
	TPE F	MAT9540017	(4G10)C	19.5	7.5	02
	TPE H*	MAT9960517	(4G10)C	19.5	7.5	03
PS B E A B XXX	**PVC M.I.**	MAT9560012	(4G16)C	23.5	7.5	01
	TPE F	MAT9540012	(4G16)C	23.0	7.5	02
	TPE H*	MAT9960512	(4G16)C	22.5	7.5	03
PS B E B B XXX	**PVC M.I.**	MAT9560024	(4G16)C	23.5	7.5	01
	TPE F	MAT9540024	(4G16)C	23.0	7.5	02
	TPE H*	MAT9960524	(4G16)C	22.5	7.5	03
PS B E F B XXX	**PVC M.I.**	MAT9560018	(4G16)C	23.5	7.5	01
	TPE F	MAT9540018	(4G16)C	23.0	7.5	02
	TPE H*	MAT9960518	(4G16)C	22.5	7.5	03
PS B G A B XXX	**PVC M.I.**	MAT9560007	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9540007	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960507	(4G1.5)C	10.0	7.5	03
PS B G B B XXX	**PVC M.I.**	MAT9560019	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9540019	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960519	(4G1.5)C	10.0	7.5	03
PS B G F B XXX	**PVC M.I.**	MAT9560013	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9540013	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9960513	(4G1.5)C	10.0	7.5	03

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Nidec/ Control Techniques

Harnessed drive cables | Nidec/Control Techniques PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Nidec/Control Techniques Servo cables						
Basic cable						
PB B A A A XXX	**PVC O.I.**	MAT9750502	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9560041	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR M.I.	MAT9540041	(4G2.5+(2x1.5)C)C	14.5	7.5	07
PB B A F A XXX	**PVC O.I.**	MAT9750505	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9560044	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR M.I.	MAT9540044	(4G2.5+(2x1.5)C)C	14.5	7.5	07
PB B B A A XXX	**PVC O.I.**	MAT9750503	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9560042	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR M.I.	MAT9540042	(4G4.0+(2x1.5)C)C	16.0	7.5	07
PB B B F A XXX	**PVC O.I.**	MAT9750506	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9560045	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR M.I.	MAT9540045	(4G4.0+(2x1.5)C)C	16.0	7.5	07
PB B G A A XXX	**PVC O.I.**	MAT9750501	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9560040	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR M.I.	MAT9540040	(4G1.5+(2x1.5)C)C	13.0	7.5	07
PB B G F A XXX	**PVC O.I.**	MAT9750504	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9560043	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR M.I.	MAT9540043	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable						
PB B A A B XXX	**PVC O.I.**	MAT9750508	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9560047	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR M.I.	MAT9540047	(4G2.5+(2x1.5)C)C	14.5	7.5	07
PB B A B B XXX	**PVC O.I.**	MAT9750516	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9560059	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR M.I.	MAT9540059	(4G2.5+(2x1.5)C)C	14.5	7.5	07
PB B A F B XXX	**PVC O.I.**	MAT9750512	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9560053	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR M.I.	MAT9540053	(4G2.5+(2x1.5)C)C	14.5	7.5	07
PB B A G B XXX	**PVC O.I.**	MAT9750520	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9560065	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR M.I.	MAT9540065	(4G2.5+(2x1.5)C)C	14.5	7.5	07
PB B B A B XXX	**PVC O.I.**	MAT9750509	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9560048	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR M.I.	MAT9540048	(4G4.0+(2x1.5)C)C	16.0	7.5	07

Harnessed drive cables | Nidec/Control Techniques PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Nidec/Control Techniques Servo cables						
Basic cable						
PB B B B B XXX	**PVC O.I.**	MAT9750517	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9560060	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR M.I.	MAT9540060	(4G4.0+(2x1.5)C)C	16.0	7.5	07
PB B B F B XXX	**PVC O.I.**	MAT9750513	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9560054	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR M.I.	MAT9540054	(4G4.0+(2x1.5)C)C	16.0	7.5	07
PB B B G B XXX	**PVC O.I.**	MAT9750521	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9560066	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR M.I.	MAT9540066	(4G4.0+(2x1.5)C)C	16.0	7.5	07
PB B C A B XXX	**PVC O.I.**	MAT9750510	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9560049	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR M.I.	MAT9540049	(4G6.0+(2x1.5)C)C	18.0	7.5	07
PB B C B B XXX	**PVC O.I.**	MAT9750518	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9560061	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR M.I.	MAT9540061	(4G6.0+(2x1.5)C)C	18.0	7.5	07
PB B C F B XXX	**PVC O.I.**	MAT9750514	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9560055	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR M.I.	MAT9540055	(4G6.0+(2x1.5)C)C	18.0	7.5	07
PB B C G B XXX	**PVC O.I.**	MAT9750522	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9560067	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR M.I.	MAT9540067	(4G6.0+(2x1.5)C)C	18.0	7.5	07
PB B D A B XXX	**PVC M.I.**	MAT9560050	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR M.I.	MAT9540050	(4G10+(2x1.5)C)C	21.0	7.5	07
PB B D B B XXX	**PVC M.I.**	MAT9560062	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR M.I.	MAT9540062	(4G10+(2x1.5)C)C	21.0	7.5	07
PB B D F B XXX	**PVC M.I.**	MAT9560056	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR M.I.	MAT9540056	(4G10+(2x1.5)C)C	21.0	7.5	07
PB B D G B XXX	**PVC M.I.**	MAT9560068	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR M.I.	MAT9540068	(4G10+(2x1.5)C)C	21.0	7.5	07
PB B E A B XXX	**PVC M.I.**	MAT9560051	(4G16+(2x1.5)C)C	25.0	7.5	05
	PUR M.I.	MAT9540051	(4G16+(2x1.5)C)C	24.5	7.5	07
PB B E B B XXX	**PVC M.I.**	MAT9560063	(4G16+(2x1.5)C)C	25.0	7.5	05
	PUR M.I.	MAT9540063	(4G16+(2x1.5)C)C	24.5	7.5	07
PB B E F B XXX	**PVC M.I.**	MAT9560057	(4G16+(2x1.5)C)C	25.0	7.5	05
	PUR M.I.	MAT9540057	(4G16+(2x1.5)C)C	24.5	7.5	07
PB B E G B XXX	**PVC M.I.**	MAT9560069	(4G16+(2x1.5)C)C	25.0	7.5	05
	PUR M.I.	MAT9540069	(4G16+(2x1.5)C)C	24.5	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Nidec/Control Techniques PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Nidec/Control Techniques Servo cables						
Basic cable						
PB B G A B XXX	**PVC O.I.**	MAT9750507	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9560046	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR M.I.	MAT9540046	(4G1.5+(2x1.5)C)C	13.0	7.5	07
PB B G B B XXX	**PVC O.I.**	MAT9750515	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9560058	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR M.I.	MAT9540058	(4G1.5+(2x1.5)C)C	13.0	7.5	07
PB B G F B XXX	**PVC O.I.**	MAT9750511	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9560052	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR M.I.	MAT9540052	(4G1.5+(2x1.5)C)C	13.0	7.5	07
PB B G G B XXX	**PVC O.I.**	MAT9750519	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9560064	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR M.I.	MAT9540064	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Nidec/Control Techniques Encoder cables						
Basic cable						
SS B A H C XXX	**PVC**	MAT9560100	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR M.I.	MAT9840501	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*	MAT9540100	(4x(2x0.34)+4x0.5)C	10.5	7.5	11
SS B A H H XXX	**PVC**	MAT9560101	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR M.I.	MAT9840502	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*	MAT9540101	(4x(2x0.34)+4x0.5)C	10.5	7.5	11
SS B A H N XXX	**PVC**	MAT9560104	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	10	08
	PUR M.I.	MAT9840505	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	10
	TPE H*	MAT9540104	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	11

Harnessed drive cables | NUM PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
NUM Power cables						
Basic cable						
AGOFRU018LMxxx	**PVC M.I.**	MAT9280051	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9282051	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9961201	(4G1.5)C	10.0	7.5	03
AGOFRU019LMxxx	**PVC M.I.**	MAT9280052	(4G4.0)C	13.5	7.5	01
	TPE F	MAT9282052	(4G4.0)C	13.5	7.5	02
	TPE H*	MAT9961202	(4G4.0)C	13.5	7.5	03
Extension cable						
AGOFRU018LMxxx (ext.)	**PVC M.I.**	MAT9280061	(4G1.5)C	10.5	7.5	01
	TPE H*	MAT9961203	(4G1.5)C	10.0	7.5	03
	TPE F	MAT9282061	(4G1.5)C	10.0	7.5	02
AGOFRU019LMxxx (ext.)	**PVC M.I.**	MAT9280062	(4G4.0)C	13.5	7.5	01
	TPE F	MAT9282062	(4G4.0)C	13.5	7.5	02
	TPE H*	MAT9961204	(4G4.0)C	13.5	7.5	03
NUM Servo cables						
Basic cable						
AGOFRU018Mxxx	**PVC M.I.**	MAT9280001	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR M.I.	MAT9282001	(4G1.5+(2x1.5)C)C	13.0	7.5	07
AGOFRU019Mxxx	**PVC M.I.**	MAT9280002	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR M.I.	MAT9282002	(4G4.0+(2x1.5)C)C	16.0	7.5	07
Basic cable						
AGOFRU020Mxxx	**PVC M.I.**	MAT9280003	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR M.I.	MAT9282003	(4G10+(2x1.5)C)C	21.0	7.5	07
Extension cable						
AGOFRU018Mxxx (ext.)	**PVC M.I.**	MAT9280011	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR M.I.	MAT9282011	(4G1.5+(2x1.5)C)C	13.0	7.5	07
AGOFRU019Mxxx (ext.)	**PVC M.I.**	MAT9280012	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR M.I.	MAT9282012	(4G4.0+(2x1.5)C)C	16.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x** = without earth core
* Cable qualities: **M.I** = with inner jacket, **O.I.** = without inner jacket, **F** = flame-retardant, **H** = halogen-free, **OIL** = oil-resistant

Harnessed drive cables | NUM PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
NUM Servo cables						
Extension cable						
AGOFRU020Mxxx (ext.)	**PVC M.I.**	MAT9280013	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR M.I.	MAT9282013	(4G10+(2x1.5)C)C	21.0	7.5	07
NUM Fan cables						
Basic cable						
AGOFRU012Mxxx	**PVC**	MAT9289005	4G1.0	7.0	7.5	17
	TPE H*	MAT9289007	4G1.0	6.5	5	23
Extension cable						
AGOFRU012Mxxx (ext.)	**PVC**	MAT9289015	4G1.0	7.0	7.5	17
	TPE H*	MAT9289017	4G1.0	6.5	5	23
NUM Encoder cables						
Basic cable						
AGOFRU029Mxxx	**PVC**	MAT9284001	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	10	08
	TPE H*	MAT9286001	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	11
Basic cable						
AGOFRU030Mxxx	**PVC**	MAT9289001	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	10	08
	TPE H*	MAT9289004	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	11
Extension cable						
AGOFRU029Mxxx (ext.)	**PVC**	MAT9284011	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	10	08
	TPE H*	MAT9286011	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	11
Extension cable						
AGOFRU030Mxxx (ext.)	**PVC**	MAT9289011	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	10	08
	TPE H*	MAT9289014	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	11

Harnessed drive cables | Omron PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Omron Motor cables						
Basic cable						
R88A-CAWA-xxxS-DE	**TPE F**	MAT9810004	(4G0.5)C	8.0	7.5	02
	TPE H*	MAT9962104	(4G0.5)C	8.0	7.5	03
R88A-CAWCxxx	**PVC M.I.**	MAT9710005	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9810005	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9962105	(4G1.5)C	10.0	7.5	03
R88A-CAWCxxxS-E	**PVC M.I.**	MAT9710003	(4G1.5)C	10.5	7.5	01
	TPE F	MAT9810003	(4G1.5)C	10.0	7.5	02
	TPE H*	MAT9962103	(4G1.5)C	10.0	7.5	03
R88A-CAWDxxxS	**PVC M.I.**	MAT9710006	(4G2.5)C	12.0	7.5	01
	TPE F	MAT9810006	(4G2.5)C	11.5	7.5	02
	TPE H*	MAT9962106	(4G2.5)C	11.5	7.5	03
R88A-CAWDxxxS-E	**PVC M.I.**	MAT9710001	(4G2.5)C	12.0	7.5	01
	TPE F	MAT9810001	(4G2.5)C	11.5	7.5	02
	TPE H*	MAT9962101	(4G2.5)C	11.5	7.5	03
R88A-CAWFxxxS-E	**PVC M.I.**	MAT9710002	(4G4.0)C	13.5	7.5	01
	TPE F	MAT9810002	(4G4.0)C	13.5	7.5	02
	TPE H*	MAT9962102	(4G4.0)C	13.5	7.5	03
Omron Control cables						
Basic cable						
JZSP-CHM000-xx-E	**PVC M.I.**	MAT9712103	(5G0.5)C	8.0	7.5	18
	PVC OIL	MAT9710015	(5G0.5)C	8.5	6.8	20
	PUR M.I.	MAT9810015	(5G0.5)C	8.0	6.8	22
	TPE H*	MAT9912103	(5x0.5)C	7.5	5	24
Basic cable						
JZSP-CHM000-xx-ME	**PVC M.I.**	MAT9712104	(5G0.5)C	8.0	7.5	18
	PVC OIL	MAT9710016	(5G0.5)C	8.5	6.8	20
	PUR M.I.	MAT9810016	(5G0.5)C	8.0	6.8	22
	TPE H*	MAT9912104	(5x0.5)C	7.5	5	24
Basic cable						
JZSP-CHM030-xx-E	**PVC M.I.**	MAT9712105	(7G0.75)C	10.0	7.5	18
	PVC OIL	MAT9710017	(7G0.5)C	10.0	6.8	20
	PUR M.I.	MAT9810017	(7G0.5)C	9.5	6.8	22
	TPE H*	MAT9912105	(7x0.5)C	8.5	5	24

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Omron PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Omron Control cables						
Basic cable						
JZSP-CHM030-xx-ME	**PVC M.I.**	MAT9712106	(7G0.75)C	10.0	7.5	18
	PVC OIL	MAT9710018	(7G0.5)C	10.0	6.8	20
	PUR M.I.	MAT9810018	(7G0.5)C	9.5	6.8	22
	TPE H*	MAT9912106	(7x0.5)C	8.5	5	24
Basic cable						
JZSP-CSM22-xx-E-G1	**PVC M.I.**	MAT9712102	(4G0.75)C	8.5	7.5	18
	PVC OIL	MAT9710014	(4G0.75)C	8.5	6.8	20
	PUR M.I.	MAT9810014	(4G0.75)C	8.5	6.8	22
	TPE H*	MAT9912102	(4G0.75)C	7.5	5	24
Basic cable						
R88A-CAWCxxxB-E	**PVC**	MAT9712101	2x0.5	5.5	7.5	17
	PVC OIL	MAT9710013	2x0.5	6.0	6.8	19
	PUR	MAT9810013	3G0.75	6.5	6.8	21
	TPE H*	MAT9912101	2x0.5	5.0	5	23
Basic cable						
R88A-CAWExxxB	**PVC M.I.**	MAT9712107	(3G0.5)C	7.0	7.5	18
	PVC OIL	MAT9710019	(2x0.5)C	7.0	6.8	20
	PUR M.I.	MAT9810019	(4G0.5)C	8.0	6.8	22
	TPE H*	MAT9912107	(4x0.5)C	7.0	5	24
Omron Encoder cables						
Basic cable						
JZSP-CHP800-xx-E	**PVC**	MAT9710009	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9842103	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9810009	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
Basic cable						
JZSP-CHP800-xx-ME	**PVC**	MAT9710008	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9842102	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9810008	(4x(2x0.25)+2x0.5)C	9.5	7.5	11

Harnessed drive cables | Omron
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Omron Encoder cables						
Basic cable						
JZSP-CSP21-xx-E-G1	**PVC**	MAT9710011	(3x(2x0.25))C	7.0	7.5	14
	PUR M.I.	MAT9842105	(3x(2x0.25))C	7.5	7.5	10
	TPE H*	MAT9810011	(3x(2x0.25))C	7.5	7.5	11
Basic cable						
R88A-CRWA-xxxC-DE	**PVC**	MAT9710012	(2x(2x0.25)+2x0.5)C	6.5	10	08
	PUR M.I.	MAT9842106	(2x(2x0.25)+2x0.5)C	7.0	7.5	10
	TPE H*	MAT9810012	(2x(2x0.25)+2x0.5)C	7.0	7.5	11
Basic cable						
R88A-CRWBxxxN	**PVC**	MAT9710010	(4x(2x0.25)+2x1.0)C	8.5	10	08
	PUR M.I.	MAT9842104	(4x(2x0.25)+2x1.0)C	9.5	7.5	10
	TPE H*	MAT9810010	(4x(2x0.25)+2x1.0)C	9.5	7.5	11
R88A-CRWBxxxN-E	**PVC**	MAT9710007	(4x(2x0.25)+2x1.0)C	8.5	10	08
	PUR M.I.	MAT9842101	(4x(2x0.25)+2x1.0)C	9.5	7.5	10
	TPE H*	MAT9810007	(4x(2x0.25)+2x1.0)C	9.5	7.5	11

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Parker
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Parker Motor cables						
Basic cable						
iMOK42	**PVC O.I.**	MAT9752255	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9752205	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9852255	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9852205	(4G1.5+(2x1.5)C)C	13.0	7.5	07
iMOK43	**PVC O.I.**	MAT9752257	(4G2.5+(2x1.5)C)C	14.0	10	04
	PUR O.I.	MAT9852257	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9752207	(4G2.5+(2x1.5)C)C	14.5	7.5	07
	PUR M.I.	MAT9852207	(4G2.5+(2x1.5)C)C	14.5	7.5	07
iMOK44	**PVC O.I.**	MAT9752256	(4G1.5+(2x1.5)C)C	12.0	10	04
	PUR O.I.	MAT9852256	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9752206	(4G1.5+(2x1.5)C)C	13.0	7.5	07
	PUR M.I.	MAT9852206	(4G1.5+(2x1.5)C)C	13.0	7.5	07
iMOK45	**PVC O.I.**	MAT9752258	(4G2.5+(2x1.5)C)C	14.0	10	04
	PUR O.I.	MAT9852258	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9752208	(4G2.5+(2x1.5)C)C	14.5	7.5	07
	PUR M.I.	MAT9852208	(4G2.5+(2x1.5)C)C	14.5	7.5	07
iMOK54	**PVC O.I.**	MAT9752252	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9752202	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9852252	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9852202	(4G1.5+(2x1.5)C)C	13.0	7.5	07
iMOK55	**PVC O.I.**	MAT9752251	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9752201	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9852251	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9852201	(4G1.5+(2x1.5)C)C	13.0	7.5	07
iMOK56	**PVC O.I.**	MAT9752253	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9752203	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9852253	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9852203	(4G2.5+(2x1.5)C)C	14.5	7.5	07
iMOK57	**PVC O.I.**	MAT9752254	(4G2.5+(2x1.5)C)C	14.0	10	04
	PUR O.I.	MAT9852254	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9752204	(4G2.5+(2x1.5)C)C	14.5	7.5	07
	PUR M.I.	MAT9852204	(4G2.5+(2x1.5)C)C	14.5	7.5	07
Parker Resolver cables						
Basic cable						
iREK32	**PVC**	MAT9722211	(4x(2x0.25))C	8.0	7.5	14
	PUR M.I.	MAT9822211	(4x(2x0.25))C	9.0	10	15
	TPE H*	MAT9922211	(4x(2x0.25))C	8.5	6.8	16

Harnessed drive cables | Parker
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Parker Resolver cables						
Basic cable						
iREK33	**PVC**	MAT9722212	(4x(2x0.25))C	8.0	7.5	14
	PUR M.I.	MAT9822212	(4x(2x0.25))C	9.0	10	15
	TPE H*	MAT9922212	(4x(2x0.25))C	8.5	6.8	16
iREK41	**PVC**	MAT9722210	(4x(2x0.25))C	8.0	7.5	14
	PUR M.I.	MAT9822210	(4x(2x0.25))C	9.0	10	15
	TPE H*	MAT9922210	(4x(2x0.25))C	8.5	6.8	16
iREK42	**PVC**	MAT9722209	(4x(2x0.25))C	8.0	7.5	14
	PUR M.I.	MAT9822209	(4x(2x0.25))C	9.0	10	15
	TPE H*	MAT9922209	(4x(2x0.25))C	8.5	6.8	16

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | SEW
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
SEW Motor cables						
Connection cable (Amphenol)						
0199 1809	**PVC M.I.**	MAT9410006	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861401	(4G1.5)C	9.5	10	06
	TPE F	MAT9400006	(4G1.5)C	10.0	7.5	02
0199 1825	**PVC M.I.**	MAT9410007	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861402	(4G2.5)C	11.5	10	06
	TPE F	MAT9400007	(4G2.5)C	11.5	7.5	02
0199 1841	**PVC M.I.**	MAT9410008	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9861403	(4G4.0)C	12.5	10	06
	TPE F	MAT9400008	(4G4.0)C	13.5	7.5	02
0199 1868	**PVC M.I.**	MAT9410009	(4G6.0)C	16.0	7.5	01
	PUR O.I.	MAT9861404	(4G6.0)C	14.5	10	06
	TPE F	MAT9400009	(4G6.0)C	16.0	7.5	02
0199 1884	**PVC M.I.**	MAT9410010	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861405	(4G10)C	18.0	10	06
	TPE F	MAT9400010	(4G10)C	19.5	7.5	02
Connection cable						
0590 4773	**PVC M.I.**	MAT9410012	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861406	(4G1.5)C	9.5	10	06
	TPE F	MAT9400012	(4G1.5)C	10.0	7.5	02
0590 4803	**PVC M.I.**	MAT9761415	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9861415	(4G4.0)C	12.5	10	06
	TPE F	MAT9961415	(4G4.0)C	13.5	7.5	02
0590 6245	**PVC M.I.**	MAT9761413	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861413	(4G1.5)C	9.5	10	06
	TPE F	MAT9961413	(4G1.5)C	10.0	7.5	02
0590 6253	**PVC M.I.**	MAT9761414	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861414	(4G2.5)C	11.5	10	06
	TPE F	MAT9961414	(4G2.5)C	11.5	7.5	02
Connection cable						
1335 0293	**PVC M.I.**	MAT9761416	(4G6.0)C	16.0	7.5	01
	PUR O.I.	MAT9861416	(4G6.0)C	14.5	10	06
	TPE F	MAT9961416	(4G6.0)C	16.0	7.5	02
1335 0307	**PVC M.I.**	MAT9761417	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861417	(4G10)C	18.0	10	06
	TPE F	MAT9961417	(4G10)C	19.5	7.5	02

Harnessed drive cables | SEW PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
SEW Motor cables						
Connection cable						
1335 0315	**PVC M.I.**	MAT9761418	(4G16)C	23.5	7.5	01
	PUR O.I.	MAT9861418	(4G16)C	22.0	10	06
	TPE F	MAT9961418	(4G16)C	23.0	7.5	02
Extension cable (Amphenol)						
0199 5502	**PVC M.I.**	MAT9411006	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861407	(4G1.5)C	9.5	10	06
	TPE F	MAT9401006	(4G1.5)C	10.0	7.5	02
0199 5529	**PVC M.I.**	MAT9411007	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861408	(4G2.5)C	11.5	10	06
	TPE F	MAT9401007	(4G2.5)C	11.5	7.5	02
0199 5545	**PVC M.I.**	MAT9411008	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9861409	(4G4.0)C	12.5	10	06
	TPE F	MAT9401008	(4G4.0)C	13.5	7.5	02
0199 5561	**PVC M.I.**	MAT9411009	(4G6.0)C	16.0	7.5	01
	PUR O.I.	MAT9861410	(4G6.0)C	14.5	10	06
	TPE F	MAT9401009	(4G6.0)C	16.0	7.5	02
0199 5588	**PVC M.I.**	MAT9411010	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861411	(4G10)C	18.0	10	06
	TPE F	MAT9401010	(4G10)C	19.5	7.5	02
Extension cable						
0590 3610	**PVC M.I.**	MAT9411012	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861412	(4G1.5)C	9.5	10	06
	TPE F	MAT9401012	(4G1.5)C	10.0	7.5	02
Extension cable						
1333 2457	**PVC M.I.**	MAT9761419	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861419	(4G1.5)C	9.5	10	06
	TPE F	MAT9961419	(4G1.5)C	10.0	7.5	02
1333 2465	**PVC M.I.**	MAT9761420	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861420	(4G2.5)C	11.5	10	06
	TPE F	MAT9961420	(4G2.5)C	11.5	7.5	02

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | SEW PVC/PUR/TPE

SEW

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
SEW Motor cables						
Extension cable						
1333 2473	**PVC M.I.**	MAT9761421	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9861421	(4G4.0)C	12.5	10	06
	TPE F	MAT9961421	(4G4.0)C	13.5	7.5	02
1335 0021	**PVC M.I.**	MAT9761422	(4G6.0)C	16.0	7.5	01
	PUR O.I.	MAT9861422	(4G6.0)C	14.5	10	06
	TPE F	MAT9961422	(4G6.0)C	16.0	7.5	02
1335 0048	**PVC M.I.**	MAT9761423	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861423	(4G10)C	18.0	10	06
	TPE F	MAT9961423	(4G10)C	19.5	7.5	02
1335 0056	**PVC M.I.**	MAT9761424	(4G16)C	23.5	7.5	01
	PUR O.I.	MAT9861424	(4G16)C	22.0	10	06
	TPE F	MAT9961424	(4G16)C	23.0	7.5	02
SEW Servo cables						
Connection cable (Amphenol)						
0199 1906	**PVC O.I.**	MAT9751401	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9410001	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851401	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9400001	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
0199 1922	**PVC O.I.**	MAT9751402	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9410002	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9851402	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9400002	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
0199 1949	**PVC O.I.**	MAT9751403	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9410003	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9851403	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9400003	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
0199 1965	**PVC O.I.**	MAT9751404	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9410004	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851404	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9400004	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
0199 1981	**PVC M.I.**	MAT9410005	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9851405	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9400005	(4G10+2x(2x1.5)C)C	23.5	7.5	07

Harnessed drive cables | SEW PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
SEW Servo cables						
Connection cable						
1332 4861	**PVC O.I.**	MAT9751405	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9410011	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851406	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9400011	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Connection cable						
1333 1221	**PVC O.I.**	MAT9751473	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9751474	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851473	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9851474	(4G1.5+(2x1.5)C)C	13.0	7.5	07
	TPE H*	MAT9951473	(4G1.5+(2x1.5)C)C	13.0	6.8	32
1333 2155	**PVC O.I.**	MAT9751471	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9751472	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851471	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9851472	(4G2.5+(2x1.5)C)C	14.5	7.5	07
	TPE H*	MAT9951471	(4G2.5+(2x1.5)C)C	14.0	6.8	32
Connection cable						
1335 0153	**PVC O.I.**	MAT9751422	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9751440	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851422	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9851440	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
1335 0161	**PVC M.I.**	MAT9751441	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9851423	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9851441	(4G10+2x(2x1.5)C)C	23.5	7.5	07
1335 0188	**PVC M.I.**	MAT9751442	(4G16+2x(2x1.5)C)C	27.5	7.5	05
	PUR O.I.	MAT9851424	(4G16+2x(2x1.5)C)C	26.0	10	06
	PUR M.I.	MAT9851442	(4G16+2x(2x1.5)C)C	26.5	7.5	07
1335 0234	**PVC O.I.**	MAT9751416	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9751434	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.	MAT9851416	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.	MAT9851434	(4G6.0+(2x1.5)C)C	18.0	7.5	07
1335 0242	**PVC M.I.**	MAT9751435	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT9851417	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT9851435	(4G10+(2x1.5)C)C	21.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | SEW PVC/PUR/TPE

SEW

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
SEW Servo cables						
Connection cable						
1335 0250	**PVC M.I.**	MAT9751436	(4G16+2x(2x1.5)C)C	27.5	7.5	05
	PUR O.I.	MAT9851418	(4G16+2x(2x1.5)C)C	26.0	10	06
	PUR M.I.	MAT9851436	(4G16+(2x1.5)C)C	24.5	7.5	07
1335 4302	**PUR O.I.**	MAT9851419	(4G1.5+(3x1.0)C)C	14.0	10	06
1335 4310	**PVC O.I.**	MAT9751420	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9751438	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9851420	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9851438	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
1335 4329	**PVC O.I.**	MAT9751421	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9751439	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9851421	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9851439	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
1335 4388	**PUR O.I.**	MAT9851413	(4G1.5+(3x1.0)C)C	14.0	10	06
1335 4396	**PUR O.I.**	MAT9851479	(4G2.5+(3x1.0)C)C	14.0	10	28
Extension cable (Amphenol)						
0199 2007	**PVC O.I.**	MAT9751406	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9411001	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851407	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9401001	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
0199 2023	**PVC O.I.**	MAT9751407	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9411002	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9851408	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9401002	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
0199 204X	**PVC O.I.**	MAT9751408	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9411003	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9851409	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9401003	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
0199 2066	**PVC O.I.**	MAT9751409	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9411004	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851410	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9401004	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
0199 2082	**PVC M.I.**	MAT9411005	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9851411	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9401005	(4G10+2x(2x1.5)C)C	23.5	7.5	07

Harnessed drive cables | SEW PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
SEW Servo cables						
Extension cable						
0593 6500	**PVC O.I.**	MAT9751410	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9411011	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851412	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9401011	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Extension cable						
1333 1205	**PUR O.I.** New	MAT9851480	(4G1.5+(3x1.0)C)C	12.0	10	28
Extension cable						
1333 2481	**PVC O.I.**	MAT9751475	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9751476	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851475	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9851476	(4G1.5+(2x1.5)C)C	13.0	7.5	07
	TPE H*	MAT9951475	(4G1.5+(2x1.5)C)C	13.0	6.8	32
1333 2503	**PVC O.I.**	MAT9751477	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9751478	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851477	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9851478	(4G2.5+(2x1.5)C)C	14.5	7.5	07
	TPE H*	MAT9951477	(4G2.5+(2x1.5)C)C	14.0	6.8	32
1335 0099	**PVC M.I.**	MAT9751446	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851428	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9851446	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
1335 0102	**PVC M.I.**	MAT9751447	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9851429	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9851447	(4G10+2x(2x1.5)C)C	23.5	7.5	07
1335 0110	**PVC M.I.**	MAT9751448	(4G16+2x(2x1.5)C)C	27.5	7.5	05
	PUR O.I.	MAT9851430	(4G16+2x(2x1.5)C)C	26.0	10	06
	PUR M.I.	MAT9851448	(4G16+2x(2x1.5)C)C	26.5	7.5	07
1335 4221	**PUR O.I.**	MAT9851425	(4G1.5+(3x1.0)C)C	14.0	10	06
1335 4248	**PVC M.I.**	MAT9751444	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9851426	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9851444	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
1335 4337	**PVC M.I.**	MAT9751445	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9851427	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9851445	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

SEW

Harnessed drive cables | SEW PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
SEW Hybrid servo cables						
Basic cable						
0186 725 3	**PUR O.I.**	MAT9851443	4G1.5+(2x0.75)C+(3x0.75)C	14.0	10	28
0187 889 5	**PUR O.I.**	MAT9851456	(7x2.5+(2x0.75)C)C	20.0	10	28
0593 278 5	**PUR O.I.**	MAT9851449	(7x2.5+(2x0.75)C)C	20.0	10	28
0593 755 8	**PUR O.I.**	MAT9851451	(7x2.5+(2x0.75)C)C	20.0	10	28
0816 208 5	**PUR O.I.**	MAT9851454	(7x2.5+(2x0.75)C)C	20.0	10	28
0816 325 1	**PUR O.I.**	MAT9851450	(7x2.5+(2x0.75)C)C	20.0	10	28
0816 326 X	**PUR O.I.**	MAT9851452	(7x2.5+(2x0.75)C)C	20.0	10	28
0817 886 0	**PUR O.I.**	MAT9851457	(7x2.5+(2x0.75)C)C	20.0	10	28
0817 887 9	**PUR O.I.**	MAT9851455	(7x2.5+(2x0.75)C)C	20.0	10	28
0817 888 7	**PUR O.I.**	MAT9851458	(7x2.5+(2x0.75)C)C	20.0	10	28
0817 948 4	**PUR O.I.**	MAT9851453	(7x2.5+(2x0.75)C)C	20.0	10	28
Connection cable						
1811 8119	**PUR O.I.**	MAT9851464	(7x1.5+(2x0.75)C)C	16.5	10	28
SEW Control cables						
Connection cable						
0199 560x	**PVC OIL**	MAT9711401	3G1.0	6.5	6.8	19
	PUR	MAT9811401	3G1.0	6.5	6.8	21
	TPE F	MAT9911401	3G1.0	7.5	5	25
SEW Encoder cables						
Connection cable						
0198 9308	**PUR M.I.**	MAT9841404	(3x(2x0.25))C	7.5	7.5	10
0199 3194	**PUR M.I.**	MAT9841401	(5x(2x0.25))C	9.5	7.5	10
0199 4875	**PVC**	MAT9741401	(5x(2x0.25))C	8.0	10	08
0595 1518	**PVC**	MAT9741408	(6x(2x0.25))C	8.5	10	08
	PUR M.I.	MAT9841408	(6x(2x0.25))C	10.0	7.5	10
	TPE H*	MAT9941408	(6x(2x0.25))C	10.0	6.8	16
1332 4551	**PVC**	MAT9741403	(6x(2x0.25))C	8.5	10	08
	PUR M.I.	MAT9841403	(6x(2x0.25))C	10.0	7.5	10
1332 7437	**PVC**	MAT9741402	(5x(2x0.25))C	8.0	10	08
	PUR M.I.	MAT9841402	(5x(2x0.25))C	9.5	7.5	10

Harnessed drive cables | SEW
PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
SEW Encoder cables						
Extension cable						
0199 5405	**PVC**	MAT9741406	(6x(2x0.25))C	8.5	10	08
	PUR M.I.	MAT9841406	(6x(2x0.25))C	10.0	7.5	10
0199 5413	**PUR M.I.**	MAT9841405	(5x(2x0.25))C	9.5	7.5	10
0199 5421	**PVC**	MAT9741405	(5x(2x0.25))C	8.0	10	08
0593 9682	**PVC**	MAT9741407	(5x(2x0.25))C	8.0	10	08
	PUR M.I.	MAT9841407	(5x(2x0.25))C	9.5	7.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Siemens
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Power cables						
Basic cable						
6FX8002-5CN06	**PVC M.I.**	MAT9761554	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT98615122	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT98615123	(4G1.5)C	10.5	7.5	07
	TPE F	MAT9961560	(4G1.5)C	10.0	7.5	02
6FX8002-5CN16	**PVC M.I.**	MAT9761559	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT98615108	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT98615107	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9961554	(4G2.5)C	11.5	7.5	02
Basic cable						
6FX8002-5CN26	**PVC M.I.**	MAT97515111	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT98515130	(4G1.5)C	9.5	10	06
	TPE F	MAT98515131	(4G1.5)C	10.0	7.5	02
6FX8002-5CN36	**PVC M.I.**	MAT9761556	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT98615102	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT98615103	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9961552	(4G2.5)C	11.5	7.5	02
6FX8002-5CN46	**PVC M.I.**	MAT9761557	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT98615105	(4G4.0)C	12.5	10	06
	TPE F	MAT9961553	(4G4.0)C	13.5	7.5	02
6FX8002-5CN56	**PVC M.I.**	MAT9761561	(4G6.0)C	16.0	7.5	01
	PUR O.I.	MAT98615110	(4G6.0)C	14.5	10	06
	TPE F	MAT9961555	(4G6.0)C	16.0	7.5	02
Basic cable						
6FX8002-5CS06	**PVC M.I.**	MAT9761568	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT98615120	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT98615121	(4G1.5)C	10.5	7.5	07
	TPE F	MAT9961559	(4G1.5)C	10.0	7.5	02
Basic cable						
6FX_002-5CA01	**PVC M.I.**	MAT9150001	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861504	(4G1.5)C	9.5	10	06
	TPE F	MAT9050001	(4G1.5)C	10.0	7.5	02

Harnessed drive cables | Siemens PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Power cables						
Basic cable						
6FX_002-5CA11	**PVC M.I.**	MAT9150002	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861505	(4G2.5)C	11.5	10	06
	TPE F	MAT9050002	(4G2.5)C	11.5	7.5	02
Basic cable						
6FX_002-5CA13	**PVC M.I.**	MAT9150009	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861524	(4G10)C	18.0	10	06
	TPE F	MAT9050009	(4G10)C	19.5	7.5	02
Basic cable						
6FX_002-5CA21	**PVC M.I.**	MAT9150003	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861506	(4G1.5)C	9.5	10	06
	TPE F	MAT9050003	(4G1.5)C	10.0	7.5	02
Basic cable						
6FX_002-5CA23	**PVC M.I.**	MAT9150008	(4G16)C	23.5	7.5	01
	PUR O.I.	MAT9861511	(4G16)C	22.0	10	06
	TPE F	MAT9050008	(4G16)C	23.0	7.5	02
Basic cable						
6FX_002-5CA31	**PVC M.I.**	MAT9150004	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861507	(4G2.5)C	11.5	10	06
	TPE F	MAT9050004	(4G2.5)C	11.5	7.5	02
6FX_002-5CA41	**PVC M.I.**	MAT9150005	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9861508	(4G4.0)C	12.5	10	06
	TPE F	MAT9050005	(4G4.0)C	13.5	7.5	02
6FX_002-5CA51	**PVC M.I.**	MAT9150006	(4G6.0)C	16.0	7.5	01
	PUR O.I.	MAT9861509	(4G6.0)C	14.5	10	06
	TPE F	MAT9050006	(4G6.0)C	16.0	7.5	02
6FX_002-5CA61	**PVC M.I.**	MAT9150007	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861510	(4G10)C	18.0	10	06
	TPE F	MAT9050007	(4G10)C	19.5	7.5	02

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Siemens PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Power cables						
Basic cable						
6FX_002-5CG01	**PVC M.I.**	MAT9761512	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861542	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT9861541	(4G1.5)C	10.5	7.5	07
	TPE F	MAT9961512	(4G1.5)C	10.0	7.5	02
Basic cable SpeedTec						
6FX_002-5CG10	**PVC M.I.**	MAT9761540	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861584	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT9861583	(4G1.5)C	10.5	7.5	07
	TPE F	MAT9961540	(4G1.5)C	10.0	7.5	02
Basic cable						
6FX_002-5CG11	**PVC M.I.**	MAT9761514	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861546	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9861545	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9961514	(4G2.5)C	11.5	7.5	02
Basic cable SpeedTec						
6FX_002-5CG12	**PVC M.I.**	MAT9761541	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861586	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9861585	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9961541	(4G2.5)C	11.5	7.5	02
Basic cable						
6FX_002-5CG13	**PVC M.I.**	MAT9761520	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861553	(4G10)C	18.0	10	06
	TPE F	MAT9961520	(4G10)C	19.5	7.5	02
6FX_002-5CG21	**PVC M.I.**	MAT9761513	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861544	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT9861543	(4G1.5)C	10.5	7.5	07
	TPE F	MAT9961513	(4G1.5)C	10.0	7.5	02

Harnessed drive cables | Siemens PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Power cables						
Basic cable SpeedTec						
6FX_002-5CG22	**PVC M.I.**	MAT9761542	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861588	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT9861587	(4G1.5)C	10.5	7.5	07
	TPE F	MAT9961542	(4G1.5)C	10.0	7.5	02
Basic cable						
6FX_002-5CG23	**PVC M.I.**	MAT9761521	(4G16)C	23.5	7.5	01
	PUR O.I.	MAT9861554	(4G16)C	22.0	10	06
	TPE F	MAT9961521	(4G16)C	23.0	7.5	02
6FX_002-5CG31	**PVC M.I.**	MAT9761516	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861549	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9861548	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9961516	(4G2.5)C	11.5	7.5	02
Basic cable SpeedTec						
6FX_002-5CG32	**PVC M.I.**	MAT9761543	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861590	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9861589	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9961543	(4G2.5)C	11.5	7.5	02
Basic cable						
6FX_002-5CG41	**PVC M.I.**	MAT9761517	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9861550	(4G4.0)C	12.5	10	06
	TPE F	MAT9961517	(4G4.0)C	13.5	7.5	02
Basic cable SpeedTec						
6FX_002-5CG42	**PVC M.I.**	MAT9761544	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9861591	(4G4.0)C	12.5	10	06
	TPE F	MAT9961544	(4G4.0)C	13.5	7.5	02

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Siemens PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Power cables						
Basic cable						
6FX_002-5CG51	**PVC M.I.**	MAT9761518	(4G6.0)C	16.0	7.5	01
	PUR O.I.	MAT9861551	(4G6.0)C	14.5	10	06
	TPE F	MAT9961518	(4G6.0)C	16.0	7.5	02
Basic cable SpeedTec						
6FX_002-5CG52	**PVC M.I.**	MAT9761545	(4G6.0)C	16.0	7.5	01
	PUR O.I.	MAT9861592	(4G6.0)C	14.5	10	06
	TPE F	MAT9961545	(4G6.0)C	16.0	7.5	02
Basic cable						
6FX_002-5CG61	**PVC M.I.**	MAT9761519	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861552	(4G10)C	18.0	10	06
	TPE F	MAT9961519	(4G10)C	19.5	7.5	02
Basic cable SpeedTec						
6FX_002-5CG62	**PVC M.I.**	MAT9761546	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861593	(4G10)C	18.0	10	06
	TPE F	MAT9961546	(4G10)C	19.5	7.5	02
Basic cable						
6FX_002-5CK01	**PUR M.I.**	MAT98615112	(4G0.75)C	9.0	7.5	07
	TPE F	MAT9961556	(4G0.75)C	8.5	7.5	02
Basic cable						
6FX_002-5CL01	**PVC M.I.**	MAT9761563	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT98615114	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT98615115	(4G1.5)C	10.5	7.5	07
	TPE F	MAT9961557	(4G1.5)C	10.0	7.5	02

Harnessed drive cables | Siemens
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality		Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Power cables							
Basic cable							
6FX_002-5CL02	**PVC M.I.**	New	MAT9761572	(4G1.5)C	10.5	7.5	01
	PUR O.I.	New	MAT98615126	(4G1.5)C	9.5	10	06
	PUR M.I.	New	MAT98615127	(4G1.5)C	10.5	7.5	07
	TPE F	New	MAT9961563	(4G1.5)C	10.0	7.5	02
6FX_002-5CL12	**PVC M.I.**	New	MAT9761573	(4G2.5)C	12.0	7.5	01
	PUR O.I.	New	MAT98615128	(4G2.5)C	11.5	10	06
	PUR M.I.	New	MAT98615129	(4G2.5)C	12.5	7.5	07
	TPE F	New	MAT9961564	(4G2.5)C	11.5	7.5	02
Basic cable SpeedTec							
6FX_002-5CN01	**PVC M.I.**		MAT9761531	(4G1.5)C	10.5	7.5	01
	PUR O.I.		MAT9861571	(4G1.5)C	9.5	10	06
	PUR M.I.		MAT9861570	(4G1.5)C	10.5	7.5	07
	TPE F		MAT9961531	(4G1.5)C	10.0	7.5	02
6FX_002-5CN11	**PVC M.I.**		MAT9761532	(4G2.5)C	12.0	7.5	01
	PUR O.I.		MAT9861573	(4G2.5)C	11.5	10	06
	PUR M.I.		MAT9861572	(4G2.5)C	12.5	7.5	07
	TPE F		MAT9961532	(4G2.5)C	11.5	7.5	02
6FX_002-5CN21	**PVC M.I.**		MAT9761533	(4G1.5)C	10.5	7.5	01
	PUR O.I.		MAT9861575	(4G1.5)C	9.5	10	06
	PUR M.I.		MAT9861574	(4G1.5)C	10.5	7.5	07
	TPE F		MAT9961533	(4G1.5)C	10.0	7.5	02
6FX_002-5CN31	**PVC M.I.**		MAT9761534	(4G2.5)C	12.0	7.5	01
	PUR O.I.		MAT9861577	(4G2.5)C	11.5	10	06
	PUR M.I.		MAT9861576	(4G2.5)C	12.5	7.5	07
	TPE F		MAT9961534	(4G2.5)C	11.5	7.5	02
6FX_002-5CN41	**PVC M.I.**		MAT9761535	(4G4.0)C	13.5	7.5	01
	PUR O.I.		MAT9861578	(4G4.0)C	12.5	10	06
	TPE F		MAT9961535	(4G4.0)C	13.5	7.5	02
6FX_002-5CN51	**PVC M.I.**		MAT9761536	(4G6.0)C	16.0	7.5	01
	PUR O.I.		MAT9861579	(4G6.0)C	14.5	10	06
	TPE F		MAT9961536	(4G6.0)C	16.0	7.5	02

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Siemens
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Power cables						
Basic cable SpeedTec						
6FX_002-5CN54	**PVC M.I.**	MAT9761537	(4G6.0)C	16.0	7.5	01
	PUR O.I.	MAT9861580	(4G6.0)C	14.5	10	06
	TPE F	MAT9961537	(4G6.0)C	16.0	7.5	02
Basic cable SpeedTec						
6FX_002-5CN61	**PVC M.I.**	MAT9761538	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861581	(4G10)C	18.0	10	06
	TPE F	MAT9961538	(4G10)C	19.5	7.5	02
Basic cable SpeedTec						
6FX_002-5CN64	**PVC M.I.**	MAT9761539	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861582	(4G10)C	18.0	10	06
	TPE F	MAT9961539	(4G10)C	19.5	7.5	02
Basic cable SpeedTec						
6FX_002-5CQ01	**PVC M.I.**	MAT9761524	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861560	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT9861559	(4G1.5)C	10.5	7.5	07
	TPE F	MAT9961524	(4G1.5)C	10.0	7.5	02
6FX_002-5CQ11	**PVC M.I.**	MAT9761525	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861562	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9861561	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9961525	(4G2.5)C	11.5	7.5	02
6FX_002-5CQ21	**PVC M.I.**	MAT9761526	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861564	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT9861563	(4G1.5)C	10.5	7.5	07
	TPE F	MAT9961526	(4G1.5)C	10.0	7.5	02
6FX_002-5CQ31	**PVC M.I.**	MAT9761527	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861566	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9861565	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9961527	(4G2.5)C	11.5	7.5	02
6FX_002-5CQ41	**PVC M.I.**	MAT9761528	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9861567	(4G4.0)C	12.5	10	06
	TPE F	MAT9961528	(4G4.0)C	13.5	7.5	02

Harnessed drive cables | Siemens
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Power cables						
Basic cable SpeedTec						
6FX_002-5CQ51	**PVC M.I.**	MAT9761529	(4G6.0)C	16.0	7.5	01
	PUR O.I.	MAT9861568	(4G6.0)C	14.5	10	06
	TPE F	MAT9961529	(4G6.0)C	16.0	7.5	02
6FX_002-5CQ61	**PVC M.I.**	MAT9761530	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861569	(4G10)C	18.0	10	06
	TPE F	MAT9961530	(4G10)C	19.5	7.5	02
Basic cable						
6FX_002-5CS01	**PVC M.I.**	MAT9150020	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861512	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT9861501	(4G1.5)C	10.5	7.5	07
	TPE F	MAT9050020	(4G1.5)C	10.0	7.5	02
Basic cable						
6FX_002-5CS02	**PVC M.I.**	MAT9761501	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861526	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT9861525	(4G1.5)C	10.5	7.5	07
	TPE F	MAT9961501	(4G1.5)C	10.0	7.5	02
Basic cable						
6FX_002-5CS11	**PVC M.I.**	MAT9761502	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861528	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9861527	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9961502	(4G2.5)C	11.5	7.5	02
Basic cable						
6FX_002-5CS12	**PVC M.I.**	MAT9761503	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861530	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9861529	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9961503	(4G2.5)C	11.5	7.5	02

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Siemens
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Power cables						
Basic cable						
6FX_002-5CS13	**PVC M.I.**	MAT9761504	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861531	(4G10)C	18.0	10	06
	TPE F	MAT9961504	(4G10)C	19.5	7.5	02
6FX_002-5CS21	**PVC M.I.**	MAT9150021	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861513	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT9861502	(4G1.5)C	10.5	7.5	07
	TPE F	MAT9050021	(4G1.5)C	10.0	7.5	02
Basic cable						
6FX_002-5CS23	**PVC M.I.**	MAT9761515	(4G16)C	23.5	7.5	01
	PUR O.I.	MAT9861547	(4G16)C	22.0	10	06
	TPE F	MAT9961515	(4G16)C	23.0	7.5	02
6FX_002-5CS24	**PVC M.I.**	MAT9761570	(4G16)C	23.5	7.5	01
	PUR O.I.	MAT98615125	(4G16)C	22.0	10	06
	TPE F	MAT9961561	(4G16)C	23.0	7.5	02
	TPE H*	MAT9961562	(4G16)C	22.5	7.5	03
Basic cable						
6FX_002-5CS31	**PVC M.I.**	MAT9150022	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861514	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9861503	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9050022	(4G2.5)C	11.5	7.5	02
6FX_002-5CS41	**PVC M.I.**	MAT9150023	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9861533	(4G4.0)C	12.5	10	06
	TPE F	MAT9050023	(4G4.0)C	13.5	7.5	02
Basic cable						
6FX_002-5CS42	**PVC M.I.**	MAT9761506	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9861534	(4G4.0)C	12.5	10	06
	TPE F	MAT9961506	(4G4.0)C	13.5	7.5	02

Harnessed drive cables | Siemens PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Power cables						
Basic cable						
6FX_002-5CS51	**PVC M.I.**	MAT9150024	(4G6.0)C	16.0	7.5	01
	PUR O.I.	MAT9861535	(4G6.0)C	14.5	10	06
	TPE F	MAT9050024	(4G6.0)C	16.0	7.5	02
Basic cable						
6FX_002-5CS52	**PVC M.I.**	MAT9761507	(4G6.0)C	16.0	7.5	01
	PUR O.I.	MAT9861536	(4G6.0)C	14.5	10	06
	TPE F	MAT9961507	(4G6.0)C	16.0	7.5	02
Basic cable						
6FX_002-5CS54	**PVC M.I.**	MAT9761508	(4G6.0)C	16.0	7.5	01
	PUR O.I.	MAT9861537	(4G6.0)C	14.5	10	06
	TPE F	MAT9961508	(4G6.0)C	16.0	7.5	02
Basic cable						
6FX_002-5CS61	**PVC M.I.**	MAT9761509	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861538	(4G10)C	18.0	10	06
	TPE F	MAT9961509	(4G10)C	19.5	7.5	02
Basic cable						
6FX_002-5CS62	**PVC M.I.**	MAT9761510	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861539	(4G10)C	18.0	10	06
	TPE F	MAT9961510	(4G10)C	19.5	7.5	02
Basic cable						
6FX_002-5CS64	**PVC M.I.**	MAT9761511	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861540	(4G10)C	18.0	10	06
	TPE F	MAT9961511	(4G10)C	19.5	7.5	02

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Siemens PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Power cables						
Extension cable						
6FX_002-5CA05	**PVC M.I.**	MAT9151001	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861515	(4G1.5)C	9.5	10	06
	TPE F	MAT9051001	(4G1.5)C	10.0	7.5	02
6FX_002-5CA15	**PVC M.I.**	MAT9151002	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861516	(4G2.5)C	11.5	10	06
	TPE F	MAT9051002	(4G2.5)C	11.5	7.5	02
Extension cable						
6FX_002-5CA28	**PVC M.I.**	MAT9151003	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861517	(4G1.5)C	9.5	10	06
	TPE F	MAT9051003	(4G1.5)C	10.0	7.5	02
6FX_002-5CA38	**PVC M.I.**	MAT9151004	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861518	(4G2.5)C	11.5	10	06
	TPE F	MAT9051004	(4G2.5)C	11.5	7.5	02
6FX_002-5CA48	**PVC M.I.**	MAT9151005	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9861519	(4G4.0)C	12.5	10	06
	TPE F	MAT9051005	(4G4.0)C	13.5	7.5	02
6FX_002-5CA58	**PVC M.I.**	MAT9151006	(4G6.0)C	16.0	7.5	01
	PUR O.I.	MAT9861520	(4G6.0)C	14.5	10	06
	TPE F	MAT9051006	(4G6.0)C	16.0	7.5	02
6FX_002-5CA68	**PVC M.I.**	MAT9151007	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861521	(4G10)C	18.0	10	06
	TPE F	MAT9051007	(4G10)C	19.5	7.5	02
Extension cable SpeedTec						
6FX_002-5CN05	**PVC M.I.**	MAT9761522	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861556	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT9861555	(4G1.5)C	10.5	7.5	07
	TPE F	MAT9961522	(4G1.5)C	10.0	7.5	02
6FX_002-5CQ15	**PVC M.I.**	MAT9761523	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861558	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9861557	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9961523	(4G2.5)C	11.5	7.5	02

Harnessed drive cables | Siemens
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Power cables						
Extension cable SpeedTec						
6FX_002-5CQ28	**PVC M.I.**	MAT9761547	(4G1.5)C	10.5	7.5	01
	PUR O.I.	MAT9861595	(4G1.5)C	9.5	10	06
	PUR M.I.	MAT9861594	(4G1.5)C	10.5	7.5	07
	TPE F	MAT9961547	(4G1.5)C	10.0	7.5	02
6FX_002-5CQ38	**PVC M.I.**	MAT9761548	(4G2.5)C	12.0	7.5	01
	PUR O.I.	MAT9861597	(4G2.5)C	11.5	10	06
	PUR M.I.	MAT9861596	(4G2.5)C	12.5	7.5	07
	TPE F	MAT9961548	(4G2.5)C	11.5	7.5	02
6FX_002-5CQ48	**PVC M.I.**	MAT9761549	(4G4.0)C	13.5	7.5	01
	PUR O.I.	MAT9861598	(4G4.0)C	12.5	10	06
	TPE F	MAT9961549	(4G4.0)C	13.5	7.5	02
6FX_002-5CQ58	**PVC M.I.**	MAT9761550	(4G6.0)C	16.0	7.5	01
	PUR O.I.	MAT9861599	(4G6.0)C	14.5	10	06
	TPE F	MAT9961550	(4G6.0)C	16.0	7.5	02
6FX_002-5CQ68	**PVC M.I.**	MAT9761551	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT98615100	(4G10)C	18.0	10	06
	TPE F	MAT9961551	(4G10)C	19.5	7.5	02
Extension cable						
6FX_002-5CX18	**PVC M.I.**	MAT9151009	(4G10)C	20.5	7.5	01
	PUR O.I.	MAT9861522	(4G10)C	18.0	10	06
	TPE F	MAT9051009	(4G10)C	19.5	7.5	02
6FX_002-5CX28	**PVC M.I.**	MAT9151008	(4G16)C	23.5	7.5	01
	PUR O.I.	MAT9861523	(4G16)C	22.0	10	06
	TPE F	MAT9051008	(4G16)C	23.0	7.5	02
Siemens Servo cables						
Basic cable						
6FX_002-5DA01	**PVC O.I.**	MAT9751501	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9160001	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851501	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9060001	(4G1.5+(2x1.5)C)C	13.0	7.5	07
6FX_002-5DA11	**PVC O.I.**	MAT9751502	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9160002	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851502	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9060002	(4G2.5+(2x1.5)C)C	14.5	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Siemens

Harnessed drive cables | Siemens
PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality		Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Servo cables							
Basic cable							
6FX_002-5DA21	**PVC O.I.**		MAT9751503	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.		MAT9160003	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.		MAT9851503	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.		MAT9060003	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable							
6FX_002-5DA23	**PVC M.I.**		MAT9160008	(4G16+(2x1.5)C)C	25.0	7.5	05
	PUR O.I.		MAT9851508	(4G16+(2x1.5)C)C	24.0	10	06
	PUR M.I.		MAT9060008	(4G16+(2x1.5)C)C	24.5	7.5	07
Basic cable							
6FX_002-5DA30	**PVC O.I.**	New	MAT97515127	(4G1.5+(2x1.5)C)C	12.0	10	04
	PUR O.I.	New	MAT98515151	(4G1.5+(2x1.5)C)C	12.0	10	06
Basic cable							
6FX_002-5DA31	**PVC O.I.**		MAT9751504	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.		MAT9160004	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.		MAT9851504	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.		MAT9060004	(4G2.5+(2x1.5)C)C	14.5	7.5	07
Basic cable							
6FX_002-5DA33	**PVC M.I.**		MAT9160009	(4G25+(2x1.5)C)C	30.0	7.5	05
	PUR M.I.		MAT9060009	(4G25+(2x1.5)C)C	28.5	7.5	07
Basic cable							
6FX_002-5DA41	**PVC O.I.**		MAT9751505	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.		MAT9160005	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.		MAT9851505	(4G4.0+(2x1.5)C)C	15.0	10	06
	PUR M.I.		MAT9060005	(4G4.0+(2x1.5)C)C	16.0	7.5	07

Harnessed drive cables | Siemens PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Servo cables						
Basic cable						
6FX_002-5DA43	**PVC M.I.**	MAT9160010	(4G35+(2x1.5)C)C	33.5	7.5	05
	PUR M.I.	MAT9060010	(4G35+(2x1.5)C)C	32.5	7.5	07
Basic cable						
6FX_002-5DA51	**PVC O.I.**	MAT9751506	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9160006	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.	MAT9851506	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.	MAT9060006	(4G6.0+(2x1.5)C)C	18.0	7.5	07
6FX_002-5DA61	**PVC M.I.**	MAT9160007	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT9851507	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT9060007	(4G10+(2x1.5)C)C	21.0	7.5	07
Basic cable						
6FX_002-5DG01	**PVC O.I.**	MAT9751529	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9751528	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851541	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9851540	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable SpeedTec						
6FX_002-5DG10	**PVC O.I.**	MAT9751589	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9751588	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT98515107	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT98515106	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable						
6FX_002-5DG11	**PVC O.I.**	MAT9751533	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9751532	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851545	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9851544	(4G2.5+(2x1.5)C)C	14.5	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Siemens PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Servo cables						
Basic cable SpeedTec						
6FX_002-5DG12	**PVC O.I.**	MAT9751593	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9751592	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT98515111	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT98515110	(4G2.5+(2x1.5)C)C	14.5	7.5	07
Basic cable						
6FX_002-5DG13	**PVC M.I.**	MAT9751541	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT9851555	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT9851554	(4G10+(2x1.5)C)C	21.0	7.5	07
6FX_002-5DG21	**PVC O.I.**	MAT9751531	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9751530	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851543	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9851542	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable SpeedTec						
6FX_002-5DG22	**PVC O.I.**	MAT9751591	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9751590	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT98515109	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT98515108	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable						
6FX_002-5DG23	**PUR O.I.**	MAT9851557	(4G16+(2x1.5)C)C	24.0	10	06
	PUR M.I.	MAT9851556	(4G16+(2x1.5)C)C	24.5	7.5	07
6FX_002-5DG31	**PVC O.I.**	MAT9751535	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9751534	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851547	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9851546	(4G2.5+(2x1.5)C)C	14.5	7.5	07
Basic cable SpeedTec						
6FX_002-5DG32	**PVC O.I.**	MAT9751595	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9751594	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT98515113	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT98515112	(4G2.5+(2x1.5)C)C	14.5	7.5	07

Harnessed drive cables | Siemens
PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Servo cables						
Basic cable						
6FX_002-5DG33	**PUR M.I.**	MAT9851558	(4G25+(2x1.5)C)C	28.5	7.5	07
6FX_002-5DG41	**PVC O.I.**	MAT9751537	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9751536	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9851549	(4G4.0+(2x1.5)C)C	15.0	10	06
	PUR M.I.	MAT9851548	(4G4.0+(2x1.5)C)C	16.0	7.5	07
Basic cable SpeedTec						
6FX_002-5DG42	**PVC O.I.**	MAT9751597	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9751596	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT98515115	(4G4.0+(2x1.5)C)C	15.0	10	06
	PUR M.I.	MAT98515114	(4G4.0+(2x1.5)C)C	16.0	7.5	07
Basic cable						
6FX_002-5DG43	**PUR M.I.**	MAT9851559	(4G35+(2x1.5)C)C	32.5	7.5	07
6FX_002-5DG51	**PVC O.I.**	MAT9751539	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9751538	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.	MAT9851551	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.	MAT9851550	(4G6.0+(2x1.5)C)C	18.0	7.5	07
Basic cable SpeedTec						
6FX_002-5DG52	**PVC O.I.**	MAT9751599	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9751598	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.	MAT98515117	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.	MAT98515116	(4G6.0+(2x1.5)C)C	18.0	7.5	07
Basic cable						
6FX_002-5DG61	**PVC M.I.**	MAT9751540	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT9851553	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT9851552	(4G10+(2x1.5)C)C	21.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Siemens
PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Servo cables						
Basic cable SpeedTec						
6FX_002-5DG62	**PVC M.I.**	MAT97515100	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT98515119	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT98515118	(4G10+(2x1.5)C)C	21.0	7.5	07
Basic cable SpeedTec						
6FX_002-5DN01	**PVC O.I.**	MAT9751571	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9751570	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851589	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9851588	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable						
6FX_002-5DN06	**PVC O.I.**	MAT97515103	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT97515102	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT98515122	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT98515123	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable SpeedTec						
6FX_002-5DN11	**PVC O.I.**	MAT9751573	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9751572	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851591	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9851590	(4G2.5+(2x1.5)C)C	14.5	7.5	07
Basic cable						
6FX_002-5DN16	**PVC O.I.**	MAT97515108	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT97515109	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT98515129	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT98515128	(4G2.5+(2x1.5)C)C	14.5	7.5	07
Basic cable SpeedTec						
6FX_002-5DN21	**PVC O.I.**	MAT9751575	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9751574	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851593	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9851592	(4G1.5+(2x1.5)C)C	13.0	7.5	07

Harnessed drive cables | Siemens PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality		Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Servo cables							
Basic cable							
6FX_002-5DN26	**PVC O.I.**		MAT97515125	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.		MAT97515126	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.		MAT98515145	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.		MAT98515146	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable SpeedTec							
6FX_002-5DN27	**PVC O.I.**	New	MAT97515128	(4G1.5+(2x1.5)C)C	12.0	10	04
	PUR O.I.	New	MAT98515152	(4G1.5+(2x1.5)C)C	12.0	10	06
Basic cable							
6FX_002-5DN30	**PVC O.I.**		MAT9761566	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.		MAT98615117	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.		MAT9761565	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.		MAT98615116	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable SpeedTec							
6FX_002-5DN31	**PVC O.I.**		MAT9751577	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.		MAT9751576	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.		MAT9851595	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.		MAT9851594	(4G2.5+(2x1.5)C)C	14.5	7.5	07
6FX_002-5DN41	**PVC O.I.**		MAT9751579	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.		MAT9751578	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.		MAT9851597	(4G4.0+(2x1.5)C)C	15.0	10	06
	PUR M.I.		MAT9851596	(4G4.0+(2x1.5)C)C	16.0	7.5	07
Basic cable							
6FX_002-5DN46	**PVC O.I.**		MAT97515113	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.		MAT97515114	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.		MAT98515133	(4G4.0+(2x1.5)C)C	15.0	10	06
	PUR M.I.		MAT98515134	(4G4.0+(2x1.5)C)C	16.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Siemens PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Servo cables						
Basic cable SpeedTec						
6FX_002-5DN51	**PVC O.I.**	MAT9751581	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9751580	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.	MAT9851599	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.	MAT9851598	(4G6.0+(2x1.5)C)C	18.0	7.5	07
Basic cable SpeedTec						
6FX_002-5DN54	**PVC O.I.**	MAT9751583	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9751582	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.	MAT98515101	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.	MAT98515100	(4G6.0+(2x1.5)C)C	18.0	7.5	07
Basic cable						
6FX_002-5DN56	**PVC O.I.**	MAT97515119	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT97515120	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.	MAT98515139	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.	MAT98515140	(4G6.0+(2x1.5)C)C	18.0	7.5	07
Basic cable SpeedTec						
6FX_002-5DN61	**PVC M.I.**	MAT9751584	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT98515103	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT98515102	(4G10+(2x1.5)C)C	21.0	7.5	07
Basic cable SpeedTec						
6FX_002-5DN64	**PVC M.I.**	MAT9751586	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT98515105	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT98515104	(4G10+(2x1.5)C)C	21.0	7.5	07
Basic cable SpeedTec						
6FX_002-5DQ01	**PVC O.I.**	MAT9751557	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9751556	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851575	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9851574	(4G1.5+(2x1.5)C)C	13.0	7.5	07

Harnessed drive cables | Siemens PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Servo cables						
Basic cable SpeedTec						
6FX_002-5DQ11	**PVC O.I.**	MAT9751559	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9751558	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851577	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9851576	(4G2.5+(2x1.5)C)C	14.5	7.5	07
6FX_002-5DQ21	**PVC O.I.**	MAT9751561	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9751560	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851579	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9851578	(4G1.5+(2x1.5)C)C	13.0	7.5	07
6FX_002-5DQ31	**PVC O.I.**	MAT9751563	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9751562	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851581	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9851580	(4G2.5+(2x1.5)C)C	14.5	7.5	07
6FX_002-5DQ41	**PVC O.I.**	MAT9751565	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9751564	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9851583	(4G4.0+(2x1.5)C)C	15.0	10	06
	PUR M.I.	MAT9851582	(4G4.0+(2x1.5)C)C	16.0	7.5	07
6FX_002-5DQ51	**PVC O.I.**	MAT9751567	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9751566	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.	MAT9851585	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.	MAT9851584	(4G6.0+(2x1.5)C)C	18.0	7.5	07
6FX_002-5DQ61	**PVC M.I.**	MAT9751568	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT9851587	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT9851586	(4G10+(2x1.5)C)C	21.0	7.5	07
Basic cable						
6FX_002-5DS01	**PVC O.I.**	MAT9751507	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9160020	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851509	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9060020	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable						
6FX_002-5DS06	**PVC O.I.**	MAT97515105	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT97515104	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT98515124	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT98515125	(4G1.5+(2x1.5)C)C	13.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Siemens PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Servo cables						
Basic cable						
6FX_002-5DS11	**PVC O.I.**	MAT9751516	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9751515	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851523	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9851522	(4G2.5+(2x1.5)C)C	14.5	7.5	07
6FX_002-5DS13	**PVC M.I.**	MAT9751517	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT9851525	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT9851524	(4G10+(2x1.5)C)C	21.0	7.5	07
6FX_002-5DS21	**PVC O.I.**	MAT9751508	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9160021	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851510	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9060021	(4G1.5+(2x1.5)C)C	13.0	7.5	07
Basic cable						
6FX_002-5DS23	**PUR O.I.**	MAT9851527	(4G16+(2x1.5)C)C	24.0	10	06
	PUR M.I.	MAT9851526	(4G16+(2x1.5)C)C	24.5	7.5	07
6FX_002-5DS33	**PUR M.I.**	MAT9851532	(4G25+(2x1.5)C)C	28.5	7.5	07
Basic cable						
6FX_002-5DS36	**PVC O.I.**	MAT97515107	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT97515106	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT98515127	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT98515126	(4G2.5+(2x1.5)C)C	14.5	7.5	07
Basic cable						
6FX_002-5DS41	**PVC O.I.**	MAT9751522	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9751521	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9851531	(4G4.0+(2x1.5)C)C	15.0	10	06
	PUR M.I.	MAT9851530	(4G4.0+(2x1.5)C)C	16.0	7.5	07
Basic cable						
6FX_002-5DS43	**PUR M.I.**	MAT9851533	(4G35+(2x1.5)C)C	32.5	7.5	07

Harnessed drive cables | Siemens PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality		Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Servo cables							
Basic cable							
6FX_002-5DS51	**PVC O.I.**		MAT9751524	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.		MAT9751523	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.		MAT9851535	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.		MAT9851534	(4G6.0+(2x1.5)C)C	18.0	7.5	07
Basic cable							
6FX_002-5DS54	**PVC O.I.**		MAT9751526	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.		MAT9751525	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR M.I.		MAT9851536	(4G6.0+(2x1.5)C)C	18.0	7.5	07
			MAT9851537				
Basic cable							
6FX_002-5DS61	**PVC M.I.**		MAT9160022	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.		MAT9851511	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.		MAT9060022	(4G10+(2x1.5)C)C	21.0	7.5	07
Basic cable							
6FX_002-5DS64	**PVC M.I.**		MAT9751527	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.		MAT9851539	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.		MAT9851538	(4G10+(2x1.5)C)C	21.0	7.5	07
Basic cable							
6FX_002-8QN04	**PUR O.I.**	New	MAT98515147	(4G0.34+(2x0.34)C+(4xAWG26)C)C	10.0	10	28
Basic cable							
6FX_002-8QN08	**PUR O.I.**	New	MAT98515148	(4G0.75+(2x0.5)C+(4xAWG26)C)C	11.0	10	28
Extension cable							
6FX_002-5DA05	**PVC O.I.**		MAT9751509	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.		MAT9161001	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.		MAT9851512	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.		MAT9061001	(4G1.5+(2x1.5)C)C	13.0	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Siemens PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Servo cables						
Extension cable						
6FX_002-5DA15	**PVC O.I.**	MAT9751510	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9161002	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851513	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9061002	(4G2.5+(2x1.5)C)C	14.5	7.5	07
Extension cable						
6FX_002-5DA28	**PVC O.I.**	MAT9751511	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9161003	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851514	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9061003	(4G1.5+(2x1.5)C)C	13.0	7.5	07
6FX_002-5DA38	**PVC O.I.**	MAT9751512	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9161004	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851515	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9061004	(4G2.5+(2x1.5)C)C	14.5	7.5	07
6FX_002-5DA48	**PVC O.I.**	MAT9751513	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9161005	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9851516	(4G4.0+(2x1.5)C)C	15.0	10	06
	PUR M.I.	MAT9061005	(4G4.0+(2x1.5)C)C	16.0	7.5	07
6FX_002-5DA58	**PVC O.I.**	MAT9751514	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9161006	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.	MAT9851517	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.	MAT9061006	(4G6.0+(2x1.5)C)C	18.0	7.5	07
6FX_002-5DA68	**PVC M.I.**	MAT9161007	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT9851518	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT9061007	(4G10+(2x1.5)C)C	21.0	7.5	07
Extension cable SpeedTec						
6FX_002-5DN05	**PVC O.I.**	MAT9751544	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9751543	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851561	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9851560	(4G1.5+(2x1.5)C)C	13.0	7.5	07
6FX_002-5DN15	**PVC O.I.**	MAT9751546	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9751545	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851563	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9851562	(4G2.5+(2x1.5)C)C	14.5	7.5	07

Harnessed drive cables | Siemens PVC/PUR

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Servo cables						
Extension cable SpeedTec						
6FX_002-5DQ15	**PVC O.I.**	MAT97515122	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT97515123	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT98515142	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT98515143	(4G2.5+(2x1.5)C)C	14.5	7.5	07
6FX_002-5DQ28	**PVC O.I.**	MAT9751548	(4G1.5+(2x1.5)C)C	12.0	10	04
	PVC M.I.	MAT9751547	(4G1.5+(2x1.5)C)C	13.0	7.5	05
	PUR O.I.	MAT9851565	(4G1.5+(2x1.5)C)C	12.0	10	06
	PUR M.I.	MAT9851564	(4G1.5+(2x1.5)C)C	13.0	7.5	07
6FX_002-5DQ38	**PVC O.I.**	MAT9751550	(4G2.5+(2x1.5)C)C	14.0	10	04
	PVC M.I.	MAT9751549	(4G2.5+(2x1.5)C)C	14.5	7.5	05
	PUR O.I.	MAT9851567	(4G2.5+(2x1.5)C)C	14.0	10	06
	PUR M.I.	MAT9851566	(4G2.5+(2x1.5)C)C	14.5	7.5	07
6FX_002-5DQ48	**PVC O.I.**	MAT9751552	(4G4.0+(2x1.5)C)C	15.0	10	04
	PVC M.I.	MAT9751551	(4G4.0+(2x1.5)C)C	16.0	7.5	05
	PUR O.I.	MAT9851569	(4G4.0+(2x1.5)C)C	15.0	10	06
	PUR M.I.	MAT9851568	(4G4.0+(2x1.5)C)C	16.0	7.5	07
6FX_002-5DQ58	**PVC O.I.**	MAT9751554	(4G6.0+(2x1.5)C)C	16.5	10	04
	PVC M.I.	MAT9751553	(4G6.0+(2x1.5)C)C	18.0	7.5	05
	PUR O.I.	MAT9851571	(4G6.0+(2x1.5)C)C	16.5	10	06
	PUR M.I.	MAT9851570	(4G6.0+(2x1.5)C)C	18.0	7.5	07
6FX_002-5DQ68	**PVC M.I.**	MAT9751555	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT9851573	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT9851572	(4G10+(2x1.5)C)C	21.0	7.5	07
Extension cable						
6FX_002-5DX18	**PVC M.I.**	MAT9161011	(4G10+(2x1.5)C)C	22.5	7.5	05
	PUR O.I.	MAT9851520	(4G10+(2x1.5)C)C	20.5	10	06
	PUR M.I.	MAT9061011	(4G10+(2x1.5)C)C	21.0	7.5	07
6FX_002-5DX28	**PVC M.I.**	MAT9161008	(4G16+(2x1.5)C)C	25.0	7.5	05
	PUR O.I.	MAT9851519	(4G16+(2x1.5)C)C	24.0	10	06
	PUR M.I.	MAT9061008	(4G16+(2x1.5)C)C	24.5	7.5	07
6FX_002-5DX38	**PVC M.I.**	MAT9161009	(4G25+(2x1.5)C)C	30.0	7.5	05
	PUR M.I.	MAT9061009	(4G25+(2x1.5)C)C	28.5	7.5	07
6FX_002-5DX48	**PVC M.I.**	MAT9161010	(4G35+(2x1.5)C)C	33.5	7.5	05
	PUR M.I.	MAT9061010	(4G35+(2x1.5)C)C	32.5	7.5	07

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Siemens PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality		Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Servo cables							
Extension cable							
6FX_002-8QE04	**PUR O.I.**	New	MAT98515149	(4G0.34+(2x0.34)C+(4xAWG26)C)C	10.0	10	28
Extension cable							
6FX_002-8QE08	**PUR O.I.**	New	MAT98515150	(4G0.75+(2x0.5)C+(4xAWG26)C)C	11.0	10	28
Siemens Signal cables							
Basic cable							
6FX8002-2CF20	**PVC**		MAT9741518	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	10	08
	PUR O.I.		MAT9841563	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	10	09
	PUR M.I.		MAT9841564	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	10
	TPE H*		MAT9941505	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	11
Basic cable							
6FX8002-2CQ31	**PVC**		MAT9741514	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	10.0	10	08
	PUR O.I.		MAT9841557	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	10.0	10	09
	PUR M.I.		MAT9841558	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	10
	TPE H*		MAT9941503	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	11
Basic cable							
6FX8002-2DC40	**PVC**		MAT9741520	(2x(2x0.15)+(2x0.38))C	7.5	10	08
	PUR O.I.		MAT9841566	(2x(2x0.15)+(2x0.38))C	7.5	10	09
	PUR M.I.		MAT9841567	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10
Basic cable							
6FX8002-2DC42	**PVC**		MAT9741522	(2x(2x0.15)+(2x0.38))C	7.5	10	08
	PUR O.I.		MAT9841569	(2x(2x0.15)+(2x0.38))C	7.5	10	09
	PUR M.I.		MAT9841570	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10
Basic cable							
6FX_002-1DC00	**PVC**		MAT9741506	(2x(2x0.15)+(2x0.38))C	7.5	10	08
	PUR O.I.		MAT9841532	(2x(2x0.15)+(2x0.38))C	7.5	10	09
	PUR M.I.		MAT9070032	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10

Harnessed drive cables | Siemens
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Signal cables						
Basic cable						
6FX_002-2AD00	**PVC**	MAT9170001	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	10	08
	PUR M.I.	MAT9841501	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	10
	TPE H*	MAT9070001	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	11
Basic cable						
6FX_002-2AH00	**PVC**	MAT9170018	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR M.I.	MAT9841518	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*	MAT9070018	(4x(2x0.34)+4x0.5)C	10.5	7.5	11
Basic cable						
6FX_002-2AH11	**PVC**	MAT9741526	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR O.I.	MAT98415104	(4x(2x0.34)+4x0.5)C	9.0	10	09
	PUR M.I.	MAT98415105	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*	MAT9941507	(4x(2x0.34)+4x0.5)C	10.5	7.5	11
Basic cable						
6FX_002-2CA11	**PVC**	MAT9170002	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR M.I.	MAT9841502	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*	MAT9070002	(4x(2x0.34)+4x0.5)C	10.5	7.5	11
6FX_002-2CA15	**PVC**	MAT9170003	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	10	08
	PUR M.I.	MAT9841503	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	10
	TPE H*	MAT9070003	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	11
Basic cable						
6FX_002-2CA31	**PVC**	MAT9170004	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	10.0	10	08
	PUR M.I.	MAT9841504	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	10
	TPE H*	MAT9070004	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	11
Basic cable						
6FX_002-2CA51	**PVC**	MAT9170005	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	10	08
	PUR M.I.	MAT9841505	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	10
	TPE H*	MAT9070005	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	11

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Siemens
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Signal cables						
Basic cable						
6FX_002-2CA71	**PVC**	MAT9170006	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR M.I.	MAT9841506	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*	MAT9070006	(4x(2x0.34)+4x0.5)C	10.5	7.5	11
Basic cable						
6FX_002-2CB31	**PUR**	MAT9841507	(14x0.25)C	8.5	10	13
	TPE H*	MAT9070007	(12x0.25)C	9.5	5	24
6FX_002-2CB51	**PVC**	MAT9170008	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR M.I.	MAT9841508	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*	MAT9070008	(4x(2x0.34)+4x0.5)C	10.5	7.5	11
6FX_002-2CC11	**PVC**	MAT9170009	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR M.I.	MAT9841509	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*	MAT9070009	(4x(2x0.34)+4x0.5)C	10.5	7.5	11
6FX_002-2CD01	**PVC**	MAT9170010	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR M.I.	MAT9841510	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*	MAT9070010	(4x(2x0.34)+4x0.5)C	10.5	7.5	11
Basic cable						
6FX_002-2CF01	**PVC**	MAT9170021	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	10	08
	PUR M.I.	MAT9841519	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	10
	TPE H*	MAT9070021	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	11
6FX_002-2CF02	**PVC**	MAT9170011	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	10	08
	PUR M.I.	MAT9841511	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	10
	TPE H*	MAT9070011	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	11
6FX_002-2CG00	**PVC**	MAT9170012	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR M.I.	MAT9841512	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*	MAT9070012	(4x(2x0.34)+4x0.5)C	10.5	7.5	11
Basic cable						
6FX_002-2CH00	**PVC**	MAT9170013	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	10	08
	PUR M.I.	MAT9841513	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	10
	TPE H*	MAT9070013	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	11

Harnessed drive cables | Siemens
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality		Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Signal cables							
Basic cable							
6FX_002-2CK00	**PVC**		MAT9170014	(3x(2x0.14)C+2x(0.5)C)C	9.5	10	08
	PUR M.I.		MAT9841514	(3x(2x0.14)C+2x(0.5)C)C	10.5	7.5	10
	TPE H*		MAT9070014	(3x(2x0.14)C+2x(0.5)C)C	10.0	7.5	11
6FX_002-2CL00	**PVC**		MAT9170015	(3x(2x0.14)C+2x(0.5)C)C	9.5	10	08
	PUR M.I.		MAT9841515	(3x(2x0.14)C+2x(0.5)C)C	10.5	7.5	10
	TPE H*		MAT9070015	(3x(2x0.14)C+2x(0.5)C)C	10.0	7.5	11
Basic cable							
6FX_002-2CR00	**PVC**		MAT9741524	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR O.I.		MAT98415101	(4x(2x0.34)+4x0.5)C	9.0	10	09
	PUR M.I.		MAT98415102	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*		MAT9941506	(4x(2x0.34)+4x0.5)C	10.5	7.5	11
Basic cable							
6FX_002-2CT12	**PVC**	New	MAT9741531	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR O.I.	New	MAT98415111	(4x(2x0.34)+4x0.5)C	9.0	10	09
	PUR M.I.	New	MAT98415112	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*	New	MAT9941509	(4x(2x0.34)+4x0.5)C	10.5	7.5	11
Basic cable							
6FX_002-2DB10	**PUR**	New	MAT9821501	(4x(2x0.25)C)C	11.0	10	
Basic cable							
6FX_002-2DC10	**PVC**		MAT9741504	(2x(2x0.15)+(2x0.38))C	7.5	10	08
	PUR O.I.		MAT9841530	(2x(2x0.15)+(2x0.38))C	7.5	10	09
	PUR M.I.		MAT9070030	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10
6FX_002-2DC20	**PVC**		MAT9741505	(2x(2x0.15)+(2x0.38))C	7.5	10	08
	PUR O.I.		MAT9841531	(2x(2x0.15)+(2x0.38))C	7.5	10	09
	PUR M.I.		MAT9070031	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10
Basic cable							
6FX_002-2DC36	**PVC**		MAT9741528	(2x(2x0.15)+(2x0.38))C	7.5	10	08
	PUR O.I.		MAT98415107	(2x(2x0.15)+(2x0.38))C	7.5	10	09
	PUR M.I.		MAT98415108	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Siemens
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality		Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Signal cables							
Basic cable							
6FX_002-2EQ00	**PVC**		MAT9170016	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	10.0	10	08
	PUR M.I.		MAT9841516	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	10
	TPE H*		MAT9070016	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	11
Basic cable							
6FX_002-2EQ10	**PVC**		MAT9170017	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	10.0	10	08
	PUR M.I.		MAT9841517	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	10
	TPE H*		MAT9070017	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	11
6FX_002-2EQ20	**PVC**	New	MAT9741530	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	10.0	10	08
	PUR O.I.	New	MAT98415109	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	10.0	10	09
	PUR M.I.	New	MAT98415110	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	10
	TPE H*	New	MAT9941508	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	11
6FX_002-2EQ31	**PVC**		MAT9741512	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	10.0	10	08
	PUR O.I.		MAT9841554	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	10.0	10	09
	PUR M.I.		MAT9841555	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	10
	TPE H*		MAT9941502	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	11
Basic cable							
6FX_002-5BL03	**PVC M.I.**	New	MAT9711502	(3G0.75)C	8.0	7.5	18
	PUR M.I.	New	MAT9811501	(3G0.75)C	8.0	6.8	22
Basic cable							
6fx3002-2CT10	**PVC**		MAT9741507	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR O.I.		MAT9841548	(4x(2x0.34)+4x0.5)C	9.0	10	09
	PUR M.I.		MAT9841549	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*		MAT9941501	(4x(2x0.34)+4x0.5)C	10.5	7.5	11

Harnessed drive cables | Siemens
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Signal cables						
Extension cable						
6FX8002-2CQ34	**PVC**	MAT9741516	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	10.0	10	08
	PUR O.I.	MAT9841560	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	10.0	10	09
	PUR M.I.	MAT9841561	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	10
	TPE H*	MAT9941504	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	11
Extension cable						
6FX_002-2AD04	**PVC**	MAT9171001	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	10	08
	PUR M.I.	MAT9841520	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	10
	TPE H*	MAT9071001	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	11
6FX_002-2AH04	**PVC**	MAT9171018	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR M.I.	MAT9841529	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*	MAT9071018	(4x(2x0.34)+4x0.5)C	10.5	7.5	11
6FX_002-2CA34	**PVC**	MAT9171004	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	10.0	10	08
	PUR M.I.	MAT9841523	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	10
	TPE H*	MAT9071004	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	11
6FX_002-2CA54	**PVC**	MAT9171003	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	10	08
	PUR M.I.	MAT9841522	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	10
	TPE H*	MAT9071003	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	11
6FX_002-2CB34	**PUR**	MAT9841525	(14x0.25)C	8.5	10	13
	TPE H*	MAT9071007	(12x0.25)C	9.5	5	24
6FX_002-2CB54	**PVC**	MAT9171002	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR M.I.	MAT9841521	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*	MAT9071002	(4x(2x0.34)+4x0.5)C	10.5	7.5	11
6FX_002-2CC14	**PVC**	MAT9171009	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR M.I.	MAT9841526	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*	MAT9071009	(4x(2x0.34)+4x0.5)C	10.5	7.5	11
6FX_002-2CF04	**PVC**	MAT9171011	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	9.0	10	08
	PUR M.I.	MAT9841527	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	10
	TPE H*	MAT9071011	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	10.5	7.5	11
Extension cable						
6FX_002-2DC34	**PVC**	MAT9741509	(2x(2x0.15)+(2x0.38))C	7.5	10	08
	PUR O.I.	MAT9841551	(2x(2x0.15)+(2x0.38))C	7.5	10	09
	PUR M.I.	MAT9841571	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x** = without earth core
* Cable qualities: **M.I** = with inner jacket, **O.I.** = without inner jacket, **F** = flame-retardant, **H** = halogen-free, **OIL** = oil-resistant

Harnessed drive cables | Siemens
PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Siemens Signal cables						
Extension cable						
6FX_002-2EQ14	**PVC**	MAT9171017	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	10.0	10	08
	PUR M.I.	MAT9841528	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	10
	TPE H*	MAT9071017	(3x(2x0.14)C+(4x0.14)+(4x0.25)+(2x0.5))C	11.0	7.5	11
Siemens Signal cables DriveCliq						
Basic cable						
i6FX8002-2DC30-1AD0(3m)	**PUR M.I.**	MAT9841534	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10
i6FX8002-2DC30-1AF0(5m)	**PUR M.I.**	MAT9841535	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10
i6FX8002-2DC30-1BA0(10m)	**PUR M.I.**	MAT9841536	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10
i6FX8002-2DC30-1BF0(15m)	**PUR M.I.**	MAT9841537	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10
i6FX8002-2DC30-1CA0(20m)	**PUR M.I.**	MAT9841538	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10
i6FX8002-2DC30-1CF0(25m)	**PUR M.I.**	MAT9841539	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10
i6FX8002-2DC30-1DA0(30m)	**PUR M.I.**	MAT9841540	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10
Extension cable						
i6FX8002-2DC34-1AD0(3m)	**PUR M.I.**	MAT9841541	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10
i6FX8002-2DC34-1AF0(5m)	**PUR M.I.**	MAT9841542	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10
i6FX8002-2DC34-1BA0(10m)	**PUR M.I.**	MAT9841543	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10
i6FX8002-2DC34-1BF0(15m)	**PUR M.I.**	MAT9841544	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10
i6FX8002-2DC34-1CA0(20m)	**PUR M.I.**	MAT9841545	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10
i6FX8002-2DC34-1CF0(25m)	**PUR M.I.**	MAT9841546	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10
i6FX8002-2DC34-1DA0(30m)	**PUR M.I.**	MAT9841547	(2x(2x0.20)+(2x0.38))C	7.5	7.5	10

Harnessed drive cables | Stöber PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Stöber Servo cables						
Basic cable						
Gr.1-Motor-1,0mm²	**PVC O.I.**	MAT9751601	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9430001	(4G1.0+2x(2x0.75)C)C	13.5	7.5	05
	PUR O.I.	MAT9851601	(4G1.0+2x(2x0.75)C)C	13.0	10	06
	PUR M.I.	MAT9420001	(4G1.0+2x(2x0.75)C)C	13.5	7.5	07
Gr.1-Motor-1,5mm²	**PVC O.I.**	MAT9751602	(4G1.5+2x(2x0.75)C)C	13.5	10	04
	PVC M.I.	MAT9430002	(4G1.5+2x(2x0.75)C)C	14.5	7.5	05
	PUR O.I.	MAT9851602	(4G1.5+2x(2x0.75)C)C	13.5	10	06
	PUR M.I.	MAT9420002	(4G1.5+2x(2x0.75)C)C	14.0	7.5	07
Gr.1-Motor-2,5mm²	**PVC O.I.**	MAT9751603	(4G2.5+2x(2x1.5)C)C	16.0	10	04
	PVC M.I.	MAT9430003	(4G2.5+2x(2x1.5)C)C	17.0	7.5	05
	PUR O.I.	MAT9851603	(4G2.5+2x(2x1.5)C)C	16.0	10	06
	PUR M.I.	MAT9420003	(4G2.5+2x(2x1.5)C)C	17.0	7.5	07
Gr.1-Motor-4,0mm²	**PVC O.I.**	MAT9751604	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9430004	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9851604	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9420004	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
Basic cable						
Gr.1,5-Motor-4,0mm²	**PVC O.I.**	MAT9751605	(4G4.0+2x(2x1.5)C)C	17.0	10	04
	PVC M.I.	MAT9430005	(4G4.0+2x(2x1.5)C)C	18.5	7.5	05
	PUR O.I.	MAT9851605	(4G4.0+2x(2x1.5)C)C	17.0	10	06
	PUR M.I.	MAT9420005	(4G4.0+2x(2x1.5)C)C	18.0	7.5	07
Gr.1,5-Motor-6,0mm²	**PVC O.I.**	MAT9751606	(4G6.0+2x(2x1.5)C)C	18.5	10	04
	PVC M.I.	MAT9430006	(4G6.0+2x(2x1.5)C)C	21.5	7.5	05
	PUR O.I.	MAT9851606	(4G6.0+2x(2x1.5)C)C	18.5	10	06
	PUR M.I.	MAT9420006	(4G6.0+2x(2x1.5)C)C	20.0	7.5	07
Gr.1,5-Motor-10,0mm²	**PVC M.I.**	MAT9430007	(4G10+2x(2x1.5)C)C	24.0	7.5	05
	PUR O.I.	MAT9851607	(4G10+2x(2x1.5)C)C	22.5	10	06
	PUR M.I.	MAT9420007	(4G10+2x(2x1.5)C)C	23.5	7.5	07
Stöber Encoder cables						
iSDS4000 Basic cable						
Encoder ED/EK iSDS4000	**PVC**	MAT9431001	(4x(2x0.34)+4x0.5)C	9.0	10	08
	PUR O.I.	MAT9941601	(4x(2x0.34)+4x0.5)C	9.0	10	09
	PUR M.I.	MAT9841601	(4x(2x0.34)+4x0.5)C	10.5	7.5	10
	TPE H*	MAT9421001	(4x(2x0.34)+4x0.5)C	10.5	7.5	11

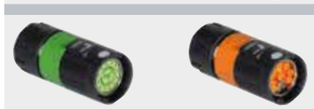
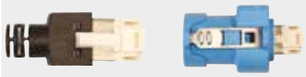
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. Example image
igus® gladly pre-harnesses the cable according to your technical specifications.
G = with green-yellow earth core **x =** without earth core
* Cable qualities: **M.I =** with inner jacket, **O.I. =** without inner jacket, **F =** flame-retardant, **H =** halogen-free, **OIL =** oil-resistant

Harnessed drive cables | Stöber PVC/PUR/TPE

* Technical information on the cable quality: ▶ page 498-501

Manufacturer Part No.	Cable quality	Part No.	Number of cores and conductor nominal cross section [mm²]	Ø [mm]	Bend radius [x d]	chain-flex® cable
Stöber Encoder cables						
iSDS4000 Basic cable						
Encoder ES iSDS4000	**PUR O.I.**	MAT9941602	((4x0.25)+3x(2x0.25+2x0.5))C	9.5	10	09
	PUR M.I.	MAT9841602	((4x0.25)+3x(2x0.25+2x0.5))C	11.0	7.5	10
	TPE H*	MAT9421002	((4x0.25)+3x(2x0.25+2x0.5))C	11.0	7.5	11
iHTL Basic cable						
Encoder HTL	**PVC**	MAT9431006	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9841606	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9421006	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
iMDS5000 Basic cable						
Encoder iMDS5000	**PVC**	MAT9431004	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9841604	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9421004	(4x(2x0.25)+2x0.5)C	9.5	7.5	11
iMDS5000 Basic cable						
Resolver iMDS5000	**PVC**	MAT9431005	(3x(2x0.25)C)C	9.0	10	08
	PUR M.I.	MAT9841605	(3x(2x0.25))C	7.5	7.5	10
	TPE H*	MAT9421005	(3x(2x0.25))C	7.5	7.5	11
iSDS4000 Basic cable						
Resolver iSDS4000	**PVC**	MAT9431003	(4x(2x0.25)+2x0.5)C	8.0	10	08
	PUR M.I.	MAT9841603	(4x(2x0.25)+2x0.5)C	9.5	7.5	10
	TPE H*	MAT9421003	(4x(2x0.25)+2x0.5)C	9.5	7.5	11

igus® connectors

	igus® connectors	Type	Page
Connectors			
	SERIES A 623	Signal connector M23 standard [6 to 19-pole] Standard/Speedtec	690
	SERIES B 923	Power connector Size 1 [6, 8 and 9-pole] Standard/Speedtec	695
	SERIES C 940	Power connector Size 1,5 [6, 8 and 9-pole] Standard/Speedtec	700
	SERIES D 958	Power connector Size 3 [6 and 8-pole] Standard	703
	SERIES 615/915	Signal and power connector Signal- [12-pole] and power connector [9-pole] Plastic- / Metal clamping ring	705
	SERIES M17 617/917	Signal and power connector M17 signal- [17-pole] and power connector [4 to 9-pole] Standard/Speedtec	713
	SERIES S 623	Power connector [1-pole] Standard	718
		Connector sets Individual connector sets from quantity 1	720
	igus® ibow	Angle adapter for power connector 923 and signal connector 623	721
		Tools and accessories	722
	SUB-D	Signal connector SUB-D standard [9 to 44-pole]	724
	Yamaichi Y-CONKIT		728
	HARTING	Connector sets Standard and Premium	730
		Glands	734

Signal connector
M23 standard [6 to 19-pole]

Types

- Connector, standard and push-pull version, angular connector
- Lead through
- Coupling, standard or with central attachment
- PG 13.5 installation box
- Straight installation box with flange
- Installation box angled and angled rotatable with flange

Number of poles in insulation body

- 6, 7, [8+1], 9, 10, 12, 16, 17, [16+3]

Technical data for series A

Temperature range	-20 °C to +130 °C
Protection class	IP 66/67 [plugged]

Electrical data for signal 6 to 12-pole

Max. continuous nominal current	10 A
Nominal voltage	160 V (AC/DC)
Test voltage (L-L)	2500 V
Contact resistance	< 5 mΩ
Mating cycles	> 50

Electrical data for signal 16 to 19-pole

Max. continuous nominal current	9 A
Nominal voltage	125 V (AC/DC)
Test voltage (L-L)	2500 V
Contact resistance	< 5 mΩ
Mating cycles	> 50

Data according to VDE 0110/EN 61984, Clause 6.19.2.2

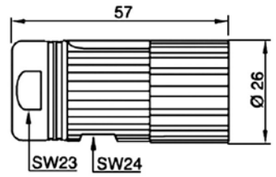
Pollution degree	3
Over-voltage category	III
Max. installation height	2000 m

Connector materials

Housing	Zinc die-casting/brass, nickel-plated
Coupling nut	Brass, nickel-plated
Insulation body	PA 6.6/PBT, UL 94/V0
Contacts	Brass, gold-plated
Seals	FPM/HNBR
Clamping ring	Brass, nickel-plated

Signal connector [9 to 19-pole] (Metal construction, EMC shielding)

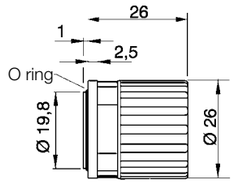
Example image



Part no.	Insulation body		Female crimp, slotted [mm]	Crimping range [mm²]	Female crimp, slotted [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT0179600	P type [8+1]-pole 3 coding slots		8x1.0	0.14-1.0	1x2.0	0.35-2.5	9.0-13,2	C+1+4
MAT0179601	E type 12-pole 3 coding slots		12x1.0	0.14-1.0			9.0-13,2	A
MAT0179602	P type 16-pole 1 coding slot		16x1.0	0.14-1.0			9.0-13,2	A
MAT0179603	P type 17-pole 3 coding slots		17x1.0	0.14-1.0			9.0-13,2	A
MAT0179604	P type [16+3]-pole 1 coding slot		16x1.0	0.14-1.0	3x1.5	0.14-1.0	9.0-13,2	C+1+5

Bulkhead connector with union nut (Metal construction, axial seal)

Example image

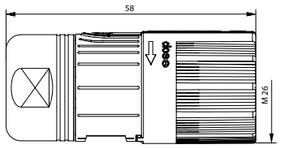


The bulkhead connector is harnessed with the above contacts and insulation bodies. The technical specifications apply accordingly. A cable clamp is not required by virtue of the design.

Part no.	Number of poles	Crimping tool + insert
MAT0179605	[8+1]	C+1+4
MAT0179606	12	A
MAT0179607	16	A
MAT0179608	17	A
MAT0179609	[16+3]	C+1+5

Crimping tools and inserts ▶ page 698

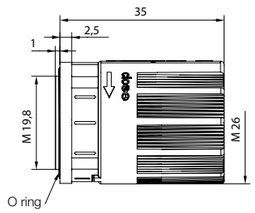
Signal connector [9 to 19-pole] (Metal construction, EMC shielding)



Example image

Part no.	Insulation body		Female crimp, slotted [mm]	Crimping range [mm²]	Female crimp, slotted [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01723461	P type [8+1]-pole 3 coding slots		8x1.0	0.14-1.0	1x2.0	0.35-2.5	9.0-13,2	C+1+4
MAT01723462	E type 12-pole 3 coding slots		12x1.0	0.14-1.0			9.0-13,2	A
MAT01723463	P type 16-pole 1 coding slot		16x1.0	0.14-1.0			9.0-13,2	A
MAT01723464	P type 17-pole 3 coding slots		17x1.0	0.14-1.0			9.0-13,2	A
MAT01723465	P type [16+3]-pole 1 coding slot		16x1.0	0.14-1.0	3x1.5	0.14-1.0	9.0-13,2	C+1+5

Bulkhead connector with union nut (Metal construction, axial seal)



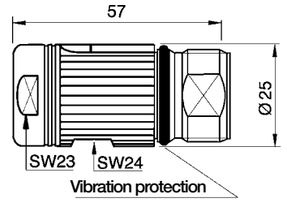
Example image

The bulkhead connector is harnessed with the above contacts and insulation bodies. The technical specifications apply accordingly. A cable clamp is not required by virtue of the design.

Part no.	Number of poles	Crimping tool + insert
MAT01723466	[8+1]	C+1+4
MAT01723467	12	A
MAT01723468	16	A
MAT01723469	17	A
MAT01723470	[16+3]	C+1+5

Crimping tools and inserts ▶ page 698

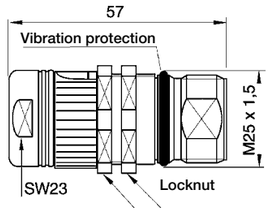
Signal coupling [9 to 19-pole] (Metal construction, EMC shielding)



Example image

Part no.	Insulation body		Male crimp [mm]	Crimping range [mm²]	Male crimp [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT0179610	E type [8+1]-pole 3 coding slots		8x1.0	0.14-1.0	1x2.0	0.35-2.5	9.0-13,2	C+1+4
MAT0179611	P type 12-pole 3 coding slots		12x1.0	0.14-1.0			9.0-13,2	A
MAT0179612	E type 16-pole 1 coding slot		16x1.0	0.14-1.0			9.0-13,2	A
MAT0179613	E type 17-pole 3 coding slots		17x1.0	0.14-1.0			9.0-13,2	A
MAT0179614	E type [16+3]-pole 1 coding slot		16x1.0	0.14-1.0	3x1.5	0.14-1.0	9.0-13,2	C+1+5

Coupling with central attachment (Metal construction, EMC shielding)



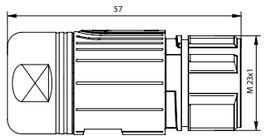
Example image

The coupling with central attachment is harnessed with the above contacts, insulation bodies and cable clamp. The technical specifications apply accordingly.

Part no.	Number of poles	Crimping tool + insert
MAT0179615	[8+1]	C+1+4
MAT0179616	12	A
MAT0179617	16	A
MAT0179618	17	A
MAT0179619	[16+3]	C+1+5

Crimping tools and inserts ▶ page 698

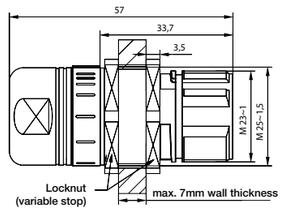
Signal coupling [9 to 19-pole] (Metal construction, EMC shielding)



Example image

Part no.	Insulation body		Male crimp [mm]	Crimping range [mm²]	Male crimp [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01723471	E type [8+1]-pole 3 coding slots		8x1.0	0.14-1.0	1x2.0	0.35-2.5	9.0-13,2	C+1+4
MAT01723472	P type 12-pole 3 coding slots		12x1.0	0.14-1.0			9.0-13,2	A
MAT01723473	E type 16-pole 1 coding slot		16x1.0	0.14-1.0			9.0-13,2	A
MAT01723474	E type 17-pole 3 coding slots		17x1.0	0.14-1.0			9.0-13,2	A
MAT01723475	E type [16+3]-pole 1 coding slot		16x1.0	0.14-1.0	3x1.5	0.14-1.0	9.0-13,2	C+1+5

Coupling with central attachment (Metal construction, EMC shielding)



The coupling with central attachment is harnessed with the above contacts, insulation bodies and cable clamp. The technical specifications apply accordingly.

Example image

Part no.	Number of poles	Crimping tool + insert
MAT01723476	[8+1]	C+1+4
MAT01723477	12	A
MAT01723478	16	A
MAT01723479	17	A
MAT01723480	[16+3]	C+1+5

Crimping tools and inserts ▶ page 698

Power connector
Size 1 [6, 8 and 9-pole]

Types

- Connector, short and long, push-pull version, angular connector
- Coupling, standard or with central attachment
- Lead-through
- Installation box straight with flange
- Installation box angled and angled rotatable with flange

Number of poles in insulation body

- 6, 8, 9

Technical data for series B

Temperature range	-20 °C to +130 °C
Protection class	IP 66/67 [plugged]

Electrical data for power 6-pole

Max. continuous nominal current	max. 28 A (6-pole) max. 30 A (8/9-pole)
Nominal voltage	630 V (AC/DC)
Testing voltage (L-L)	6000 V
Contact resistance	< 3 mΩ
Mating cycles	> 50

Electrical data for signal 8 and 9-pole

Max. continuous nominal current	10 A
Nominal voltage	250 V (AC/DC)
Testing voltage (L-L)	2500 V
Contact resistance	< 5 mΩ
Mating cycles	> 50

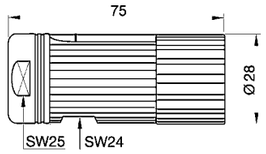
Data according to VDE 0110/EN 61984, Clause 6.19.2.2

Pollution degree	3
Over-voltage category	III
Max. installation height	2000 m

Connector materials

Housing	Zinc die-casting,/brass, nickel-plated (*)
Coupling nut	Brass, nickel-plated
Insulation body	PA 6.6/PBT, UL 94/V0
Contacts	Brass, gold-plated
Seals	FPM/HNBR
Clamping ring	Brass, nickel-plated *optional: Stainless steel

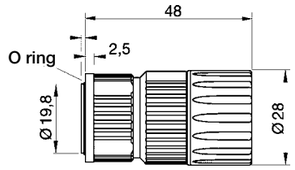
Power connector [6 to 9-pole], nickel-plated (Metal construction, EMC shielding)



Example image

Part no.	Insulation body		HC female crimp [mm]	Crimping range [mm²]	HC female crimp [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT0179620	P type 6-pole		6x2.0	0.35-2.5			9.5-14.5	C+2
MAT0179621	P type 8-pole		4x2.0	0.35-2.5	4x1.0	0.14-1.0	9.5-14.5	C+1+2
MAT0179622	P type 9-pole		4x2.0	0.35-2.5	5x1.0	0.14-1.0	9.5-14.5	C+1+2

Bulkhead connector with union nut (Metal construction, axial seal)



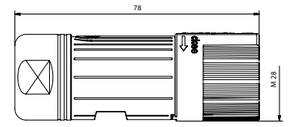
The bulkhead connector is harnessed with the above contacts and insulation bodies. The technical specifications apply accordingly. A cable clamp is not required by virtue of the design.

Example image

Part no.	Number of poles	Crimping tool + insert
MAT0178406	6	C+2
MAT0175661	8	C+1+2
MAT0179033	9	C+1+2

Crimping tools and inserts ▶ page 698

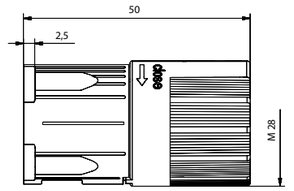
Power connector [6 to 9-pole], nickel-plated (Metal construction, EMC shielding)



Example image

Part no.	Insulation body		HC female crimp [mm]	Crimping range [mm²]	HC female crimp [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01723481	P type 6-pole		6x2.0	0.35-2.5			9.5-14.5	C+2
MAT01723482	P type 8-pole		4x2.0	0.35-2.5	4x1.0	0.14-1.0	9.5-14.5	C+1+2
MAT01723483	P type 9-pole		4x2.0	0.35-2.5	5x1.0	0.14-1.0	9.5-14.5	C+1+2

Bulkhead connector with union nut (Metal construction, axial seal)



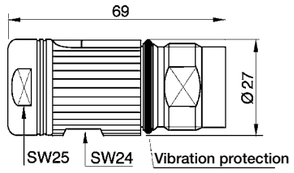
The bulkhead connector is harnessed with the above contacts and insulation bodies. The technical specifications apply accordingly. A cable clamp is not required by virtue of the design.

Example image

Part no.	Number of poles	Crimping tool + insert
MAT01723484	6	C+2
MAT01723485	8	C+1+2
MAT01723486	9	C+1+2

Crimping tools and inserts ▶ page 698

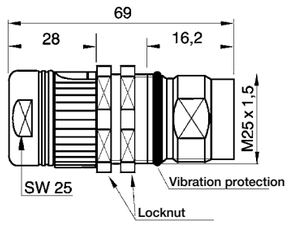
Power coupling [6 to 9-pole] nickel-plated (Metal construction, EMC shielding)



Example image

Part no.	Insulation body		Male crimp [mm]	Crimping range [mm²]	Male crimp [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT0179623	E type 6-pole		6x2.0	0.35-2.5			9.5-14.5	C+3
MAT0179624	E type 8-pole		4x2.0	0.35-2.5	4x1.0	0.14-1.0	9.5-14.5	C+3
MAT0179625	E type 9-pole		4x2.0	0.35-2.5	5x1.0	0.14-1.0	9.5-14.5	C+3

Coupling with central attachment (Metal construction, EMC shielding)



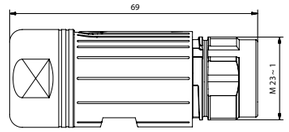
The coupling with central attachment is harnessed with the above contacts, insulation bodies and cable clamp. The technical specifications apply accordingly.

Example image

Part no.	Number of poles	Crimping tool + insert
MAT0179626	6	C+3
MAT0179627	8	C+3
MAT0179628	9	C+3

Crimping tools and inserts ▶ page 698

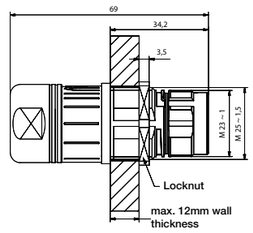
Power coupling [6 to 9-pole] nickel-plated (Metal construction, EMC shielding)



Example image

Part no.	Insulation body		Male crimp [mm]	Crimping range [mm²]	Male crimp [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01723487	E type 6-pole		6x2.0	0.35-2.5			9.5-14.5	C+3
MAT01723488	E type 8-pole		4x2.0	0.35-2.5	4x1.0	0.14-1.0	9.5-14.5	C+3
MAT01723489	E type 9-pole		4x2.0	0.35-2.5	5x1.0	0.14-1.0	9.5-14.5	C+3

Coupling with central attachment (Metal construction, EMC shielding)



The coupling with central attachment is harnessed with the above contacts, insulation bodies and cable clamp. The technical specifications apply accordingly.

Example image

Part no.	Number of poles	Crimping tool + insert
MAT01723490	6	C+3
MAT01723491	8	C+3
MAT01723492	9	C+3

Crimping tools and inserts ▶ page 698

Power connector
Size 1.5 [6, 8 and 9-pole]

Types

- Connector, angular connector
- Coupling
- Lead-through
- Straight installation box with flange
- Installation box angled and angled rotatable with flange

Number of poles in insulation body

- 6, 8, 9

Technical data for series C

Temperature range	-20 °C to +130 °C
Protection class	IP 66/67 [plugged]

Electrical data for power 6 to 19-pole

Max. continuous nominal current	75 A
Nominal voltage	630 V (AC/DC)
Testing voltage (L-L)	6000 V
Contact resistance	< 1 mΩ
Mating cycles	> 50

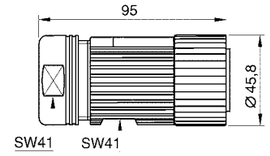
Data according to VDE 0110/EN 61984, Clause 6.19.2.2

Pollution degree	3
Over-voltage category	III
Max. installation height	2000 m

Connector materials

Housing	Magnesium die-casting/Aluminium
Coupling nut	Brass, nickel-plated
Insulation body	PA 6.6/PBT, UL 94/V0
Contacts	Brass, gold-plated
Seals	FPM/HNBR
Clamping ring	Brass, nickel-plated

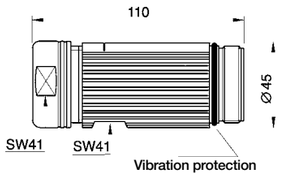
Power connector [6 to 9-pole], nickel-plated (Metal construction, EMC shielding)



Example image

Part no.	Insulation body		HC female crimp [mm]	Crimping range [mm²]	HC female crimp [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT0179629	P type 6-pole		4x3.6	1.5-10.0	2x2.0	0.5-2.5	9.0-16.5	D+9 + C+2
MAT0179630	P type 8-pole		4x3.6	1.5-10.0	4x2.0	0.5-2.5	9.0-16.5	D+9 + C+2
MAT0179631	P type 9-pole		4x3.6	1.5-10.0	5x2.0	0.5-2.5	9.0-16.5	D+9 + C+2

Power coupling [6 to 9-pole] nickel-plated (Metal construction, EMC shielding)



Example image

Part no.	Insulation body		Male crimp [mm]	Crimping range [mm²]	Male crimp [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT0179632	E type 6-pole		4x3.6	1.5-10.0	2x2.0	0.5-2.5	9.0-16.5	D+9 + C+3
MAT0179633	E type 8-pole		4x3.6	1.5-10.0	4x2.0	0.5-2.5	9.0-16.5	D+9 + C+3
MAT0179634	E type 9-pole		4x3.6	1.5-10.0	5x2.0	0.5-2.5	9.0-16.5	D+9 + C+3

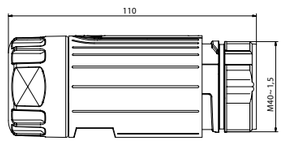
Crimping tools and inserts ▶ page 698

Power connector [6 to 9-pole], nickel-plated (Metal construction, EMC shielding)

Example image

Part no.	Insulation body		HC female crimp [mm]	Crimping range [mm²]	HC female crimp [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01723501	P type 6-pole		4x3.6	1.5-10.0	2x2.0	0.5-2.5	9.0-16.5	D+9 + C+2
MAT01723502	P type 8-pole		4x3.6	1.5-10.0	4x2.0	0.5-2.5	9.0-16.5	D+9 + C+2
MAT01723503	P type 9-pole		4x3.6	1.5-10.0	5x2.0	0.5-2.5	9.0-16.5	D+9 + C+2

Power coupling [6 to 9-pole], nickel-plated (Metal construction, EMC shielding)



Example image

Part no.	Insulation body		Male crimp [mm]	Crimping range [mm²]	Male crimp [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01723504	E type 6-pole		4x3.6	1.5-10.0	2x2.0	0.5-2.5	9.0-16.5	D+9 + C+3
MAT01723505	E type 8-pole		4x3.6	1.5-10.0	4x2.0	0.5-2.5	9.0-16.5	D+9 + C+3
MAT01723506	E type 9-pole		4x3.6	1.5-10.0	5x2.0	0.5-2.5	9.0-16.5	D+9 + C+3

Crimping tools and inserts ▶ page 698

Power connector
Size 3 [6 and 9-pole]

Types
- Connector
- Coupling
- Straight installation box with flange
- Angled installation box with flange

Number of poles in insulation body
- 6, 8

Technical data for series D

Temperature range	-20 °C to +130 °C
Protection class	IP 66/67 [plugged]

Electrical data for power 6 and 8-pole

Max. continuous nominal current	max. 150 A
Nominal voltage	630 V (AC/DC)
Testing voltage (L-L)	6000 V
Contact resistance	< 90 mΩ
Mating cycles	> 50

Electrical data for signal contacts

Max. continuous nominal current	12 A
Nominal voltage	250 V (AC/DC)
Testing voltage (L-L)	4000 V
Contact resistance	< 5 mΩ
Mating cycles	> 50

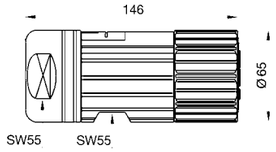
Data according to VDE 0110/EN 61984, Clause 6.19.2.2

Pollution degree	3
Over-voltage category	III
Max. installation height	2000 m

Connector materials

Housing	Zinc die-casting, nickel-plated
Coupling nut	Brass, nickel-plated
Insulation body	PA 6.6/PBT, UL 94/V0
Contacts	Brass, silver-/gold-plated
Seals	FPM
Clamping ring	Aluminium, nickel-plated

Power connector [6 and 8-pole] nickel-plated (Metal construction, EMC shielding)



Example image

Part no.	Insulation body		Female crimp (power) [mm]	Crimping range [mm²]	Female crimp (signal) [mm]	Crimping range [mm²]	Clamping range* [mm]	Crimping tool + insert
MAT0179635	P type 6-pole		4x10.0	10.0	2x1.6	1.5	17.0-36.0	E+10 + C+7
MAT0179636	P type 8-pole		4x10.0	10.0	4x1.6	1.5	17.0-36.0	E+10 + C+7

Power coupling [6 and 8-pole] nickel-plated (Metal construction, EMC shielding)

Example image

Part no.	Insulation body		Female crimp (power) [mm]	Crimping range [mm²]	Female crimp (signal) [mm]	Crimping range [mm²]	Clamping range* [mm]	Crimping tool + insert
MAT0179637	E type 6-pole		4x10.0	10.0	2x1.6	1.5	17.0-36.0	E+10 + C+8
MAT0179638	E type 8-pole		4x10.0	10.0	4x1.6	1.5	17.0-36.0	E+10 + C+8

* Crown clamp

Crimping tools and inserts ▶ page 698

Series 615 Signal- [12-pole] and Series 915 power connection [9-pole] – Plastic- / metal clamping ring

Types

- Connector, plastic or metal clamping ring
- Coupling, plastic or metal clamping ring

Number of poles in insulation body

- Signal: 12
- Power: 9

Technical data for series 615/915

Temperature range	-20 °C to +130 °C
Protection class	IP 66/67 [plugged]

Electrical data for signal 12-pole

Max. continuous nominal current	3.6 A
Nominal voltage	63 V (AC /DC)
Testing voltage (L-L)	1500 V
Contact resistance	< 15 mΩ
Mating cycles	> 50

Electrical data for Power 9-pole

Max. continuous nominal current	2.5 mm²: 20 A
Nominal voltage	630 V (AC /DC)
Testing voltage (L-L)	6000 V
Contact resistance	< 5 mΩ
Mating cycles	> 50

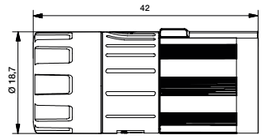
Data according to VDE 0110/EN 61984, Clause 6.19.2.2

Pollution degree	3
Over-voltage category	III
Max. installation height	2000 m

Connector materials

Housing	Zinc die-casting,/brass, nickel-plated and plastic coated
Union nut	PA modif., 30% Gf.
Insulation body	PA/PBT, UL 94/V0
Contacts	Brass, gold-plated
Seals	FPM / EPDM
Clamping ring	Brass, nickel-plated / PA modif., 30% Gf.

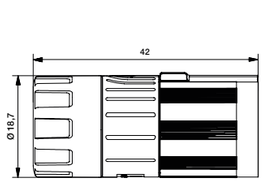
Signal connector [12-pole], (Plastic clamping ring, EMC-shieding)



Example image

Part no.	Insulation body		Female crimp, slotted [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01730633	P type 12-pole		12 x 1	0.1-0.75	4.5-6.5	C + 14
MAT01730634	P type 12-pole		12 x 1	0.1-0.75	6.5-8.5	C + 14
MAT01730635	P type 12-pole		12 x 1	0.1-0.75	8.5-10.5	C + 14

Signal connector [12-pole], nickel-plated (Metal clamping ring, EMC-shielding)

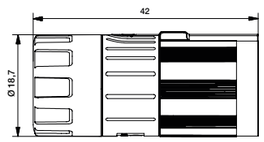


Example image

Part no.	Insulation body		Female crimp, slotted [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01730636	P type 12-pole		12 x 1	0.1-0.75	4.5-6.5	C + 14
MAT01730637	P type 12-pole		12 x 1	0.1-0.75	6.5-8.5	C + 14
MAT01730638	P type 12-pole		12 x 1	0.1-0.75	8.5-10.5	C + 14

Crimping tools and inserts ▶ page 698

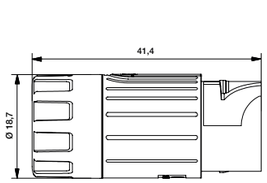
Signal connector [12-pole], nickel-plated (Metal clamping ring, EMC-shielding)



Example image

Part no.	Insulation body		Female crimp, slotted [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01730639	P type 12-pole		12 x 1	0.1-0.75	10.5-12.5	C + 14

Signal coupling [12-pole], (Plastic clamping ring, EMC-shielding)

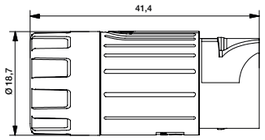


Example image

Part no.	Insulation body		Male crimp, slotted [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01730640	E type 12-pole		12 x 1	0.1-0.75	4.5-6.5	C + 14
MAT01730641	E type 12-pole		12 x 1	0.1-0.75	6.5-8.5	C + 14
MAT01730642	E type 12-pole		12 x 1	0.1-0.75	8.5-10.5	C + 14

Crimping tools and inserts ▶ page 698

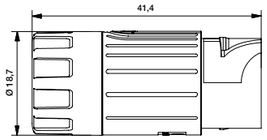
Signal coupling [12-pole], nickel-plated (Metal clamping ring, EMC-shielding)



Example image

Part no.	Insulation body		Male crimp, slotted [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01730643	E type 12-pole		12 x 1	0.1-0.75	4.5-6.5	C + 14
MAT01730644	E type 12-pole		12 x 1	0.1-0.75	6.5-8.5	C + 14
MAT01730645	E type 12-pole		12 x 1	0.1-0.75	8.5-10.5	C + 14

Signal coupling [12-pole], nickel-plated (Metal clamping ring, EMC-shielding)

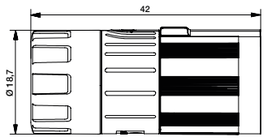


Example image

Part no.	Insulation body		Male crimp, slotted [mm]	Crimping range [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01730646	E type 12-pole		12 x 1	0.1-0.75	10.5-12.5	C + 14

Crimping tools and inserts ▶ page 698

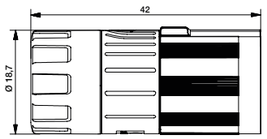
Power connector [9-pole], (Plastic clamping ring, EMC-shielding)



Example image

Part no.	Insulation body		Female crimp, slotted [mm]	Crimping range [mm²]	Female crimp, slotted [mm]	Crimping area [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01730647	P type 9-pole		4 x 1	0.5-0.15	5 x 1	0.1-0.75	4.5-6.5	C + 14
MAT01730648	P type 9-pole		4 x 1	0.5-0.15	5 x 1	0.1-0.75	6.5-8.5	C + 14
MAT01730649	P type 9-pole		4 x 1	0.5-0.15	5 x 1	0.1-0.75	8.5-10.5	C + 14

Power connector [9-pole], nickel-plated (Metal clamping ring, EMC-shielding)

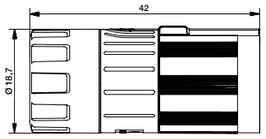


Example image

Part no.	Insulation body		Female crimp, slotted [mm]	Crimping range [mm²]	Female crimp, slotted [mm]	Crimping area [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01730650	P type 9-pole		4 x 1	0.5-0.15	5 x 1	0.1-0.75	4.5-6.5	C + 14
MAT01730651	P type 9-pole		4 x 1	0.5-0.15	5 x 1	0.1-0.75	6.5-8.5	C + 14
MAT01730652	P type 9-pole		4 x 1	0.5-0.15	5 x 1	0.1-0.75	8.5-10.5	C + 14

Crimping tools and inserts ▶ page 698

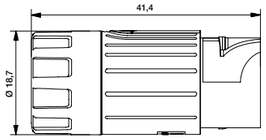
Power connector [9-pole], nickel-plated (Metal clamping ring, EMC-shielding)



Example image

Part no.	Insulation body		Female crimp, slotted [mm]	Crimping range [mm²]	Female crimp, slotted [mm]	Crimping area [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01730653	P type 9-pole		4 x 1	0.5-0.15	5 x 1	0.1-0.75	10.5-12.5	C + 14

Power coupling [9-pole], (Plastic clamping ring, EMC-shielding)

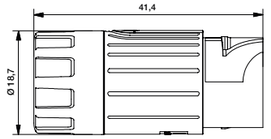


Example image

Part no.	Insulation body		Male crimp, slotted [mm]	Crimping range [mm²]	Female crimp, slotted [mm]	Crimping area [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01730654	E type 9-pole		4 x 1	0.5-0.15	5 x 1	0.1-0.75	4.5-6.5	C + 14
MAT01730655	E type 9-pole		4 x 1	0.5-0.15	5 x 1	0.1-0.75	6.5-8.5	C + 14
MAT01730656	E type 9-pole		4 x 1	0.5-0.15	5 x 1	0.1-0.75	8.5-10.5	C + 14

Crimping tools and inserts ▶ page 698

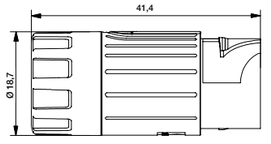
Power coupling [9-pole], nickel-plated (Metal clamping ring, EMC-shielding)



Example image

Part no.	Insulation body		Male crimp, slotted [mm]	Crimping range [mm²]	Female crimp, slotted [mm]	Crimping area [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01730657	E type 9-pole		4 x 1	0.5-0.15	5 x 1	0.1-0.75	4.5-6.5	C + 14
MAT01730658	E type 9-pole		4 x 1	0.5-0.15	5 x 1	0.1-0.75	6.5-8.5	C + 14
MAT01730659	E type 9-pole		4 x 1	0.5-0.15	5 x 1	0.1-0.75	8.5-10.5	C + 14

Power coupling [9-pole], nickel-plated (Metal clamping ring, EMC-shielding)



Example image

Part no.	Insulation body		Male crimp, slotted [mm]	Crimping range [mm²]	Female crimp, slotted [mm]	Crimping area [mm²]	Clamping range [mm]	Crimping tool + insert
MAT01730660	E type 9-pole		4 x 1	0.5-0.15	5 x 1	0.1-0.75	10.5-12.5	C + 14

Crimping tools and inserts ▶ page 698

Signal and power connector
M17 signal- [17-pole] and power connector [4 to 9-pole]

Types

- Connector, standard and push-pull version
- Coupling, standard or with central attachment
- Straight installation box with flange
- Installation box straight, connecting thread M17 x 0.75
- Installation box angled, turnable with flange
- Installation box angled and angled rotatable with flange

Number of poles in insulation body

- Signal: 17
- Power: 4, 7, 9

Technical data for series M17

Temperature range	-20 °C to +130 °C
Protection class	IP 66/67 [plugged]

Electrical data for signal 17-pole

Max. continuous nominal current	3.6 A
Nominal voltage	63 V (AC /DC)
Testing voltage (L-L)	1500 V
Contact resistance	< 15 mΩ
Mating cycles	> 50

Electrical data for Power 4 and 7-pole

	4-pole	**7-pole**
Max. continuous nominal current	2.5 mm²: 20 A	1 mm²: 10 A 1,5 mm²: 14 A
Nominal voltage	630 V (AC /DC)	630 V (AC /DC)
Testing voltage (L-L)	6000 V	6000 V
Contact resistance	< 5 mΩ	< 5 mΩ
Mating cycles	> 50	> 50

Electrical data for Power 9-pole

Max. continuous nominal current	Signal: 3.6 A	Power: 14 A
Nominal voltage	Signal: 63 V [AC/DC]	Power: 630 V [AC/DC]
Testing voltage (L-L)	Signal: 1500 V	Power: 6000 V
Contact resistance	Signal: < 15 mΩ	Power: < 5 mΩ
Mating cycles	> 50	

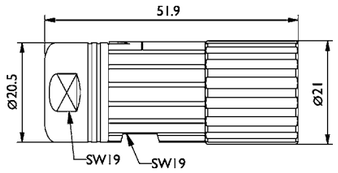
Data according to VDE 0110/EN 61984, Clause 6.19.2.2

Pollution degree	3
Over-voltage category	III
Max. installation height	2000 m

Connector materials

Housing	Zinc die-casting/brass, nickel-plated
Union nut	Brass, nickel-plated
Insulation body	PBT, UL 94/V0
Contacts	Brass, gold-plated
Seals	FPM
Clamping ring	Brass, nickel-plated

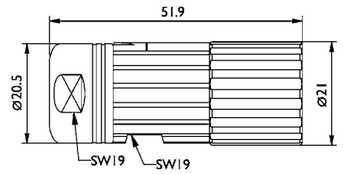
Signal connector [17-pole], nickel-plated (Metal construction, EMC-shielding)



Example image

Part no.	Insulation body		Female crimp, slotted [mm]	Crimping range [mm²]	Female crimp, slotted [mm]	Crimping range [mm²]	Clamping range** [mm]	Crimping tool + insert
MAT0179639	P type 17-pole		17x0.6	0.14-0.5			9.5-12.0	B

Power connector [4 to 9-pole], nickel-plated (Metal construction, EMC shielding)



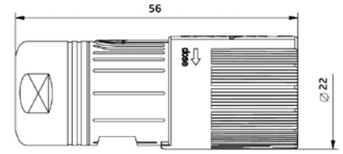
Example image

Part no.	Insulation body		Female crimp, slotted [mm]	Crimping range [mm²]	Female crimp, slotted [mm]	Crimping range [mm²]	Clamping range** [mm]	Crimping tool + insert
MAT0179641	P type 4-pole		4x1.5	0.35-2.5	1x2.0	0.35-2.5	9.5-12.0	C+1
MAT0179643	P type 7-pole		7x1.0*	0.5-1.5			9.5-12.0	A
MAT0179645	P type 9-pole		4x1.0*	0.5-1.5	5x0.6	0.14-0.5	9.5-12.0	A+B

* HC Female crimp
** Crown clamp

Crimping tools and inserts ▶ page 698

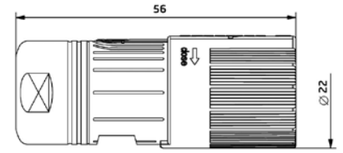
Signal connector [17-pole], nickel-plated (Metal construction, EMC-shielding)



Example image

Part no.	Insulation body		Male crimp [mm]	Crimping range [mm²]	Male crimp [mm]	Crimping range [mm²]	Clamping range** [mm]	Crimping tool + insert
MAT01723493	P type 17-pole		17x0.6	0.14-0.5			9.5-12.0	B

Power connector [4 to 9-pole], nickel-plated (Metal construction, EMC shielding)



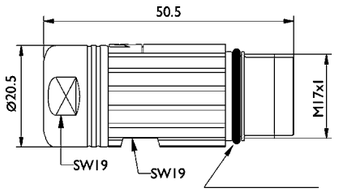
Example image

Part no.	Insulation body		Female crimp, slotted [mm]	Crimping range [mm²]	Female crimp, slotted [mm]	Crimping range [mm²]	Clamping range** [mm]	Crimping tool + insert
MAT01723495	P type 4-pole		4x1.5	0.35-2.5	1x2.0	0.35-2.5	9.5-12.0	C+1
MAT01723497	P type 7-pole		7x1.0*	0.5-1.5			9.5-12.0	A
MAT01723499	P type 9-pole		4x1.0*	0.5-1.5	5x0.6	0.14-0.5	9.5-12.0	A+B

* HC Female crimp
** Crown clamp

Crimping tools and inserts ▶ page 698

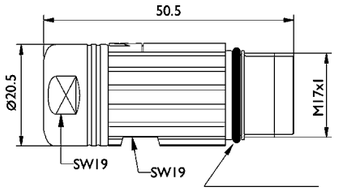
Signal coupling [17-pole], nickel-plated (Metal construction, EMC shielding)



Example image

Part no.	Insulation body		Male crimp [mm]	Crimping range [mm²]	Male crimp [mm]	Crimping range [mm²]	Clamping range* [mm]	Crimping tool + insert
MAT0179640	E type 17-pole		17x0.6	0.14-0.5			9.5-12.0	B

Power coupling [4 to 9-pole], nickel-plated (Metal construction, EMC shielding)



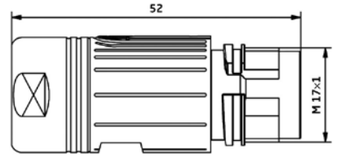
Example image

Part no.	Insulation body		Male crimp [mm]	Crimping range [mm²]	Male crimp [mm]	Crimping range [mm²]	Clamping range* [mm]	Crimping tool + insert
MAT0179642	E type 4-pole		4x1.5	0.35-2.5	1x2.0	0.35-2.5	9.5-12.0	C+6
MAT0179644	E type 7-pole		7x1.0	0.5-1.5			9.5-12.0	A
MAT0179646	E type 9-pole		4x1.0	0.5-1.5	5x0.6	0.14-0.5	9.5-12.0	A+B

* Crown clamp

Crimping tools and inserts ▶ page 698

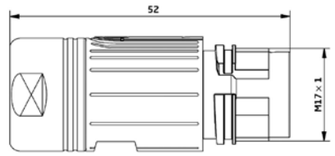
Signal coupling [17-pole], nickel-plated (Metal construction, EMC shielding)



Example image

Part no.	Insulation body		Male crimp [mm]	Crimping range [mm²]	Male crimp [mm]	Crimping range [mm²]	Clamping range* [mm]	Crimping tool + insert
MAT01723494	E type 17-pole		17x0.6	0.14-0.5			9.5-12.0	B

Power coupling [4 to 9-pole], nickel-plated (Metal construction, EMC shielding)



Example image

Part no.	Insulation body		Male crimp [mm]	Crimping range [mm²]	Male crimp [mm]	Crimping range [mm²]	Clamping range* [mm]	Crimping tool + insert
MAT01723496	E type 4-pole		4x1.5	0.35-2.5	1x2.0	0.35-2.5	9.5-12.0	C+6
MAT01723498	E type 7-pole		7x1.0	0.5-1.5			9.5-12.0	A
MAT01723500	E type 9-pole		4x1.0	0.5-1.5	5x0.6	0.14-0.5	9.5-12.0	A+B

* Crown clamp

Crimping tools and inserts ▶ page 698

Power connector
1-pole

Types

- Connector
- Coupling
- Straight installation box with flange

Number of poles in insulation body

- 1

Technical data for series S

Temperature range	-20 °C to +130 °C
Protection class	IP 66/67 [plugged]

Electrical data for Power

Nominal voltage	630 V (AC/DC)
Testing voltage (L-L)	8000 V
Contact resistance	< 110 mΩ
Mating cycles	> 50
Max. continuous nominal current	
At terminal cross-section 10 mm²:	80 A
At terminal cross-section 16 mm²:	100 A
At terminal cross-section 25 mm²:	130 A
At terminal cross-section 35 mm²:	160 A
At terminal cross-section 50 mm²:	200 A

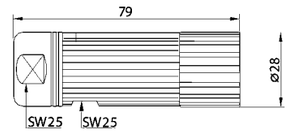
Data according to VDE 0110/EN 61984, Clause 6.19.2.2

Pollution degree	3 [2]
Over-voltage category	IV
Max. installation height	2000 m

Connector materials

Housing	Zinc die-casting/brass, nickel-plated
Coupling nut	Brass, nickel-plated
Insulation body	PA 6.6mod., UL 94/V0
Contacts	Brass, silver-plated
Seals	FPM
Clamping ring	Brass, nickel-plated

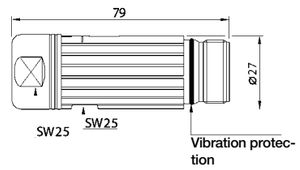
Power connector [1-pole], nickel-plated (Metal construction, EMC shielding)



Example image

Part no.	Insulation body	Female crimp [mm]	Crimping range [mm²]	Female crimp [mm]	Crimping range [mm²]	Clamping range* [mm]	Crimping tool + insert
MAT0179669	P type 1-pole	1x8.0	10.0			9.5-14.5	E+10

Power coupling [1-pole], nickel-plated (Metal construction, EMC shielding)



Example image

Part no.	Insulation body	Female crimp [mm]	Crimping range [mm²]	Female crimp [mm]	Crimping range [mm²]	Clamping range* [mm]	Crimping tool + insert
MAT0179670	E type 1-pole	1x8.0	10.0	2x1.6		9.5-14.5	E+10

* Crown clamp

Crimping tools and inserts ▶ page 698

...is the connector you are looking for not included in this catalogue?

Whether for your production or for spares, or a mating half for an existing connector; we can help!

Circular connectors e.g. in size M23

Sub-D signal connectors

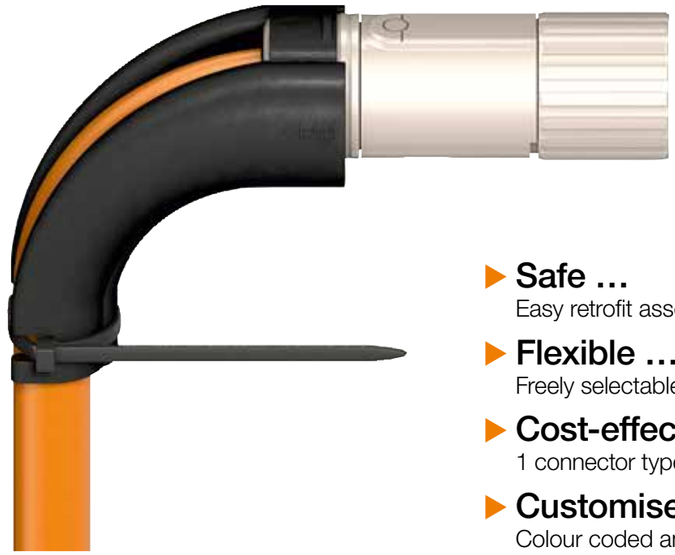
Rectangular connectors, C148, Y-Tec® or plug for network and bus systems

Connector service packs consisting of housing, insulation, strain relief, Crimp-/ solder contact, in any quantity completely picked and packed for you.

Your benefits at a glance:

- More than 3,500 connectors components from stock
- Manufacturer independent, world-wide procurement, thanks to the igus® network
- Custom article numbers/labeling possible on each package
- Price: benefit from the consolidated demand of our customers
- Purchasing: only 1 order number, everything from a single source
- QA: only one incoming inspection
- Internal logistics: only one storage location, fast identification

Talk to us! We can help!



- **Safe …**
  Easy retrofit assembly without opening the connector
- **Flexible …**
  Freely selectable angle of rotation
- **Cost-effective …**
  1 connector type gives straight and angled versions
- **Customised …**
  Colour coded and, upon request, with labelling

Push connector on …

bend the cable …

fix the cable …

and ready to use!

Assembly video and information:
www.igus.eu/ibow

Suitable for 923 power connectors, size 1.
Can be retrofitted for an angle of 90° ... or supplied ready-made as a harnessed igus® readycable®

Angle adapter igus® ibow	
Part No.	
MAT904104175	for 923 power connector
MAT904104176	for 623 signal connector

INTERCONTEC | Tools and accessories

Crimping tool for SERIES A and B

Hand crimping tool
for Ø 1 mm contacts
up to core cross section 1 mm²
includes positioning insert

MAT01710294

Positioning insert
for Ø 0.6 mm
contacts

MAT01712938

Crimping tool for SERIES M17

Hand crimping tool
for Ø 0.6 mm contacts
up to core cross section 0.5 mm²
includes positioning insert

MAT0178919

MAT0179467

Crimping tool for SERIES A, B, C and M17

Hand crimping tool for Ø 1 mm and Ø 2 mm contacts up to core cross section 4 mm² includes positioning carrier	**Positioning insert** for Ø 1 mm contacts	**Positioning insert** for Ø 2 mm contacts	**Positioning insert** for Ø 1 mm and Ø 2 mm contacts	**Positioning insert** for Ø 2 mm contacts
MAT0175736	MAT0178195	MAT0178196	MAT0177855	MAT01714573

Positioning insert for Ø 1.5 mm contacts	**Positioning insert** for Ø 0.5 - 2.5 mm contacts	**Positioning insert** for Ø 1.6 mm contacts	**Positioning insert** for Ø 1.6 mm contacts	**Positioning insert** for Ø 1.0 mm contacts Y-Tec
MAT01714574	MAT0178920	MAT0177853	MAT01714575	MAT01724301

INTERCONTEC | Tools and accessories

Crimping tool for SERIES C

Hand crimping tool
for Ø 3.6 mm contacts
up to core cross section 16 mm²
includes positioning carrier

MAT0179194

Positioning insert
for Ø 3.6 mm contacts

MAT0179195

Crimping tool for SERIES C

Pneumatic crimping tool
for Ø 3.6 mm and
Ø 2.0 mm contacts
Core cross section 1.5 - 16 mm²

MAT01721441

Crimping insert for pneumatic crimping tool

Contact	**Crimp area**				
	Pin Ø 2.0 mm **Socket** Ø 3.6 mm 1.5/2.5 mm² 1.5/2.5 mm²	**Pin** Ø 3.6 mm **Socket** Ø 3.6 mm 4.0/6.0 mm²	**Pin** Ø 3.6 mm **Socket** Ø 3.6 mm 10.0 mm²	**Pin** Ø 3.6 mm **Socket** Ø 3.6 mm 16.0 mm²
	MAT01727426	MAT01727428	MAT01721442	MAT01721444

Locator for pneumatic crimping tool

Contact	**Crimp area**		
	Pin Ø 2.0 mm **Socket** Ø 2.0 mm 1.5/2.5 mm² 1.5/2.5 mm²	**Pin** Ø 3.6 mm **Socket** Ø 3.6 mm 1.5 - 10.0 mm²	**Pin** Ø 3.6 mm **Socket** Ø 3.6 mm 1.5 - 16.0 mm²
	MAT01727429	MAT01721443	MAT01721445

Crimping insert for SERIES S and D

Battery-powered crimping tool, B131-C	**Crimping jaws** up to 10 mm², 16 mm²	**Crimping jaws** up to 25 mm²	**Crimping jaws** up to 35 mm²	**Crimping jaws** up to 50 mm²
MAT0177854	MAT01713679	MAT01713678	MAT01713677	MAT01713676

Signal connector
SUB-D standard [9 to 44-pole]

Types
- Connector, standard and angular connector

Number of poles
- Standard 9, 15, 25
- High Density 15, 26, 44

Technical data for series S

Temperature range	-35 °C to +100 °C

Electrical data

Max. continuous nominal current	5 A
Testing voltage	(L-L) 1200 V
Contact resistance	10^{16} Ω/cm
Mating cycles	50

Connector materials

Housing	Zinc die-casting, nickel-plated
Insulation body	Glass fibre reinforced polyester
Contacts	Copper alloy, flash gold-plated

Size 1 9-pole - HD15-pole Order no.	Solder contact pin 9-pole standard	Metal hood, straight
MAT01716504		

Size 1 9-pole - HD15-pole Order no.	Solder contact socket 9-pole standard	Metal hood, straight
MAT01716505		

Size 1 9-pole - HD15-pole Order no.	Solder contact pin HighDensity 15-pole	Metal hood, straight
MAT01716506		

Size 1 9-pole - HD15-pole Order no.	Solder contact socket HighDensity 15-pole	Metal hood, straight
MAT01716507		

Size 1 9-pole - HD15-pole Order no.	Solder contact pin 9-pole standard	Metal hood, angled
MAT01716508		

Size 1 9-pole - HD15-pole Order no.	Solder contact socket 9-pole standard	Metal hood, angled
MAT01716509		

Size 1 9-pole - HD15-pole Order no.	Solder contact pin HighDensity 15-pole	Metal hood, angled
MAT01716510		

Size 1 9-pole - HD15-pole Order no.	Solder contact socket HighDensity 15-pole	Metal hood, angled
MAT01716511		

FCT | Connectors SUB-D

Size 2 15-pole - HD26-pole Order no.	Solder contact pin 15-pole standard	Metal hood, straight
MAT01716512		

Size 2 15-pole - HD26-pole Order no.	Solder contact socket 15-pole standard	Metal hood, straight
MAT01716513		

Size 2 15-pole - HD26-pole Order no.	Solder contact pin HighDensity 26-pole	Metal hood, straight
MAT01716514		

Size 2 15-pole - HD26-pole Order no.	Solder contact socket HighDensity 26-pole	Metal hood, straight
MAT01716515		

Size 2 15-pole - HD26-pole Order no.	Solder contact pin 15-pole standard	Metal hood, angled
MAT01716516		

Size 2 15-pole - HD26-pole Order no.	Solder contact socket 15-pole standard	Metal hood, angled
MAT01716517		

Size 2 15-pole - HD26-pole Order no.	Solder contact pin HighDensity 26-pole	Metal hood, angled
MAT01716518		

Size 2 15-pole - HD26-pole Order no.	Solder contact socket HighDensity 26-pole	Metal hood, angled
MAT01716519		

Size 3 25-pole - HD44-pole Order no.	Solder contact pin 25-pole standard	Metal hood, straight
MAT01716520		

Size 3 25-pole - HD44-pole Order no.	Solder contact socket 25-pole standard	Metal hood, straight
MAT01716521		

Size 3 25-pole - HD44-pole Order no.	Solder contact pin HighDensity 44-pole	Metal hood, straight
MAT01716522		

Size 3 25-pole - HD44-pole Order no.	Solder contact socket HighDensity 44-pole	Metal hood, straight
MAT01716523		

Size 3 25-pole - HD44-pole Order no.	Solder contact pin 25-pole standard	Metal hood, angled
MAT01716524		

Size 3 25-pole - HD44-pole Order no.	Solder contact socket 25-pole standard	Metal hood, angled
MAT01716525		

Size 3 25-pole - HD44-pole Order no.	Solder contact pin HighDensity 44-pole	Metal hood, angled
MAT01716526		

Size 3 25-pole - HD44-pole Order no.	Solder contact socket HighDensity 44-pole	Metal hood, angled
MAT01716527		

Technical data

Temperature range -20 °C to +120 °C

Electrical data

Max. continuous nominal current 2.1 A (70 °C), power contacts

Mating cycles 1,000

Product range Yamaichi Y-CONKIT

Product range	igus® Part No.	Number of poles	Protection class
Housing PA66			
Y-CONKIT 10	**MAT01719769**	4 (Ethernet)	IP20
Y-CONKIT 11	**MAT0176641**	4 (Ethernet) + 2 (Power)	IP20
Housing Zinc die-casting			
Y-CONKIT 17	**MAT01719770**	4 (Ethernet)	IP20
Y-CONKIT 15	**MAT01719236**	4 (Ethernet) + 2 (Power)	IP20
Housing Plastic PBT, UL94V-0			
Y-CONKIT 20	**MAT01719771**	4 (Ethernet)	IP67/68/69K
Y-CONKIT 21	**MAT0176759**	4 (Ethernet) + 2 (Power)	IP67/68/69K
Housing Zinc die-casting			
Y-CONKIT 40	**MAT01719772**	4 (Ethernet)	IP67/68/69K
Y-CONKIT 40-E	**MAT01719773**	4 (Ethernet)	IP67/68/69K
Y-CONKIT 41	**MAT01717218**	4 (Ethernet) + 2 (Power)	IP67/68/69K
Y-CONKIT 41-E	**MAT01718801**	4 (Ethernet) + 2 (Power)	IP67/68/69K

Yamaichi | Connectors Y-CONKIT

Y-CONKIT

Product range Yamaichi Y-CONKIT accessoires

Product range	igus® Part No.	
Crimping tool		
Y-ConTool-11	**MAT0176447**	
Cable dismantle tool		
	MAT01719767	
Assembly tool		
Y-ConTool-30	**MAT01717349**	

HARTING | Connector sets with pin-inserts

HARTING Connectors sets, pin				
Part No.	Cable entry	Insert	Pin insert HARTING Part No.	Housing HARTING Part No.
Han 6B connector housing, straight cable entry				
MAT90489802.U	M20	6+PE	09330062601	19300061440
Han 6B connector housing, angled cable entry				
MAT90489804.U	M20	6+PE	09330062601	19300061540
Han 10B connector housing, straight cable entry				
MAT90489806.U	M25	10+PE	09330102601	19300101441
Han 10B connector housing, angled cable entry				
MAT90489808.U	M25	10+PE	09330102601	19300101541
Han 16B connector housing, straight cable entry				
MAT90489810.U	M25	16+PE	09330162601	19300161441
Han 16B connector housing, angled cable entry				
MAT90489812.U	M25	16+PE	09330162601	19300161541
Han 24B connector housing, straight cable entry				
MAT90489814.U	M32	24+PE	09330242601	19300241442
Han 24B connector housing, angled cable entry				
MAT90489816.U	M32	24+PE	09330242601	19300241542

HARTING | Connector sets with socket-inserts

HARTING Connector sets, socket				
Part No.	Cable entry	Insert	Socket-inserts HARTING Part No.	Housing HARTING Part No.
Han 6B connector housing, straight cable entry				
MAT90489803.U	M20	6+PE	09330062701	19300061440
Han 6B connector housing, angled cable entry				
MAT90489805.U	M20	6+PE	09330062701	19300061540
Han 10B connector housing, straight cable entry				
MAT90489807.U	M25	10+PE	09330102701	19300101441
Han 10B connector housing, angled cable entry				
MAT90489809.U	M25	10+PE	09330102701	19300101541
Han 16B connector housing, straight cable entry				
MAT90489811.U	M25	16+PE	09330162701	19300161441
Han 16B connector housing, angled cable entry				
MAT90489813.U	M25	16+PE	09330162701	19300161541
Han 24B connector housing, straight cable entry				
MAT90489815.U	M32	24+PE	09330242701	19300241442
Han 24B connector housing, angled cable entry				
MAT90489817.U	M32	24+PE	09330242701	19300241542

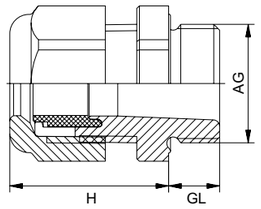
HARTING | Connector sets Premium (pin + socket)

HARTING Connector sets Premium, pin + socket						
Part No.	Cable entry	Insert	Pin-insert HARTING Part No.	Socket-insert HARTING Part No.	Connector housing HARTING Part No.	Connector base HARTING Part No.
Han 6B connector housing and base, straight cable entry						
MAT90489818.U	M20	6+PE	09330062601	09330062701	19300061440	19300061250
Han 6B connector housing and base, angled cable entry						
MAT90489819.U	M20	6+PE	09330062601	09330062701	19300061540	19300061250
Han 10B connector housing and base, straight cable entry						
MAT90489820.U	M25	10+PE	09330102601	09330102701	19300101441	19300101250
Han 10B connector housing and base, angled cable entry						
MAT90489821.U	M25	10+PE	09330102601	09330102701	19300101541	19300101250
Han 16B connector housing and base, straight cable entry						
MAT90489822.U	M25	16+PE	09330162601	09330162701	19300161441	19300161251
Han 16B connector housing and base, angled cable entry						
MAT90489823.U	M25	16+PE	09330162601	09330162701	19300161541	19300161251
Han 24B connector housing and base, straight cable entry						
MAT90489824.U	M32	24+PE	09330242601	09330242701	19300241442	19300241251
Han 24B connector housing and base, angled cable entry						
MAT90489825.U	M32	24+PE	09330242601	09330242701	19300241542	19300241251

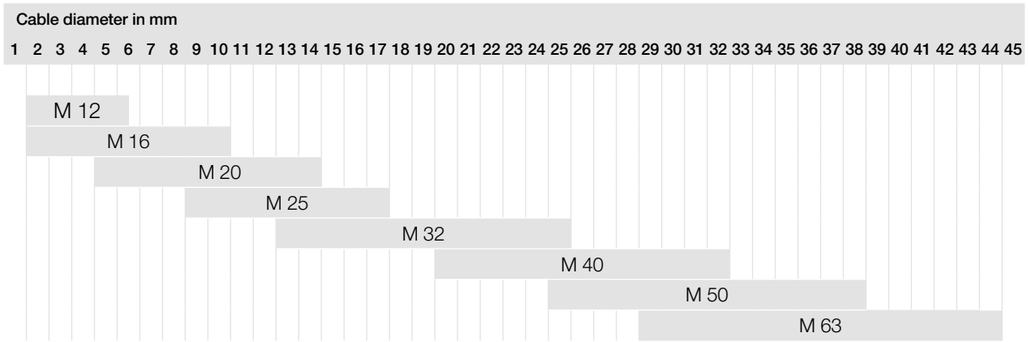
HARTING
Connectors

HUMMEL | Cable glands HSK-K

Material	PA V0 according to UL 94
Moulded seal	NBR
Protection class	IP 68 – 10 bar / IP 69K within the specified clamping range only with optional O-Ring
Continuous operating temperature	-40 °C to +100 °C
Colour	grey (RAL 7035)

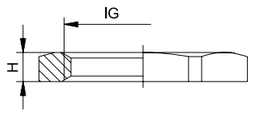


AG	⌀K mm	GL mm	H mm	mm	Pack size	Part No. grey	igus® Part No.
M 12 x 1.5	3 - 6.5	8	21	15	5	1.209.1200.50	MAT0179492
M 12 x 1.5	2 - 5	8	21	15	5	1.209.1200.51	MAT01712319
M 16 x 1.5	4 - 8	8	22	19	5	1.209.1600.50	MAT0179493
M 16 x 1.5	2 - 6	8	22	19	5	1.209.1600.51	MAT01712320
M 16 x 1.5	5 - 10	8	25	22	5	1.219.1600.50	MAT01712321
M 20 x 1.5	6 - 12	9	27	24	5	1.209.2000.50	MAT0179494
M 20 x 1.5	5 - 9	9	27	24	5	1.209.2000.51	MAT01712322
M 20 x 1.5	10 - 14	9	28	27	5	1.219.2000.50	MAT0179563
M 25 x 1.5	13 - 18	11	31	33	5	1.209.2500.50	MAT0179495
M 25 x 1.5	9 - 16	11	31	33	5	1.209.2500.51	MAT01712323
M 32 x 1.5	18 - 25	11	39	42	5	1.209.3200.50	MAT0179496
M 32 x 1.5	13 - 20	11	39	42	5	1.209.3200.51	MAT01712324
M 40 x 1.5	22 - 32	13	48	53	5	1.209.4000.50	MAT0179497
M 40 x 1.5	20 - 26	13	48	53	5	1.209.4000.51	MAT01712325
M 50 x 1.5	32 - 38	13	49	60	5	1.209.5000.50	MAT0179498
M 50 x 1.5	25 - 31	13	49	60	5	1.209.5000.51	MAT01712326
M 63 x 1.5	37 - 44	14	49	65 / 68	5	1.209.6300.50	MAT0179499
M 63 x 1.5	29 - 35	14	49	65 / 68	5	1.209.6300.51	MAT01712327



HUMMEL | K-Counter nuts

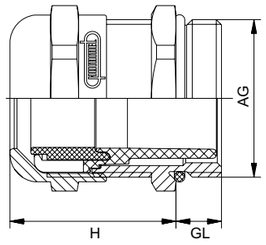
Material	SB / PA
Continuous operating temperature	-20 °C to +40 °C (SB) -40 °C to +100 °C (PA)
Colour	grey (RAL 7035)



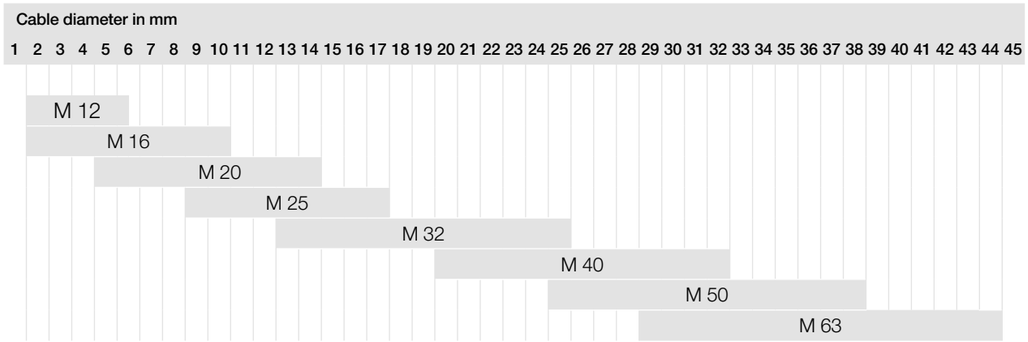
IG	H mm	mm	Pack size	Part No. grey	igus® Part No.
M 12 x 1.5	5	17	5	1.262.1200.50	MAT0179500
M 16 x 1.5	5	22	5	1.262.1600.50	MAT0179501
M 20 x 1.5	6	27	5	1.262.2000.50	MAT0179502
M 25 x 1.5	7	36	5	1.262.2500.50	MAT0179503
M 32 x 1.5	7	41	5	1.262.3200.50	MAT0179504
M 40 x 1.5	7	50	5	1.262.4000.50	MAT0179505
M 50 x 1.5	8	60	5	1.262.5000.50	MAT0179506
M 63 x 1.5	8	75	5	1.262.6300.50	MAT0179507

HUMMEL | Cable glands HSK-M

Material	Brass, nickel-plated
Clamping insert	PA
Moulded seal	NBR
O ring	NBR
Protection class	IP 68 – 10 bar / IP 69K within the specified Clamping range only
Continuous operating temperature	-40 °C to +100 °C

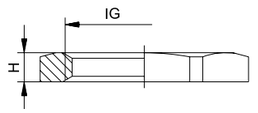


AG	⌀ mm	GL mm	H mm	mm	Pack size	Part No.	igus® Part No.
M 12 x 1.5	3 - 6.5	6.5	19	14	5	1.609.1200.50	MAT0179476
M 12 x 1.5	2 - 5	6.5	19	14	5	1.609.1200.51	MAT01712328
M 16 x 1.5	4 - 8	6	21	17 / 19	5	1.609.1600.50	MAT0179477
M 16 x 1.5	2 - 6	6	21	17 / 19	5	1.609.1600.51	MAT01712329
M 16 x 1.5	5 - 10	6	22	20	5	1.609.1611.50	MAT01712330
M 20 x 1.5	6 - 12	6	23	22	5	1.609.2000.50	MAT0179478
M 20 x 1.5	5 - 9	6	23	22	5	1.609.2000.51	MAT01712331
M 20 x 1.5	10 - 14	6	24	24	5	1.609.2016.50	MAT0179562
M 25 x 1.5	13 - 18	7	26	30	5	1.609.2500.50	MAT0179479
M 25 x 1.5	9 - 16	7	26	30	5	1.609.2500.51	MAT01711769
M 32 x 1.5	18 - 25	8	31	40	5	1.609.3200.50	MAT0179480
M 32 x 1.5	13 - 20	8	31	40	5	1.609.3200.51	MAT01712332
M 40 x 1.5	22 - 32	8	37	50	5	1.609.4000.50	MAT0179481
M 40 x 1.5	20 - 26	8	37	50	5	1.609.4000.51	MAT01712333
M 50 x 1.5	32 - 38	9	37	57	5	1.609.5000.50	MAT0179482
M 50 x 1.5	25 - 31	9	37	57	5	1.609.5000.51	MAT01712334
M 63 x 1.5	37 - 44	10	38	64 / 68	5	1.609.6300.50	MAT0179483
M 63 x 1.5	29 - 35	10	38	64 / 68	5	1.609.6300.51	MAT01712335



HUMMEL | M Counter nuts

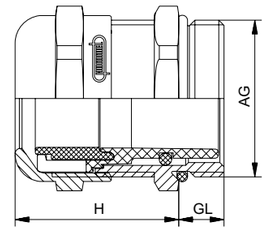
Material	Brass, nickel-plated



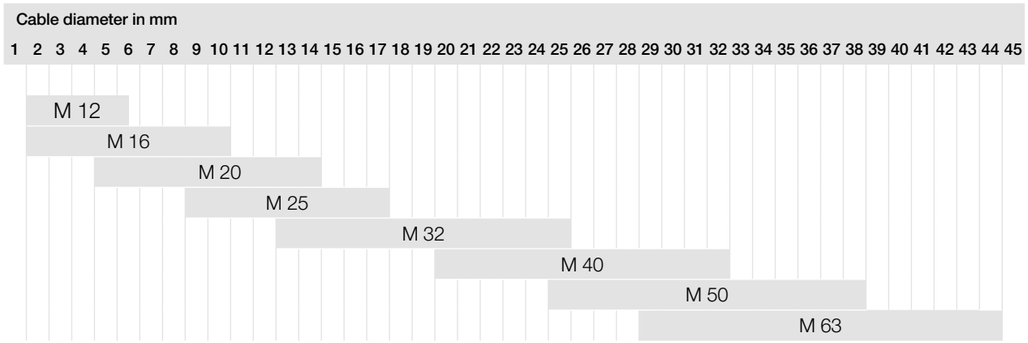
IG	H mm	mm	Pack size	Part No.	igus® Part No.
M 12 x 1.5	2.8	15	5	1.161.1200.50	MAT0179484
M 16 x 1.5	2.8	19	5	1.161.1600.50	MAT0179485
M 20 x 1.5	3.0	23	5	1.161.2000.50	MAT0179486
M 25 x 1.5	3.5	29	5	1.161.2500.50	MAT017948
M 32 x 1.5	4.0	36	5	1.161.3200.50	MAT0179488
M 40 x 1.5	4.5	45	5	1.161.4000.50	MAT0179489
M 50 x 1.5	5.5	55	5	1.161.5000.50	MAT0179490
M 63 x 1.5	6.0	70	5	1.161.6300.50	MAT0179491

HUMMEL | Cable glands HSK-M-EMV

Material	Brass, nickel-plated
Clamping insert	PA
Moulded seal	NBR
O ring	NBR
Protection class	IP 68 – 10 bar / IP 69K within the specified Clamping range only
Continuous operating temperature	-40 °C to +100 °C



AG	⌀ mm	GL mm	H mm	mm	Pack size	Part No.	igus® Part No.
M 12 x 1.5	3 - 6.5	6.5	19	14	5	1.691.1200.50	MAT0179508
M 12 x 1.5	2 - 5	6.5	19	14	5	1.691.1200.51	MAT01712336
M 16 x 1.5	5 - 10	6	22	20	5	1.691.1600.50	MAT0179509
M 16 x 1.5	3 - 7	6	22	20	5	1.691.1600.51	MAT01712337
M 20 x 1.5	10 - 14	6	23	24	5	1.691.2000.50	MAT0179510
M 20 x 1.5	7 - 12	6	23	24	5	1.691.2000.51	MAT01712338
M 25 x 1.5	13 - 18	7	24	30	5	1.691.2500.50	MAT0179511
M 25 x 1.5	9 - 16	7	24	30	5	1.691.2500.51	MAT01712339
M 32 x 1.5	18 - 25	8	31	40	5	1.691.3200.50	MAT0179512
M 32 x 1.5	13 - 20	8	31	40	5	1.691.3200.51	MAT01712340
M 40 x 1.5	22 - 32	8	37	50	5	1.691.4000.50	MAT0179513
M 40 x 1.5	20 - 26	8	37	50	5	1.691.4000.51	MAT01712341
M 50 x 1.5	32 - 38	9	37	57	5	1.691.5000.50	MAT0179514
M 50 x 1.5	25 - 31	9	37	57	5	1.691.5000.51	MAT01712342
M 63 x 1.5	37 - 44	10	38	64 / 68	5	1.691.6300.50	MAT0179515
M 63 x 1.5	29 - 35	10	38	64 / 68	5	1.691.6300.51	MAT01712343



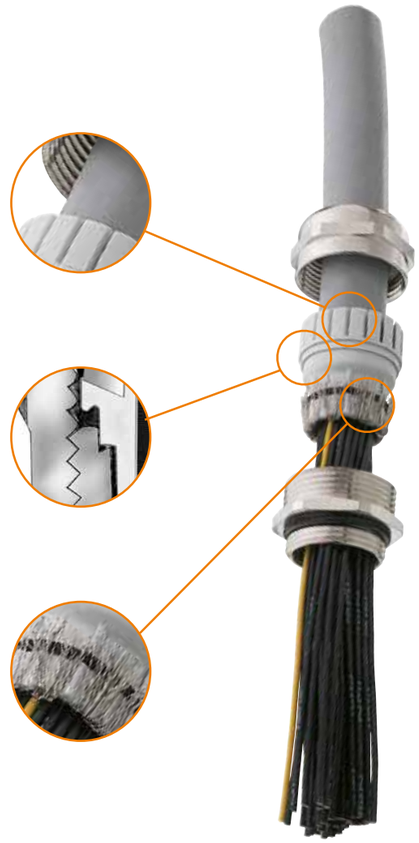
HUMMEL | HSK-EMV Industry standard

HSK-M-EMV

Flexible overlapping clamping splines prevent the form seal from being pulled out of the fitting

The internal sealing edge results in a superior seal between the splined Nylon clamping insert and the nickel-plated brass body.

Patented 360° grounding. The internal O-Ring, which results in a perfect contact between braided shield of cable and fitting.

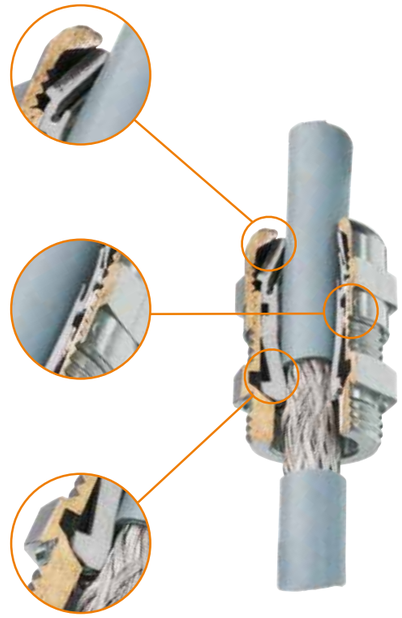


HSK-M-EMV-D

Flexible overlapping clamping splines prevent the form seal from being pulled out of the fitting.

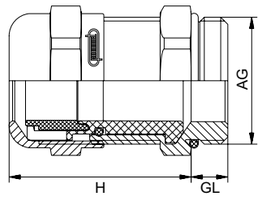
Metalised spline insert provides electrical conductivity.

Flexible contact points allow contact with variable braid diameters.

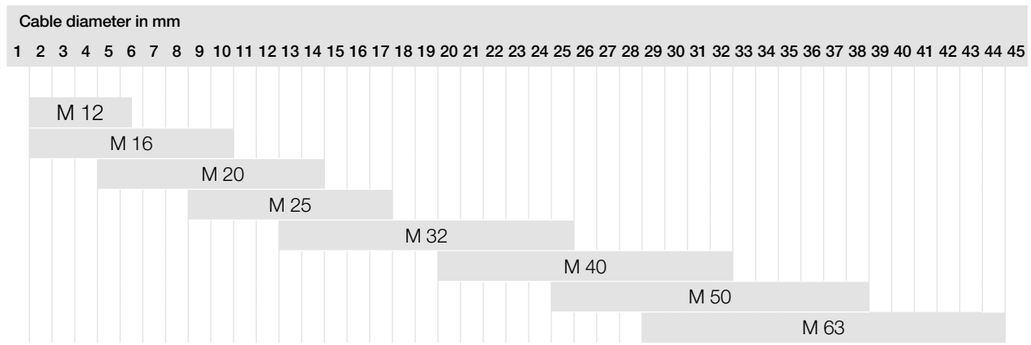


HUMMEL | Cable glands HSK-M-EMV-D

Material	Brass, nickel-plated
Clamping insert	Metal coated PA
Moulded seal	NBR
O ring	NBR
Protection class	IP 68 – 10 bar / IP 69K within the specified Clamping range only
Continuous operating temperature	-40 °C to +100 °C

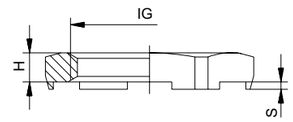


AG	⌀K mm	GL mm	H mm	⌀ mm	Pack size	Part No.	igus® Part No.
M 12 x 1.5	3 - 6.5	6.5	25	14	5	1.631.1200.50	MAT0179524
M 16 x 1.5	5 - 10	6	32	20	5	1.631.1600.50	MAT0179525
M 20 x 1.5	10 - 14	6	33	24	5	1.631.2000.50	MAT0179526
M 25 x 1.5	13 - 18	7	39	30	5	1.631.2500.50	MAT0179527
M 32 x 1.5	18 - 25	8	45	40	5	1.631.3200.50	MAT0179528
M 40 x 1.5	24 - 32	8	51	50	5	1.631.4000.50	MAT0179529
M 50 x 1.5	32 - 38	9	57.5	57	5	1.631.5000.50	MAT0179530
M 63 x 1.5	37 - 44	10	52	64 / 68	5	1.631.6300.50	MAT0179531



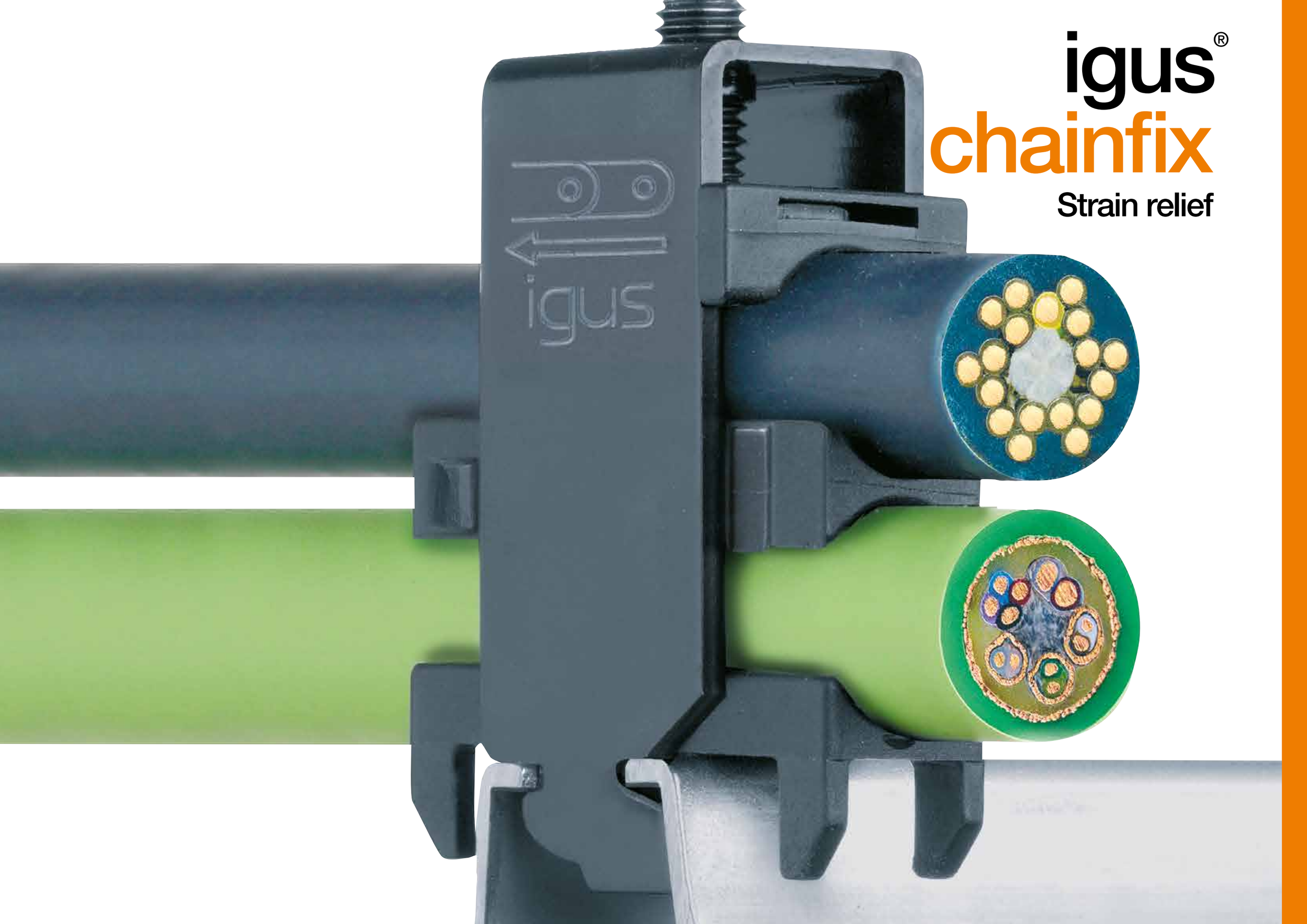
HUMMEL | EMV-Counter nuts

Material	Brass, nickel-plated



IG	H mm	⌀ mm	S mm	Pack size	Part No.	igus® Part No.
M 12 x 1.5	2.8	15	0.7	5	1.167.1200.50	MAT0179516
M 16 x 1.5	2.8	19	0.7	5	1.167.1600.50	MAT0179517
M 20 x 1.5	3.0	24	0.7	5	1.167.2000.50	MAT0179518
M 25 x 1.5	3.5	30	0.7	5	1.167.2500.50	MAT0179519
M 32 x 1.5	4.5	36	0.7	5	1.167.3200.50	MAT0179520
M 40 x 1.5	5.0	46	0.7	5	1.167.4000.50	MAT0179521
M 50 x 1.5	5.0	60	0.7	5	1.167.5000.50	MAT0179522
M 63 x 1.5	6.0	70	0.7	5	1.167.6300.50	MAT0179523

igus®
chainfix
Strain relief



igus® chainfix-strain relief. Flexible and quickly assembled.

Strain relief from igus® specifically developed for use in e-chains® and dynamic applications. The combination of chainflex® cable materials in contact with the polymer strain relief components of igus® chainfix are designed for long cable life and maximum holding power. For a wide variety of applications igus® is the best solution in terms of cost and benefits, from the best chainfix strain relief for long travels or harsh use to chainfix Nuggets, for simple and inexpensive strain relief solutions. igus® chainfix strain relief components are proven in real use by customers around the world.

Available from stock. Delivery time* from 24h or same day!

*Delivery time refers the time until the product is shipped (after verifying technical feasibility)

3D-CAD, configurators, PDF, applications ► www.igus.eu/chainfix

Clamps, steel or stainless steel - For maximum tensile strength ► Page 750

Clamps, saddles and bases	ø [mm]
CFX* Single, double, triple standard clamps	6-42
CFXL* Single, double, triple clamps with wide base for maximum tensile forces	6-42
Clamp elements - saddles and bases	6-42
chainfix Multi-Clamps*	6-12

C-profiles ► Page 756

Standard C-profiles and C-profiles for heavy-duty applications
Standard C-profiles part no. CF.92.42. (to be integrated into KMA!)
C-profiles part no. CF.92.52. With increased retention force (assembly outside e-chain®)

Universal tiewrap clamps, screw or clip mounted ► Page 758

chainfix tiewrap plates	ø [mm]
Option 1A: Tiewrap plates as single part "Series 2000" + cable tiewraps	
Option 1B: Tiewrap plates as single part "Series 3000" + cable tiewraps	
Cable tiewraps as single part	max. 36

Tiewrap plates, with clip-on connection for the C-profile ► Page 760

chainfix tiewrap plates
Option 2: Tiewrap plates with clip-on connection for the C-profile
Option 3: Integrated strain relief for E2 e-tubes - Series R
Option 4: Tiewrap plates for fixed crossbars
Option 5: Tiewrap plates for opening crossbars

Clips - High tensile strength, modular clip-on strain relief ► Page 762

chainfix clips	ø [mm]
Option 1: for all e-chains® with C-profiles and also suitable for assembly in the KMA mounting brackets	4-24
Option 2: Clip-on strain relief for opening crossbars	4-24

Strain relief separators - with integrated teeth ► Page 764

chainfix strain relief separator
Separator with integrated strain relief - for easy strain relief with cable ties

Nuggets - for top hat rail and C-profile ► Page 766

chainfix nuggets	ø [mm]
Option 1: simple and universal cable fixation, for diameter with Ø 20 mm and Ø 30 mm	≤ 30
Option 2: Fastening through clipping onto standard top hat rail	≤ 20

Strain relief blocks - special strain reliefs for hoses ► Page 767

Blocks	ø [mm]
Conventional igus® blocks - strain relief for hoses	4.3-14
CFB polymer strain relief connector system, for many cables in a confined space	

*Standard material: galvanised steel. Also available as stainless steel-version (material stainless steel: 1.4301/AISI 304)

chainfix | Select your strain relief system

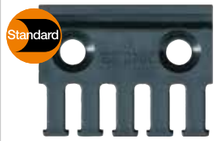
e-chains® series	chainfix Clamps[1] CFX	Clamps[1] FXL**	Clip C-Profile[1]	Clip Crossbars[1]	Nugget[1]	Strain relief separator[2]	chainfix tiewrap plates Single part 2000[2]	Single part 3000[2]	Clip-on for C-profile[2]	Fixed crossbar[2]	Cross bar[2]	For triflex®[2]	For e-tubes[2]
triflex®													
easy triflex®												E33X.XX.2	
triflex®												33X.XX	
easy chain®													
E/Z200							20XX.ZB			2050.Z			
E/Z26								30XX.ZB					
E/Z300								30XX.ZB					
E2/000													
1400/1500		X				21.1.Z	20XX.ZB						
1450/1480		X					20XX.ZB						
2400/2500		X				2020.Z	20XX.ZB			2050.Z			
2450/2480		X				2020.ZR	20XX.ZB						
2600/2700	X	X	X		X	262.Z		30XX.ZB	30XX.ZC	2050.Z	2050.Z		
2650/2680	X	X	X		X			30XX.ZB	30XX.ZC		2050.Z*		
3400/3500	X	X	X		X	301.Z		30XX.ZB	30XX.ZC	30XX.Z	30XX.ZS		
3450/3480	X	X	X		X	34501.Z		30XX.ZB	30XX.ZC		30XX.ZS*		
255							20XX.ZB						
E2													
R117/118		X					20XX.ZB						
R157/158		X				1585.01.Z							
R167/168		X				1685.01.Z							
R48		X				481.ZR	20XX.ZB						
R58		X											5850.Z
R68		X											30XX.Z
E4.1													
E4.21		X				T2103.Z							
E4.28/R4.28		X				28.Z / 28.ZT	20XX.ZB				2050.Z		
E4.32/H4.32/R4.32	X	X	X		X			30XX.ZB	30XX.ZC		3850.ZS		
E4.42/H4.42/R4.42	X	X	X		X			30XX.ZB	30XX.ZC		3850.ZS		
E4.56/H4.56/R4.56	X	X	X	X	X			30XX.ZB	30XX.ZC		45XX.ZS		
E4.80/H4.80/R4.80	X	X	X	X	X			30XX.ZB	30XX.ZC		45XX.ZS		
1640/R1608	X	X		X				30XX.ZB			45XX.ZS		
800	X	X						30XX.ZB					
840		X		X				30XX.ZB					
E4/00													
210		X				T2103.Z							
220/R760		X					20XX.ZB				2050.Z		
280/290/R770	X	X	X		X			30XX.ZB	30XX.ZC		3850.ZS		
380/390/R780	X	X	X		X			30XX.ZB	30XX.ZC		3850.ZS		
400/410/R880	X	X	X	X	X			30XX.ZB	30XX.ZC		45XX.ZS		
600/601/R608	X	X		X				30XX.ZB					
640	X	X		X				30XX.ZB					
E4/4													
2828/2928/R7728	X	X	X		X			30XX.ZB	30XX.ZC		3850.ZS		
3838/3938/R7838	X	X	X		X			30XX.ZB	30XX.ZC		3850.ZS		
4040/4140/R8840	X	X	X	X	X			30XX.ZB	30XX.ZC		45XX.ZS		
5050/5150/R9850	X	X	X	X	X			30XX.ZB	30XX.ZC		45XX.ZS		
E4/light													
14040/14140/18840	X	X	X	X	X			30XX.ZB	30XX.ZC		45XX.ZS		
14240/14340	X	X	X		X			30XX.ZB	30XX.ZC		3850.ZS		
14550/14650/19050	X	X	X	X	X			30XX.ZB	30XX.ZC		45XX.ZS		
15050/15150/19850	X	X	X	X				30XX.ZB	30XX.ZC		45XX.ZS		
15250/15350	X	X	X					30XX.ZB	30XX.ZC		3850.ZS		
E6													
E6.29		X				E6.29.02.Z	20XX.ZB						
R6.29		X					20XX.ZB						
E6.35		X				E6.35.02.Z	20XX.ZB						
E6.40	X	X	X		X	E6.40.02.Z	20XX.ZB						
E6.52	X	X	X		X			30XX.ZB	30XX.ZC		3850.ZS		
R6.52	X	X	X		X			30XX.ZB	30XX.ZC				
E6.62	X	X	X		X			30XX.ZB	30XX.ZC		3850.ZS		
E6.80L	X	X	X	X	X			30XX.ZB	30XX.ZC		45XX.ZS		
E6.80	X	X	X	X	X			30XX.ZB	30XX.ZC		45XX.ZS		

**CFXL are always assembled in front of the e-chain® - Not integrated into KMA mounting brackets with C-profile-host option!

= Recommended strain relief for selected e-chain®
* Half e-tube only

1) you'll find on subsequent pages
2) you'll find on the product page of each e-chain® series

chainfix strain relief | **Parameters** | Overview

igus® chainfix- strain relief system									
Parameters		**CFX** **Clamps**	**Tiewrap plates** **screwed, clip-on**			**Clips** for C-profile or clip-on	**Nuggets** **Strain relief nuggets**	**Strain relief separators**	**CFB strain relief connector system**
	Recommended standard for the following e-chains®:	**E4, E6, for all KMA* with C-profile** Polymer metal mounting bracket	**easychain®, E2/000, E2 e-tubes, E4, E6**			**E4, E6, for all KMA* with C-profile** Polymer metal mounting bracket	**For all KMAs* with C-profile, top-hat rails** Polymer metal mounting bracket	**E2/000, E2 e-tubes, E6, T3**	**E4, E6, for all KMA* with C-profile** Polymer metal mounting bracket
	When to use this igus® strain relief system:	Standard for high accelerations, loads and demanding applications. For many cables, large cable Ø, stacked cables. For long travels, cranes, offshore, machine tools, high speed, hydraulic cables. If modularity is required.	Standard for many applications with medium acceleration. For unsupported, gliding, hanging and standing applications in general machinery and machine tools. For cables next to each other. Also available as single parts, for example for cabinets, etc.			Cost-effective, space-saving strain relief for many applications with medium accelerations. For stacked cables, or cables with the same diameters.	Cost-effective, fast strain relief for simple applications with confined space requirements at medium accelerations. Also available as single parts for rigid linings, such as in cabinets, etc.	Combination of separator and strain relief, ideal for confined space requirements. For applications with medium accelerations. For smaller cable diameter. Ideal for e-tubes. For machine tools and automation.	Space-saving, modular strain relief with many cables in confined spaces. For applications with high accelerations and loads, e.g. machine tools.
	When not to use it:	No limitation	For large cable diameters			Under high loads	Under high loads	Under high loads	No limitation
Features									
Assembly time index		+	+			+ –	+ –	+	+ –
Adjustable tensile strength		+ +	–			+ –	–	–	+
Price Index		●●◐	●○○			●●○	●○○	●◐○	●●●
Modularity		yes	yes			yes	yes	yes	yes (special fabrication)
Dynamics		high to very high	high			medium	high	high	high to very high

Price Index
●◐○ Low price category
●◐○ Medium price category
●●● Highest price category

+ + = best suitability
+ = good suitability
+ – = suitable
– = conditionally suitable

All clamps were tightended with 1Nm.
Cable tie wraps tightened by hand.

Can be integrated into KMA mounting brackets

For up to three cables stacked

Reduced installation height, space saving

Excellent durability for dynamic applications

chainfix clamps – fitted safely and even faster

- Integration with KMA mounting brackets and C-profile host-option
- Easy to read part no. and lateral marking of the correct installation direction
- Reduced installation height due to optimal housing height (compared to conventional clamps up to 15 mm)
- Space- and time-saving assembly
- Delivery options for complete systems with cables and preassembled strain relief
- Improved base for easy fit on the C-profile
- Setscrews tightened with hex wrench, for easy installation
- Durability for dynamic applications through improved stacker elements: optimised stacker saddles, captive by retaining lugs
- The long contract surface of the stacker elements improves the clamp's stability
- The high rigidity of the stacker elements significantly increases the reliability
- Built-in ribs to the stacker elements - no slipping of cables within the strain relief
- Optional: CFXL clamps with increased holding force for heavy-duty applications (CFXL clamps are always assembled IN FRONT of the e-chain® - CANNOT be integrated into KMA mounting brackets with C-profile host-option!)

Available from stock. Delivery time* from 24 hrs or same day!

*Delivery time refers the time until the product is shipped (after verifying technical feasibility)

chainfix strain relief | **Clamps**

chainfix

Product range and materials

- Steel clamp: clamp and screw black painted steel
- Stainless steel clamp: clamp and screw: blank (material 1.4301/AISI 304)
- Stacker elements: bottom saddle and stacker saddle (material igumid G)
- C-profiles: steel (material galvanised steel) or stainless steel (material 1.4301/AISI 304) available

Installation height

If the e-chain® glides on itself for long travels, the screw heads of the strain relief at the fixed end of the e-chain® must have a distance of at least 10 mm below the top of the e-chain®. As a consequence of this, many strain relief elements described here may not be suitable for use at the fixed end on gliding e-chains®. For unsupported e-chains® these strain relief elements can be used safely.

Please note!

- The cables should ideally be fixed at both ends of the e-chain®. **The minimum should be to be fixed at the moving end of the e-chain®.**
- When using chainfix clamps on C-profiles in the mounting bracket for the Series: E4.32/H4.32/R4.32, 280/290 R770, 2828/2928/R7728 a shortened bottom saddle must be used. For shortened bottom saddles supplement part no. with index "K" = Example: Part no. CFX12.1K

For the following igus® series

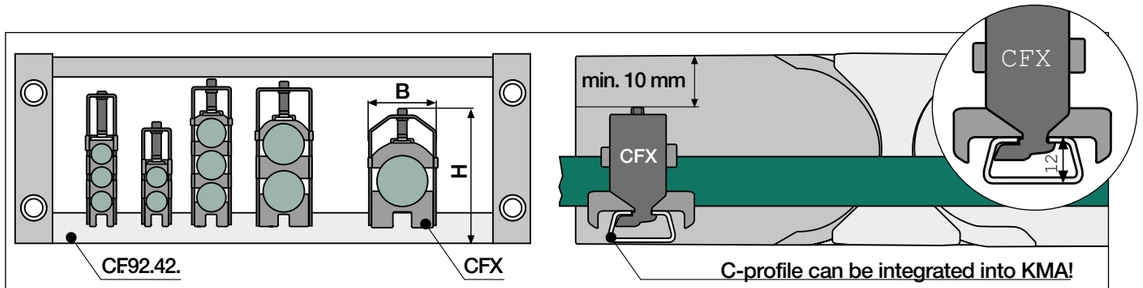
E2/000
● 2400/2500/2450/2480
● 2600/2700/2650/2680
● 3400/3500/3450/3480
E4.1
● E4.32/H4.32/R4.32
● E4.42/H4.42/R4.42
● E4.56/H4.56/R4.56
● E4.80/H4.80/R4.80
E4/light
● 14040/14140/18840
● 14240/14340
● 14550/14650/19050
● 15050/15150/19850
● 15250/15350
E4/00
● 280/290/R770
● 380/390/R780
● 400/410/R880
E4/4
● 2828/2928/R7728
● 3838/3938/R7838
● 4040/4140/R8840
● 5050/5150/R9850
E6
● E6.40
● E6.52 / R6.52
● E6.62
● E6.80L
● E6.80

CFX - chainfix housing with reduced height

KMA mounting bracket with integrated C-profile and chainfix clamps

Save both time and space during installation of igus® chainfix clamps

chainfix strain relief | **CFX clamps**



The dimensions given for H in the tables are based on the maximum cable diameter.
Cables with smaller diameters may result in lower overall clamp housing heights. Tightening torque 1.5Nm for CFX clamps.

Standard

CFX | Standard clamps with standard base

Suitable for C-profiles CF.92.42.XX - Can be integrated into KMA with C-profile-option!

CFX - Single clamp housing, incl. bottom saddles

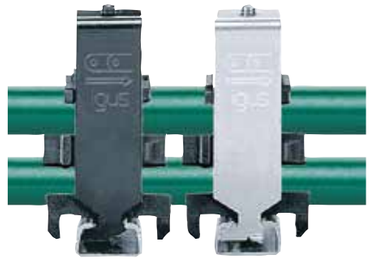
Part no. steel	Part no. stainless steel*	ø [mm]	B+2 [mm]	H [mm]	Part no. steel	Part no. stainless steel*	ø [mm]	B+2 [mm]	H [mm]
CFX12.1	CFX12.1.E	06 - 12	16	54	CFX26.1	CFX26.1.E	22 - 26	30	67
CFX14.1	CFX14.1.E	12 - 14	18	50	CFX30.1	CFX30.1.E	26 - 30	34	71
CFX16.1	CFX16.1.E	14 - 16	20	52	CFX34.1	CFX34.1.E	30 - 34	38	75
CFX18.1	CFX18.1.E	16 - 18	22	54	CFX38.1	CFX38.1.E	34 - 38	42	79
CFX20.1	CFX20.1.E	18 - 20	24	56	CFX42.1	CFX42.1.E	38 - 42	46	83
CFX22.1	CFX22.1.E	20 - 22	26	58					

*Material stainless steel: 1.4301/AISI 304

CFX - Double clamp housing, incl. bottom and stacker saddles

Part no. steel	Part no. stainless steel*	ø [mm]	B+2 [mm]	H [mm]	Part no. steel	Part no. stainless steel*	ø [mm]	B+2 [mm]	H [mm]
CFX12.2	CFX12.2.E	06 - 12	16	72	CFX22.2	CFX22.2.E	20 - 22	26	90
CFX14.2	CFX14.2.E	12 - 14	18	74	CFX26.2	CFX26.2.E	22 - 26	30	109
CFX16.2	CFX16.2.E	14 - 16	20	78	CFX30.2	CFX30.2.E	26 - 30	34	117
CFX18.2	CFX18.2.E	16 - 18	22	82	CFX34.2	CFX34.2.E	30 - 34	38	125
CFX20.2	CFX20.2.E	18 - 20	24	86					

*Material stainless steel: 1.4301/AISI 304



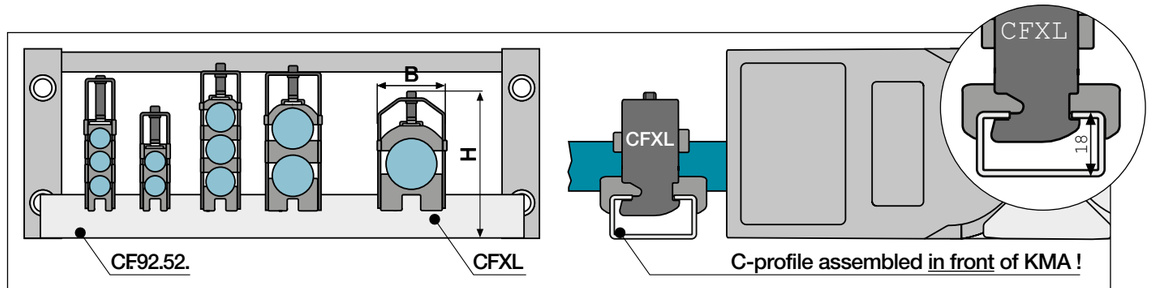
CFX - Triple clamp housing, incl. bottom and stacker saddles

Part no. steel	Part no. stainless steel*	ø [mm]	B+2 [mm]	H [mm]	Part no. steel	Part no. stainless steel*	ø [mm]	B+2 [mm]	H [mm]
CFX12.3	–	06 - 12	16	100	CFX18.3	–	16 - 18	22	108
CFX14.3	–	12 - 14	18	96	CFX20.3	–	18 - 20	24	114
CFX16.3	–	14 - 16	20	102	CFX22.3	–	20 - 22	26	120

*Material stainless steel: 1.4301/AISI 304

Suitable C-profiles for CFX clamps part no. CF.92.42. ▶ Page 732

chainfix strain relief| Optional | **CFXL clamps**



The dimensions given for H in the tables are based on the maximum cable diameter.
Cables with smaller diameters may result in lower overall clamp housing heights. Tightening torque 1.5 Nm for CFXL clamps

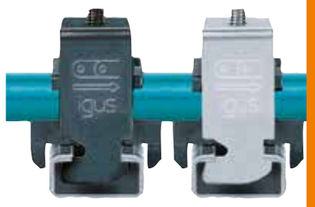
CFXL | Clamps with wide base for increased holding power

Suitable for C-profiles CF.92.52.XX - C-profile assembled in front of KMA! NO KMA-integration!

CFXL - Single clamp housing, incl. bottom saddles

Part no. steel	Part no. stainless steel*	ø [mm]	B+2 [mm]	H [mm]	Part no. steel	Part no. stainless steel*	ø [mm]	B+2 [mm]	H [mm]
CFXL12.1	CFXL12.1.E	06 - 12	16	60	CFXL26.1	CFXL26.1.E	22 - 26	30	73
CFXL14.1	CFXL14.1.E	12 - 14	18	56	CFXL30.1	CFXL30.1.E	26 - 30	34	77
CFXL16.1	CFXL16.1.E	14 - 16	20	58	CFXL34.1	CFXL34.1.E	30 - 34	38	81
CFXL18.1	CFXL18.1.E	16 - 18	22	60	CFXL38.1	CFXL38.1.E	34 - 38	42	85
CFXL20.1	CFXL20.1.E	18 - 20	24	62	CFXL42.1	CFXL42.1.E	38 - 42	46	89
CFXL22.1	CFXL22.1.E	20 - 22	26	64					

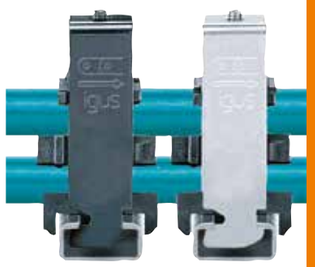
*Material stainless steel: 1.4301/AISI 304



CFXL - Double clamp housing, incl. bottom and stacker saddles

Part no. steel	Part no. stainless steel*	ø [mm]	B+2 [mm]	H [mm]	Part no. steel	Part no. stainless steel*	ø [mm]	B+2 [mm]	H [mm]
CFXL12.2	CFXL12.2.E	06 - 12	16	78	CFXL22.2	CFXL22.2.E	20 - 22	26	86
CFXL14.2	CFXL14.2.E	12 - 14	18	80	CFXL26.2	CFXL26.2.E	22 - 26	30	115
CFXL16.2	CFXL16.2.E	14 - 16	20	84	CFXL30.2	CFXL30.2.E	26 - 30	34	123
CFXL18.2	CFXL18.2.E	16 - 18	22	86	CFXL34.2	CFXL34.2.E	30 - 34	38	131
CFXL20.2	CFXL20.2.E	18 - 20	24	92					

*Material stainless steel: 1.4301/AISI 304



CFXL - Triple clamp housing, incl. bottom and stacker saddles

Part no. steel	Part no. stainless steel*	ø [mm]	B+2 [mm]	H [mm]	Part no. steel	Part no. stainless steel*	ø [mm]	B+2 [mm]	H [mm]
CFXL12.3	–	06 - 12	16	106	CFXL18.3	–	16 - 18	22	114
CFXL14.3	–	12 - 14	18	102	CFXL20.3	–	18 - 20	24	120
CFXL16.3	–	14 - 16	20	108	CFXL22.3	–	20 - 22	26	126

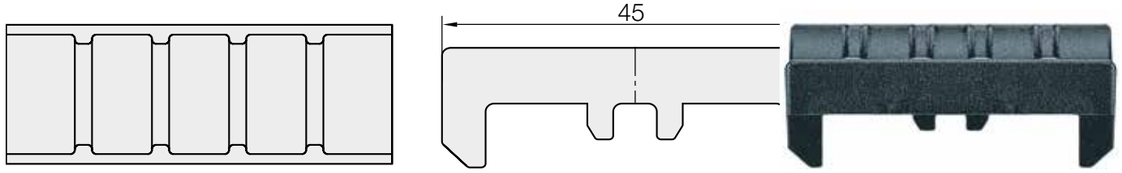
*Material stainless steel: 1.4301/AISI 304

Suitable C-profiles for CFXL clamps part no. CF.92.52. ▶ Page 732

chainfix strain relief | **Clamps** | Single parts

Characteristics of igus® chainfix clamps - stacker elements
- Built-in ribs for security of cables within the strain relief
- Optimized double-trough, captive by ❶ locking spring and with ❷ spring groove for a simplified and precise installation
- Conventional stacker saddles
- Long contact surface improves the clamp's stability
- More secure due to high stiffness
- Suitable for CFX-and CFXL-clamps

Bottom saddles to slide into the clamp housing as single part



Conventional stacker saddles for all for all double and triple clamps as single part

NEW in this catalogue!
Optimised stacker saddles for all double and triple clamps as single part

Part no. clamp	Part no. bottom saddle	CDXX stacker saddle	CD.XX.C stacker saddle	Cable Ø [mm]
CFX/CFXL12.X	**CG12**	**CD12**	CD.12.C*	06 - 12
CFX/CFXL14.X	**CG14**	**CD14**	CD.14.C*	12 - 14
CFX/CFXL16.X	**CG16**	**CD16**	CD.16.C*	14 - 16
CFX/CFXL18.X	**CG18**	**CD18**	**CD.18.C**	16 - 18
CFX/CFXL20.X	**CG20**	**CD20**	CD.20.C*	18 - 20
CFX/CFXL22.X	**CG22**	**CD22**	CD.22.C*	20 - 22

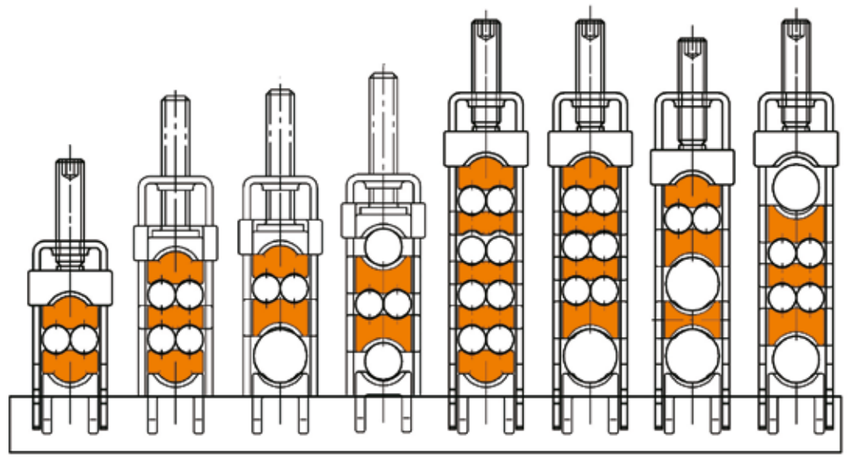
Part no. clamp	Part no. bottom saddle	CDXX stacker saddle	CD.XX.C stacker saddle	Cable Ø [mm]
CFX/CFXL26.X	**CG26**	**CD26**	CD.26.C*	22 - 26
CFX/CFXL30.X	**CG30**	**CD30**	CD.30.C*	26 - 30
CFX/CFXL34.X	**CG34**	**CD34**	CD.34.C*	30 - 34
CFX/CFXL38.X	**CG38**	–	–	34 - 38
CFX/CFXL42.X	**CG42**	–	–	38 - 42

Please note: When using chainfix clamps on C-profile in the mounting bracket for Series E4.32/H4.32/R4.32, 280/290/R770, 2828/2928/R7728, 28/29/R77 a shortened bottom saddle has to be used. For shortened bottom saddles supplement part no. with index "K" = Example: Part no. CFX12.1K

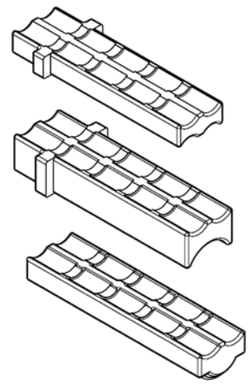
chainfix strain relief | **Multi-clamps**

Characteristics of igus® chainfix multi-clamps
- Now more flexible options of the proven chainfix strain relief elements with more components
- Universal strain relief – more assembly options
- Saves both time and space during installation
- Compact and modular
- For small outer diameters
- Cost-effective

CFX12 | Multi-clamps, universal strain relief



CFX12.1.Z1 CFX12.2.Z1 CFX12.2.Z2 CFX12.2.Z3 CFX12.3.Z1 CFX12.3.Z2 CFX12.3.Z3 CFX12.3.Z4



Universal bottom and stacker saddles

Part no. series	Part no. stacker saddles - single parts				For cables Ø max. [mm]
CFX12.1.Z1	X (2-piece)	–	–	–	6
CFX12.2.Z1	X (2-piece)	X (1-piece)	–	–	6
CFX12.2.Z2	X (1-piece)	–	X (1-piece)	–	6 + 12
CFX12.2.Z3	–	–	X (2-piece)	–	6 + 8
CFX12.3.Z1	X (2-piece)	X (3-piece)	–	–	6
CFX12.3.Z2	X (1-piece)	X (2-piece)	X (1-piece)	–	6 + 12
CFX12.3.Z3	X (1-piece)	–	X (1-piece)	X (1-piece)	6 + 12
CFX12.3.Z4	–	X (1-piece)	X (2-piece)	–	6 + 10

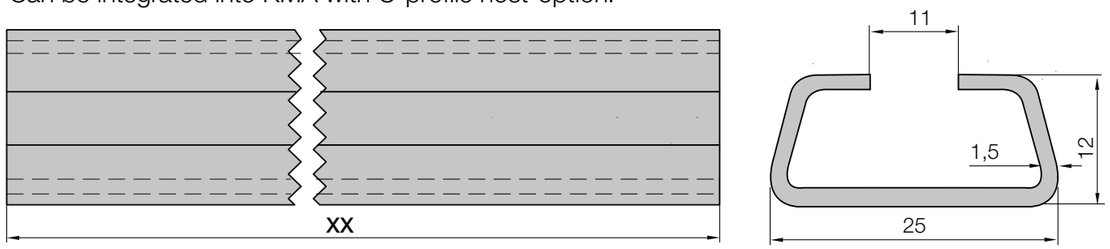
Standard material: galvanised steel. For the stainless steel version (material 1.4301/AISI 304) supplement part no. with Index "E" = example: part no. CFX.12.3.Z1.E

Standard C-profiles part no. CF.92.42.XX

- For all igus® CFX clamps and KMA mounting brackets with C-profile host-option
- Standard material: galvanised steel part no. CF.92.42.XX (XX=length in mm)
- Also available as stainless steel version
  (Material: 1.4301/AISI 304)
  Please add index **.E**, example: Part no. CF.92.52.XX.XX**.E**
- Length tolerances of ±1 mm possible!

Standard C-profile part no. CF.92.42. | For standard applications

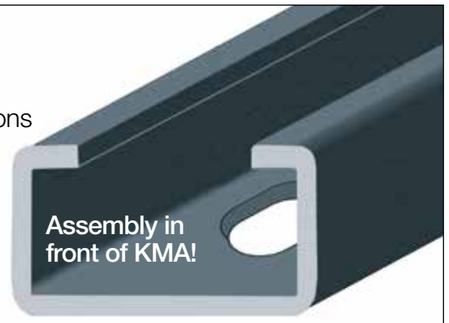
Can be integrated into KMA with C-profile host-option!



Optional | For heavy-duty applications

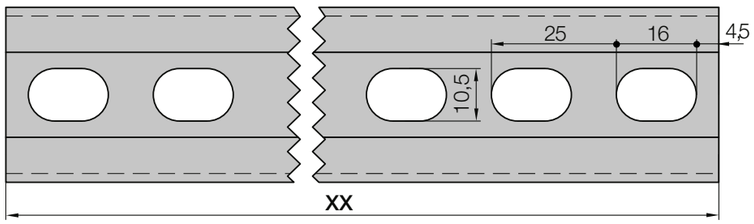
C-profiles part no. CF.92.52.XX

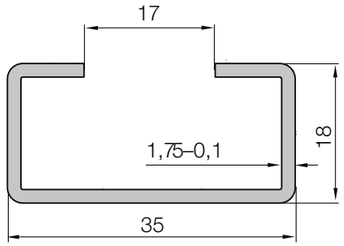
- For all igus® CFXL clamps
- With increased holding power - even for harsh applications
- Standard material galvanised steel part no. CF.92.52.XX (XX = length in mm)
- Also available as stainless steel version
  (Material: 1.4301/AISI 304)
  Please add Index **.E**, example: Part no. CF.92.52.XX.**E**
- Length tolerances of ±5 mm possible!



C-profile part no. CF.92.52. With increased holding power for tough applications

Assembly <u>in front</u> of the e-chain® - <u>NO</u> integration into KMA!





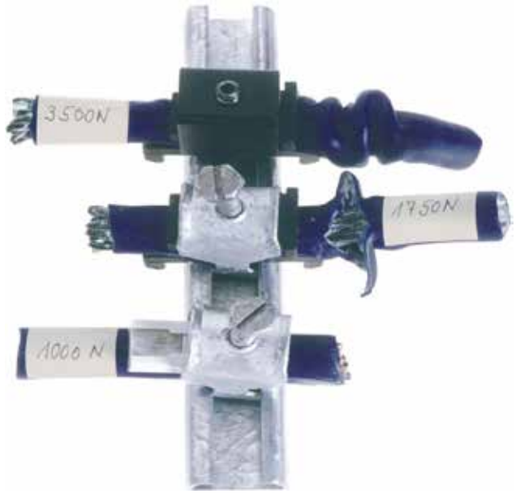
Available from stock. Delivery time* from 24 hrs or same day!

*Delivery time refers the time until the product is shipped (after verifying technical feasibility)

igus® tensile strength test with CFX clamps

igus® strain relief devices are tested under real conditions, taking various parameters into account

Whether under the influence of fluids like water or oil, or at different ambient temperatures. The interaction of chainfix systems with different jacket materials of cables and hoses of course plays a big role in the in-house tests. **Detailed information about the tests: chainfix strain relief parameter overview ▶ Page 724**



igus® test: Comparison of three different strain reliefs - Result: Triple tensile strength of igus® chainfix clamps compared to conventional products.

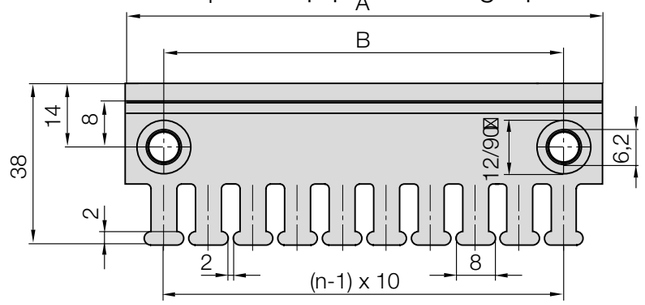
Tensile strength tests with chainflex® cables

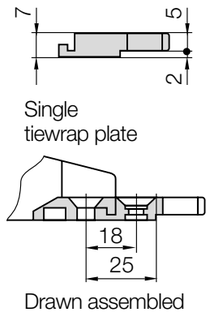
Tensile strength tests of igus® clamps with cable tiewraps

Characteristics of igus® chainfix tiewrap plates - Series 2000
Option 1A.: Tiewrap plates as single parts

- Available as individual component
- Screwed on KMA* with C-profile (*polymer metal mounting bracket)
- Can be clipped onto the mounting bracket
- Single part for the manufacturing of switchgear cabinets or for the assembly of machines
- Accessory for igus® e-chain systems®

Series 2000 | Tiewrap plate as single part





For the following igus® series

easychain®
● E200/Z200
E2/000
● 1400/1500/1450/1480
● 2400/2500/2450/2480
255
E2 e-tubes
● R117/R118
● R48
E4.1
● E4.28
E4/00
● 220 (2050.Z)
E6
● E6.29/R6.29
● E6.35
● E6.40

Tiewrap plate	n Number of teeth	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Centre bore – = no / + = yes
2020.ZB	3	30	15	–	–
2030.ZB	4	40	20	–	–
2040.ZB	5	50	30	–	–
2050.ZB	6	60	40	–	–
2070.ZB	8	80	60	–	–
2090.ZB (= 2030.ZB + 2040.ZB)	9	90	–	–	–
2100.ZB	10	100	80	–	–
2125.ZB (= 2050.ZB + 2050.ZB)	12	120	–	–	–

Cable tiewraps separately

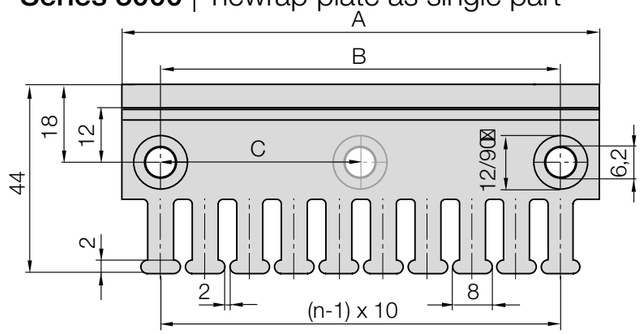
Cable tiewraps (100-piece bag)	Width x length [mm]	Maximum Ø	Pull force resistance [N]
CFB.001	4.8 x 150	36	222 N

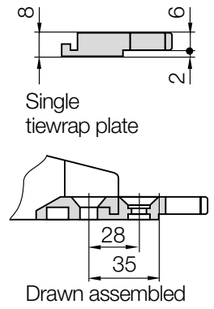
Available from stock. Delivery time* from 24 hrs or same day!
*Delivery time refers the time until the product is shipped (after verifying technical feasibility)

Characteristics of igus® chainfix tiewrap plates - Series 3000
Option 1B.: Tiewrap plates as individual parts

- Available as individual component
- Screwed on KMA* with C-profile (*polymer metal mounting bracket)
- Can be clipped onto the mounting bracket
- Single part for the manufacturing of switchgear cabinets or for the assembly of machines
- Accessory for igus® e-chain systems®

Series 3000 | Tiewrap plate as single part





For the following igus® series

easychain®
● E26/Z26
● E300/Z300
E2/000
● 2600/2700/2650/2680
● 3400/3500/3450/3480
E4.1
● E4.32/H4.32/R4.32
● E4.42/H4.42/R4.42
● E4.56/H4.56/R4.56
● E4.80/H4.80/R4.80
● 1640
800
840
E4/light
● 14040/14140/18840
● 14240/14340
● 14550/14650/19050
● 15050/15150/19850
● 15250/15350
E4/00
● 280/290/R770
● 380/390/R780
● 400/410/R880
● 600/601/R608
● 640
E4/4
● 2828/2928/R7728
● 3838/3938/R7828
● 4040/4140/R8840
● 5050/5150/R9850
E6
● E6.52/R6.52
● E6.62
● E6.80L / E6.80

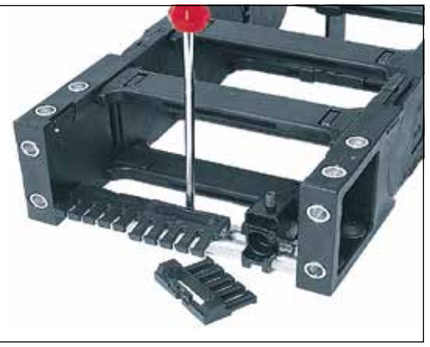
Tiewrap plate	n Number of teeth	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Centre bore – = no / + = yes
3050.ZB	5	50	30	–	–
3075.ZB	7	75	55	–	–
3100.ZB	10	100	80	–	–
3115.ZB	11	115	95	–	–
3125.ZB	12	125	105	–	–
3150.ZB	15	150	130	–	–
3175.ZB	17	175	155	–	–
3200.ZB	20	200	180	90	+
3225.ZB	22	225	205	102.5	+
3250.ZB	25	250	230	115	+

Cable tiewraps

Cable tiewraps (100-piece bag)	Width x length [mm]	Maximum Ø	Pull force resistance [N]
CFB.001	4.8 x 150	36	222 N

Available from stock. Delivery time* from 24 hrs or same day!
*Delivery time refers the time until the product is shipped (after verifying technical feasibility)

Characteristics of igus® chainfix tiewrap plates
Option 2: With clip-on connection for the C-profile
- Can be clipped into the KMA C-profile
- Easy to assemble without any screws
- Easy to remove with screwdriver yet secure
- Single part for the manufacturing of switchgear cabinets or for the assembly of machines
  Accessory for igus® e-chain systems®



Option 2 | Tiewrap plate with clip-on connection for C-profile

For all mounting brackets with C-profile!

Part no.	Width [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

Characteristics of igus® chainfix tiewrap plates
Option 3: Integrated strain relief for E2 e-tubes - Series R
- Strain relief integrates completely into the e-tube
- Easy to assemble without any screws
- Single part for the manufacturing of switchgear cabinets or for the assembly of machines
- Accessory for igus® e-chain systems®

Option 3 | Tiewrap plate for E2 e-tubes of series R

For the following igus® series
▶ See table

Part no.	Width [mm]	Number of teeth	For series
3050.Z	50	5	**R68**
3075.Z	75	7	**R68**
5850.Z	46	4	**R58**

Available from stock. Delivery time* from 24 hrs or same day!
*Delivery time refers the time until the product is shipped (after verifying technical feasibility)

Characteristics of igus® chainfix tiewrap plates
Option 4: For fixed crossbars or option 5: For opening crossbars
- Can be clipped onto fixed and opening crossbars
- In case of many harnessed cables
- Dual level strain relief
- If the KMA is too small for the C-profile
- Easy to assemble without any screws
- Accessory for igus® e-chain systems®

Option 4 | Tiewrap plate for fixed crossbars

For the following igus® series
▶ See table

Part no.	Width [mm]	Number of teeth	For series
2050.Z	60	6	**E/Z200, 2400/2500, 2600/2700**
3050.Z	50	5	**3400/3500**
3075.Z	74	7	**3400/3500**

Option 5 | Tiewrap plate for opening crossbars

For the following igus® series
▶ See table

Part no.	Width [mm]	Number of teeth	For series
2050.Z	60	6	**E4/H4/R4.28, 220, 2650**
3035.ZS	35	3	**3400/3500**
3050.ZS	50	5	**3400/3500**
3075.ZS	75	7	**3400/3500**
3850.ZS	48	5	**E4/H4/R4.32, E4/H4/R4.42, 280/290/R770, 380/390/R780,2828/2928/R7728, 3838/3938/R7838, 14240/14340, 15250/15350, E6.52, E6.62**
4550.ZS	48	5	**E4/H4/R4.56, E4/H4/R4.80, 400/410/R880, 4040/4140/R8840, 5050/5150/R9850, 14040/14140/18840,14550/14650/19050, 15050/15150/19850, E6.80L, E6.80, 1640/1608**
4575.ZS	74	7	**E4/H4/R4.56, E4/H4/R4.80, 400/410/R880, 4040/4140/R8840, 5050/5150/R9850, 14040/14140/18840, 14550/14650/19050, 15050/15150/19850, E6.80L, E6.80,1640/1608**

Available from stock. Delivery time* from 24 hrs or same day!
*Delivery time refers the time until the product is shipped (after verifying technical feasibility)

Characteristics of igus® chainfix clips
Option 1: Modular clip-on strain relief for C-profile

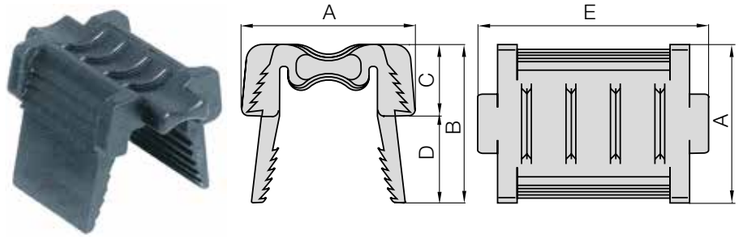
- Available for all igus® e-chains® with C-profiles
- Also suitable for assembly in the KMA mounting brackets
- Polymer, for cable diameters ranging from 4 mm to 24 mm
- Quick assembly without any tools
- 2 to 3 layers on top of one another possible
- Each layer can be detached and changed later on

Option 1 | Clip-on strain relief for C-profile

For all mounting brackets with C-profile!

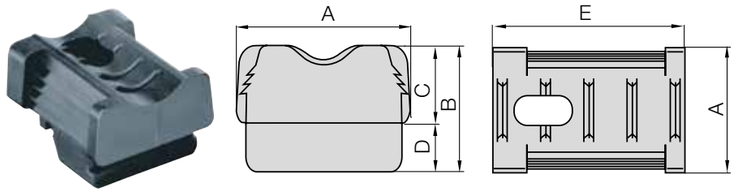
Clamp - Part no. CFC-XX-M

ø Cable [mm]	Part no. clamp	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]	Dim. E [mm]
04 - 08 mm	**CFC-08-M**	14.5	13	5.5	7.5	30
08 - 12 mm	**CFC-12-M**	23.7	24	10	14	36
12 - 16 mm	**CFC-16-M**	32.4	32.5	13.6	18.9	42
16 - 20 mm	**CFC-20-M**	43.2	39.1	17.6	11.5	45
20 - 24 mm	**CFC-24-M**	54	49	22	27	50



Bottom part - Part no. CFC-XX-C

ø Cable [mm]	Part no. clamp	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]	Dim. E [mm]
04 - 08 mm	**CFC-08-C**	14.5	12.5	5.5	7	24
08 - 12 mm	**CFC-12-C**	23.8	18	11	7	28
12 - 16 mm	**CFC-16-C**	32.4	23.6	13.6	10	32
16 - 20 mm	**CFC-20-C**	43.2	24.6	17.6	7	36
20 - 24 mm	**CFC-24-C**	54	29	22	7	39



Available from stock. Delivery time* from 24 hrs or same day!

*Delivery time refers the time until the product is shipped (after verifying technical feasibility)

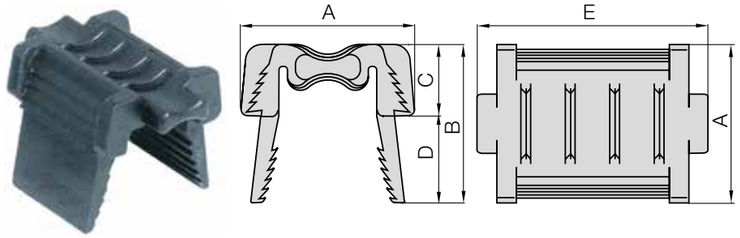
Characteristics of igus® chainfix clips
Option 2: Clip-on strain relief for opening crossbars

- Available for all igus® e-chains® with opening crossbars Part no. 450.XX.
- Polymer, for cable diameters from 8 mm to 12 mm
- Quick assembly without any tools
- 2 to 3 layers on top of one another possible
- Each layer can be detached and changed later on

Option 2 | Clip-on strain relief for opening crossbars

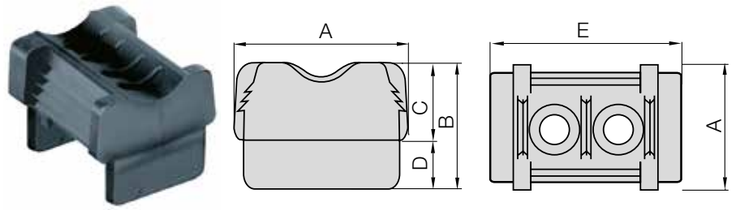
Clamp - Part no. CFC-XX-M

ø Cable [mm]	Part no. clamp	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]	Dim. E [mm]
08 - 12 mm	**CFC-12-M**	23.7	24	10	14	36



Bottom part - Part no. CFC-XX-B

ø Cable [mm]	Part no. clamp	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]	Dim. E [mm]
08 - 12 mm	**CFC-12-B**	23.8	21	13	8	38



For the following igus® series

E4.1
● E4.56/H4.56/R4.56
● E4.80/H4.80/R4.80
● 1640
● 840
E4/light
● 14040/14140
● 14550/14650
● 15050/15150
E4/00
● 400/410
● 640
E4/4
● 4040/4140
● 5050/5150
E6
● E6.80L
● E6.80

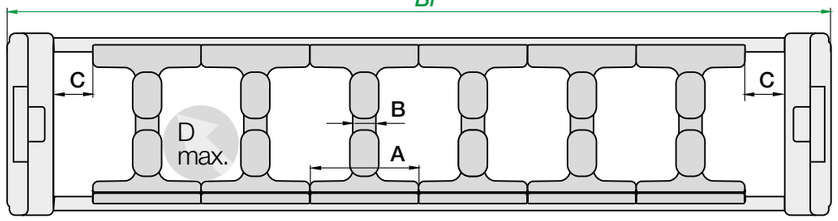
Available from stock. Delivery time* from 24 hrs or same day!

*Delivery time refers the time until the product is shipped (after verifying technical feasibility)

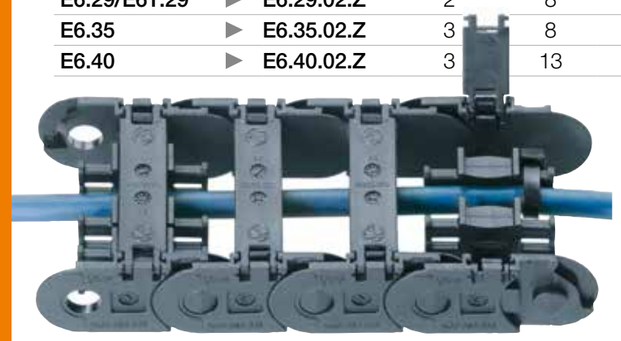
Characteristics of igus® strain relief separators
Separator with integrated strain relief teeth

- To be used either at the first or last e-chain® link
- For restricted space conditions
- Easy to assemble without any screws
- The number "n" depends on the selection of the cables (diameter, type) and the available space

Strain relief separator | With integrated teeth



For series	Part no. strain relief separator	Number of teeth	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]
1400/1500	▶ 21.1.Z	2	10	4	–	6
2400/2500	▶ 2020.Z	2	10	4	–	6
2450/2480	▶ 2020.ZR	2	10	4	–	6
2600/2700	▶ 262.Z	3	10	4	–	6
3400/3500	▶ 301.Z	3	18	4	–	14
3450/3800	▶ 34501.Z	3	14	4	–	10
R157/R158	▶ 1585.01.Z	3	22	4	–	18
R167/R168	▶ 1685.01.Z	4	22	4	–	18
R48	▶ 481.ZR	2	10	3.5	10	6.5
E4.21	▶ T2103.Z	2	8	4	1	4
E4.28	▶ 28.Z	2	10	4	–	6
R4.28	▶ 28.ZT	2	10	4	15	6
T3.29	▶ E6.29.02.Z	2	8	4	1	4
E6.29/E61.29	▶ E6.29.02.Z	2	8	4	1	4
E6.35	▶ E6.35.02.Z	3	8	4	1	4
E6.40	▶ E6.40.02.Z	3	13	4	–	8



Strain relief separators are fitted either at the first or last e-chain® link. For an intermediate strain relief they can be assembled inside the e-chain®

For the following igus® series

E2/000
- 1400/1500
- 2400/2500
- 2450/2480
- 2600/2700
- 3400/3500
- 3450/3480

E2 e-tubes
- R157/R158
- R167/R168
- R48

E4.1
- E4.21
- E4.28/R4.28

T3
- T3.29

E6
- E6.29
- E6.35
- E6.40

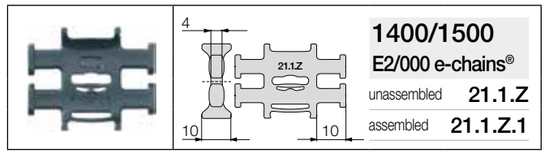
E6.1
- E61.29

Available from stock. Delivery time* from 24 hrs or same day!

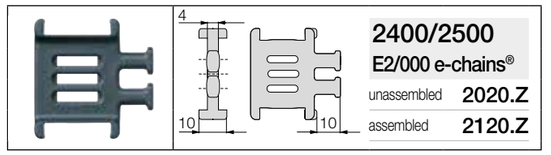
*Delivery time refers the time until the product is shipped (after verifying technical feasibility)

chainfix strain relief | **Clip-on solutions**

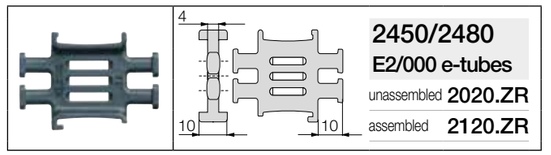
Strain relief separators | Product range overview



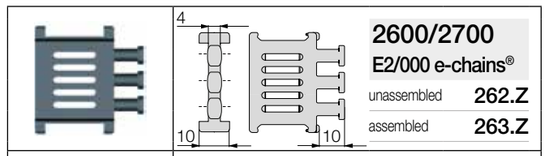
1400/1500
E2/000 e-chains®
unassembled 21.1.Z
assembled 21.1.Z.1



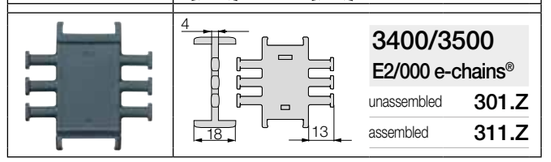
2400/2500
E2/000 e-chains®
unassembled 2020.Z
assembled 2120.Z



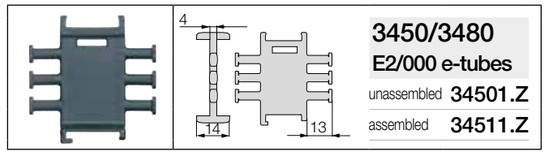
2450/2480
E2/000 e-tubes
unassembled 2020.ZR
assembled 2120.ZR



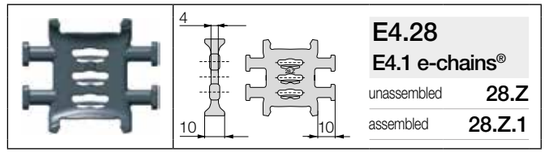
2600/2700
E2/000 e-chains®
unassembled 262.Z
assembled 263.Z



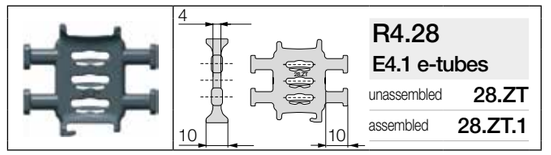
3400/3500
E2/000 e-chains®
unassembled 301.Z
assembled 311.Z



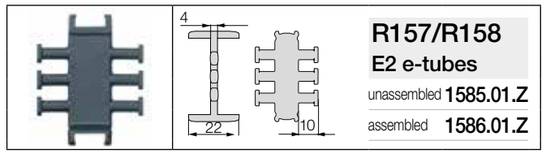
3450/3480
E2/000 e-tubes
unassembled 34501.Z
assembled 34511.Z



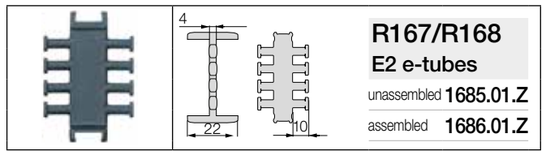
E4.28
E4.1 e-chains®
unassembled 28.Z
assembled 28.Z.1



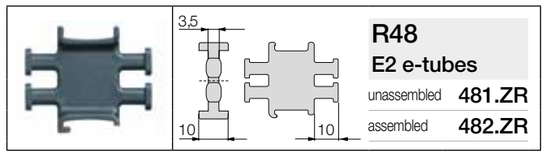
R4.28
E4.1 e-tubes
unassembled 28.ZT
assembled 28.ZT.1



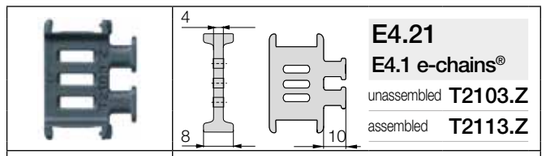
R157/R158
E2 e-tubes
unassembled 1585.01.Z
assembled 1586.01.Z



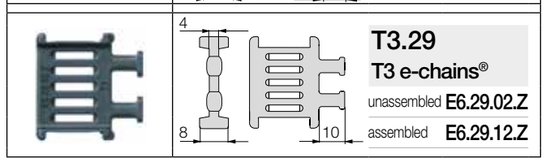
R167/R168
E2 e-tubes
unassembled 1685.01.Z
assembled 1686.01.Z



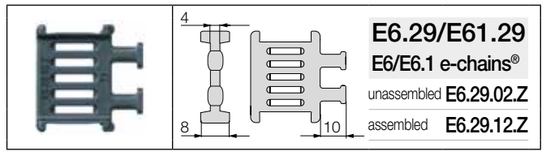
R48
E2 e-tubes
unassembled 481.ZR
assembled 482.ZR



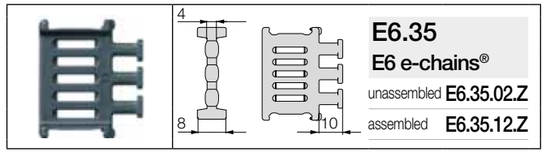
E4.21
E4.1 e-chains®
unassembled T2103.Z
assembled T2113.Z



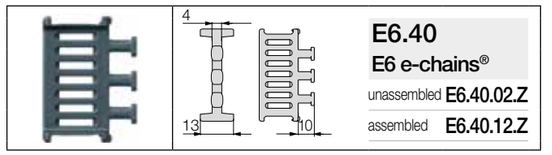
T3.29
T3 e-chains®
unassembled E6.29.02.Z
assembled E6.29.12.Z



E6.29/E61.29
E6/E6.1 e-chains®
unassembled E6.29.02.Z
assembled E6.29.12.Z



E6.35
E6 e-chains®
unassembled E6.35.02.Z
assembled E6.35.12.Z



E6.40
E6 e-chains®
unassembled E6.40.02.Z
assembled E6.40.12.Z

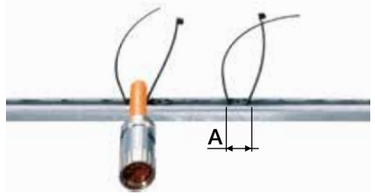
chainfix strain relief | **Clip-on solutions**

Characteristics of igus® chainfix Nuggets
Option 1: C-profile and option 2: top hat rail
- Option 1: Universal cable fixation in C-profile
- Option 2: Clip onto a top hat rail
- Simple strain relief - harnessed cable tiewraps
- Very small space requirement
- Easy to assemble without any screws and tools
- Adjustable to any e-chain® filling

Option 1 | chainfix nuggets for C profile

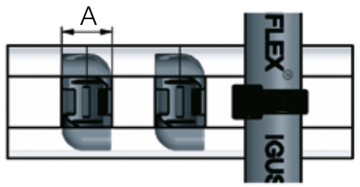
For C-profiles	Part no. nugget	ø Cable max. [mm]	Dim. A [mm]
92.42.../92.42...E	**CFN.20**	20	10.8
92.52.../92.52...E	**CFN.30.52**	30	16.4

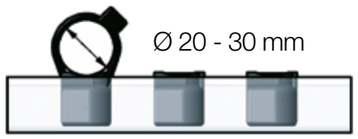
For all mounting brackets with C-profile!



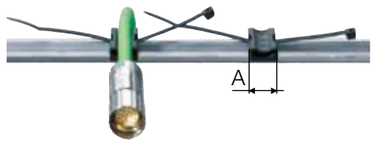
Option 2 | chainfix nuggets for top-hat rail

For top hat rail	Part no. nugget	ø Cable max. [mm]	Dim. A [mm]
Top hat rail 35	**CFN.20.N35**	20	20.0





For standard rails 35 (top-hat rails) !



Available from stock. Delivery time* from 24 hrs or same day!
*Delivery time refers the time until the product is shipped (after verifying technical feasibility)

chainfix strain relief | **Blocks**

Characteristics of the special strain relief system for hoses igus® blocks
- Modular, space-saving system
- No hose damage
- Combination of hoses and cables possible
- Hose diameters from 4.3 14 mm
- Easy to assemble without any screws and tools
- Adjustable to any e-chain® filling

Block | Strain relief for hoses

Part no. block modules	Hose Ø [mm]	Number of hoses	Width [mm]
CFS 4,3	4.3	4 - 12	27.5
CFS 6	6	3 - 6	27.5
CFS 9	9	2	27.5
CFS 55,9	9	5	55.0
CFS 10	10	2	27.5
CFS 12	12	2	27.5
CFS 14	14	1	27.5
Part no. base plate	**Part no. cover plate**	**Width [mm]**	
CFS U75	**CFS P75**	75	
CFS U102,5	**CFS P102,5**	102.5	
CFS U130	**CFS P130**	130	
CFS U185	**CFS P185**	185	
CFS U212	**CFS P212**	212.5	
CFS U240	**CFS P240**	240	
CFS U295	**CFS PD295**	295	
Part no. spacer	**Height [mm]**		
CFS D 16	16		
CFS D 12	12		
CFS D295	16		

The modules accommodate hoses from 4.3 to 14 mm, 3 x 4.3 mm hoses can be fitted on top of each in module CFS 4.3 and 2 hoses can be fitted directly on top of each other in one notch using module CFS 6. The modules have a width of 27.5 mm, are inserted into the base plate and then fastened in position with M4 countersunkhead screws. The exception is module CFS 55.9 which ofers the capacity for 5 x 9 mm hoses ith twice the width. The base plate and cover plate are available in wdths ranging from 75 to 240mm. The height of the spacers and modules is 16mm. Several layers can be installed directly above one another.

Please contact us!

❶Cover plate
❷Spacers
❸Base plate
❹ Grid-dimensions modules
B = 27.5 mm, H = 16 mm

Delivery time upon request, customer-specific fabrication!

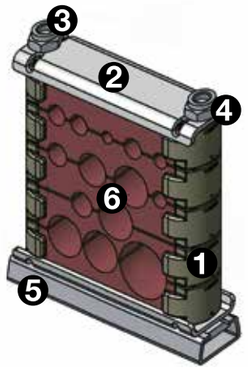
igus® CFB: Modular polymer strain relief system, can be mounted onto the C-profile

- Customised strain relief solutions can be offered
- 2 variations available
- Fast assembly by standard screw connection
- Can be mounted in the mounting bracket or in front of the e-chain®
- Customised production from 1 piece
- Low priced and effective

CFB 907.881. | Polymer strain relief connector system

Please contact us for a customised design

Parts list		Part no.	Number
❶	Outer fixing block	**CFB20.1**	N x 2
❷	Clamping bar	**907.881.1.XXX**	2
❸	Threaded bolt with plate	**907.825.2.LLL**	2
❹	Hexagon nut M8	**MAT 0040012**	2
❺	C-profile (part of KMA)	**92.42.XXX**	1
❻	Strain relief block	customised	1



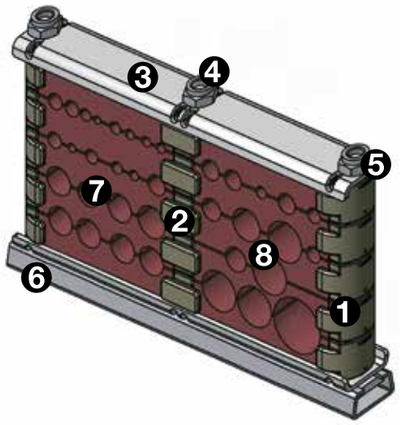
Order key
907.881.XXX.N

N = Number of layers fixing blocks ❶
XXX= *Bi* - 3 mm (mounting bracket)
Part no. with version 881

CFB 907.825. | Polymer strain relief connector system

Please contact us for a customised design

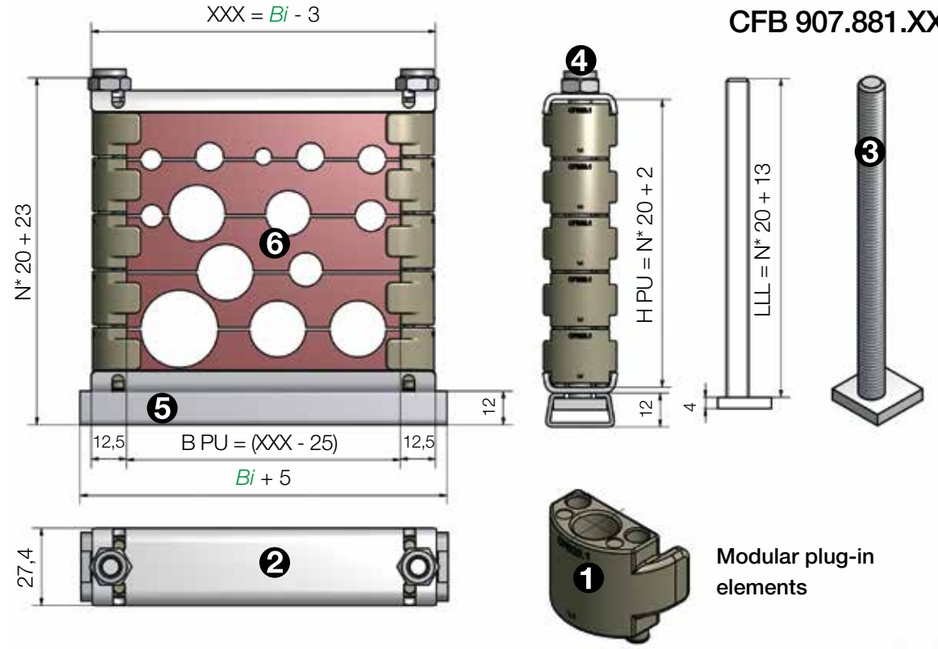
Parts list		Part no.	Number
❶	Outer fixing block	**CFB20.1**	N x 2
❷	Inner fixing block	**CFB20.2**	N
❸	Clamping bar	**907.825.1.XXX**	2
❹	Threaded bolt with plate	**907.825.2.LLL**	3
❺	Hexagon nut M8	**MAT 0040012**	3
❻	C-profile (part of KMA)	**92.42.XXX**	1
❼	Strain relief block	customised	1
❽	Strain relief block	customised	1



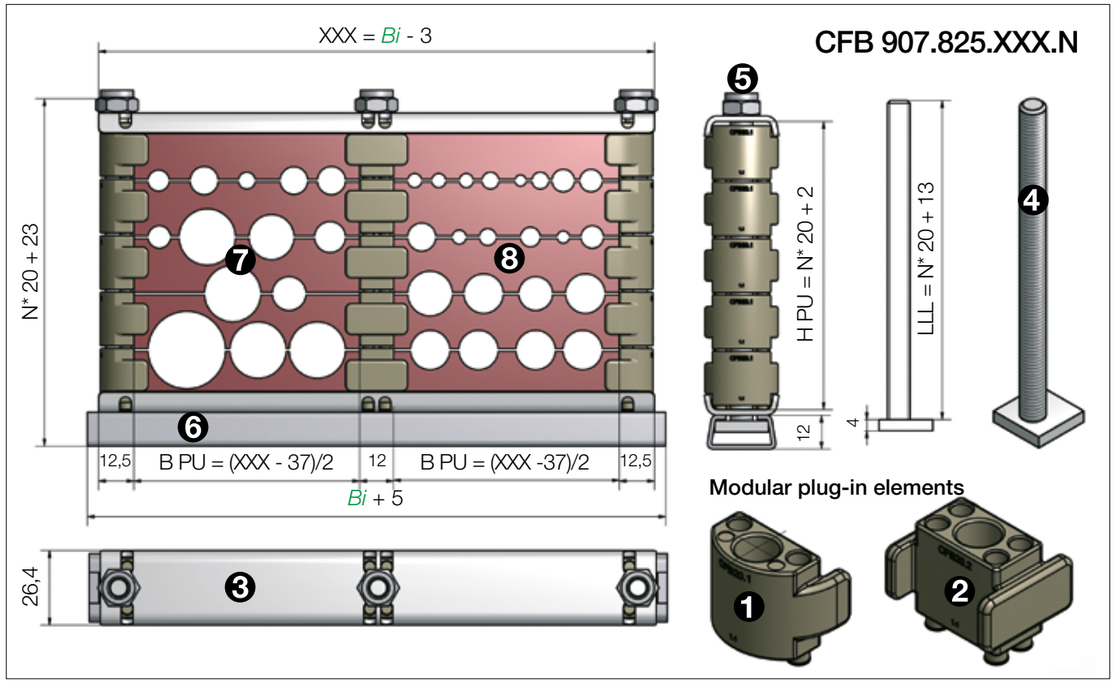
Order key
907.825.XXX.N

N = Number of layers fixing blocks❷ + ❶
XXX= *Bi* - 3 mm (mounting bracket)
Part no. with version 825

CFB 907.881.XXX.N



CFB 907.825.XXX.N

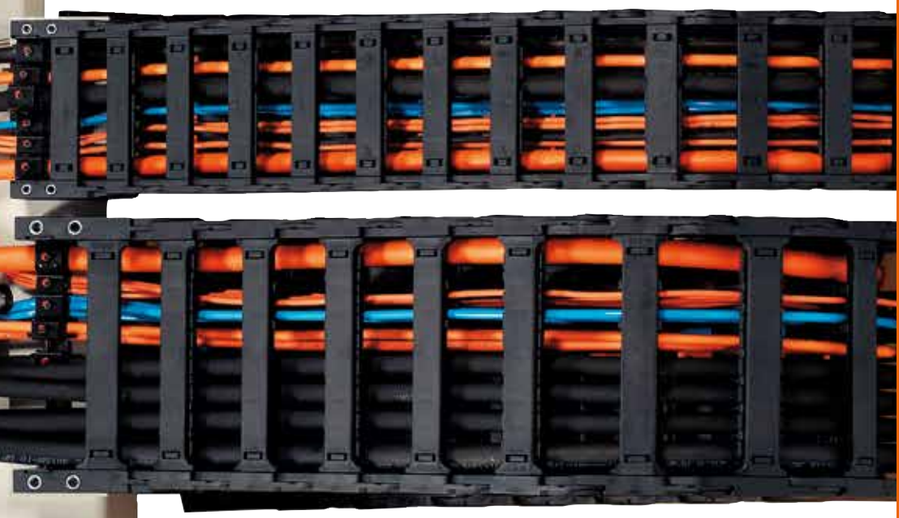


Delivery time upon request, customer-specific manufacture!

igus®

readychain® & readycable®

Ready-to-install energy supply systems.
Cables with connectors.
Minimise process costs.
Everything from a single source.



readychain® | Ready-to-install harnessed e-chain systems®

**Harnessed energy supply systems, connectors, cables and attachment parts by igus® ...
Everything from one source - directly from the manufacturer - quick delivery to your machine**

Ready to install systems, from connectors through assembled cables up to complex energy supply modules, delivered in 1-10 days.

Customer-specific production

From one off to mass production

readychains® – Increase your capacity and cash flow quickly with igus®

- Lower your overhead costs
- Cut your throughput times from days to hours
- Respond flexibly to order variations
- Utilize igus® manufacturing capacity and our know-how in cable assembly

Reduce the number of suppliers and orders by 75%

- One order, one invoice, one delivery
- One partner for minimal machine downtimes
- All readychain® components are subject to an extensive quality control and function testing

readychain® | You decide, igus® delivers

**Industrial harnessed energy chain modules directly from the manufacturer
... you decide quantity, travel distance and level of harnessing ...**

3 Benefits: readychain® basic

1 ONE supplier – combine suppliers
2 Reduce assembly time
3 Reduce failures

Reduction of assembly time
Reduction of logistics costs
Optimisation of procurement process

Further information, videos, configurators and product finder
▶ www.igus.eu/RCbasic

6 Benefits: readychain® standard

4 No electrical termination needed
5 100% digitally tested
6 No cable surplus

Reduction of assembly time
Reduction of logistics costs
Optimisation of procurement process

Further information, videos, configurators and product finder
▶ www.igus.eu/RCstandard

9 Benefits: readychain® standard+

7 Reduce interfaces
8 Optimise points of connection/interfaces
9 Ready-to-install multi-axis system

Reduction of assembly time
Reduction of logistics costs
Optimisation of procurement process

Further information, videos, configurators and product finder
▶ www.igus.eu/RCstandard+

13 Benefits: readychain® premium

10 Optimise your transport/assembly
11 One single assembly
12 One Part No./Product group
13 Plug & Play

Reduction of assembly time
Reduction of logistics costs
Optimisation of procurement process

Further information, videos, configurators and product finder
▶ www.igus.eu/RCpremium

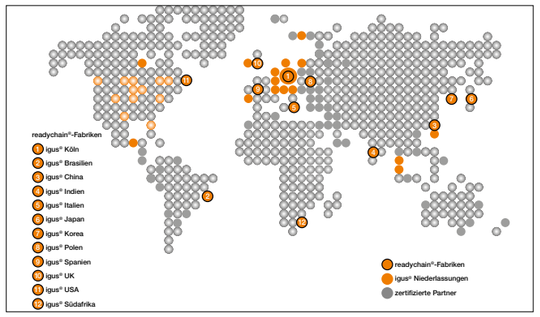
readychain® | The igus® readychain® factory

600 orders/week, more than 3,000 m² of floorspace, "chain-cable guarantee" since 1989… 3 shifts, 13 project engineers, 160 employees dedicated only to harnessing

In the igus® readychain® factory, we assemble customized e-chain systems®. All under one roof. All from one source.

Up-to-date production processes, custom-build or serial production

Customised cable assembling



12 readychain® factories worldwide

Full Service: from system acceptance to assembly

1 Everything from a single source

The readychain® includes pre-harnessed, customised energy chain systems. The "plug and play" solutions are configured, manufactured and delivered according to individual customer specifications. The use of the transport rack can yield benefits even at low quantities.

2 Flexible components

The telescoping supports and braces of the readychain® rack allow flexible adaption to the installation on site. Changes in mass production can be untertaken easily. Additional components can also be easily attached to the rack due to the modular joining mechanism.

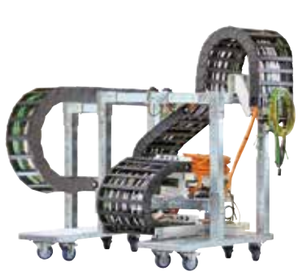
**Save 80% when prototyping.
Assembly transport rack for ready-to-install energy supply systems.**

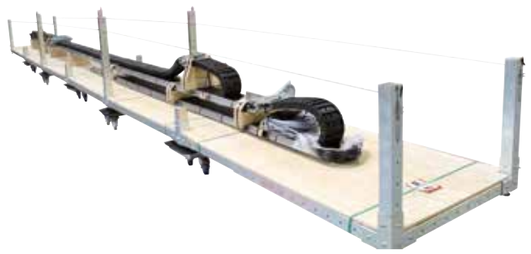
3 Sustainable use

The components of the readychain® rack are galvanised and thus designed for a long life. Each rack is constructed within a few hours. The individual elements can be reused at any time removing the need to dispose of custom made parts - as with conventional welded transport racks.

4 Precise fitting "Plug & Play"

All interfaces and attachments are designed in such a way that the installation of the e-chain® can be managed quickly and easily. The complete package includes the matching plugs and connectors, plates, sensor actuator boxes, linear bearings, links to the central lubrication, etc., all reducing the installation time considerably.





readychain® | Connector ...Cable ... Accessories

igus® Connectors

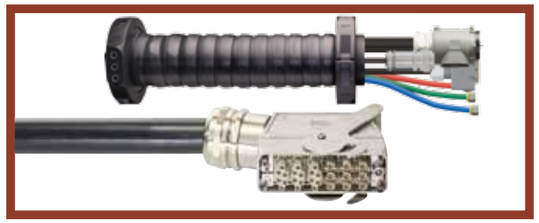
Round plug connector kit

D-sub as a service kit

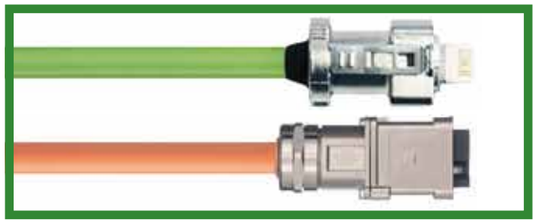
Tools and accessories

igus® readycable®

Control cables with industrial connectors



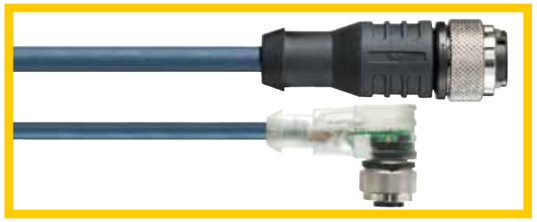
Harnessed hose packages and cables for robots



Drive technologe: More than 4,000 cables

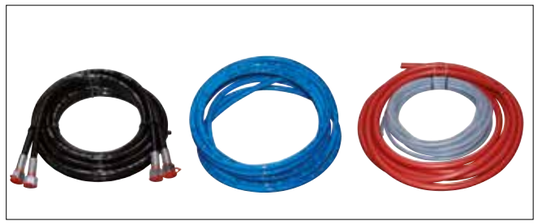
Catalogue standards: Video-/vision-/bus technology

Catalogue standards: Network/Ethernet/FOC/Field bus



Catalogue standards: Initiator cables down to 4 x d

igus® hoses and attachments



Configurable online with hose cable configurator - to meet your needs

readychain® | Configured, assembled, with system guarantee

1 System acceptance — 2 Project phase — 3 Initial acceptance of prototype — 4 igus® installation

readychain® service
- We visit you
- Define interfaces
- Logistics planning
- Cycle integration
- Time schedule

System acceptance on your machine

readychain® service
- Component selection
- Interface optimisation
- Documentation
- Integrated project management
- Cost optimisation

Project planning

readychain® Skype service*
- Initial acceptance from your work place
- Build your prototype with an igus® project engineer, live in your meeting
- Your requests for changes explained with a model

... or visit us for acceptance in production

* only available in Germany

Prototype including transport rack

readychain® installation
- System installation by igus® specialists
- igus® supervision service for own installation
- Transparent, fixed price

Installation on site

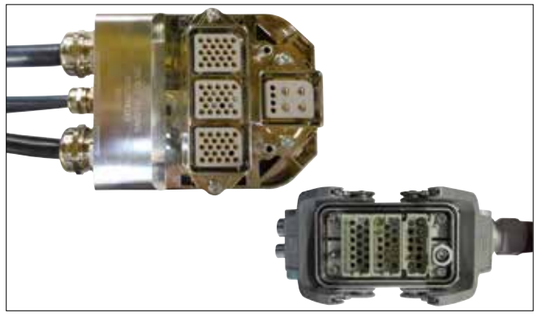
readychain® | Cable assembly

Capacity for 600,000 assembled cables a year... more than 18,000 test programmes ... 1,800 test adapters

Process reliability ... crimp force monitoring ... automated ... time-optimised ...

Computer-based high-voltage testing and inspection of all assembled cables

Modern machinery - automatic stripper-crimper



Special cable assemblies

Worldwide system guarantee

readychain® | You decide, igus® delivers

In our warehouse the material waits for your order... ... and not your order for the materials!

e-chains® ...

90,000 e-chain® components

... chainflex® cables ...

3 million metres of cables on stock

... harnessing

3,500 connector components

Hundreds of metres of guide troughs

2,750 m² test lab - more than 8,000 tests every year

Quickly within reach

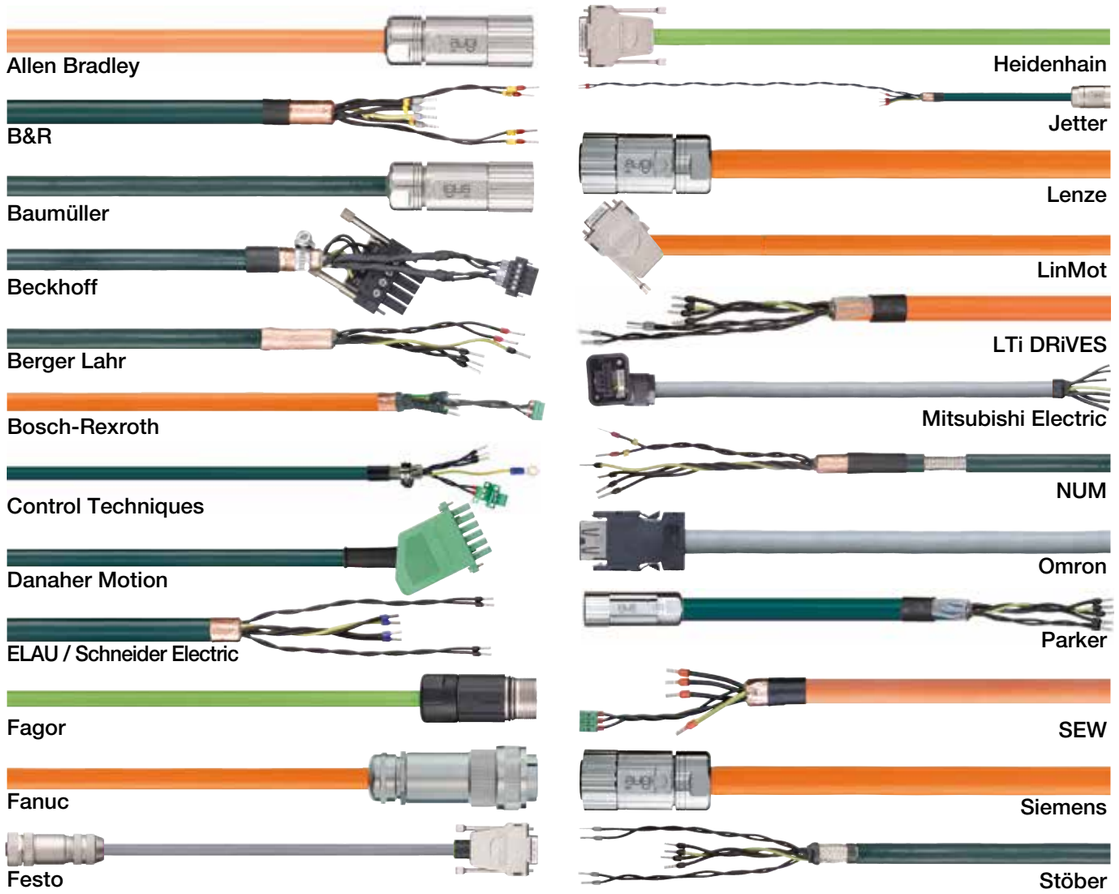
Numerous strain relief solutions

More than 8,000 cables per week

Just in time supply

readyable® | Harnessed cables in 24-48h

readycable® – harnessed cables in 24h or today



- igus® offers more than 4,000 harnessed cables online
- Servo, Motor and Signal/Encoder cables similar to 24 manufacturers
- No cutting costs, no surcharges for small quantities and packaging
- Cable length accurate to the centimetre to the customer spec
- Smallest bending radius from 7.5 x d
- Reduce storage costs and increase cashflow
- Available in 24h or today

QuickPin 2.0
Connector-cable configurator
integrated directly in EPLAN P8.
www.igus.eu/quickpin

readycable® M | molded – extended offer

readycable® M – Injection-molded cables

As individual as your project – injection-molded connectors from igus®

- Various sizes:
  M8, M12, M23, M40, USB 3.0 etc.
- Sizes M23+M40
  with SpeedTec® quickrelease fastener
- Angled versions
- According to UL/CSA standard
- Individual customer logo possible
- ESD material for ATEX-areas
- Tamper-proof
- Sealed according to IP66/67 already before the molding process
- 360° shielded
- Space and weight saving

Professionally injection moulded – moulding M23

Harnessed to your specifications

100% tested: test cells

100% tested: digital continuity test

Page

Technical data

The tricks and features of the chainflex® design

Know-how from testing	760
Construction and sectional views through the chainflex® cable types	764

Tested, tested, tested

Test no. 4876 – Tested at -40°C	766
Test no. 4866 – 4 year continuous test chainflex® Profinet	768
Servo cable structure	770
"Millions of double strokes" in an energy chain	772
CF98 with < 4xd!	774
Light in the cold	776
Completely twisted	778
Container crane with 50 m travel distance	780
Comparison of jacket materials exposed to different oils	782
Completely twisted, take two	783

Data

DIN 47100 colour code/ Copper wire dimensions according to AWG numbers	784
Calculation of the copper surcharge	784
Load-carrying capacity of cores	785
Chemical resistance	786

Designing with igus®

Cables and hoses - General rules for cables and hoses in e-chains®	790
Cables and hoses - Separation in e-chain®	791
Cables and hoses - Further information on the separation of cables	792
Round electrical cables	793
Round electrical cables - Information on assembly and strain relief of round electrical cables	794
Pneumatic hoses	795

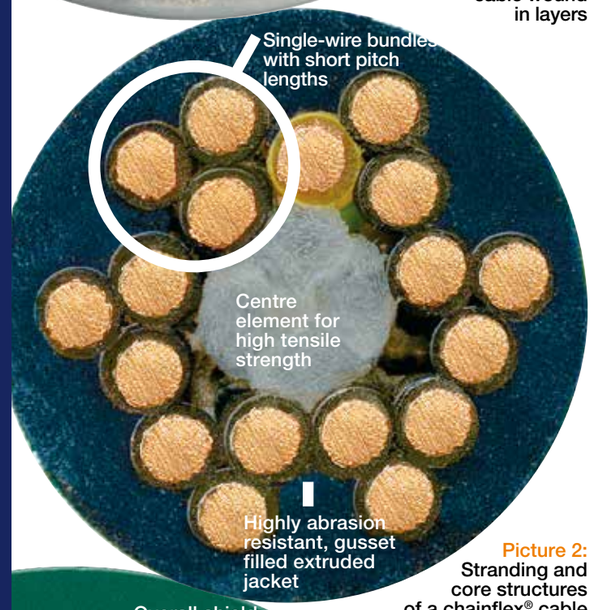
Information

Approvals and standards	796
General conditions	798
User information, Disclaimer, KTG, Product illustrations	798
Technical notes	799
chainflex® online tools	802
Table of contents according to part number	825

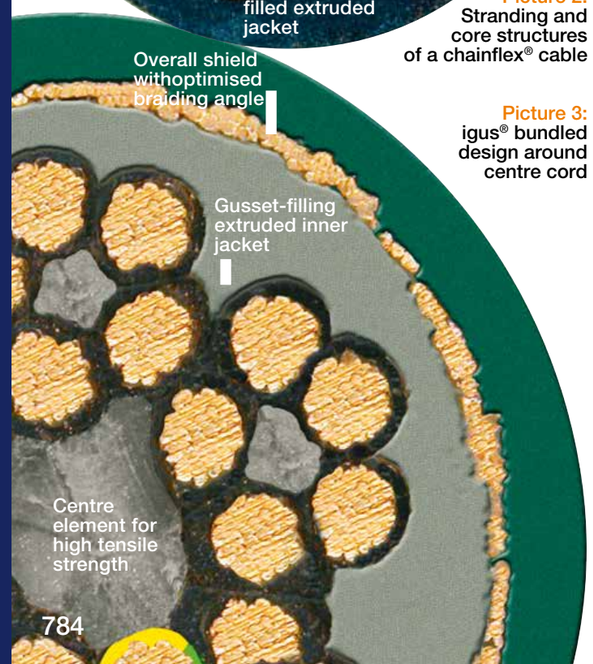
Contact igus®

igus® worldwide - International map	800

Picture 1: **Chain-suitable cable wound in layers**



Picture 2: **Stranding and core structures of a chainflex® cable**



Picture 3: **igus® bundled design around centre cord**

chainflex®…

The tricks and ingenious features of...

From the customer's point of view, a flexible energy supply system needs to function properly. However, this demand assumes the perfect operation of all components, including the cables being used in this system. And this is exactly where problems came up in the early 1980s. Due to constantly increasing loads resulting from the constant movement, guided cables often failed even though the energy supply system itself was functioning perfectly. In extreme cases, failures caused by "corkscrews" and core ruptures brought the entire production process to a standstill and resulted in high costs.

In order to find a solution to this problem for its customers, igus® decided to take the initiative. As the first worldwide company to do so, igus® began to develop complete energy chain systems. chainflex® cables and energy chains are now being offered from a single source and with a system guarantee depending on the individual application. Based on the increasing know-how gained since 1989 and on the very sophisticated series of tests that have been conducted since then, design principles were, and still are, being developed that help prevent machine downtime in factories throughout the world today.

How can "corkscrews" be prevented?

Here, the term "corkscrew" does not refer to a useful instrument for wine connoisseurs. Instead, it refers to the permanent deformation of guided, moving cables caused by excessive strain – which, in most cases, results in core rupture almost immediately afterwards. How does this happen? How can "corkscrews" be prevented? An important factor here – in addition to a sensible design of the total energy chain system – is the construction of the cables. Simply speaking, a clear distinction can be made between cables braided in bundles and cables wound in layers ▶ see picture 4.

Properties of winding in layers

Winding in layers is significantly easier to produce and is therefore offered on the market in so-called "chain-suitable" cables at low cost. But what appears to be tempting at first glance can quickly turn into an expensive mistake when a "corkscrew" immobilises the system being operated with these cables. How do these problems arise? Looking at the cable structure can be quite helpful ▶ see picture 1.
In the case of winding in layers, the cable cores are mostly wound more or less firmly and relatively long in several layers around a centre and are then provided with a jacket extruded to the form of a tube. In the case of shielded cables, the cores are wrapped up with fleece or foils. But what happens to a similarly structured 12-core cable, for example, during normal operation?

The bending process compresses the inner radius of the cable and stretches the outer radius. Initially, this works quite well because the elasticity of the material is sufficient. But very soon, material fatigue causes permanent deformations, and then, due to excursion from the specified paths, the cores make their own compression and tension zones: The corkscrew is created, often followed rather quickly by core ruptures.

... lasts or your money back!

...the chainflex® design and why we feel so confident about this design

Bundled design tried and tested millions of times since 1989

The bundled design eliminates these problems by means of its very sophisticated, internal structure. Here, the core wires are wound with a special pitch length first and then the resulting cores are bundled. For large cross sections, this is done around a strain relief element. The next step is the winding of these bundles around a tension-proof centre cord ▶ see picture 2.

Due to this multiple winding of the cores, all cores move through the inner radius and the outer radius of the cable several times at identical spacing distances. Tensile and compressive forces balance one another around the high-tensile centre cord giving the structure its stability. In this way, the structure remains stable even under maximum bending stress ▶ see picture 3.

Picture 4: **Shielded "chain-suitable" control cable after only 400,000 double strokes with a bending factor of 10 x d**

What are EMC problems and shield wire breakage?

In principle, cable shields must fulfill two tasks:
- Preventing interference getting into the cable
- Preventing interference being transmitted out of the cable

Both tasks are equally important because faulty signals can cause considerable consequential damage in the system itself as well as to any external systems. Furthermore, this is especially problematic due to the fact that incorrect shielding usually cannot be detected from outside, and this is something that makes the trouble-shooting procedure extremely difficult.
How do these kinds of problems arise in the first place?
Once again, the answer is to be found in the internal structure of the cable itself: Is the shielding designed for the movements of the cable? Although it may be very easy to shield a fixed cable, it is much more difficult to guarantee the permanent shielding of a moving cable.

In the case of so-called "chain-suitable" cables, for example, an intermediate layer is formed with foils or fleeces. This layer is supposed to guarantee the separation between the cores and the shield braid. But something that functions quite well for the fixed installation of cables is quite insufficient for moving cables. This has to do with the fact that the foils and fleeces do not stay put between the cores, shield and jacket and may fall apart under stress. Consequently, the metallic shield then rubs on the insulation of the cores – short circuits can then be expected.

Dictionary of defects

Broken wires

Failure of electric conductivity due to broken copper wires as a result of subjecting the individual cores to mechanical load under constant bending stress. In most cases, the causes are incorrect strand wires and/or incorrect stranding pitch directions and lengths.

Insulation damage

Short circuits due to damage to the insulation around the conductor. The cause can be material fatigue under constant bending stress or material abrasion within the core structure. Single wire breakage of the conductor or the shield braid result in perforation of the insulation.

Corkscrew

An externally detectable corkscrew-like deformation of the entire cable due to broken copper wires as the result of subjecting the individual cores to mechanical load during the bending process. In most cases, the causes are poor structure (winding in layers, missing centre, loose jackets extruded to the form of a "tube") and subjecting the cables to high bending stress.

Jacket abrasion

The jacket is abraded down to the cores or to the shield. In most cases, the causes are incorrect selection of materials and/or unfavorable extrusion processes resulting in poor surface properties such that abrasion is an unavoidable effect.

Jacket swelling/jacket breakage

Jacket becomes soft and deformed or breaks until the cores/shield can be seen. The cause can be the incorrect selection of materials with respect to the oils or other chemical substances being used.

Shielding losses/EMC problems

Electromagnetic interferences inside or outside an electric cable. In most cases, the cause is shield wire breakage due to mechanical overload with incorrect shield braid angles. Other causes include loose braids over foils without supporting effects or very open coverings.

Jacket breakage of (36x0.14mm²) after only 900,000 double strokes with a bend radius factor of 7.8 x d

Picture 1: **Optimised shield braiding angle over gusset-filled extruded inner jacket**

chainflex®...

The tricks and ingenious features of...

The production of the shield itself is very time-consuming and cost-intensive and may have been the reason for the use of open braid shields or even simple wire wrappings. The disadvantages are obvious: open shields only possess a limited shielding effect when moving – motion reduces this effect even further. The type of shield is therefore an important point that is not even mentioned in some catalogues.

In its approx. 70% linear and approx. 90% optical coverage cables, igus® eliminates these weaknesses by means of an optimised internal structure. In virtually all shielded chainflex® cables, a gusset-filled extruded inner jacket over the core structure is used. This "second jacket" fulfils two tasks:

- It holds the core structure together and guides the individual cores as in a channel.
- It serves as a firm, round base for a very tight-fitting shield. ▶ see picture 1.

Shield wire breakage – and how this can be prevented

Even during the production of the shield, there are many things that can be done correctly – or incorrectly. Here, an important parameter is the braiding angle.
In the case of "chain-suitable" cables, tensile load on the shield wires in the outer radius of the cable must be taken into account. If an unfavorable braiding angle is used, the tensile load increases even further and shield wire breakage is the result. The consequences range from reduced shielding effects right up to short circuits whenever the sharp wire ends penetrate through the fleeces or foils into the cores. Here is a useful tip: If, after the insulation has been stripped off, the shield can be easily pushed back over the jacket, the shield is then usually unsuitable for use in moving energy supply systems! This is a problem that igus® has now solved with its novel approach:

- The shield braiding angle determined in long-term tests efficiently neutralises the tensile strengths and is therefore highly suitable for energy chains.
- Due to the stable inner jacket, the shield cannot become uncontrolled.
- The shield itself has a torsion protection effect on the wound structure.

Jacket abrasion/jacket breakage

Whilst defects in the internal structure are hardly detectable on the outside, jacket problems are immediately obvious. The jacket is the first protection for the complicated internal structure. This is why broken, worn and swollen jackets are a serious quality defect. To prevent this problem, the igus® customer can select from 7 jacket materials to adapt their energy chain cables to suit the conditions of the respective environment.

... lasts or your money back!

...the chainflex® design and why we feel so confident about this design

Gusset-filling extruded jacket

Here, not only is the material an important factor but also the production process. In the case of the so-called "chain-suitable" cables, the jackets are usually produced extruded to the form of a tube and therefore do not provide the structure with the necessary support for constant bending. The wound structure can fall apart.

Therefore, igus® is the first manufacturer of energy chain systems to offer the so-called the "gusset-filled extruded" jacket.

Here, the jacket material is injected between the core structure powdered with talc and ensures that the core structure does not open up and also makes sure that the cores are guided as in a channel. The special characteristic of this type of production is that the intermediate spaces created between the cores during the winding process, are completely filled with jacket material by the high extrusion pressure. As a result, the jacket material creates a channel-like guide which ensures the cores have a defined longitudinal movement. The jacket also provides a supporting function for the structure. ▶ see picture 2.

The quality bundles of igus® chainflex® cables

- Strain-relieving centre
- Cores in bundles
- Gusset-filled extruded inner jacket in shielded cables
- Enclosed shield braid
- Optimised shield braiding angle
- Gusset-filled extruded jacket

Picture 2: **Gusset-filled extruded jacket**

7 basic rules for a good cable

1. Strain-relieving centre

Clear space is created in the centre of a cable according to the number of cores and the cross section of each cable. This centre should be filled, as far as possible, with a genuine centre cord (and not, as frequently the case, with fillers or dummy cores consisting of waste materials). These measures will then efficiently protect the structure and prevent it from wandering into the middle of the cable.

2. Stranded core

With respect to the selection of core strand wires, the maximum flexibility has proved to be the best solution. Although very flexible conductors can be made using very thin individual wires, these conductors can allow formation of kinks. Long-term testing provided the result of a combination of strand wire diameter, pitch length and pitch direction as the best overall bending-resistant solution.

3. Core insulation

The insulation materials must be made so that they do not stick to one another within the cable. Furthermore, the insulation is also required to support the stranded individual wires of the conductor. Accordingly, only the highest-quality, high-pressure-extruded PVC or TPE materials that have proved their tested reliability in millions of core kilometres are then used in energy chain applications.

4. Structure

The structure must be wound around a stable, tension-proof centre with an optimised short pitch length. However, due to the insulating materials being used, this wound structure should still used. Starting from a quantity of 12 cores, a bundled design should be used.

5. Inner jacket

A gusset-filling extruded inner jacket must be used instead of inexpensive fleeces, fillers or accessory fillers. This measure ensures that the core structure is efficiently guided in longitudinal direction. Moreover, the wound structure cannot fall apart or wander off.

6. Shielding

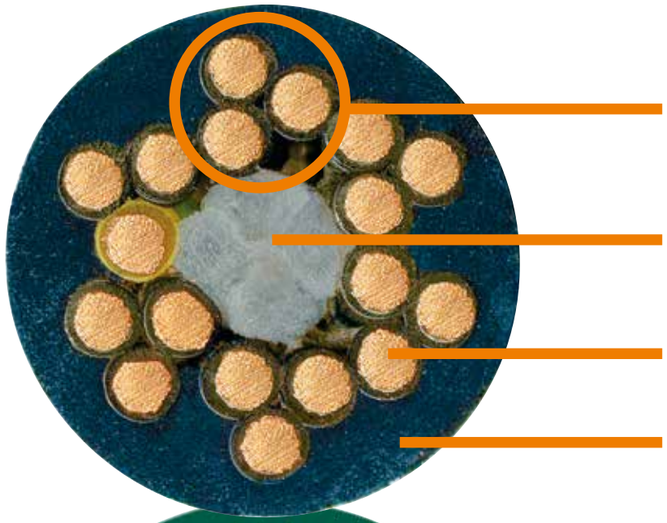
The overall shield should be made tight using an optimised shield braiding angle over an extruded inner jacket. Loose open braids or wrapped stranding reduce the EMC protection considerably and can fail very quickly due to shield wire breakage. A tight total braid shield also has a torsion protection effect on the wound structure.

7. Outer jacket

The material-optimised outer jacket can fulfil many different requirements: From UV-resistant to low-temperature-flexible, and from oil-resistant to cost-optimised. But these outer jackets must have one thing in common: A jacket material must be highly abrasion-resistant but not be allowed to stick to anything. It must be flexible but also provide a supporting function. In any case, the jacket should also be extruded under pressure (gusset-filled).

Sectional views through the igus® cable types

Detailed structure of igus® control, data, servo and motor cables



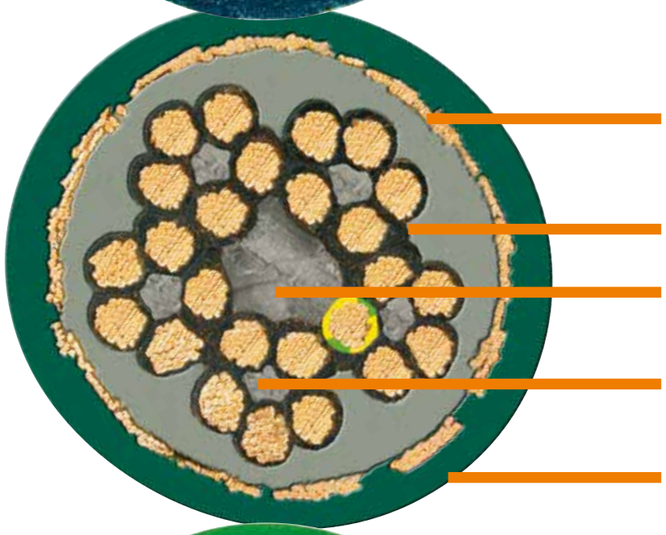
chainflex® control cable, unshielded

Individual bundles with optimised pitch length and pitch direction

Centre element for high tensile strength

Strand wire diameter optimised for energy chains

Highly abrasion-resistant, gusset-filled extruded jacket



chainflex® control cable, shielded

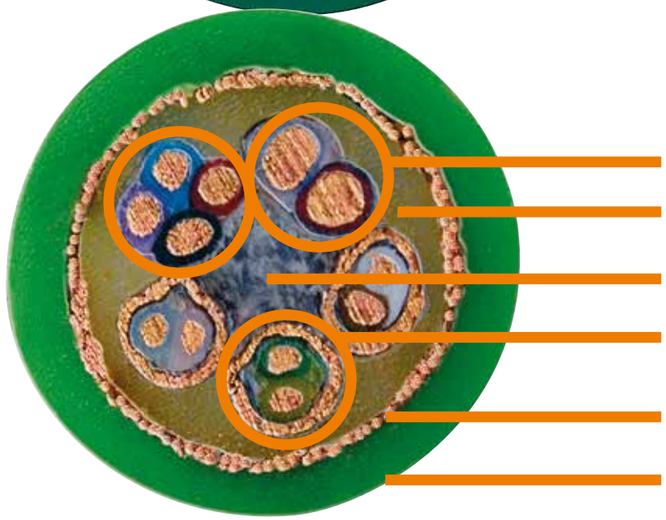
Overall shield with optimised braiding angle (approx. 70% linear, approx. 90% optical coverage)

Gusset-filled extruded inner jacket supports bundles

Centre element for high tensile strength

Centre element for high tensile strength in the individual bundles

Tension-proof centre element in individual bundles



chainflex® data/ sensor cable, shielded

Stranded elements with optimised pitch length and pitch direction

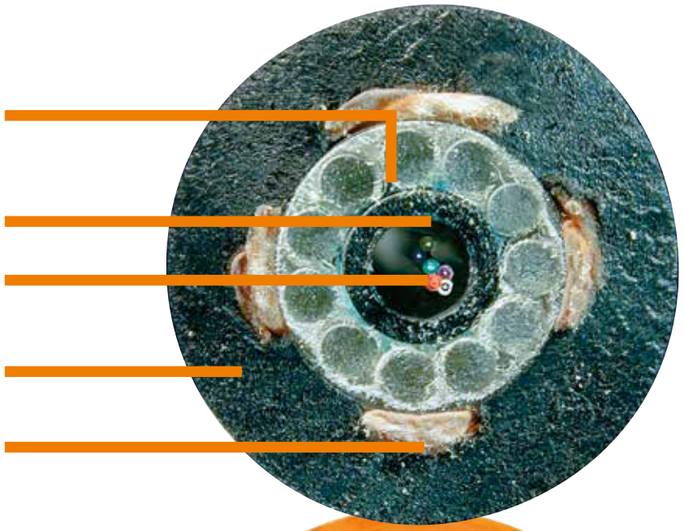
Gusset-filled extruded inner jacket supports core structure

Centre element for high tensile strength

Pair braided shield

Overall shield with optimised braiding angle (approx. 70% linear, approx. 90% optical coverage)

Pressure extruded jacket



chainflex® FOC graded index glass-fibre cable

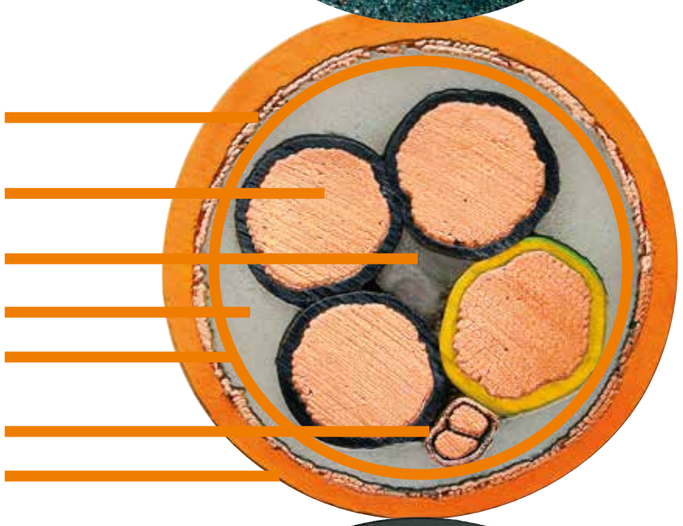
Supporting braid made of glass-yarn GRP rods

Gel-filled fibre tube

FOC fibres

Highly abrasion-resistant TPE jacket

Integrated torsion protection



chainflex® servo cable, shielded

Overall shield with optimised braiding angle (approx. 70% linear, approx. 90% optical coverage)

Optimised strand-wire diameter

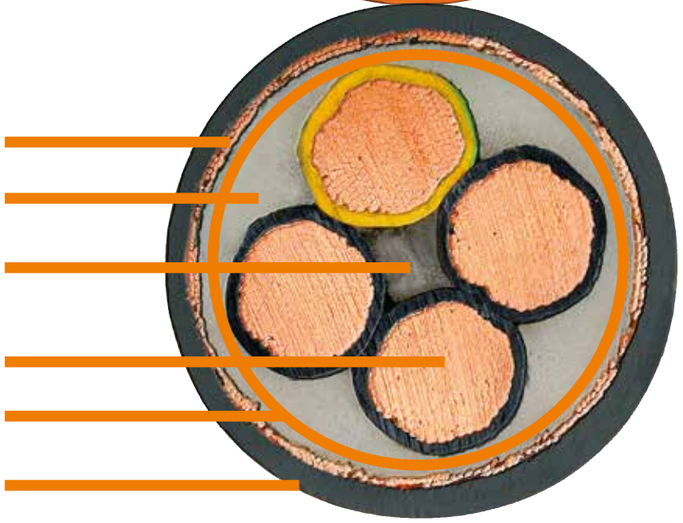
Centre element for high tensile strength

Gusset-filled extruded inner jacket

Cores wound with optimised pitch length and pitch direction

Pair braid shield over optimised wound pair

Highly abrasion-resistant pressure extruded jacket



chainflex® motor cable, shielded

Overall shield with optimised braiding angle (approx. 70% linear, approx. 90% optical coverage)

Gusset-filled extruded inner jacket

Centre element for high tensile strength

Optimised strand wire diameter

Core wound with optimised pitch length and pitch direction

Highly abrasion-resistant pressure extruded jacket

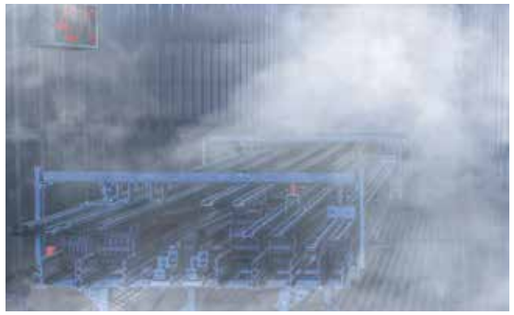
Example: Test 4876 Tested at -40°C

Bending tests in cold conditions in e-chains® with amazing results.

25 years of tests in the igus® in-house chainflex® test lab have clearly shown that international standards for the testing of cables are quite useful, but do not meet the special requirements for continuous movement in e-chains®. Thus we have the standard ratings for "Mechanical tests - Low temperature bending tests for insulating sheaths and jackets" according to IEC 60811-504.

According to this international standard, cables, according to the outer diameter, are wound around a mandrel and cooled down for a certain time to the temperature to be tested.
After the removal, a visual inspection is carried out. For the material tested, the test is deemed to have been passed if the material (in this case outer jacket) does not show damage, e.g. cracks.
Based on this standard, all cables for movement are tested in this way and the limit temperature is specified in catalogues as the lowest temperature for a moving application.
Thanks to many different series of tests, igus® has shown that these values are in accordance with the standards, but in continuous movement in e-chains® the materials tested in this way do not withstand the temperature.

Example: igus® test 4876. Here, the so-called chain-compatible PUR cables were tested in comparison with those with chainflex® TPE jacket material.
The cables to be tested were moved in continuous motion in the igus® 40-foot cooling container in an e-chain® at -40°C with a bend radiuss factor of 6.5 x d and a travel of 5 m.



Media and cold tests of chainflex® cables and e-chains® in the 40-foot climatic container

The results of this experiment make for interesting reading:
Cables, which are available on the market as cold-flexible down to -40°C with a PUR outer jacket and are marketed as having a service life of 10 million cycles in the catalogue, fail in a real test in an e-chain® at -40°C with a massive jacket break after less than 41,000 strokes!

Jacket damage after 41,000 strokes ...

The parallel test of the CF9.15.18, however, was discontinued after more than 520,000 double strokes since no change could be detected at all. On the basis of this and many other test series, igus® is the only supplier on the market that is able to list three different temperature ranges in its catalogue:
For fixed installation, flexible movement according to DIN EN 60811-504, as well as for continuously moving applications in e-chains®.

A test result from the igus® database	
Test no.	4876
Bend radius factor in e-chain®	6.5 x d
Test temperature	-40°C
Result PUR jacket	Breaks after 41,000 strokes
Result chainflex® TPE jacket	520,000 strokes without any damage

Details of the test online:
www.chainflex.eu/test4876

Calculate service life online:
www.igus.eu/chainflexlife

40-foot climatic container for cable tests in continous motion at -40°C

520,000 strokes without any damage, which the CF9.15.18 achieved in this test

Result PUR jacket: Broken after 41,000 strokes

Result chainflex® TPE jacket: Cable after the 520,000 strokes test

Example: Test 4866
4 year continuous test
chainflex® Profinet

chainflex® Profinet bus cable tested in e-chain® for more than 29 million double strokes.

Due to its extensive equipment, the igus® laboratory with a floor area of 2750 sq.m offers the necessary environment to carry out continuous flexing tests under real-world conditions, even over many years. Only these real long-term tests lead to the necessary understanding of the behaviour of cable design and materials.

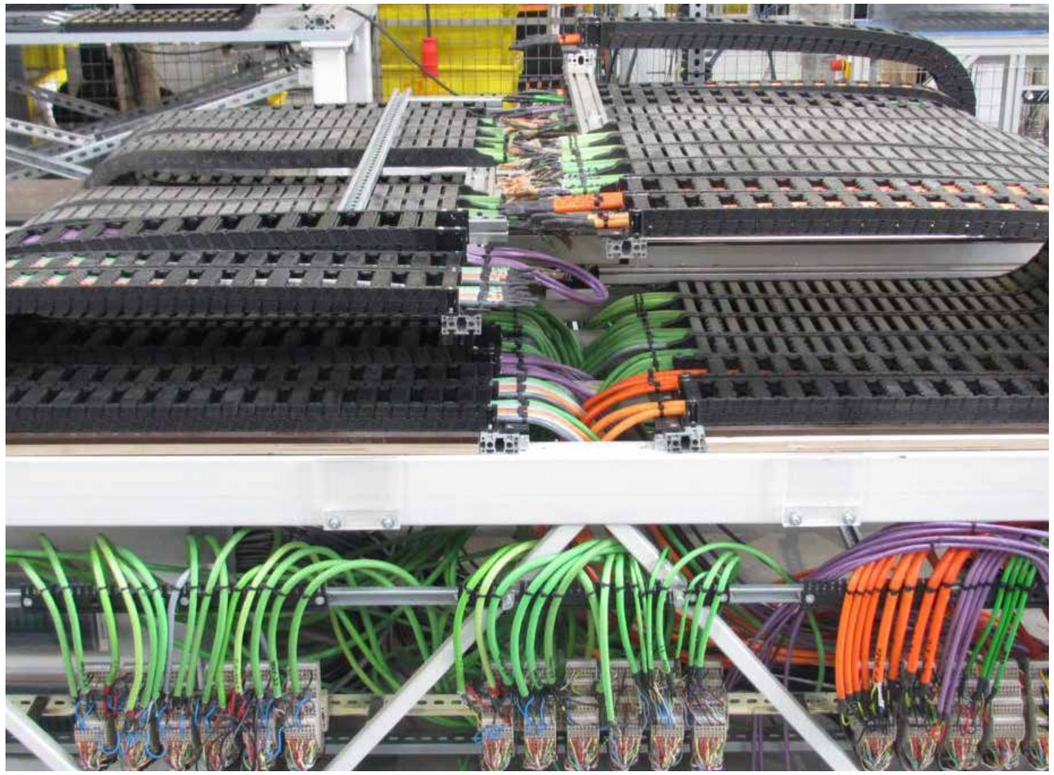
These long-term studies are used to equip the chainflex® online service life calculator with its data.

The chainflex® online service life calculator offers the user the great advantage of being able to determine the expected service life in advance so as not to be surprised by unscheduled breakdowns due to the cable.

In test 4866, the following question was posed: To what extent is the continuous bending of the Profinet bus cable of the chainflex® CFBUS.060 type affecting the electrical transmission quality.

Or, in other words, if a chainflex® bus cable is moved in an e-chain® for years, can secure data transmission still be expected?

At the time of this catalogue, the CFBUS.060 cable has been in the long-term test for over 4 years and has covered over 29 million double strokes without a measurable change in the electrical properties.



Linear chain tests with continuous monitoring of the electrical cable parameters

LINKWARE™PC
CABLE TEST MANAGEMENT SOFTWARE

Kabelkennung: 4866-1.1
Datum/Uhrzeit: 03/08/2017 11:24:16 AM
Reserve 15.9 dB (NEXT 12-36)
Grenzwert: Profinet
Kabeltyp: Cat 5e F/UTP
NVP: 66.0%

Bediener: A.FINKE
Software-Version: 2.7800
Grenzwerte Version: 1.9500
Kalibrierungsdatum:
Hauptgerät (Tester): 03/03/2017
Remote (Tester): 03/03/2017

Testzusammenfassung: PASS
Modell: DTX-ELT
Hauptgerät S/N: 9751011
Remote S/N: 9751012
Adapter Hauptgerät: DTX-CHA002
Adapter Remote: DTX-CHA002

Länge (ft)	[Paar 12]	34
Laufzeit (ns), Grnz. 555	[Paar 12]	52
Abweichung (ns), Grnz. 20	[Paar 12]	0
Widerstand (Ohm), Grnz. 25.0	[Paar 12]	1.3
Einfüg.-Dämpf. Reserve (dB)	[Paar 12]	20.5
Frequenz (MHz)	[Paar 12]	100.0
Grenzwert (dB)	[Paar 12]	24.0

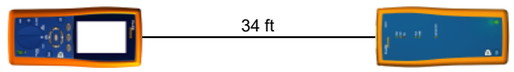
	Min. Abstand		Min. Wert	
N.A.	MAIN	SR	MAIN	SR
Schlechtest Paar	12-36	12-36	12-36	12-36
NEXT (dB)	15.9	16.4	20.8	19.7
Freq. (MHz)	11.9	11.0	86.0	90.0
Grenzwert (dB)	45.8	46.3	31.2	30.9
Schlechtest Paar	12	12	12	12
PS NEXT (dB)	18.9	19.4	23.8	22.7
Freq. (MHz)	11.9	11.0	86.0	90.0
Grenzwert (dB)	42.8	43.3	28.2	27.9

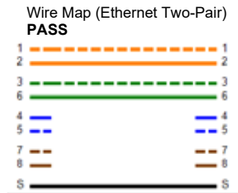
PASS	MAIN	SR	MAIN	SR
Schlechtest Paar	12-36	36-12	12-36	36-12
ACR-F (dB)	28.1	28.1	28.1	28.1
Freq. (MHz)	99.3	99.3	99.5	99.5
Grenzwert (dB)	17.5	17.5	17.4	17.4
Schlechtest Paar	36	12	36	12
PS ACR-F (dB)	31.1	31.1	31.1	31.1
Freq. (MHz)	99.3	99.3	99.5	99.5
Grenzwert (dB)	14.5	14.5	14.4	14.4

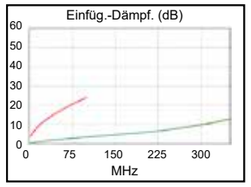
PASS	MAIN	SR	MAIN	SR
Schlechtest Paar	12-36	12-36	12-36	12-36
ACR-N (dB)	21.8	21.0	39.7	39.4
Freq. (MHz)	3.0	2.1	86.0	91.3
Grenzwert (dB)	51.6	54.0	9.1	7.9
Schlechtest Paar	12	12	12	36
PS ACR-N (dB)	24.8	24.0	42.6	42.4
Freq. (MHz)	3.0	2.1	86.0	91.3
Grenzwert (dB)	48.6	51.0	6.1	4.9

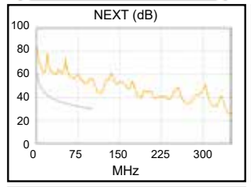
PASS	MAIN	SR	MAIN	SR
Schlechtest Paar	12	12	12	12
RL (dB)	6.9	6.7	7.2	6.7
Freq. (MHz)	85.5	89.8	99.8	89.8
Grenzwert (dB)	10.7	10.5	10.0	10.5

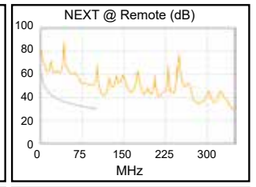
Erfüllte Network Standards:
10BASE-T, 100BASE-TX, 100BASE-T4, 1000BASE-T, ATM-25, ATM-51, ATM-155, 100VG-AnyLan, TR-4, TR-16 Active, TR-16 Passive

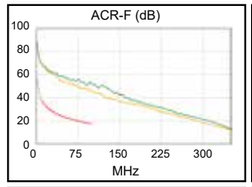


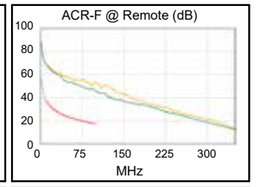


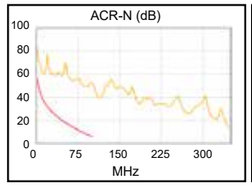


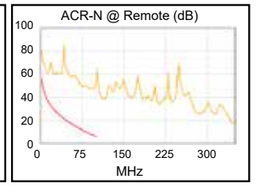


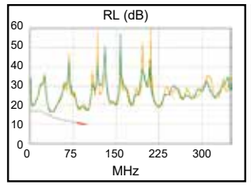


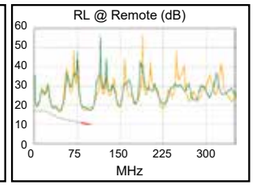












LinkWare™ PC Version 9.6

Projekt: CHAINFLEX
Unbenannt1

Ort: LABOR

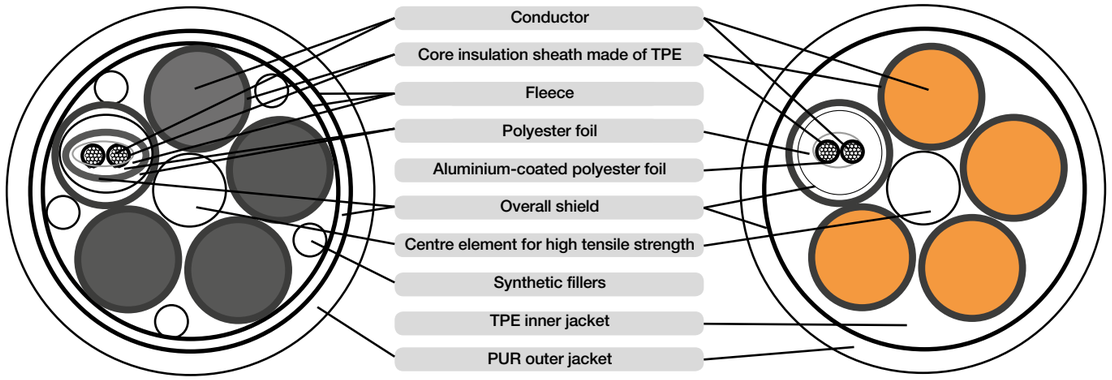
FLUKE networks

A test result from the igus® database	
Test no.	4866
Bend radius factor in e-chain®	8.5 x d
Measuring devices	Fluke DTX-ELT
Double strokes without damage	29 million

Details of the test online:
www.chainflex.eu/test4866

Calculate service life online:
www.igus.eu/chainflexlife

Example: tested, tested, tested!
Servo cable structure



Sample B with fleece and filler experimental production 4x10+(2x1.0) C

The purpose of the test is to determine the advantages of the more expensive internal jacket in shielded servo cables versus the less expensive fleece taping with fillers.

In the case of flexible shielded cables, the shield is usually separated from the core structure. On the one hand, this is done in order to achieve a rounder braid form and, on the other hand, the friction of the core insulation against the braided shield is prevented due to the separation of the cores and shield. This can be achieved with an internal jacket or a fleece taping which is wrapped around the core structure. The internal jacket is more sophisticated and therefore more expensive to produce. Following the twisting process, the core structure must run through the extruder in which the internal jacket is then put on. In contrast to this method, the fleece tape can be put on between twisting and reeling-up during the twisting process and therefore does not require an extra operation.

Product information CF27.D
▶ Page 274

Sample A with inner jacket igus® chainflex® CF27.100.10.02.01.D

Comparison between the igus® solution with the gusset-filled internal jacket and the fleece version with fillers

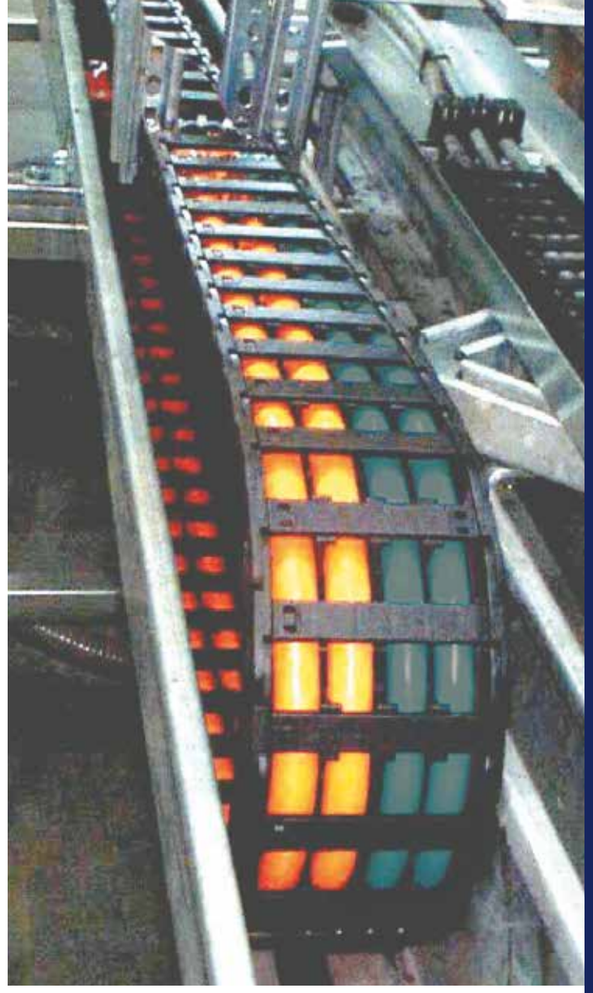
Here, the servo cables are highly flexible motor cables with a complete copper shield and an integrated, shielded pair of control cores. This cable type was selected due to the fact that the structure is not axisymmetric due to the different core cross sections, and therefore emphasises the bending behaviours of the different production methods.

- **Sample A: CF27.100.10.02.01.D (igus® GmbH) (4x10 mm²) + (2x1.0 mm²)**
- **Sample B: experimental (4x10 mm²) + (2x1.0 mm²)**

Both cables are provided with identical nominal cross sections and insulation materials. Cable A is equipped with an internal jacket and cable B with a fleece taping and fillers.

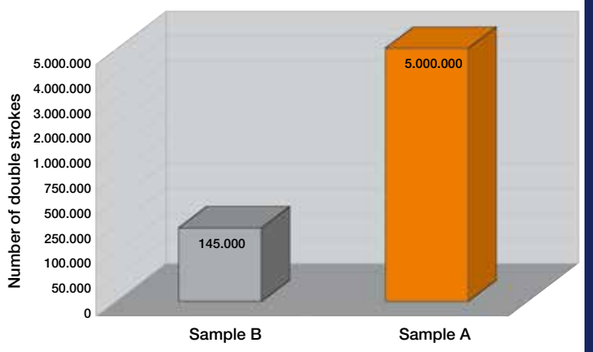
The experimental production (sample B) shows the formation of a corkscrew after just 145,000 double strokes. In the case of a cable, the so-called corkscrew refers to the wave-shaped deformation like that seen in the picture of sample B.

In the case of cable A, the internal jacket fills up the gussets and a round braided structure is created as a result, cable B requires fillers in the gussets. Like the core, the fillers are made of filbrated polyethylene. They are easy to compress and are therefore don't offer much support. By contrast, the internal jacket, which is made of TPE, and the cable A centre element hold the cores in a defined position. The cores of cable B are able to move about with no resistance. During the bending process, cores can detach themselves from the braid structure and shift into the inner bend radius or outer radius. This results in the corkscrew-type deformations that repeat themselves periodically along the length.



Assessment

Despite the extremely low bending factor of 4.76, no signs of wear can be detected in sample A (CF27.100.10.02.01.D) even after 5 million double strokes. Sample B, on the other hand, with its fillers and fleece taping, succumbs to a corkscrew formation after just 145,000 double strokes. Therefore, the result justifies the extra expenditure of the cable with the gusset-filled internal jacket.



Sample A: CF27.100.10.02.01.D

Sample B: experimental production

Example: tested, tested, tested! "Millions of double strokes" in an energy chain

Profibus cables for constant moving industrial use

For customers, it is hard to get an overview of the cable market. Competition between cable suppliers is intensifying and manufacturers are outshining one another with their promises to "guarantee service life for cables used in energy chains". Catalogues claim ten million – or even as many as 50 million – double strokes service life of cables used in moving applications.

Taking a closer look at figures claimed, one must ask what testing was done, or how realistic the tests carried out actually were (for example length of travel, test radii, etc.) in order to be able to provide such a guarantee. Even information stating that cables are tested in accordance with VDE (Association of German electrical engineers) 0472, part 603, test method H, is not helpful when it comes to determining the service life of a cable in energy chains, since the roller testing stand cannot provide any conclusive results and there is no VDE test for special cables in energy chains.

Picture 1: Gliding e-chain® application as the basis of the test

Differences in service life

At the beginning of 2002, a test to determine the service life of Profibus cables in a real application was commissioned in igus® test laboratory. The aim was to examine any differences in the service life of igus' CFBUS.001 chainflex® cable and another market leading Profibus cable. The parameters required for the test were selected on the basis of data contained in the competitor's catalogue:

Catalogue details	Test item "A" Twin-core Profibus cable	Test item "B" igus® chainflex® CFBUS.001
Cross section	(2 x AWG24)C	(2 x 0.25 mm²)C
Guaranteed lifetime	Min. 4.0 million cycles	To be determined in a test
Bend radius	> = 60 mm	85 mm
Diameter	8.0 mm	8.5 mm
Catalogue details	Issue 2002	Issue 2002

Table 2: Test parameters according to catalogue data of the competition

A gliding application was chosen as a suitable test structure since Profibus cable systems are often used here because of their data integrity, particularly over long travel lengths and transmission distances.

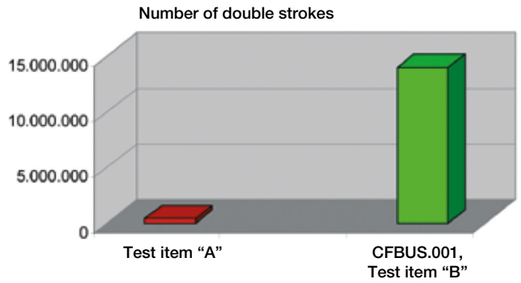
In order to be able to carry out non-destructive testing and achieve a large number of bending cycles in a short period of time, a genuine Profibus transmission path was constructed. In a PC at the fixed end of the test chain there was a Profibus master insert card. A connection to a profibus slave was located on the moving end. This enabled the transmission rate to be determined with the help of a diagnostic program. Any data packets which might have been transmitted incorrectly would be indicated. The highest-possible transmission rate of 12 megabits/s was set.

This important test, which commenced at the beginning of 2002 and is still in progress today, showed that only a relatively low number of cycles (420,000) led to the total failure of test item "A", which, according to the competitor's catalogue, should have functioned safely for at least 4.0 million cycles. Thus the real lifetime reaches only about 10% of the stated catalogue value.

On the other hand test item "B", the CFBUS.001, is still undergoing testing without any faulty data transmissions. So far, it has accomplished more than 14.0 million double strokes.

Structure and materials

The main reason for the major differences in service life is the differing structural parameters of test item "A" and test item "B" (CFBUS.001), as well as the different materials used for producing the cables.
The conductor insulation of the bus pair comprised of a foam material for both test items. The electrical properties of this material ensured better transmission properties were achieved. A disadvantage of this material, however, was its weakness under mechanical stresses. The forces which affect the bus pair should be absorbed by the element insulation in order to alleviate the mechanical stress on a conductor insulation.



Highly-elastic element insulation

For this reason, test item "B" (igus®) was provided with a mechanically superior, extruded TPE inner, or element, gusset filling insulation, in order to protect the bus pair against mechanical influences during the bending procedure. The element insulation must be highly elastic. A mechanically inferior element insulation made of inexpensive filling material only serves to make the bus pair round, just like often used fillers or banding. It is not able to protect the bus pairs from the high degree of mechanical stress present in the chain. Tensile and compressive forces which occur particularly affect those parts of the cable core in which there is a break in the element insulation.

Test parameters	
Travel distance:	S = 5.0 m
Speed, approx.:	V = 3.5 m/s
Acceleration, approx.:	a = 7.5 m/s²
Bend radius, approx.:	55 mm

The insulation of test item "B" (CFBUS.001) is on the one hand characterised by a mechanically superior, gusset-filled TPE element jacket, which mechanically relieves the bus pair, fixes the cores in a defined position.
The extremely short pitch of the core strands ensure that no great tensile or compressive force has an effect on a long length of core. So relatively small bend radii with high cycle rates can be realised.

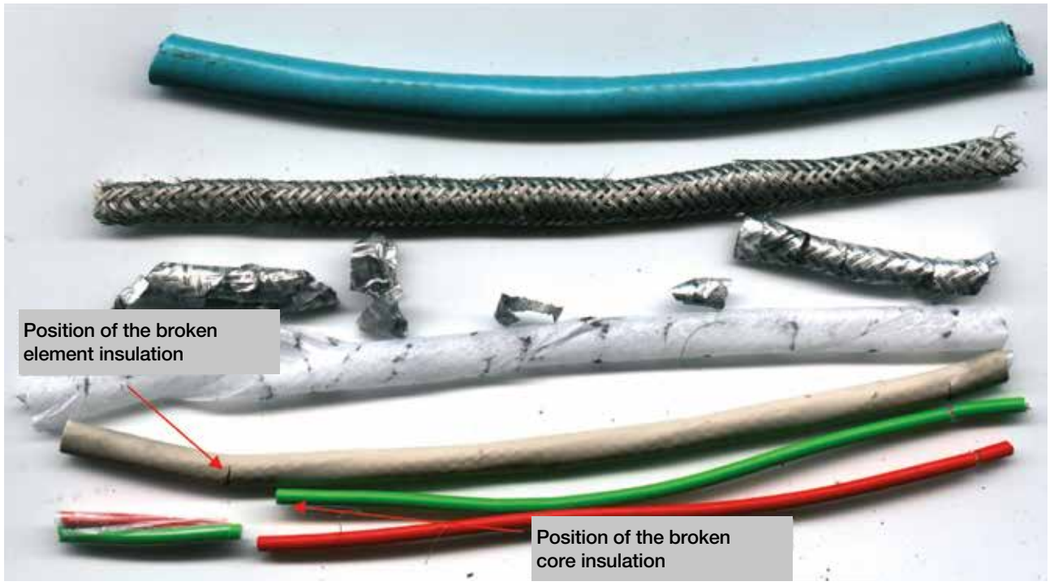
New: UL and CSA approval

chainflex® CFBUS cables are now also available for all standard field bus systems, complete with UL and CSA approval and DESINA compliance. The highly abrasion-resistant, flame-retardant TPE outer jacket is extruded onto the fully braided shield with an optimised angle in order to provide the cable with additional stability.

The bus elements wound with a particularly short pitch are protected by means of a gap-filling, extruded TPE inner jacket. The bus parameters required are fulfilled by means of a combination of optmised insulating materials and production procedures.

As with all chainflex® cables, the new standard field bus cables of the CFBUS series are now available exstock, without any cutting costs or extra charges for small quantities.

Product information CFBUS
▶ Page 174



Picture 3: A mechanically low-quality element jacket can't protect the bus pair against the high mechanical loads inside an energy chain.

Example: tested, tested, tested!
CF98 with < 4 x d!

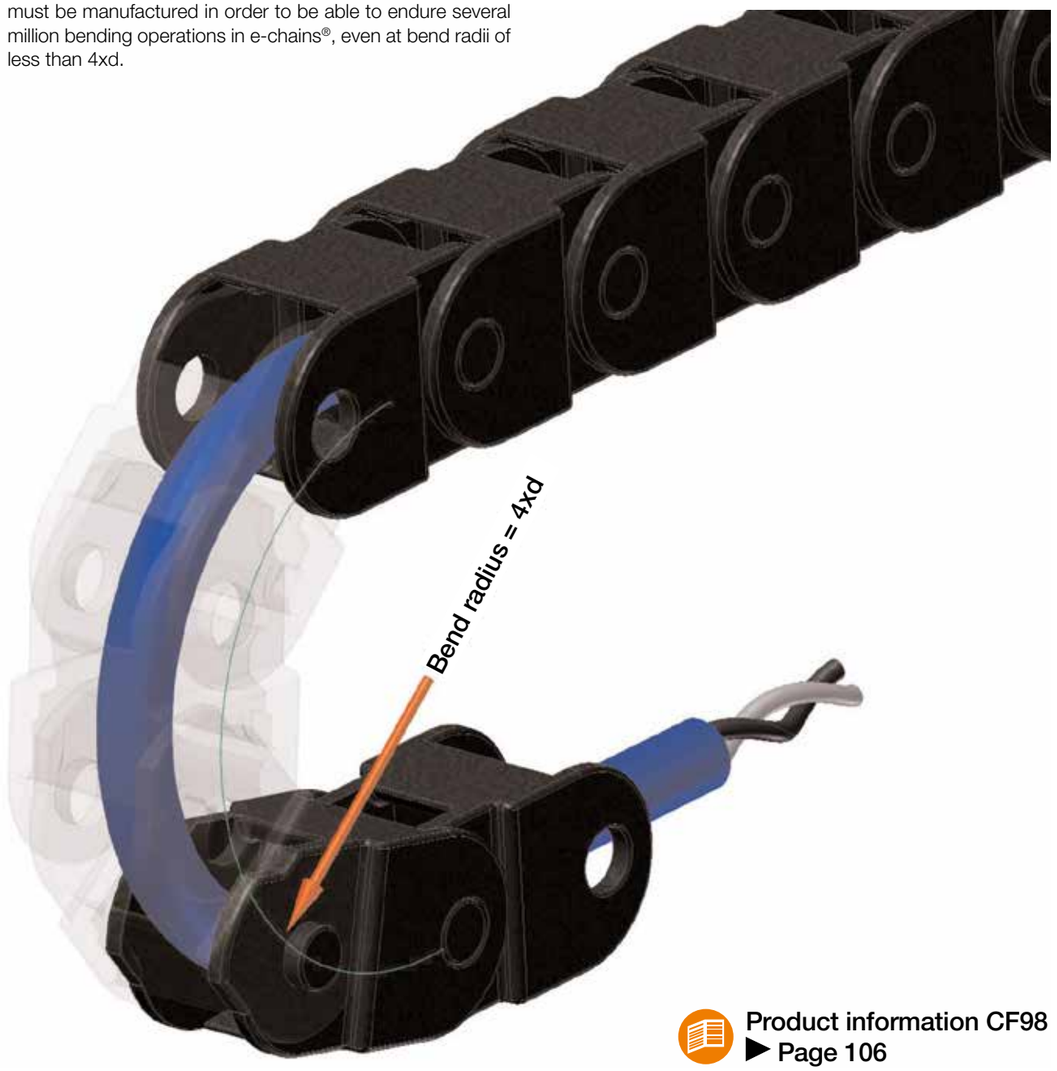
For users of very small energy supply chains with very small bend radii, the question of a suitable cable for very high cycle life has come up many times in the past.

At bend radii of less than 5xd, copper quickly reaches its physical limits, which necessitated the search for suitable substitute conductor materials or for a fundamentally different conductor structure.

Many series of tests with a variety of conductor structures and materials were performed in order to find out how cables must be manufactured in order to be able to endure several million bending operations in e-chains®, even at bend radii of less than 4xd.

Test setup:
Horizontal, short travel distance

Test parameters:	
Travel distance:	S = 0.8 m
Speed, approx.:	V = 1.5 m/s
Acceleration, approx.:	a = 0.5 m/s²
Radius, approx.:	18 mm



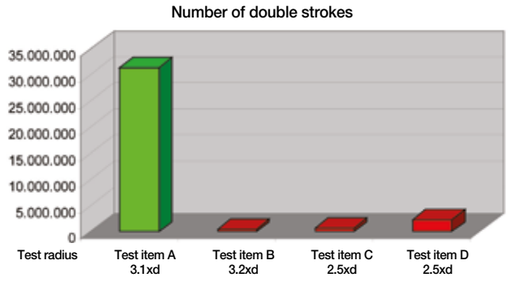
Product information CF98
▶ Page 106

Test 1:
Inspection of four different cable designs

Four different cable designs have been analysed: Test item A – conductor in special conductor alloy
Test item B – conductor same as test item A, but in copper
Test item C – conductor with braided structure
Test item D – conductor with layered construction

This long-term inspection, which was carried out over a period of 2 years, provided the following results:

	Number of double strokes	Cross section	d [mm]	Test radius
Test item A	47,434,277	7x0.20	5.8	3.1xd = 18
Test item B	450,000	7x0.20	5.6	3.2xd = 18
Test item C	638,000	7x0.25	7.3	2.5xd = 18
Test item D	2,350,000	7x0.25	7.3	2.5xd = 18

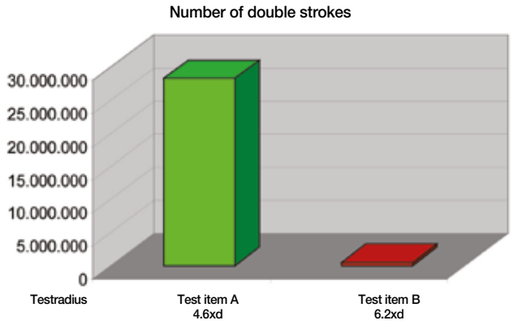


Test 2:

Two different cable designs were tested, and different core numbers and cross-sections were selected in comparison with test 1:
Test item A – conductor in special conductor alloy
Test item B – conductor in copper

In this case, test item B was manufactured completely identically to test item A except for the conductor material. The test showed that not a single case of wire breakage could be detected for test item A even after 28 million double strokes. Test item B, however, only achieved approx. 1.4 million double strokes before complete destruction of the conductor was observed. This test demonstrates that the alloy concept clearly surpasses the life of the copper conductor by more than 19 times and achieves these extraordinary results in the critical area of very small cross sections!

	Number of double strokes	Cross section	d [mm]	Testradius
Test item A	28,267,000	2x0.14	3.9	4.6xd = 18
Test item B	1,450,000	2x0.14	2.9	6.2xd = 18



Conductivity of alloys

However, the outstanding mechanical properties of this alloy also come with a reduced conductivity versus copper, but this can be compensated for by means of slightly increased cross-sections. This means that the cross-sections mentioned in the catalogue meet the electrically defined cross-section defined using the conductivity value. The conductor diameter of the alloyed conductor increases slightly compared to the conductor diameter of a copper conductor.

This compromise results in a 10% greater external diameter for the CF98 series versus a comparable CF9 type, although the service life differences between the CF98 versus the CF9 speak for themselves and increase by a multiple factor in comparison with other so-called chain-suitable cables.

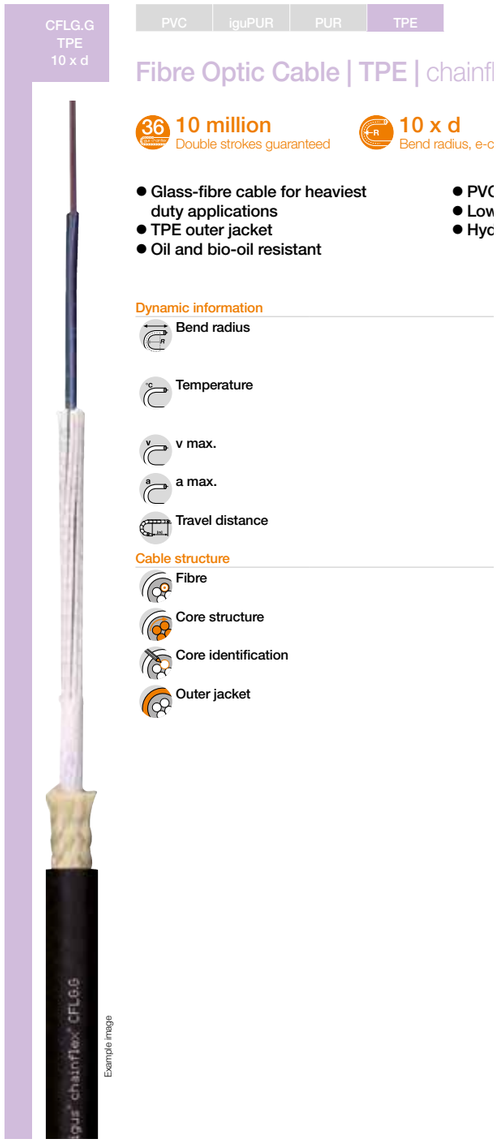
As in the case of the CF9 series, further characteristics of the chainflex® CF98 include the highly abrasion-resistant, gusset-filled extruded TPE outer jacket, the oil resistance and the UV resistance as well as the absence of any PVC and halogen compounds.

In application areas with minimum space but which demand a large number of strokes, the igus® cable offers an increased degree of operational safety and reliability. Relevant application areas are in the: semiconductor and component parts industry, automation sector as well as the automotive and banking sector. New application possibilities can also be found in automatic doors for motor vehicles and trains as well as in automatic food and self-service machines, and in the packaging industry.

Example: ...tested!
Light in the cold

Light in the cold – igus® graded index glass-fibre cable in a deep freeze test

The igus® CFLG graded index glass-fibre cable has already become a standard in numerous crane applications for the safe transmission of large amounts of bus data at high speeds and over long distances. Insensitivity to electro-magnetic interference and resistance to tough environmental influences enable this, alongside the energy supply cables in very long travels.



What happens in crane facilities in regions with extremely low temperatures? Does the maximum possible cable length of several hundred metres reduce through increase in attenuation at low temperatures, or can the cable even break in extreme applications, for example at -40 °C?

The sensitive glass fibres are carried in a gel-filled tube. How does the gel behave in highly dynamic conditions and what happens in restarts after long downtimes? As no precise information about this could be found in relevant technical journals, and as little was known particularly about the thermal features of the gel, igus® undertook its own tests to determine the reliable specifications for applications in e-chain systems®.

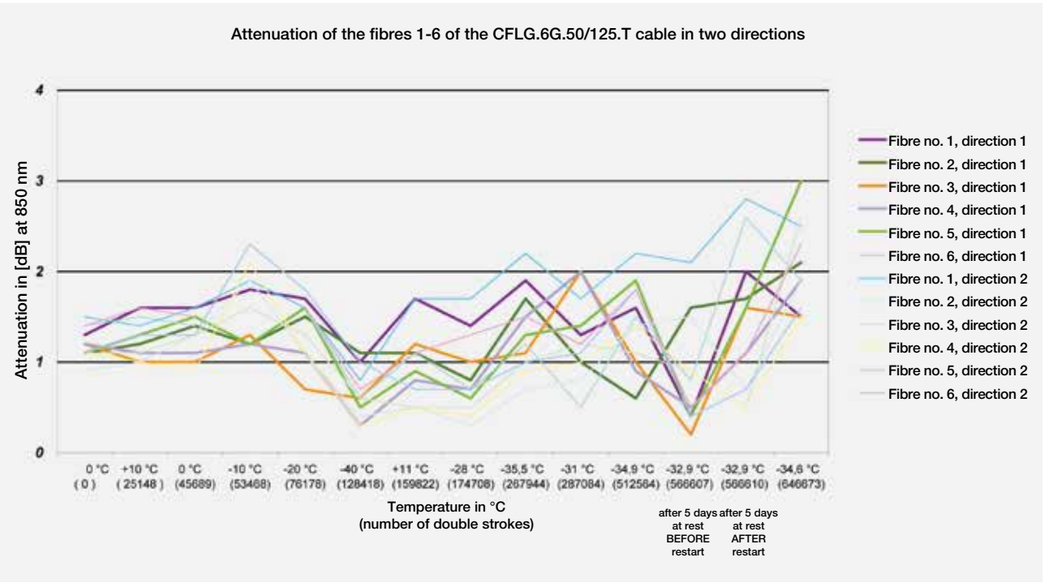
To carry out this task, the igus® test laboratory was equipped with a cold chamber that can generate constant temperatures of -40 °C and a test facility was created for long travels up to 7 m with a speed of 1.6 m/s and an acceleration up to 6 m/s². The igus® graded index glass-fibre cable CFLG.6G.50/125.TC was tested with a length of about 15 m as loop within an igus® e-chain system® 3500.125.200.0 with a bend radius of 200 mm. Varied and extreme temperatures simulated environmental influences, particularly when the temperature plunged during downtimes from above freezing to -40 °C in a short time and the motion was restarted afterward.

Under these application conditions, the attenuation of the cable was not permitted to rise above 3 dB at 850 nm wave length. After one million double strokes, which correspond to an operational performance of about 7,000 kilometres, the maximum attenuation was reached and remained significantly below 3 dB.

The measurements highlighted in the diagram reveal that variations in temperature combined with the constant movement in the e-chain® have only minor effects on the attenuation of the CFLG.6G.TC cable. The noticeable high initial attenuation is attributed to the plugs used and also reflects the reality here because, in practice, 90% of the cables used in automation are plugged fibre optic cables.

The test with the igus® cable makes it quite clear that only expensive and realistic tests can offer clarity about the service life of cables.

Product information CFLG.G
▶ Page 202



Example: …tested!
Completely twisted

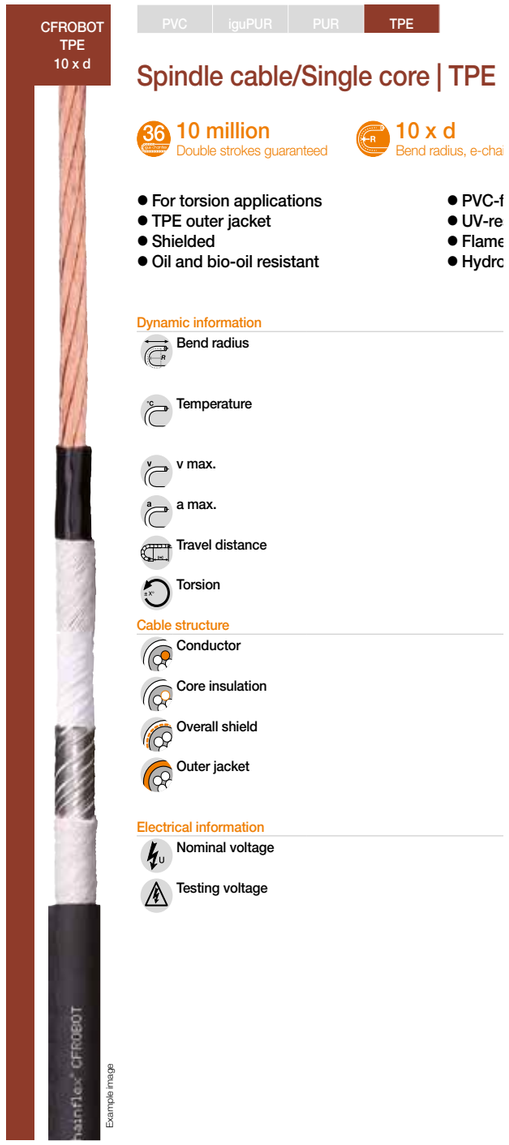
chainflex® cables for e-chain system® are designed for application in linear movements and their efficiency has been proved a million times.

But industrial applications and their motion sequences are becoming increasingly complex, so that special cables are needed more and more for torsional movements. The service life of the different designs are even harder to calculate for torsion applications, as there are no fixed parameters such as radii, travels etc. Shielded cables however are particularly vulnerable in torsion applications. Braided shields are generally braided in the opposite directions. Whether a cable survives the torsional demands is very strongly dependent on the application and type of installation.

Unshielded cables, particularly bundled chainflex® types, can be successfully used in many twisted applications.

At igus®, the emphasis is not only on technology but also on aesthetically designed products. The TRC and TRE series both received the iF-Design-Award.

In twisting movements with a braided shield, the strand wires wound in one direction are in tension and the other direction in compression. This leads quickly to shield breakage.



Product information CFROBOT
▶ Page 372

The igus® development of a new twistable, shielded single core cable accounts for this and ensures, due to its special shield design and structure, that no, or absolutely minimal, forces act on the shield wire.

As the test clearly shows, massive service life extension can be observed when compared, for example, to a CF310.250.01.

Test setup:
The new CFROBOT cable was tested at the igus® laboratory on a specially developed torsion test rig. The torsion angle is ±270° for a total cable length of about 2.5 m (tested within different versions of the triflex® R).

Cables tested were:
- **3 cables of CFROBOT.037**
- **3 cables of the series CF310.250.01.UL**
- **3 cables of the series CF310.250.01**

igus® test lab: The cables were tested in movements of ± 270°

The initial test sample of the CF310 with braided shield and the CFROBOT were taken after 250,000 movements with a torsion angle of ± 270°.

The cable dissection was undertaken in three areas of the cable length. In the sample illustrated in Picture 1, distinct damage to the overall shield is noticeable in the upper third of the cable.

Picture 1: Damaged overall shield sample of the braid version after 250,000 movements

The detail inspection of the shield braid shows damage on the shield strand wires.

The samples (picture 2) of the CFROBOT.037 (so far samples were taken after 250,000, 1.5 million and 3 million movements) showed no damage in the area of the cable or the overall shield even after above 3 million torsional movements of ± 270°.

Picture 2: The CFROBOT shows absolutely no damage after more than 3 million movements

The detailed analyses (picture 3) of the shield wires, buffer fibres, PTFE film and the cable show no damage. The test is being continued further to determine the maximum service life of the cable.

Picture 3: Detail pictures of the CFROBOT after more than 3 million movements of ±270°

Example: tested live! Container crane with 50 m travel distance

In the crane engineering industry, energy supply systems are increasingly proving their technical and economic benefits. Flexibility, variability, and space-saving installation are just a few of the important criteria. An important building block of an energy supply system is the cable. Here, users expect a high degree of operational reliability.

In the chainflex® laboratory, igus® cables undergo constant testing which can be used to obtain important information on the service life of a cable and to develop improvements for the future structural design of the cable. However, the situation becomes very exciting if you get the rare opportunity to remove cables from their tough, real-life applications and inspect them.

Current inspection
The chainflex® cable CF9.60.05 has been used in container cranes for many years; in the case here with a total travel distance of approx. 47 m.
An inspection contract commissioned by the owner-operator was to present a performance balance sheet after more than 40,000 chain kilometres and determine the date for which the next preventive maintenance work should be planned.

Following the removal of the CF9.60.05, inspections were performed with the following objectives:
1. outer jacket, abrasion behaviour, other damage;
2. overall structure, insulation behaviour of the individual cores;
3. strand wire structure, number of any individual broken wires which might be an indication of an early failure of the entire cable.

An igus® energy supply system with a length of approx. 26 m in a stainless steel trough.

The energy chain system was filled with many different igus® chainflex® cables, including the CF9.60.05

Result regarding 1:
No or only barely measurable traces of abrasion could be detected on the highly abrasion-resistant TPE outer jacket. This means that a failure due to abrasion or jacket breakage, despite the extreme environmental factors (temperature differences, UV irradiation, etc.), is not expected.

Result regarding 2:
The overall structure showed no indications of fatigue and had not changed in its pitch length.
Due to the large amount of talc, no abrasion was observed between the TPE-insulated cores. The high-voltage tests did not show any age-related changes.

Result regarding 3:
The cable was opened all the way to the copper conductor in the most stressed section of the radius. Here too, after more than 40,000 km, the inspection of the individual strand wires also showed no fatigue breakages which would indicate an early failure of the cable.

To sum up, it can be said that this cable, which was used in a real crane application in the trolley of an STS crane, was still completely intact even after more than 40,000 km and that preventive repair work was not required.

Product information CF9
▶ **Page 90**

An igus® energy supply system with a length of around 26 m.

The individual elements of the CF9 from the dissected cable.

A close-up of the completely intact copper conductor. The inspection performed over the entire length shows that the conductor is still completely intact and does have any individual strand wire breakages.

Example:...tested!
Comparison of jacket materials exposed to different oils

For years now, specially developed tests tailored to the individual requirements of igus® customers have been used to obtain more meaningful results than if standard tests were used. The relatively general terms such as "oil-resistant" or "coolant-resistant" are little help in making the right selection in terms of jacket material to be used for an application with oil, lubricant or coolant influence.

Alongside the generally applicable tests according to e.g. DIN EN 60811-2-1 and IEC 60811-1-1, "everyday application conditions" are simulated as realistically as possible in a test set-up matching our customers' requirements. Thus, for example, test samples are mounted in an energy chain that moves into an "oil bath" and then back out of it again. There is direct and alternating contact between the outer jacket and the medium to be tested and the air surrounding the energy chain and cable – just as in a real application.

After a test duration for a customer application or defined according to the igus® standard, test samples can be examined for changes in material characteristics e.g. by comparing material strength, elongation at tear and swelling with the values noted before the test started.

In this way, customers not only get a statement about the different resistance of the various materials such as given by following the above-mentioned standards, but also an estimation of the real service life of the cable in an e-chain® in these conditions.

If the test samples – such as the cables shown – do not complete the prescribed test duration, we advise against use in the respective application.

Cracks in the outer jackets of materials from competitors caused by the use in e-chains®.

Example:...tested!
Completely twisted, take two.

The "torsion-resistant" requirement for cables for energy chains is not new, but is seldom exactly defined. So how is a statement such as "This cable is torsion-resistant up to ±180 °" to be understood? This makes it all the more important to be able to deliver comparable and meaningful test results.

In order to satisfy this requirement, the "torsion test bench" was developed according to the igus® standard. Here, various cable types are twisted to a prescribed cable length of 1 metre, which also corresponds to the distance between the fixed points. The degree of torsion can be chosen, and is defined individually according to the test requirement, and the standard test is ±180 °.

After a prescribed number of double strokes or a negative electrical or mechanical test result, the test specimen is dissected, and the type and position of any damage can be exactly determined.

The first chainflex® CFROBOT cable types were developed to series with help of the data of these tests.

Product information CFROBOT
▶ Page 372

The "torsion test bench" developed according to the igus® standard

Information colour code + copper price

DIN 47100 colour code (however, deviating from DIN: without colour repetition after 44th core)*

1 white	17 white-grey	33 green-red	49 white-green-black
2 brown	18 grey-brown	34 yellow-red	50 brown-green-black
3 green	19 white-pink	35 green-black	51 white-yellow-black
4 yellow	20 pink-brown	36 yellow-black	52 yellow-brown-black
5 grey	21 white-blue	37 grey-blue	53 white-grey-black
6 pink	22 brown-blue	38 pink-blue	54 grey-brown-black
7 blue	23 white-red	39 grey-red	55 white-pink-black
8 red	24 brown-red	40 pink-red	56 pink-brown-black
9 black	25 white-black	41 grey-black	57 white-blue-black
10 violet	26 brown-black	42 pink-black	58 brown-blue-black
11 grey-pink	27 grey-green	43 blue-black	59 white-red-black
12 red-blue	28 yellow-grey	44 red-black	60 brown-red-black
13 white-green	29 pink-green	45 white-brown-black	61 black-white
14 brown-green	30 yellow-pink	46 yellow-green-black	
15 white-yellow	31 green-blue	47 grey-pink-black	
16 yellow-brown	32 yellow-blue	48 red-blue-black	

*Exception: 4-core cables are braided in the colour sequence white, green, brown, yellow.

The first colour indicates the basic colour of the core insulation, and the second colour indicates the colour of the printed-on ring. In the case of three colours, the second and colours are printed on the basic colour.

Calculation of the copper surcharge

The copper surcharge is the calculation of the difference between the calculated price (copper basis) and the fluctuating, actual price of the copper share in a cable. In calculatory terms, the list price of each chainflex® cable is based on a copper price to the amount of € 150,–/100 kg copper In the end, however, this copper share is calculated on the basis of the current daily price according to the DEL (German abbr. = German electrolyte copper for conducting purposes) quotation.

The copper index specifies the weight of the copper share in a cable in kg/km. The product from the copper index (kg/km) and the price difference per kg of copper according to the DEL quotation then provides the copper surcharge in €per km of cable.

Here, the following example:

Cable: chainflex® CF9.15.18
Copper index: 286 kg/km
DEL quotation: € 189,-/100 kg Cu
Copper basis: 150,-/100 kg Cu

$$\text{Copper index [kg/km]} \times \frac{\text{DEL quotation [€/100 kg]} - \text{Copper basis [€/100 kg]}}{100} = \text{Copper surcharge [€/km]}$$

$$286 \times \frac{189 - 150}{100} = \text{Copper surcharge [€/km]} \qquad \text{Copper surcharge} = 111.54\ €/\text{km}$$

For this example, the copper surcharge amounts to € 101.40/km of cable. Any discounts that are granted only apply to the cable prices but not to the copper surcharge. The copper surcharge is shown separately on our invoices, where applicable.

New: You now have the possibility of calculating the individual extra charge for copper for your cable online ▶ www.igus.eu/cfcu

Copper wire dimensions according to Anglo-American AWG numbers

AWG No.	Diameter [mm]	Cross section [mm²]	AWG No.	Diameter [mm]	Cross section [mm²]
500	17.96	253.00	18	1.024	0.823
350	15.03	177.00	20	0.813	0.519
250	12.70	127.00	22	0.643	0.324
4/0	11.88	107.20	24	0.511	0.205
3/0	10.40	85.00	26	0.405	0.128
2/0	9.27	67.50	28	0.320	0.0804
1/0	8.25	53.50	30	0.255	0.0507
1	7.35	42.40	32	0.203	0.0324
2	6.54	33.60	34	0.160	0.0200
4	5.19	21.20	36	0.127	0.0127
6	4.12	13.30	38	0.102	0.00811
8	3.26	8.37	40	0.079	0.00487
10	2.59	5.26	42	0.064	0.00317
12	2.05	3.31	44	0.051	0.00203
14	1.63	2.08			
16	1.29	1.31			

Information | Load-carrying capacity of cores

The values from the tables on the side of this page have been taken from the standard DIN VDE 0298, Part 4. These values have been simplified and only apply approximately. For each user, it is advisable to obtain and comply with the regulations that apply to each individual case of application (e.g. measures for protection in case of indirect contact in accordance with DIN VDE 0100 Part 410, overcurrent protective devices in accordance with DIN VDE 0100 Part 430 or voltage drop in accordance with DIN VDE 0100 Part 520). It is not possible to provide all the regulations or overviews in this catalogue. Due to the harmonisation that has been carried out, it is possible that different load-carrying values may be permissible for the same cable in some cases. For the selection of the relevant cross sections, the load capacity in undisturbed operation is the determining factor, i.e. the use with permissible operating temperature or permissible maximum temperature on the conductor.
The load-carrying capacity according to table 1 on this page applies to operating-current-carrying cores.

Normally, these are 2 loaded cores in the case of 2-core and 3-core cables, as well as 3 loaded cores in the case of 4-core and 5-core cables. Please take this into account when planning for the use of multi-core cables in electrical installation conduits or energy chains. This information is based on an ambient temperature of 30°C and a non-loaded cable. Please apply the conversion factors according to table 2 in case the air temperature is increased due to the heat loss of the cables (please take thermal radiation into account as well, e.g. effects of exposure to the sun).

The possible cable installation types in energy chains result in such a broad range of loading profiles that no generalised conversion factors can be mentioned for this large accumulation of cables. The installation type and the conversion factors must be looked up in table 3 according to each individual application.

Table 1: Cables for installation/movement in e-chains® and -tubes

Insulation material	PVC	TPE
chainflex® type	CF5, CF6, CF2, CF880, CF881, CF890, CF891	CF130.UL, CF140.UL, CF77. UL.D, CF78.UL, CF9, CF10, CF9. UL, CF10.UL, CF98, CF99, CF240, CF211, CF112, CF11, CF12, CF211, CF113.D, CF111.D, CF11.D, CF210.UL, CF21.UL, CF270.UL.D, CF27.D, CF30, CF31, CF34.UL.D, CF35.UL, CF37.D, CF38, CF300. UL.D, CFPE, CF310.UL, CF330.D, CF340, CFBRAID, CFROBOT, CFROBOT 6,7,9, CF884, CF894 CF885, CF886, CF895, CF896 CF887, CF897, CF220.UL.H, CF280.UL.H, CF430.D, CF440
Number of cores	2 or 3	
Installation		

Nominal cross section of copper cable [mm²]	Load-carrying capacity [A]	
	PVC insulation	TPE insulation
0.14	2.5	2.5
0.25	4	5
0.34	5	7
0.50	8	10
0.75	12	14
1	15	17
1.50	18	21
2.50	26	30
4	34	41
6	44	53
10	61	74
16	82	99
25	108	131
35	135	162
50	168	202
70	207	250
95	250	301
120	292	352
150	335	404
185	382	461

Table 2: Conversion factors in case of varying ambient temperatures

Ambient temperature [°C]	Conversion factor	
	PVC insulation	TPE insulation
10	1.22	1.15
15	1.17	1.12
20	1.12	1.08
25	1.06	1.04
30	1.00	1.00
35	0.94	0.96
40	0.87	0.91
45	0.79	0.87
50	0.71	0.82
55	0.61	0.76
60	0.50	0.71
65	–	0.65
70	–	0.58
75	–	0.50
80	–	0.41
85	–	0.29
90	–	0.14

Table 3: Conversion factors for multi-core cables with cable cross sections up to 10 mm²

Loaded cores	Conversion factor
5	0.75
7	0.65
10	0.55
14	0.50
19	0.45
24	0.40
40	0.35
61	0.30

Chemical resistance | **Selection chart**

Group	chainflex® cable	Jacket material	1	2	3	4	5	Page
Control cables								
Control cable	CF880	PVC	1					48
Control cable	CF881	PVC	1					52
Control cable	CF130.UL	PVC	1					56
Control cable	CF140.UL	PVC	1					60
Control cable	CF5	PVC		2				64
Control cable	CF6	PVC		2				68
Control cable	CFSOFT1	PVC		2				72
Control cable	CFSOFT2	PVC		2				74
Control cable	CF890	iguPUR			3			76
Control cable	CF891	iguPUR			3			80
Control cable	CF77.UL.D	PUR				4		84
Control cable	CF78.UL	PUR				4		88
Control cable	CF2	PUR				4		92
Control cable	CF9	TPE					5	96
Control cable	CF10	TPE					5	100
Control cable	CF9.UL	TPE					5	104
Control cable	CF10.UL	TPE					5	108
Control cable	CF98	TPE					5	112
Control cable	CF99	TPE					5	114
Data cables								
Data cable	CF8821	PVC	1					120
Data cable	CF240	PVC		2				122
Data cable	CF240.PUR	PUR				4		126
Data cable	CF211	PVC		2				130
Data cable	CF211.PUR	PUR				4		134
Data cable	CF11	TPE					5	138
Data cable	CF112	PUR				4		142
Data cable	CF12	TPE					5	146
Data cable	CF298	TPE					5	148
Data cable	CF299	TPE					5	150
Data cable	CFKoax	TPE					5	152
Bus cables								
Bus cable	CF888	PVC	1					164
Bus cable	CFBUS.PVC	PVC		2				168
Bus cable	CF898	iguPUR			3			172
Bus cable	CFBUS.PUR	PUR				4		176
Bus cable	CFBUS	TPE					5	180
Bus cable	CFBUS.LB	TPE					5	186
Fibre Optic Cables								
Fibre Optic Cable	CFLK	PUR				4		196
Fibre Optic Cable	CFLG88	PVC	1					198
Fibre Optic Cable	CFLG.LB.PUR	PUR				4		200
Fibre Optic Cable	CFLG.LB	TPE					5	204
Fibre Optic Cable	CFLG.G	TPE					5	208
Measuring system cables								
Measuring system cable	CF884	PVC	1					218
Measuring system cable	CF211	PVC		2				222
Measuring system cable	CF894	iguPUR			3			228
Measuring system cable	CF111.D	PUR				4		232
Measuring system cable	CF113.D	PUR				4		238
Measuring system cable	CF11.D	TPE					5	244

Chemical resistance | **Selection chart**

Data and schedules

Group	1	2	3	4	5
Inorganic chemicals					
Aqueous solutions, neutral					
Water	+	+	O	+	+
Common salt (10%)	+	+	O	+	+
Glauber's salt (10%)	+	+	O	+	+
Aqueous solutions, alkaline					
Soda (10%)	O	+	+	O	+
Aqueous solutions, acid					
Sodium bisulfate (10%)	O	+	+	O	+
Aqueous solutions, oxidising					
Hydrogen peroxide (10%)	+	+	O	+	+
Potassium permanganate (2%)	+	+	O	+	+
Inorganic acids					
Hydrochloric acid, concentrated	–	–	–	–	–
Hydrochloric acid (10%)	O	O	+	O	+
Sulfuric acid, concentrated	–	–	–	–	–
Sulfuric acid (10%)	O	O	+	O	+
Nitric acid, concentrated	–	–	–	–	–
Nitric acid (10%)	O	O	+	–	O
Inorganic caustic solutions					
Sodium hydroxide, concentrated	–	–	–	–	O
Sodium hydroxide (10%)	O	O	+	O	+
Caustic potash, concentrated	–	–	–	–	O
Caustic potash (10%)	O	O	+	O	+
Ammonia, concentrated	O	O	–	O	+
Ammonia (10%)	+	+	+	+	+
Organic chemicals / organic acids					
Acetic acid, concentrated (glacial acetic acid)	–	–	–	–	O
Acetic acid (10% in H_20)	O	+	+	O	+
Tartaric acid (10% in H_2O)	O	+	+	+	+
Citric acid (10% in H_2O)	O	+	+	+	+
Ketone					
Acetone	–	–	–	–	O
Methyl ethyl ketone (MEK)	–	–	–	–	O
Alcohols					
Ethyl alcohol (spirit)	–	O	+	O	+
Isopropyl alcohol	–	O	+	O	+
Diethylene glycol	O	O	+	+	+
Aromatic compounds					
Toluol	–	–	–	O	–
Xylol	–	–	–	O	–
Fuels					
Gasoline	–	O	O	+	+
Diesel fuel	–	O	O	+	+
Synthetic oils lubricating oil					
ASTM oil #2	O	+	+	+	+
Hydraulic oil					
Mineral oil base	–	O	+	+	+
Glycol base	O	O	+	+	+
Synthetic ester base	–	O	–	+	+
Vegetable oils					
Rapeseed oil	O	+	O	+	+
Olive oil	O	+	O	+	+
Soya bean oil	O	+	O	+	+
Cold cleaning agent					
Cold cleaning agent	–	O	+	+	O

\+ no or minimum negative influence
O medium reciprocal effect, short-term exposure permissible
– unstable, material partly destroyed

All information applies to room temperature

Chemical resistance | **Selection chart**

Group	chainflex® cable	Jacket material	1	2	3	4	5	Page
Servo cables								
Servo cable	CF887	PVC	1					256
Servo cable	CF210.UL	PVC		2				258
Servo cable	CF220.UL.H	PVC		2				262
Servo cable	CF21.UL	PVC		2				266
Servo cable	CF897	iguPUR			3			270
Servo cable	CF270.UL.D	PUR				4		272
Servo cable	CF280.UL.H	PUR				4		276
Servo cable	CF27.D	PUR				4		280
Servo cable	CF29.D	TPE					5	284
Motor cables								
Motor cable	CF885	PVC	1					292
Motor cable	CF886	PVC	1					294
Motor cable	CF210.UL	PVC		2				296
Motor cable	CF30	PVC		2				298
Motor cable	CF31	PVC		2				302
Motor cable	CF895	iguPUR			3			306
Motor cable	CF896	iguPUR			3			308
Motor cable	CF270.UL.D	PUR				4		310
Motor cable	CF27.D	PUR				4		314
Motor cable	CF34.UL.D	TPE					5	318
Motor cable	CF35.UL	TPE					5	322
Motor cable	CF37.D	TPE					5	326
Motor cable	CF38	TPE					5	328
Sindle cable/Single core	CF885	PVC	1					330
Sindle cable/Single core	CF885.PE	PVC	1					332
Sindle cable/Single core	CF886	PVC	1					334
Sindle cable/Single core	CF270.UL.D	PUR				4		336
Sindle cable/Single core	CF300.UL.D	TPE					5	338
Sindle cable/Single core	CFPE	TPE					5	340
Sindle cable/Single core	CF310.UL	TPE					5	342
Sindle cable/Single core	CF330.D	TPE					5	344
Sindle cable/Single core	CF340	TPE					5	346
Medium voltage cable	CFCRANE.PUR	TPE					5	348
Twistable cables								
Twistable cable	CF77.UL.D	PUR				4		358
Twistable cable	CFROBOT2	PUR				4		362
Twistable cable	CFROBOT3	PUR				4		364
Twistable cable	CFROBOT4	PUR				4		366
Twistable cable	CFROBOT5	TPE					5	370
Twistable cable	CFROBOT6	PUR				4		372
Twistable cable	CFROBOT7	PUR				4		374
Twistable cable	CFROBOT	TPE					5	378
Twistable cable	CFROBOT8	PUR				4		380
Twistable cable	CFROBOT8.PLUS	PUR				4		384
Twistable cable	CFROBOT9	PUR				4		388
Special cables								
Special cable	CFTHERMO	PUR				4		394
Special cable	CFFLAT	TPE					5	396
Special cable	CFBRAID	TPE					5	398
Special cable	CFSPECIAL.182	PUR				4		400
Special cable	CFSPECIAL.792	PUR				4		406

Chemical resistance | **Selection chart**

Data and schedules

Group	1	2	3	4	5
Inorganic chemicals					
Aqueous solutions, neutral					
Water	+	+	O	+	+
Common salt (10%)	+	+	O	+	+
Glauber's salt (10%)	+	+	O	+	+
Aqueous solutions, alkaline					
Soda (10%)	O	+	+	O	+
Aqueous solutions, acid					
Sodium bisulfate (10%)	O	+	+	O	+
Aqueous solutions, oxidising					
Hydrogen peroxide (10%)	+	+	O	+	+
Potassium permanganate (2%)	+	+	O	+	+
Inorganic acids					
Hydrochloric acid, concentrated	–	–	–	–	–
Hydrochloric acid (10%)	O	O	+	O	+
Sulfuric acid, concentrated	–	–	–	–	–
Sulfuric acid (10%)	O	O	+	O	+
Nitric acid, concentrated	–	–	–	–	–
Nitric acid (10%)	O	O	+	–	O
Inorganic caustic solutions					
Sodium hydroxide, concentrated	–	–	–	–	O
Sodium hydroxide (10%)	O	O	+	O	+
Caustic potash, concentrated	–	–	–	–	O
Caustic potash (10%)	O	O	+	O	+
Ammonia, concentrated	O	O	–	O	+
Ammonia (10%)	+	+	+	+	+
Organic chemicals / organic acids					
Acetic acid, concentrated (glacial acetic acid)	–	–	–	–	O
Acetic acid (10% in H20)	O	+	+	O	+
tartaric acid (10% in H2O)	O	+	+	+	+
Citric acid (10% in H2O)	O	+	+	+	+
Ketone					
Acetone	–	–	–	–	O
Methyl ethyl ketone (MEK)	–	–	–	–	O
Alcohols					
Ethyl alcohol (spirit)	–	O	+	O	+
Isopropyl alcohol	–	O	+	O	+
Diethylene glycol	O	O	+	+	+
Aromatic compounds					
Toluol	–	–	–	O	–
Xylol	–	–	–	O	–
Fuels					
Gasoline	–	O	O	+	+
Diesel fuel	–	O	O	+	+
Synthetic oils lubricating oil					
ASTM oil #2	O	+	+	+	+
Hydraulic oil					
Mineral oil base	–	O	+	+	+
Glycol base	O	O	+	+	+
Synthetic ester base	–	O	–	+	+
Vegetable oils					
Rapeseed oil	O	+	O	+	+
Olive oil	O	+	O	+	+
Soya bean oil	O	+	O	+	+
Cold cleaning agent					
Cold cleaning agent	–	O	+	+	O

\+ no or minimum negative influence
O medium reciprocal effect, short-term exposure permissible
– unstable, material partly destroyed

All information applies to room temperature

Design parameters | **Cable and hose packages**

Rules for:
- **Maximum cable diameters**
- **Separation**
- **Bend radius**

General rules for cables and hoses in e-chains®

Data and energy supply in all forms – in an energy chain system

The key advantage of an igus® e-chain system® is the safe accommodation of various forms of data cables and energy supply in one system. We recommend the optimal separation layout of the cables and hoses in the e-chain®, but you, the customer, are still afforded the final choice. It is possible, for instance, to maintain minimum distances between bus and motor cables and mix pneumatics, electric and hydraulics in the same compartments.

In addition to the quality of the cables used, the arrangement of each service within the e-chain® and the space allowed, are important for the service life of the system. Various separation options enable the adaptation of the e-chains® to the specific requirements of each respective application. Generalised rules such as "No more than 80% of the clear space of energy chains should be used" no longer make sense given the complexity of present-day applications. In this chapter, we give you detailed recommendations. Due to the variety of the application parameters, we strongly recommend you take advantage of our free consultation services.Simply give us a list of your cable requirements (or merely the required electrical or other services) and you will receive our recommendation.

Hydraulics and electric cables are separated from one another in this example

Well ordered cables with igus® interior separation

Maximum cable and hose diameters

The maximum cable and/or hose diameter corresponds to the inner height of the selected e-chain®/e-tube, with additional minimum clearance. This minimum clearance would be, for example, 10% for Round electrical cables, 20% for hydraulic hoses. An e-chain® is ideal if a minimum lateral gap to the next cable or hose has been factored in. Depending on the nature of the cables, the dynamics, and the expected service life, more clearance must be allowed. In specific cases, clearances may be altered further.

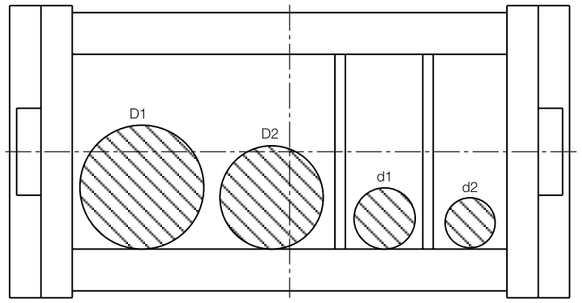
Electrical cables need at least 10% clearance space all around, hydraulic hoses need 20%

Design parameters | **Cable and hose packages**

Designing with igus®

Distribution in e-chains®

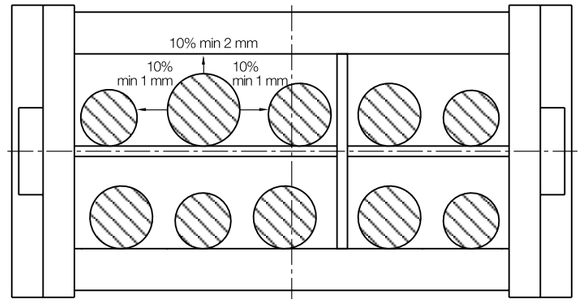
- Cables and hoses with very different diameters should be laid separately. The separation is achieved using modular separators.
- Cables and hoses must under no circumstances have the opportunity to tangle. Therefore, the clearance height of a compartment with several similar cables or hoses next to one another must not amount to more than one and a half times the cable/hose diameter.



D1 + D2 > 1.2 x hi **d1 + d2 ≤ 1.2 x hi**

Expressed in rules, this means:

Rule 1:
if D1 + D2 > 1.2 x e-chain® inner height, no separation between the two cables/ hoses is necessary. Two cables/ hoses should never be left unguided on top of one another or be allowed to become tangled.



d1 + d2 ≤ 1.2 x hi

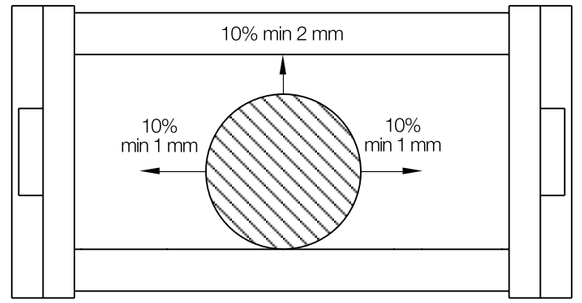
Rule 2:
if d1 + d2 ≤ 1.2 x e-chain® inner height, a vertical separator or a horizontal shelf must be used to reduce the inner height. Thereby preventing the entanglement of d1 and d2.

The reason for this rule is:
The cables and hoses must be laid so that they can move freely at all times and so that no tensile force is exerted at the radius of the e-chains®.

For high-speed applications and high cycles, cables or hoses must not be laid on top of each other without horizontal separation.
The standard values for this are:

Travel speed over **0.5 m/s** and cycles over **10,000 p.a.**

igus® interior separation offers a safe solution for this situation.



Clearance space for round electrical cables

Clearance space in % for various cables

Cables	clearance space
Round electrical cables	**10%**
Electrical flat cables	**10%**
Pneumatics	**5-10%**
Hydraulics	**20%**
Media hoses	**15-20%**

Design parameters | **Cable and hose packages**

Further guidelines for distribution

- The cable weight should be symmetrically distributed across the width of the e-chain®.
- Cables with different outer jacket materials must not be allowed to rub together. If necessary, they must be laid separately. All igus® chainflex® cables can be combined with each other and other brands of cables.
- The cables should always be fixed at the moving end. The fixed end should also always have strain relief. Exceptions are made only for certain hydraulic hoses with length compensation issues or other high pressure hoses. (refer to "hydraulic hoses").
- Generally, the faster and more frequently the e-chain® operates, the more important the exact positioning of the cables and hoses inside the e-chain® becomes. Due to the wide variety of the possibilities, we strongly recommend you take advantage of our free consultation services for your specific applications.

Bend radius R

- The bend radius of your e-chain® depends on the thickest or stiffest cable or hose in your application.
- The bend radii of the e-chains® should be adjusted to the recommendations of the cable or hose manufacturer. The selection of a larger radius than the minimum will positively affect service life.
- The specification of minimum bend radii for cables refers to use at normal temperatures. Other bend radii may be recommended. Please ask your cable supplier for details.

The igus® construction kit of energy chain systems solves all the requirements for interior separation known today.

igus® chainflex® cables permit the smallest bend radius of 4 x d for one million strokes.

The igus® product range offers up to 12 different bend radii for each chain series from stock. Here series 50 in the Storebaelt bridge project.

We recommend complete e-chain systems® - where bend radii for all cables and hoses, interior separation and service life are optimally matched. Also ask for the igus® system guarantee ▶ readychain® **from page 747**

Design parameters | **Round electrical cables**

Round electrical cables

For electrical cables, the round cable is a safe, modular and cost-effective solution for e-chain systems®. We recommend the following criteria for selecting the proper round electrical cables:

Selection criteria:

- Small minimum bend radii and mounting heights
- Long service life at minimum bend radius
- Service life expectations for your application (short or long travel, hanging)
- Test data on service life from realistic tests
- Uncomplicated installation process – no hanging, laying out, etc, of cables required
- Strain relief integrated directly into the mounting bracket
- Flexible shields for shielded cables
- Abrasion-resistant and non-adhesive outer jackets
- Large selection to avoid expensive custom designs

For bus cables and fibre optic cables, special attention must be paid to how effective transmission rates and shielding remain after millions of cycles at the minimum bend radius.

Example at igus® test laboratory: constant development and testing of chainflex® cables

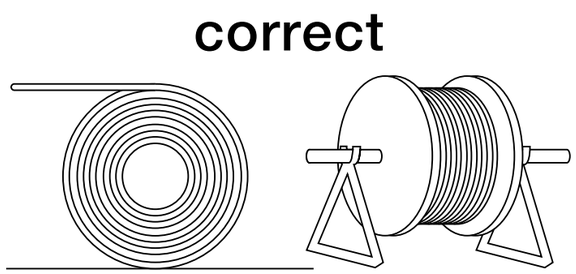
Design parameters | **Electrical round cables**

Installation and strain relief of round electrical cables

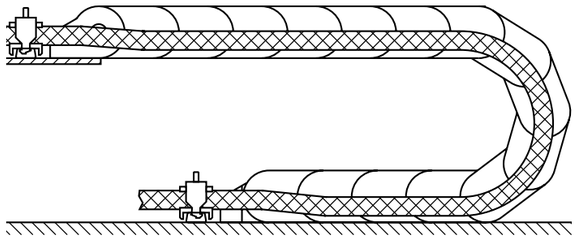
1. The cables must be laid straight, without twisting. Cables must not be uncoiled from the top of the spool. igus® chainflex® cables are immediately ready for fitting directly into the e-chain®. They need not be disconnected or laid out before installation.
2. The cables must be laid so that each individual cable can move freely from side to side.
3. The cables must be able to move freely along the radius. This must be double-checked if the upper run operates at the cable's maximum bend radius.
4. The division of the e-chains® interior using igus® interior separators or shelves is necessary if several cables and/or hoses with varying diameters are laid out. It is important to prevent cables and hoses from tangling.
5. For cables and hoses with different jacket materials, it is important to prevent them from "sticking" to one another. If necessary, they should be separated. igus® chainflex® cables can be combined with all others.
6. Round electrical cables must be secured with strain relief at both ends. In exceptional cases, the cables may be fixed with strain relief at the moving end of the e-chain® only. A gap of 10-30 x cable diameter between the end of the bend segment and the fixed point is recommended for most cables. chainflex® cables can, on the other hand, be secured directly to the mounting bracket with strain relief (this has been confirmed with testing).

We will be pleased to provide you with recommendations for complete e-chain systems®:
"readychain®: chain-cable harnessing".

▶ readychain® **from page 747**



The cables must be able to move freely along the radius



chainflex® cables can be strain-relieved directly at the mounting bracket.

Corkscrewing: an effect of improper cable and hose placement in an e-chain®

Design parameters | **Pneumatic hoses**

Pneumatic hoses

In principle, the same rules apply for pneumatic hoses as for round cables. In practice, it has been demonstrated that pneumatic hoses are less susceptible to wear. After consultation, they can be laid together more closely than the "10% all-around clearance" rule. A double-sided strain relief is required under these conditions. For pneumatic hoses made of rubber, we recommend strictly following the "10% clearance" rule because they tend to adhere to each other and to other cables and hoses.

Fully pre-assembled e-chain system® with several pneumatic and hydraulic hoses

The igus® product range also offers thermo polymer pneumatic hoses called "chainflex® CFAir and CFCleanAir" ▶ page 398

Information | **Approvals and standards**

igus® chainflex® cables for DESINA

DESINA: DEcentral and Standardised INstAllation technique is a recommendation of the Verein Deutscher Werkzeugmaschinenfabriken (VDW = Association of German machine tool industry) for the purpose of standardising components, interfaces and connecting systems.
DESINA describes an extensive whole concept for standardisation and decentralisation of the fluid technical and electrical installation of machines and plants.
For further information: www.desina.de

Det Norske Veritas Germanischer Lloyd

For further information: www.dnvgl.com

Underwriters Laboratories Inc.

For further information: www.ul-europe.com

Canadian Standards Association

For further information: www.csa.ca

Commission Électrotechnique Internationale

Communauté Européenne

Соответствия Техническому Регламенту

EurAsian Conformity

Information | **Approvals and standards**

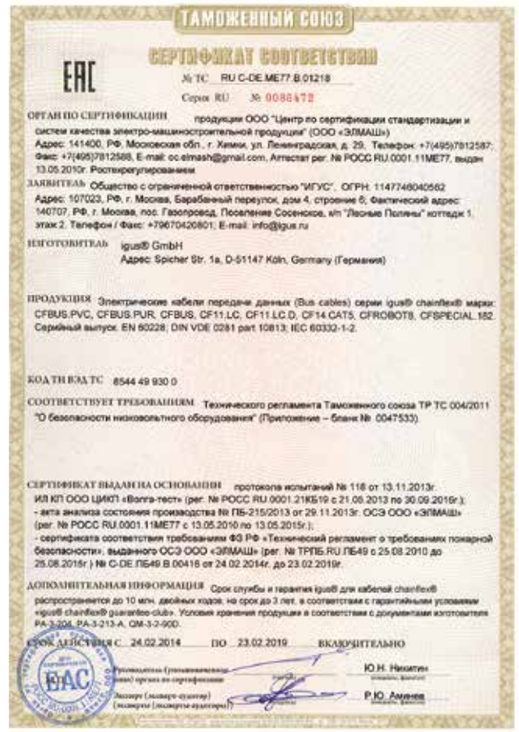
chainflex® cables now certified for the Russian market

igus® chainflex® cables are now certified for Russia, Belarus and Kazakhstan.
These certificates replace the outdated GOST certificates.

CTP
Certified according to standards of fire safety
No. C-DE.PB49.B.00416
No. C-DE.PB49.B.00420
No. C-DE.PB49.B.00449
No. C-DE.PB49.B.00450

EAC
Certified according to the standards of the technical regulations of the customs union
No. TC RU C-DE.ME77.B.01218
No. TC RU C-DE.ME77.B.01254
No. TC RU C-DE.ME77.B.01559
No. TC RU C-DE.ME77.B.01560
No. TC RU C-DE.ME77.B.01561
No. TC RU C-DE.ME77.B.02324

РОССИЙСКАЯ ФЕДЕРАЦИЯ
СЕРТИФИКАТ СООТВЕТСТВИЯ
(обязательная сертификация)
№ C-DE.ПБ49.B.00416 ТР 1371118
ЗАЯВИТЕЛЬ Общество с ограниченной ответственностью "ИГУС", ОГРН: 1147746040562; Адрес: 107023, РФ, г. Москва, Барабанный переулок, дом 4, строение 6; Фактический адрес: 140707, РФ, г. Москва, пос. Газопровод, Поселение Сосенское, к/п "Лесные Поляны" коттедж 1, этаж 2. Телефон / Факс: +79670420801, E-mail: info@igus.ru
ИЗГОТОВИТЕЛЬ igus® GmbH Адрес: Spicher Str. 1a, D-51147 Köln, Germany (Германия)
ОРГАН ПО СЕРТИФИКАЦИИ электрооборудования ООО «ЭЛМАШ» Адрес: 141400, Московская обл., г. Химки, ул. Ленинградская, 29, тел.(факс) +74957812587 (88), ОГРН 1105047004226, Аттестат рег. № ТРПБ.RU.ПБ49 выдан 25.08.2010 МНС России
ПОДТВЕРЖДАЕТ, ЧТО ПРОДУКЦИЯ Электрические кабели серии igus® chainflex® марки согласно приложению – бланк № 0434209. Серийный выпуск
код ОК 005 (ОКП): 35 6300, 35 7400
код ЕКПС:
СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ ТЕХНИЧЕСКОГО РЕГЛАМЕНТА (ТЕХНИЧЕСКИХ РЕГЛАМЕНТОВ) Технический регламент о требованиях пожарной безопасности (Федеральный Закон № 123-ФЗ от 22 июля 2008г.). (см. Приложение – бланк № 0434209)
код ТН ВЭД России: 8544 49 950 0, 8544 49 930 0
Показатели пожарной опасности по ГОСТ Р 53315-2009: пункт 5.2. – предел распространения горения одиночным кабельным изделием ПРГО1.
ПРОВЕДЕННЫЕ ИССЛЕДОВАНИЯ (ИСПЫТАНИЯ) И ИЗМЕРЕНИЯ протоколы испытаний ИЛ КП ООО ЦИКП "Волга-тест" (ТРПБ.RU.ИН83 от 05.06.2011г. до 04.08.2016г.) №№ 77-П, 78-П, 79-П от 13.11.2013г.
ПРЕДСТАВЛЕННЫЕ ДОКУМЕНТЫ акт анализа состояния производства № ПБ-215/2013 от 29.11.2013г. ОСЭ ООО «ЭЛМАШ» (рег. № ТРПБ.RU.ПБ49)
СРОК ДЕЙСТВИЯ СЕРТИФИКАТА СООТВЕТСТВИЯ с 24.02.2014 по 23.02.2019
Руководитель (заместитель руководителя) органа по сертификации Д.А. Дружинин
Эксперт (эксперты) Р.Ю. Аминев


ТАМОЖЕННЫЙ СОЮЗ
EAC
СЕРТИФИКАТ СООТВЕТСТВИЯ
№ ТС RU C-DE.ME77.B.01218
Серия RU № 0086472
ОРГАН ПО СЕРТИФИКАЦИИ продукции ООО "Центр по сертификации стандартизации и систем качества электро-машиностроительной продукции" (ООО «ЭЛМАШ») Адрес: 141400, РФ, Московская обл., г. Химки, ул. Ленинградская, д. 29. Телефон: +7(495)7812587; Факс: +7(495)7812588, E-mail: oc.elmash@gmail.com, Аттестат рег. № РОСС RU.0001.11ME77, выдан 13.05.2010г. Ростехрегулированием
ЗАЯВИТЕЛЬ Общество с ограниченной ответственностью "ИГУС", ОГРН: 1147746040562 Адрес: 107023, РФ, г. Москва, Барабанный переулок, дом 4, строение 6; Фактический адрес: 140707, РФ, г. Москва, пос. Газопровод, Поселение Сосенское, к/п "Лесные Поляны" коттедж 1, этаж 2. Телефон / Факс: +79670420801; E-mail: info@igus.ru
ИЗГОТОВИТЕЛЬ igus® GmbH Адрес: Spicher Str. 1a, D-51147 Köln, Germany (Германия)
ПРОДУКЦИЯ Электрические кабели передачи данных (Bus cables) серии igus® chainflex® марки: CFBUS.PVC, CFBUS.PUR, CFBUS, CF11.LC, CF11.LC.D, CF14.CAT5, CFROBOT8, CFSPECIAL.182. Серийный выпуск. EN 60228; DIN VDE 0281 part 10813; IEC 60332-1-2.
КОД ТН ВЭД ТС 8544 49 930 0
СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ Технического регламента Таможенного союза ТР ТС 004/2011 "О безопасности низковольтного оборудования" (Приложение – бланк № 0047533).
СЕРТИФИКАТ ВЫДАН НА ОСНОВАНИИ протокола испытаний № 116 от 13.11.2013г. ИЛ КП ООО ЦИКП «Волга-тест» (рег. № РОСС RU.0001.21КБ19 с 21.05.2013 по 30.09.2016г.); - акта анализа состояния производства № ПБ-215/2013 от 29.11.2013г. ОСЭ ООО «ЭЛМАШ» (рег. № РОСС RU.0001.11ME77 с 13.05.2010 по 13.05.2015г.); - сертификата соответствия требованиям ФЗ РФ «Технический регламент о требованиях пожарной безопасности», выданного ОСЭ ООО «ЭЛМАШ» (рег. № ТРПБ.RU.ПБ49 с 25.08.2010 до 25.08.2015г.) № C-DE.ПБ49.B.00416 от 24.02.2014г. до 23.02.2019г.
ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ Срок службы и гарантия igus® для кабелей chainflex® распространяется до 10 млн. двойных ходов, на срок до 3 лет, в соответствии с гарантийными условиями «igus® chainflex® guarantee-club». Условия хранения продукции в соответствии с документами изготовителя PA-3-204, PA-3-213-A, QM-3-2-90D.
СРОК ДЕЙСТВИЯ С 24.02.2014 ПО 23.02.2019 ВКЛЮЧИТЕЛЬНО
Руководитель (уполномоченное лицо) органа по сертификации Ю.Н. Никитин
Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) Р.Ю. Аминев

All certificates can be found on ▶ www.igus.eu/CTP-EAC

The general conditions

The General Conditions of Sale of igus® shall apply. Excessive and short deliveries of ± 10 % for cables conform with contractual agreements. Deliveries can be made in part-lengths. Statutory VAT must be added to the prices. The General Conditions of Sale and Delivery of igus® GmbH, Cologne, can be found online under www.igus.eu.
The prices quoted in the catalogue or other media are subject to alteration. igus® can modify the prices at any time at their own discretion.

User information

Since our products are constantly being developed further in the interest of our customers, we reserve the right to make technical alterations at any time. With the issue of this catalogue, all previous publications lose their validity. Subject to printing errors.

Disclaimer

The terms "igus", "chainflex", "CFRIP", "readycable", "readychain", "e-chain", "e-chain systems", "e-ketten", "e-kettensysteme", "flizz", "iglidur", "drylin" are legally protected trademarks in the Federal Republic of Germany and in case also in foreign countries.

Outer jacket color according to RAL

chainflex® cable jacket colours are given with the similar RAL colour number; for example yellow-green, similar to RAL 6018. Slight differences can occur from the exact RAL colour, depending on the cable jacket material. However, this has no effect on the quality or functionality of the cable.

A RAL number is used to describe different shades of colour more consistently. For example, RAL 7040 is light grey and RAL 7016 is a dark grey. The RAL number describes the colour, but cannot guarantee the same shade in different applications.

RAL: German Institute for Quality Assurance and Certification EV. ▶ www.RAL.de

KTG

If cable drums are to be used, please visit KTG directly online.
▶ www.kabeltrommel.de

Product illustrations

The products illustrated are photos showing examples for whole series, i.e. the original cable can deviate from the cable shown.

Information | General

Technical notes

The USB, FireWire and GigE cables listed on this page have been developed and manufactured for the mechanically demanding industrial application in e-chain systems®. High resistance against oil and lubricants are guaranteed, and also a high protection against electro-magnetic interference fields. This high mechanical service life was reached with the usage of high quality materials which even care for the electrical safeness.
In single cases communication errors can occur, if very different hardware and software is combined. We recommend tests with all components and the cables before starting serial production, to get the proove for a perfect running system.
Of course we support you with the details of these electrical tests.

The specifications in the catalogue referring to temperature range, bend radius and travel must be seen as limiting value specifications. If two limiting value specifications are combined, this can lead to a reduction of the cable's service life.

The term "oil resistant" refers to a few selected oil types which have been tested accordingly. This does not mean, however, that the products are automatically resistant to all the oils on the market.

Length printing: Respective printing of the metre length is already on many cables. These are not calibrated measurements, they are only intended as an orientation aid.
Just give us a call!

igus® worldwide

igus® Offices

igus® Distributors

1 Germany

igus® GmbH
Spicher Str. 1a
51147 Köln
P.O. Box 90 61 23
51127 Köln
Phone 02203 9649-0
Fax 02203 9649-222
info@igus.de, www.igus.de

2 Argentina

Borintech SRL
Av. Elcano 4971
C1427CIH Buenos Aires
Phone +5411 4556 1000
Fax +5411 4556 1000
igus@borintech.com

3 Australia

Treotham Automation Pty. Ltd.
14 Sydenham Road
Brookvale NSW 2100
Phone +61 2 9907-1788
Fax +61 2 9907-1778
info@treotham.com.au

4 Austria

igus® polymer Innovationen GmbH
Photo-Play-Straße 1
4860 Lenzing
Phone +43 7662 57763
Fax +43 7662 57751
igus-austria@igus.de

5 Belarus

SOOO Hennlich
Puschkin ave. 39 amt 5
BY 220092 Minsk
Republik Belarus
Phone +375 17 207-1828
Fax +375 17 207-3921
info@hennlich.by

6 Belgium/Luxembourg

igus® B.V.B.A.
Jagersdreef 4A
2900 Schoten
Phone +32 3 330 13 60
Fax +32 3 313 79 91
info@igus.be

7 Bosnia + Herzegovina

Hennlich d.o.o.
Tvornička 3
(Energoinvest-zgrada C&O)
71210 Ilidža - Sarajevo
Phone +387 33 451 439
Fax +387 33 451 439
info@hennlich.ba

8 Brazil

igus® do Brasil Ltda.
Rua Antônio Christi, nº 611
Parque Industrial III – FAZGRAN
Jundiaí – CEP 13213-183 – SP
Phone +55 11 3531-4487
Fax +55 11 3531-4488
vendas@igus.com.br

9 Bulgaria

igus® EOOD
2, Lui Ayer str., fl.4, off. 4
1404 Sofia, Bulgaria
Phone +359 2 850 8409
Fax +359 2 850 8409
info@igus.bg

9 Bulgaria

Hennlich OOD, BG
4003 Plovdiv, Bulgaria
147A, Brezovsko shose Str.,
Rota center, fl. 3
Phone +359 32 511 326
Fax +359 32 621 929
office@hennlich.bg

10 Canada

igus® Office Canada
Suite 100-180
Bass Pro Mills Dr
Vaughan, ON L4K 5W4
Phone +1 905 7608448
Fax +1 905 7608688
webmaster@igus.com

11 Chile

Vendortec
Avda. Los Pajaritos 3195,
Oficina 1410
Edificio Centro Maipú
Maipú – Santiago
Phone +56 22 710 58 25
+56 23 245 02 00
ventas@vendortec.cl

12 China

igus® Shanghai Co., Ltd.
No.46 Warehouse,
11 Debao Road, WGQ FTZ,
Shanghai 200131,
P. R. China
Phone +86 21 51303100
Fax +86 21 51303200
master@igus.com.cn

13 Colombia

Productos igus SAS
Calle 33A
#21-09 Bogotá
Tocancipá, CUN 251017
Phone +57 1 561 2959
ext. 113
igus@igus.com.co

14 Costa Rica

Enesa Equipos Neumaticos S.A.
Del Colegio Marista
100 este, 200 sur, 25 este
Urbanizacion Ciruelas
Alajuela, Costa Rica
Phone +506 2440-2393
Fax +506 2440-2393
equiposneumaticos@enesa.net

15 Croatia

Hennlich, Industrijska d.o.o.
Stupničkoobreška 17
Stupnički Obrež
10255 Gornji Stupnik
Phone +385 1 3874334
Fax +385 1 3874336
hennlich@hennlich.hr

16 Czech Republic

HENNLICH s.r.o.
Českolipská 9
412 01 Litoměřice
Phone e-chains®
+420 416 711332
Phone Plain bearings
+420 416 711339
Fax +420 416 711999
lin-tech@hennlich.cz

17 Denmark

igus® ApS
Lysholt Alle 8
DK-7100 Vejle
Phone +45 86 603373
Fax +45 86 603273
info@igus.dk

18 Ecuador

Ecuainsetec
Yugoeslavia N34-110 y Azuay
Quito
Phone +593 2 2253757
Fax +593 2 2461833
infouio@ecuainsetec.com.ec

19 Egypt

IEE International Company for Electrical Engineering
2nd floor, 25 Orabi St
Down Town, Cairo
Phone +202 25767370
Fax +202 25767375
sales@iee-egypt.com

20 Estonia

igus® OÜ
Lõõtsa 4A
Tallinn 11415
Phone +372 667 5600
Fax +372 667 5601
info@igus.ee

21 Finland

OEM Finland OY
Fiskarsinkatu 3
20750 Turku
PL 9, 20101 Turku
Phone +358 20 7499499
Fax +358 20 7499456
info@oem.fi

21 Finland

SKS Mekaniikka Oy
Martinkyläntie 50
01720 Vantaa
Phone +358 20 76461
Fax +358 20 7646824
sales.mekaniikka@sks.fi

22 France

igus® SARL
49, avenue des Pépinières
Parc Médicis
94260 Fresnes
Phone +33 1 49840404
Fax +33 1 49840394
info@igus.fr

23 Greece

J. & E. Papadopoulos S.A.
12 Polidefkous str
Piraeus, 185 40
Phone +30 210 4113133
Fax +30 210 4116781
sales@papadopoulos-sa.com

23 Greece

Chrismotor s.a.
71, Sp. Patsi str.
118 55 Athens
Phone +30 210 34 25574
Fax +30 210 3425595
info@chrismotor.gr

24 Hong Kong

Sky Top Enterprises Ltd.
Room 1806 ; Block C; Wah Tat Industrial Center; Wah Sing Street; Kwai Chung Hong Kong
Phone +852 23318928
Fax +852 24269738
info@skytop.com.cn

25 Hungary

igus® Hungária Kft.
Ipari Park u.10.
1044 Budapest
Phone +36 1 3066486
Fax +36 1 4310374
info@igus.hu

25 Hungary

Tech-Con Kft.
Vésö utca 9-11
1133 Budapest
Phone +36 1 4124161
Fax +36 1 4124171
tech-con@tech-con.hu

26 India

igus® (India) Pvt. Ltd.
36/1, Sy No. 17/3
Euro School Road,
Dodda Nekkundi Industrial Area, - 2nd Stage
Mahadevapura Post
Bangalore 560048
Phone +91 80 45127800
Fax +91 80 45127802
info-in@igus.net

27 Indonesia

PT igus® Indonesia
Headquarter Indonesia
Taman Tekno BSD
Sektor XI, Blok L1 No. 15
Tangerang Selatan 15314
Phone +62 21 7588 1933
Fax +62 21 7588 1932
info@igus.co.id

28 Ireland

igus® Ireland
Caswell Rd
Northampton NN4 7PW
Phone +44-1604 677240
Fax +44-1604 677242
sales@igus.ie

29 Israel

Conlog LTD
P.O. Box 3265
17 Hamefalssim Str.
Industrial Zone Kiryat Arie
Petach-Tikva 49130
Phone +972 3 9269595
Fax +972 3 9233367
conlog@conlog.co.il

30 Italy

igus® S.r.l.
Via delle Rovedine, 4
23899 Robbiate (LC)
Phone +39 039 5906.1
Fax +39 039 5906.222
igusitalia@igus.it

31 Japan

igus® k.k.
Arcacentral 15F, 1-2-1 Kinshi,
Sumida-ku Tokyo JAPAN
Zip 130-0013
Phone +81 358 192030
Fax +81 358 192055
info@igus.co.jp

32 Kenya

Mantrad Ltd.
Sterling House, 1St. Floor
Moi Avenue, Mombasa
Phone + 254 722 706 830
Fax + 254 720 765 566
info@mantrad.co.ke

33 Latvia

Techvitas SIA
Daugavas iela 38-3
Mārupe, LV-2167
Phone +372 667 5600
Fax +372 667 5601
i_igusLettland_G@igus.de

34 Lebanon

Mecanix Shops SAL
Horsh Tablet - Ste Rita blvd
P.O.Box: 55384 Beirut
Phone +961 1 486701
Fax +961 1 490929
sales@mecanixshops.com

35 Lithuania

Hitech UAB
Terminalo g. 3
54469 Biruliskiu k. (Kauno LEZ)
Kauno raj.
Phone +370 37 323271
Fax +370 37 203273
info@hitech.lt

36 Macedonia, Albania, Kosovo

Hennlich doo Beograd
Radomira Markovića 1/3
11222 Beograd
Phone +381 11 63 098 17
Fax +381 11 63 098 20
office@hennlich.rs

37 Malaysia

igus® Malaysia Sdn Bhd
Suite 1601-1, Level 16,
Tower 2, Wisma AmFirst,
Jalan SS 7/15 (Jalan Stadium),
47301 Kelana Jaya, Selangor
Phone +603 7803 0618
Fax +603 7886 1328
info@igus.my

38 Morocco

AFIT
5, Rue Amir Abdelkader
20300 Casablanca
Phone +212 522 633769
Fax +212 522 618351
souria.vu@premium.net.ma

39 Mexico

igus® México S. de R.L. de C.V.
Boulevad Aeropuerto Miguel Alemán 160 Int. 135
Col. Corredor Industrial Toluca Lerma
Lerma, Estado de México C.P. 52004
Phone +52 728284 3185
Fax +52 728284 3187
fmarquez@igus.com

40 Middle East (except of UAE)

JISigus Middle East FZE
FF07, Jebel Ali Free Zone
PO Box- 17483
Dubai, United Arab Emirates
Phone +971 4222 1185
Fax +971 4222 1186
info@jisigus.com

41 Myanmar

Sea Lion Co. Ltd.
181 Bo Myat Tun St
Botataung Yangon
11161 Myanmar
Phone +95 1 29 97 97
Fax +95 1 20 27 51
zaw.m.thant@sealionmyanmar.com

42 Netherlands

igus® B.V.
Sterrenbergweg 9
3769 BS Soesterberg
Phone +31 346 353932
Fax +31 346 353849
info@igus.nl

42 Netherlands – dry-tech®

Elcee B.V.
Kamerlingh Onnesweg 28
NL-3316 GL Dordrecht
Phone +31 (0)78-654 47 77
Fax +31 (0)78-654 47 33
info@elcee.nl

43 Nigeria

Deepee Industrials Ltd.
11 Ishaga Road Surulere
Lagos
Phone +234 803 3899107
oachinike@gmail.com

44 New Zealand

Treotham Automation Pty Ltd.
Stocking Distributor
13c Vogler Drive
Wiri Auckland 2104
Phone +64 9 278 6577
Fax +64 9 278 6578
info@treotham.co.nz

44 New Zealand

Automation Equipment Ltd.
26 Tawn Place
PO Box 5656
Hamilton
Phone +64 7 8490281
Fax +64 7 8492422
sales@autoequip.co.nz

45 Norway

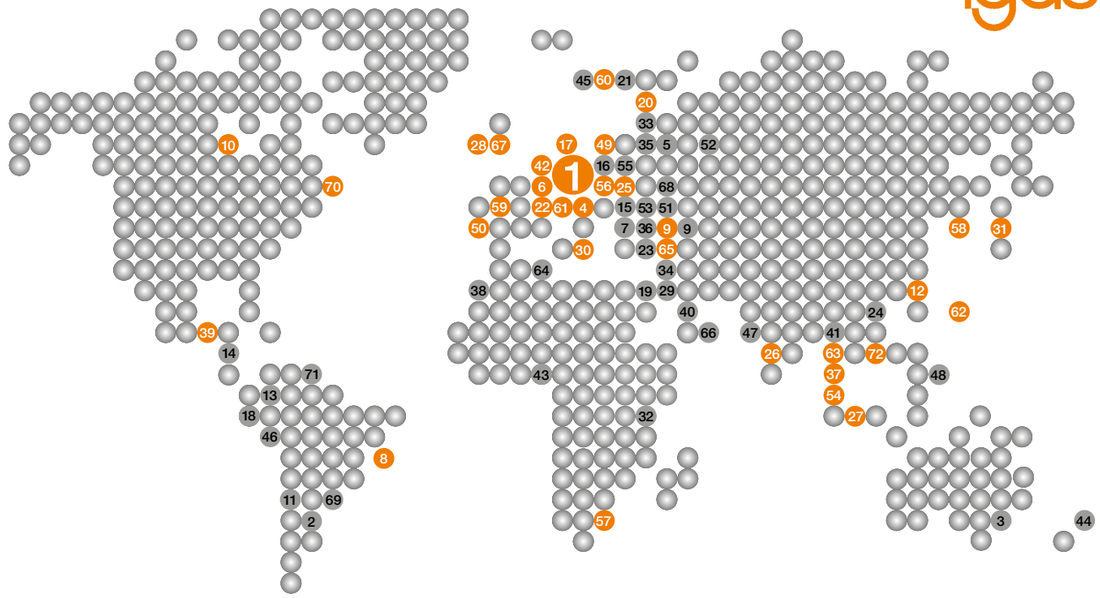
ASI Automatikk AS
Sankt Hallvards vei 3, port 8
3414 Lierstranda
Phone +47 9006 1100
info@asiflex.no

46 Peru

PROIGUS S.A.C.
Calle Bolivar 388/of. 203
Miraflores
Lima 18 – Perú
Phone +51 1 2414370
Fax +51 1 2428608
profaceventas@profaco.com

47 Pakistan

GEMS International Trading
501, Windsong Place, Block 7&8,
K.C.H.S, Off Shaheed-e-Millat Rd.
Karachi - 75350
Phone +92 21 34531505
marketing@gemsinter.com



48 Philippines

Silicon Exponents Corp.
Unit 1-B, 8414 LMN Bldg.
Dr. A. Santos Avenue Brgy.BF
Homes Sucat Parañaque City
1700 Philippines
Phone +63 2 8250 126/135
Fax +63 2 8250 141
ryemrigor@sieplus.ph

49 Poland

igus® Sp. z o.o.
ul. Działkowa 121C
02-234 Warszawa
Phone +48 22 8635770
Fax +48-22 8636169
info@igus.pl

50 Portugal

igus® Lda.
R. Eng. Ezequiel Campos, 239
4100-231 Porto
Phone +351 22 6109000
Fax +351 22 8328321
info@igus.pt

51 Romania

Hennlich SRL
Str. Patria, Nr17
310106 Arad
Phone +40 257 211119
Fax +40 257 211021
igus@hennlich.ro

52 Russia

OOO Hennlich
Room 14
Naberezhnaya reki Lazuri, 15A
170028 Tver
Russian Federation
Phone +7 4822 787 180
Fax +7 4822 787 180, add. 380
hennlich@hennlich.ru

53 Serbia + Montenegro

Hennlich doo Beograd
Radomira Markovica 1/3
11222 Beograd / Srbija
Phone +381 11 63 098 17
Fax +381 11 63 098 20
office@hennlich.rs

54 Singapore– ASEAN HQ

igus® Singapore Pte Ltd
84 Genting Lane
#06-03 Axxel Innovation Centre
Singapore 349584
Phone +65 6487 1411
info@igus.com.sg

55 Slovakia

Hennlich s.r.o.
Na Bystricku 16
SK-036 01 Martin
Phone +421 43 421 2352
lintech@hennlich.sk
www.hennlich.sk

56 Slovenia

igus® d.o.o.
Tržaška c. 134
1000 Ljubljana
Slovenija
Mob. +386 (0)30 601 610
info@igus.si

56 Slovenia

Hennlich, d.o.o. Industrijska tehnika
Podnart 33
SI-4244 Podnart
Phone +386 4 53206-10
Fax +386 4 53206- 20
info@hennlich.si

57 South Africa

igus® Pty. Ltd.
Unit 29
Midline Business Park
Cnr Le Roux & Richards Drive
Midrand 1682
Phone +27 11312-1848
Fax +27 11312-1594
sales.sa@igus.de

58 South Korea

igus® Korea Co. Ltd.
613-14 Namchondong,
Namdonggu
Incheon City, 405-846
Phone +82 32 82129-11
Fax +82 32 82129-13
info@igus.kr

59 Spain

igus® S.L.U.
Ctra. Llobatona, 6
Polígono Noi del Sucre
08840 Viladecans – BCN
Phone +34 936 473950
Fax +34 936 473951
igus.es@igus.es

60 Sweden

igus® AB
Berga Allé 1
254 52 Helsingborg
Phone +46 42 329270
Fax +46 42 211585
info@igusab.se

60 Sweden – the-chain

OEM Automatic AB
Box 1011 Dalagatan 4
573 28 Tranås
Phone +46 75 2424100
Fax +46 75 2424159
info@oemautomatic.se

60 Sweden – dry-tech®

Colly Components AB
Raseborgsgatan 9
P.O. Box 76
164 94 Kista
Phone +46 8 7030100
Fax +46 8 7039841
info@me.colly.se

61 Switzerland

igus® Schweiz GmbH
Winkelstr. 5
4622 Egerkingen
Phone +41 62 388 97 97
Fax +41 62 388 97 99
info@igus.ch

62 Taiwan

igus® Taiwan Company Ltd.
5F, No. 35, 24th Road
Taichung Industrial Park
Taichung 40850
Phone +886 4 2358-1000
Fax +886 4 2358-1100
info@igus.tw

63 Thailand

igus® Thailand Co., Ltd
1340 Soi Bangkok-Nonthaburi 30,
Bangkok-Nonthaburi Rd.,
Bangsue, Bangsue
Bangkok 10800
Phone +66 (0)2 587 4899
Fax +66 (0)2 587 4898
info@igus.co.th

64 Tunisia

BOUDRANT
53, Avenue de Carthage
1000 Tunis – Tunisia
Phone +216 71340244
Fax +216 71348910
info@boudrant.com.tn

65 Turkey

igus® Turkey
Güzeller Org. San. Bölg.
Galvano Teknik San. Sit.
Cumhuriyet Cad. 2/32
P.K. 41400 Gebze / Kocaeli
Phone +90 262 502 14 08
Fax +90 262 502 14 19
info@igus.com.tr

65 Turkey

HIDREL Hidrolik Elemanlar
Sanayi ve Ticaret A.S.
Percemli Sk. No. 7
Tünel Mevkii
34420 Karaköy / Istanbul
Phone +90 212 2494881
Fax +90 212 2920850
info@hidrel.com.tr

66 UAE + Oman

Unigroup FZE
Plot of Land M6-01
Sharjah Airport Free Zone
P.O. Box 120300
Sharjah - U.A.E.
Phone +971 6 5578386
Fax +971 6 5578387
automation@unigroup.ae

67 United Kingdom

igus®
Caswell Rd
Northampton NN4 7PW
Phone +44 1604 677240
sales@igus.co.uk

68 Ukraine

Hennlich Ukraine LLC (HQ)
Kramatorska Street 15
84100 Slovyansk City,
Donetsky Region
Phone +38 06262 33540
hennlich@hennlich.com.ua

68 Ukraine

Cominpro Ltd.
Romena Rollana 12,
Office 220
61058 Kharkov
Phone +38 0577174914
Fax +38 0577174914
cominpro@gmail.com

69 Uruguay

Larrique Rulemanes SA
Galicia 1204
Montevideo-Uruguay
Phone +598 29021773
Fax +598-29084824
larrique@larrique.com.uy

70 USA

igus® inc.
257 Ferris Avenue
P.O. Box 14349
East Providence
RI 02914
Phone +1 401 4382200
Fax +1 401 4387270
webmaster@igus.com

71 Venezuela

Neumatica Rotonda C.A.
Prolong Av. Michelena
C.C. Atlas Locales B-10 y B-11
Valencia, Edo. Carabobo
Phone +58 241 832.64.64
+58 241 832.32.50
+58 241 838.88.19
Fax +58 241 832.62.83
ventas@neumaticar.com

72 Vietnam

igus® Vietnam Company Ltd
1/7 Huynh Lan Khanh Street,
Ward 2
District Tan Binh, HCM City,
Vietnam
Phone +84 28 3636 4189
info@igus.vn

Online | Product finder and design

Find & compare cables

Quickcable

The chainflex® product finder simply shows which of our cables is best suited for your e-chain® application:
Select the cable type , the connection and other desired product properties as well as the number of cores and the cross-section , the nominal voltage and type of the e-chain® for your application. Select the bending radius, the maximum and minimum operating temperature ❶, torsion, maximum speed and acceleration, as well as the travel ❷. Select the bend radius, the maximum and minimum operating temperature ❸, torsion, maximum speed and acceleration, as well as the travel ❹.
The results are displayed at the bottom edge of the screen ❺.

▶ www.igus.eu/quickcable

Design and calculate e-chains®

QuickChain 100

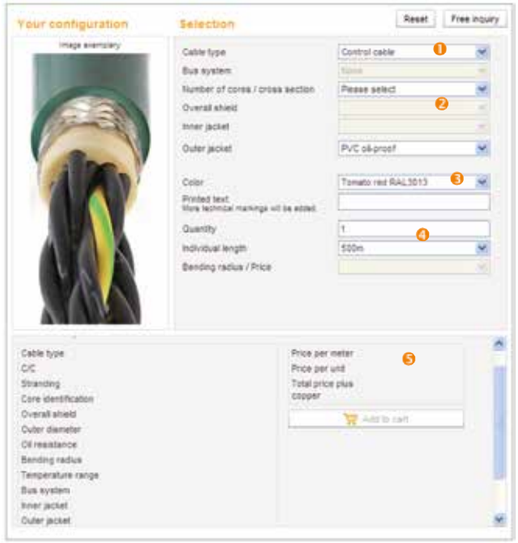
This tool will help you to plan your e-chain®, from cables to energy supply systems.
Please determine the filling requirements and enter the weight first ❶ – or just select the igus® chainflex® cables ❷. Then select the type of installation and set speed, acceleration, and stroke/cycles per hour ❸. Choose the length of the travel and the inner diameter of the chain ❹. To find the chain that fits your needs best, select the conditions to which your e-chain® will be exposed (if applicable) ❺.
In the next step, select the correct e-chain® and the desired performance features. If you need help while filling the e-chain®, from here you can go directly to the "QuickFill" shelving configurator.

▶ www.igus.eu/quickchain100

Online | Configurators

Configure chainflex® custom cables

CCC

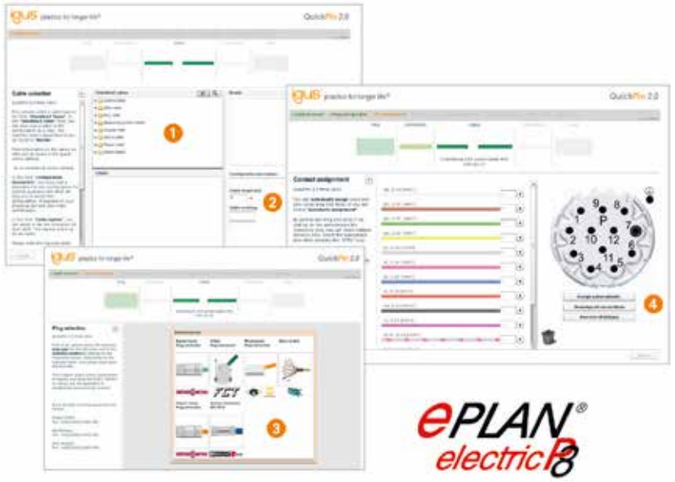


Using the chainflex® custom cable configurator, unique chainflex® custom cables can be ordered on the spot within 3 minutes at the daily prices starting at 300 m, and shipped within 3 weeks.
Select the required cable type ❶ and then enter the specificities as numbers of cores, shield, jacket material, colour, etc ❷. Add the individual characteristics like colour and printed text ❸. Then select the quantity and length ❹ and you immediately see the price online❺.
You can add it to the cart or please enter your personal details and send us a request.

▶ www.igus.eu/ccc

Connector-cable configurator

QuickPin 2.0

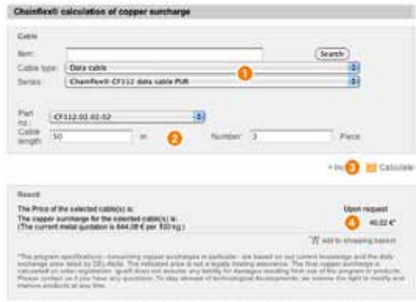


This tool makes your electrical design much easier.
Begin by selecting the appropriate cable ❶. Enter a description of the cable and its length ❷. Select the connection type ❸ and configure the connector by selecting the manufacturer (if available) and other variables. Then you can assign the cores and pins. Define the assignment of the connections manually, whereby you are guided in the selection by the numbers on the connector, or choose the automatic option ❹.
In the next steps, you can select the other connections, connectors and the length of cable reinforcement. Or order directly and create an ePLAN P8 macro for the future configuration of your cables.

▶ www.igus.eu/quickpin

Calculate copper surcharge

QuickCopper



Online copper surcharge calculator for igus® chainflex® cables.
Simply select your cable in the drop-down list ❶ or enter a product number. Then you enter the length of the cable ❷ and how often it is needed. Then click on "Calculate" ❸. The price of cable is shown, then the calculated price of copper below and finally the total costs ❹.

▶ **www.igus.eu/quickcopper**

Calculate service life of cables

QuickLife

Calculate the service life of your required cable online with a few clicks. Enter the name of your system and select cable type, series and part number ❶. Enter the system information ❷ of your energy chain and select whether you have an unsupported or gliding application.
Click on "Calculate" ❸ to be shown the results ❹.

▶ **www.igus.eu/cf-lifetime**

Configure hoses

QuickFluid

Quickly "configure" hoses. Select the required hose from the list ❶. If you enter the application parameters ❷ QuickFluid will recommend the hose.
Select the necessary fittings to connect the hose from the choices available . The total cost will be displayed ❸. Select the necessary fittings to connect the hose from the choices available . The total cost will be displayed ❹.

▶ **www.igus.eu/quickfluid**

The entire igus® product range as well as service and latest news can be found on the internet at www.igus.eu

Special information of chainflex® can be found on the internet at www.chainflex.eu

energy chain systems

Information, selection and online ordering by clicking on the online catalogue.

Quick product selection and all important related information.

More than 80,000 products, all features and data

Fast and easy design of e-chains®, with free download of 3D product drawings.

Design and calculate your e-chain® by simply entering the parameters and environment of your application.

Polymer plain bearings

iglidur® plain bearings. 35 materials, all features and applications.

Everything about self-adjusting and maintenance free igubal® plain bearings.

Information, quick selection and ordering related to the drylin® linear bearings.

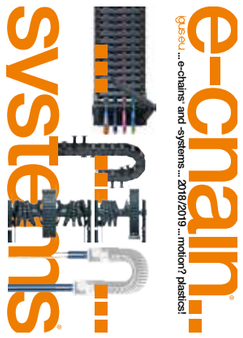
Find the right linear bearing in 4 simple steps with the drylin® selection system and service life calculation.

Many application examples with iglidur®, igubal® and drylin®.

Efficient design tools, free download of 3D product drawings.

You can also download all catalogues and brochures in our download area at **www.igus.eu/downloads**

Printed CATALOGUES:



e-chains® and e-chain systems®

The standard catalogue for e-chains® and e-chain systems® an 1,400 pages.

- 90,000 products from stock
- Coloured chapters for better orientation
- New products , e.g. e-spool, twisterband, E4.1 light can be ordered
- **Optimised overview,** readability and ordering tools
- **Detailed product information**
- Many links to online tools and configurators

Polymer plain bearings and ball bearings

The standard catalogue for plain bearings, self-aligning bearings and linear bearings and systems on 1,280 pages.

- 10,400 products from stock
- Coloured chapters for better orientation
- Many new products, e.g. drylin® axes with motor, new iglidur® materials and line extensions
- **Optimised overview,** readability and ordering tools
- **Detailed product information**
- Many links to online tools and configurators

igus® webguide

The WebGuide is the first technical printed catalog that is entirely designed as a quick selection, and on selection of the desired product leads straight to the internet.

- Clear and easy
- It combines the advantages of a printed catalogue with the manifold possibilities of the Internet
- Price indicated for almost every product in the catalogue
- Get inspired by the QR code which show you application examples
- The catalogue Quicklinks (www.igus.eu/web/...) lead you directly to suitable product range, where you can configure, compare, generate CAO data, etc.
- Quick overview and simple comparison of all igus® product groups
- Handy DIN A5 format

chainflex® cables | For your notes
Notes

chainflex® cables | For your notes
Notes

chainflex® cables | For your notes
Notes

chainflex® cables | For your notes
Notes

igus® Part No.	Page
Control cable CF2	
CF2.01.04	92
CF2.01.08	92
CF2.01.12	92
CF2.01.18	92
CF2.01.24	92
CF2.01.36	92
CF2.02.04	92
CF2.02.08	92
CF2.02.18	92
CF2.02.24	92
CF2.02.48	92
Control cable CF5	
CF5.02.36	64
CF5.03.15	64
CF5.03.18	64
CF5.03.25	64
CF5.05.02	64
CF5.05.03	64
CF5.05.05	64
CF5.05.07	64
CF5.05.12	64
CF5.05.18	64
CF5.05.25	64
CF5.05.30	64
CF5.07.03	64
CF5.07.04	64
CF5.07.05	64
CF5.07.07	64
CF5.07.12	64
CF5.07.18	64
CF5.07.25	64
CF5.07.36	64
CF5.07.42	64
CF5.10.03	64
CF5.10.04	64
CF5.10.05	64
CF5.10.07	64
CF5.10.12	64
CF5.10.18	64
CF5.10.25	64
CF5.15.03	64
CF5.15.04	64
CF5.15.05	64
CF5.15.07	64
CF5.15.12	64
CF5.15.18	64
CF5.15.25	64
CF5.15.36	64
CF5.25.04	64
CF5.25.05	64
CF5.25.07	64
CF5.25.12	64
CF5.25.18	64
CF5.25.25	64
Control cable CF6	
CF6.02.04	68
CF6.02.25	68
CF6.03.05	68
CF6.05.02	68
CF6.05.05	68
CF6.05.07	68
CF6.05.09	68
CF6.05.12	68
CF6.05.18	68
CF6.05.25	68
CF6.07.03	68
CF6.07.04	68
CF6.07.05	68
CF6.07.07	68
CF6.07.12	68
CF6.07.18	68
CF6.07.25	68
CF6.10.03	68
CF6.10.04	68
CF6.10.05	68
CF6.10.07	68
CF6.10.12	68
CF6.10.18	68
CF6.10.25	68
CF6.15.03	68
CF6.15.04	68
CF6.15.05	68
CF6.15.07	68
CF6.15.12	68
CF6.15.18	68
CF6.15.25	68
CF6.15.36	68
CF6.25.04	68
Control cable CF9	
CF9.02.02	96
CF9.02.03.INI	96
CF9.02.06	96
CF9.02.07	96
CF9.02.08	96
CF9.02.12	96
CF9.02.18	96
CF9.02.20	96
CF9.02.25	96
CF9.03.04.INI	96
CF9.03.05.INI	96
CF9.03.06	96
CF9.03.08	96
CF9.03.16.07.03.INI	96
CF9.05.02	96
CF9.05.03	96
CF9.05.04	96
CF9.05.05	96
CF9.05.07	96
CF9.05.12	96
CF9.05.18	96
CF9.05.25	96
CF9.05.36	96
CF9.07.04	96
CF9.07.05	96
CF9.07.07	96
CF9.07.12	96
CF9.07.20	96
CF9.07.25	96
CF9.10.03	96
CF9.10.04	96
CF9.10.05	96
CF9.10.12	96
CF9.10.18	96
CF9.10.25	96
CF9.15.02	96
CF9.15.04	96
CF9.15.05	96
CF9.15.07	96
CF9.15.12	96
CF9.15.18	96
CF9.15.25	96
CF9.15.36	96
CF9.25.04	96
CF9.25.05	96
CF9.25.07	96
CF9.25.12	96
CF9.25.16	96
CF9.25.18	96
CF9.25.25	96
CF9.40.04	96
CF9.60.04	96
CF9.60.05	96
CF9.100.04	96
CF9.160.04	96
Control cable CF9.UL	
CF9.UL.02.02	104
CF9.UL.02.03.INI	104
CF9.UL.02.04	104
CF9.UL.02.06	104
CF9.UL.02.08	104
CF9.UL.02.12	104
CF9.UL.03.04.INI	104
CF9.UL.03.05.INI	104
CF9.UL.03.06	104
CF9.UL.03.08	104
CF9.UL.05.02	104
CF9.UL.05.03	104
CF9.UL.05.04	104
CF9.UL.05.05	104
CF9.UL.05.07	104
CF9.UL.05.12	104
CF9.UL.05.18	104
CF9.UL.05.25	104
CF9.UL.07.05	104
CF9.UL.07.07	104
CF9.UL.07.12	104
CF9.UL.07.25	104
CF9.UL.10.03	104
CF9.UL.10.04	104
CF9.UL.10.12	104
CF9.UL.10.18	104
CF9.UL.10.25	104
CF9.UL.15.04	104
CF9.UL.15.05	104
CF9.UL.15.07	104
CF9.UL.15.12	104
CF9.UL.15.18	104
CF9.UL.15.25	104
CF9.UL.25.04	104
CF9.UL.25.05	104
CF9.UL.25.07	104
CF9.UL.25.12	104
CF9.UL.25.18	104
CF9.UL.25.25	104
CF9.UL.40.04	104
CF9.UL.60.04	104

Information | Table of contents by part number

igus® Part No.	Page
Control cable CF10	
CF10.01.12	100
CF10.01.18	100
CF10.02.04	100
CF10.02.08	100
CF10.02.12	100
CF10.02.25	100
CF10.03.05.INI	100
CF10.05.04	100
CF10.05.05	100
CF10.05.07	100
CF10.05.12	100
CF10.05.18	100
CF10.05.25	100
CF10.07.04	100
CF10.07.05	100
CF10.07.07	100
CF10.07.12	100
CF10.07.20	100
CF10.07.25	100
CF10.10.02	100
CF10.10.03	100
CF10.10.04	100
CF10.10.05	100
CF10.10.07	100
CF10.10.12	100
CF10.10.18	100
CF10.10.25	100
CF10.15.04	100
CF10.15.05	100
CF10.15.07	100
CF10.15.12	100
CF10.15.18	100
CF10.25.04	100
CF10.25.07	100
CF10.25.12	100
CF10.40.04	100
CF10.40.05	100
Control cable CF10.UL	
CF10.UL.02.04	108
CF10.UL.02.08	108
CF10.UL.02.12	108
CF10.UL.02.25	108
CF10.UL.05.04	108
CF10.UL.05.05	108
CF10.UL.05.12	108
CF10.UL.05.25	108
CF10.UL.07.04	108
CF10.UL.07.05	108
CF10.UL.07.07	108
CF10.UL.07.12	108
CF10.UL.07.20	108
CF10.UL.07.25	108
CF10.UL.10.02	108
CF10.UL.10.03	108
CF10.UL.10.04	108
CF10.UL.10.05	108
CF10.UL.10.07	108
CF10.UL.10.18	108
CF10.UL.10.25	108
CF10.UL.15.04	108
CF10.UL.15.05	108
CF10.UL.15.07	108
CF10.UL.15.12	108
CF10.UL.15.18	108
CF10.UL.25.04	108
CF10.UL.25.07	108
CF10.UL.25.12	108
CF10.UL.40.04	108
Data cable CF11	
CF11.01.04.02	138
CF11.01.18.02	138
CF11.02.01.02	138
CF11.02.02.02	138
CF11.02.03.02	138
CF11.02.04.02	138
CF11.02.05.02	138
CF11.02.06.02	138
CF11.02.10.02	138
CF11.02.14.02	138
CF11.03.08.02	138
CF11.05.04.02	138
CF11.05.06.02	138
CF11.05.08.02	138
CF11.07.03.02	138
CF11.10.04.02	138
CF11.15.06.02	138
Measuring system cable CF11.D	
CF11.001.D	244
CF11.002.D	244
CF11.003.D	244
CF11.004.D	244
CF11.005.D	244
CF11.006.D	244
CF11.007.D	244
CF11.008.D	244
CF11.009.D	244
CF11.010.D	244
CF11.011.D	244
CF11.012.D	244
CF11.013.D	244
CF11.014.D	244
CF11.015.D	244
CF11.016.D	244
CF11.017.D	244
CF11.018.D	244
CF11.019.D	244
CF11.021.D	244
CF11.022.D	244
CF11.025.D	244
CF11.027.D	244
CF11.028.D	244
CF11.031.D	244
CF11.032.D	244
CF11.033.D	244
CF11.034.D	244
CF11.035.D	244
CF11.038.D	244
CF11.040.D	244
Data cable CF12	
CF12.02.04.02	146
CF12.05.03.02	146
CF12.05.04.02	146
CF12.05.06.02	146
CF12.05.08.02	146
CF12.05.10.02	146
CF12.05.14.02	146
CF12.10.06.02	146
Servo cable CF21.UL	
CF21.07.05.02.01.UL	266
CF21.15.15.02.01.UL	266
CF21.25.15.02.01.UL	266
CF21.40.15.02.01.UL	266
CF21.60.15.02.01.UL	266
CF21.100.15.02.01.UL	266
CF21.07.03.02.02.UL	266
CF21.10.07.02.02.UL	266
CF21.15.07.02.02.UL	266
CF21.25.15.02.02.UL	266
CF21.40.15.02.02.UL	266
CF21.60.15.02.02.UL	266
CF21.100.15.02.02.UL	266
CF21.160.15.02.02.UL	266
Motor cable CF27.D	
CF27.07.04.D	314
CF27.15.04.D	314
CF27.25.04.D	314
CF27.500.04.D	314
Servo cable CF27.D	
CF27.07.05.02.01.D	280
CF27.15.15.02.01.D	280
CF27.25.15.02.01.D	280
CF27.40.15.02.01.D	280
CF27.60.15.02.01.D	280
CF27.100.15.02.01.D	280
CF27.160.15.02.01.D	280
CF27.250.15.02.01.D	280
CF27.350.15.02.01.D	280
CF27.07.03.02.02.D	280
CF27.10.07.02.02.D	280
CF27.15.07.02.02.D	280
CF27.25.15.02.02.D	280
CF27.40.15.02.02.D	280
CF27.60.15.02.02.D	280
CF27.100.15.02.02.D	280
CF27.160.15.02.02.D	280
CF27.250.15.02.02.D	280
CF27.15.05.04.D	280
CF27.25.05.04.D	280
CF27.40.05.04.D	280
Servo cable CF29.D	
CF29.15.15.02.01.D	284
CF29.25.15.02.01.D	284
CF29.40.15.02.01.D	284
Motor cable CF30	
CF30.15.04	298
CF30.25.04	298
CF30.25.05	298
CF30.40.04	298
CF30.40.05	298
CF30.60.04	298
CF30.60.05	298
CF30.100.04	298
CF30.100.05	298
CF30.160.04	298
CF30.160.05	298
CF30.250.04	298
CF30.350.04	298
CF30.500.04	298
Motor cable CF31	
CF31.15.04	302
CF31.25.04	302
CF31.25.05	302
CF31.40.04	302
CF31.40.05	302
CF31.60.04	302
CF31.60.05	302
CF31.100.04	302
CF31.100.05	302
CF31.160.04	302
CF31.250.04	302
CF31.350.04	302
CF31.500.04	302
CF31.700.04	302
Motor cable CF34.UL.D	
CF34.UL.15.04.D	318
CF34.UL.25.04.D	318
CF34.UL.40.04.D	318
CF34.UL.60.04.D	318
CF34.UL.60.05.D	318
CF34.UL.100.04.D	318
CF34.UL.100.05.D	318
CF34.UL.160.04.D	318
CF34.UL.160.05.D	318
CF34.UL.250.04.D	318
CF34.UL.100.04.O.PE.D	318
CF34.UL.160.04.O.PE.D	318
Motor cable CF35.UL	
CF35.UL.05.04	322
CF35.UL.07.04	322
CF35.UL.15.04	322
CF35.UL.25.04	322
CF35.UL.40.04	322
CF35.UL.60.04	322
CF35.UL.100.04	322
CF35.UL.160.04	322
CF35.UL.250.04	322
CF35.UL.60.03.O.PE	322
CF35.UL.250.03.O.PE	322
CF35.UL.350.03.O.PE	322
CF35.UL.500.03.O.PE	322
Motor cable CF37.D	
CF37.15.04.D	326
CF37.25.04.D	326
CF37.40.04.D	326
CF37.60.04.D	326
CF37.60.05.D	326
CF37.100.04.D	326
CF37.100.05.D	326
CF37.160.04.D	326
CF37.160.05.D	326
CF37.250.04.D	326
CF37.500.03.O.PE.D	326
Motor cable CF38	
CF38.15.04	328
CF38.25.04	328
CF38.40.04	328
CF38.60.04	328
CF38.100.04	328
CF38.160.04	328
CF38.250.04	328
CF38.100.03.O.PE	328
CF38.160.03.O.PE	328
CF38.500.03.O.PE	328
CF340.250.01	328
CF340.350.01	328
CF340.500.01	328
CF340.700.01	328
CF340.950.01	328
CF340.1200.01	328
CF340.1500.01	328
CF340.1850.01	328
CF340.2400.01	328
Control cable CF77.UL.D	
CF77.UL.02.03.INI	84
CF77.UL.02.04.D	84
CF77.UL.02.05.D	84
CF77.UL.02.07.D	84
CF77.UL.02.12.D	84
CF77.UL.02.18.D	84
CF77.UL.02.25.D	84
CF77.UL.03.04.INI	84
CF77.UL.05.04.D	84
CF77.UL.05.05.D	84
CF77.UL.05.07.D	84
CF77.UL.05.12.D	84
CF77.UL.05.18.D	84
CF77.UL.05.25.D	84
CF77.UL.05.30.D	84
CF77.UL.07.03.D	84
CF77.UL.07.04.D	84
CF77.UL.07.05.D	84
CF77.UL.07.07.D	84
CF77.UL.07.12.D	84
CF77.UL.07.18.D	84
CF77.UL.07.20.D	84
CF77.UL.07.25.D	84
CF77.UL.07.36.D	84
CF77.UL.07.42.D	84
CF77.UL.10.02.D	84
CF77.UL.10.03.D	84
CF77.UL.10.04.D	84
CF77.UL.10.05.D	84
CF77.UL.10.07.D	84
CF77.UL.10.12.D	84
CF77.UL.10.18.D	84
CF77.UL.10.25.D	84
CF77.UL.10.42.D	84
CF77.UL.15.04.D	84
CF77.UL.15.05.D	84
CF77.UL.15.07.D	84
CF77.UL.15.12.D	84
CF77.UL.15.18.D	84
CF77.UL.15.25.D	84
CF77.UL.15.36.D	84
CF77.UL.15.42.D	84
CF77.UL.25.03.D	84
CF77.UL.25.04.D	84
CF77.UL.25.05.D	84
CF77.UL.25.07.D	84
CF77.UL.25.12.D	84
CF77.UL.40.04.D	84
CF77.UL.40.05.D	84
CF77.UL.60.05.D	84
Twistable cable CF77.UL.D	
CF77.UL.02.03.INI	358
CF77.UL.02.04.D	358
CF77.UL.02.05.D	358
CF77.UL.02.07.D	358
CF77.UL.02.12.D	358
CF77.UL.02.18.D	358
CF77.UL.02.25.D	358
CF77.UL.03.04.INI	358
CF77.UL.05.04.D	358
CF77.UL.05.05.D	358
CF77.UL.05.07.D	358
CF77.UL.05.12.D	358
CF77.UL.05.18.D	358
CF77.UL.05.25.D	358
CF77.UL.05.30.D	358
CF77.UL.07.03.D	358
CF77.UL.07.04.D	358
CF77.UL.07.05.D	358
CF77.UL.07.07.D	358
CF77.UL.07.12.D	358
CF77.UL.07.18.D	358
CF77.UL.07.20.D	358
CF77.UL.07.25.D	358
CF77.UL.07.36.D	358
CF77.UL.07.42.D	358
CF77.UL.10.02.D	358
CF77.UL.10.03.D	358
CF77.UL.10.04.D	358
CF77.UL.10.05.D	358
CF77.UL.10.07.D	358
CF77.UL.10.12.D	358
CF77.UL.10.18.D	358
CF77.UL.10.25.D	358
CF77.UL.10.42.D	358
CF77.UL.15.03.D	358
CF77.UL.15.04.D	358
CF77.UL.15.05.D	358
CF77.UL.15.07.D	358
CF77.UL.15.12.D	358
CF77.UL.15.18.D	358
CF77.UL.15.25.D	358
CF77.UL.15.36.D	358
CF77.UL.15.42.D	358
CF77.UL.25.03.D	358
CF77.UL.25.04.D	358
CF77.UL.25.05.D	358
CF77.UL.25.07.D	358
CF77.UL.25.12.D	358
CF77.UL.40.04.D	358
CF77.UL.40.05.D	358
CF77.UL.60.05.D	358
Control cable CF78.UL	
CF78.UL.05.04	88
CF78.UL.05.05	88
CF78.UL.05.07	88
CF78.UL.05.09	88
CF78.UL.05.12	88
CF78.UL.05.18	88
CF78.UL.05.25	88
CF78.UL.07.03	88
CF78.UL.07.04	88
CF78.UL.07.05	88

Information | Table of contents by part number

Contents

Information | Table of contents by part number

igus® Part No.	Page
CF78.UL.07.07	88
CF78.UL.07.12	88
CF78.UL.07.18	88
CF78.UL.07.36	88
CF78.UL.10.03	88
CF78.UL.10.04	88
CF78.UL.10.05	88
CF78.UL.10.07	88
CF78.UL.10.12	88
CF78.UL.10.18	88
CF78.UL.10.25	88
CF78.UL.15.03	88
CF78.UL.15.04	88
CF78.UL.15.05	88
CF78.UL.15.07	88
CF78.UL.15.12	88
CF78.UL.15.18	88
CF78.UL.15.25	88
CF78.UL.15.36	88
CF78.UL.15.42	88
CF78.UL.25.03	88
CF78.UL.25.04	88
CF78.UL.25.05	88
CF78.UL.25.07	88
CF78.UL.25.12	88
CF78.UL.40.04	88
Control cable CF98	
CF98.01.02	112
CF98.01.03	112
CF98.01.04	112
CF98.01.08	112
CF98.02.03.INI	112
CF98.02.04	112
CF98.02.07	112
CF98.02.08	112
CF98.03.04.INI	112
CF98.05.04	112
Control cable CF99	
CF99.01.02	114
CF99.01.04	114
CF99.01.08	114
CF99.02.04	114
CF99.02.07	114
CF99.03.08	114
Measuring system cable CF111.D	
CF111.001.D	232
CF111.002.D	232
CF111.004.D	232
CF111.006.D	232
CF111.009.D	232
CF111.010.D	232
CF111.011.D	232
CF111.014.D	232
CF111.015.D	232
CF111.020.D	232
CF111.021.D	232
CF111.022.D	232
CF111.024.D	232
CF111.026.D	232
CF111.027.D	232
CF111.028.D	232
CF111.032.D	232
CF111.040.D	232

igus® Part No.	Page
Data cable CF112	
CF112.02.02.02	142
CF112.02.03.02	142
CF112.02.04.02	142
CF112.02.05.02	142
CF112.05.02.02	142
CF112.05.04.02	142
CF112.05.06.02	142
Measuring system cable CF113.D	
CF113.001.D	238
CF113.002.D	238
CF113.003.D	238
CF113.004.D	238
CF113.005.D	238
CF113.006.D	238
CF113.007.D	238
CF113.008.D	238
CF113.009.D	238
CF113.010.D	238
CF113.011.D	238
CF113.013.D	238
CF113.014.D	238
CF113.015.D	238
CF113.016.D	238
CF113.017.D	238
CF113.018.D	238
CF113.019.D	238
CF113.022.D	238
CF113.025.D	238
CF113.027.D	238
CF113.028.D	238
CF113.029.D	238
CF113.031.D	238
CF113.032.D	238
CF113.033.D	238
CF113.036.D	238
CF113.037.D	238
CF113.038.D	238
CF113.040.D	238
Control cable CF130.UL	
CF130.02.03.UL	56
CF130.02.04.UL	56
CF130.02.06.UL	56
CF130.02.07.UL	56
CF130.02.12.UL	56
CF130.02.18.UL	56
CF130.02.20.UL	56
CF130.02.25.UL	56
CF130.02.30.UL	56
CF130.03.02.UL	56
CF130.03.05.UL	56
CF130.05.02.UL	56
CF130.05.03.UL	56
CF130.05.04.UL	56
CF130.05.05.UL	56
CF130.05.07.UL	56
CF130.05.12.UL	56
CF130.05.18.UL	56
CF130.05.25.UL	56
CF130.07.02.UL	56
CF130.07.03.UL	56
CF130.07.04.UL	56
CF130.07.05.UL	56

igus® Part No.	Page
CF130.07.07.UL	56
CF130.07.12.UL	56
CF130.07.18.UL	56
CF130.07.25.UL	56
CF130.07.36.UL	56
CF130.07.42.UL	56
CF130.10.02.UL	56
CF130.10.03.UL	56
CF130.10.04.UL	56
CF130.10.05.UL	56
CF130.10.07.UL	56
CF130.10.12.UL	56
CF130.10.18.UL	56
CF130.10.25.UL	56
CF130.15.02.UL	56
CF130.15.03.UL	56
CF130.15.04.UL	56
CF130.15.05.UL	56
CF130.15.07.UL	56
CF130.15.12.UL	56
CF130.15.18.UL	56
CF130.15.25.UL	56
CF130.15.36.UL	56
CF130.25.03.UL	56
CF130.25.04.UL	56
CF130.25.07.UL	56
CF130.25.12.UL	56
CF130.40.03.UL	56
CF130.40.05.UL	56
CF130.60.04.UL	56
CF130.60.05.UL	56
Control cable CF140.UL	
CF140.02.12.UL	60
CF140.03.05.UL	60
CF140.05.03.UL	60
CF140.05.05.UL	60
CF140.05.18.UL	60
CF140.05.36.UL	60
CF140.07.03.UL	60
CF140.07.04.UL	60
CF140.07.05.UL	60
CF140.07.07.UL	60
CF140.07.12.UL	60
CF140.07.18.UL	60
CF140.07.25.UL	60
CF140.10.02.UL	60
CF140.10.03.UL	60
CF140.10.04.UL	60
CF140.10.05.UL	60
CF140.10.07.UL	60
CF140.10.12.UL	60
CF140.10.18.UL	60
CF140.10.25.UL	60
CF140.15.03.UL	60
CF140.15.04.UL	60
CF140.15.05.UL	60
CF140.15.07.UL	60
CF140.15.12.UL	60
CF140.15.18.UL	60
CF140.15.25.UL	60
CF140.15.36.UL	60
CF140.25.03.UL	60
CF140.25.04.UL	60

Information | Table of contents by part number

Contents

igus® Part No.	Page
Motor cable CF210.UL	
CF210.UL.15.04	296
CF210.UL.25.04	296
CF210.UL.40.04	296
Servo cable CF210.UL	
CF210.UL.15.15.02.01	258
CF210.UL.25.15.02.01	258
CF210.UL.40.15.02.01	258
CF210.UL.60.15.02.01	258
CF210.UL.15.07.02.02	258
CF210.UL.25.15.02.02	258
CF210.UL.40.15.02.02	258
CF210.UL.60.15.02.02	258
Data cable CF211	
CF211.02.01.02	130
CF211.02.02.02	130
CF211.02.03.02	130
CF211.02.04.02	130
CF211.02.05.02	130
CF211.02.06.02	130
CF211.02.08.02	130
CF211.02.10.02	130
CF211.02.14.02	130
CF211.03.03.02	130
CF211.03.08.02	130
CF211.03.10.02	130
CF211.05.01.02	130
CF211.05.02.02	130
CF211.05.03.02	130
CF211.05.04.02	130
CF211.05.05.02	130
CF211.05.06.02	130
CF211.05.08.02	130
CF211.05.10.02	130
CF211.05.14.02	130
Measuring system cable CF211	
CF211.001	222
CF211.002	222
CF211.004	222
CF211.006	222
CF211.009	222
CF211.010	222
CF211.011	222
CF211.014	222
CF211.015	222
CF211.016	222
CF211.017	222
CF211.018	222
CF211.019	222
CF211.022	222
CF211.024	222
CF211.027	222
CF211.028	222
CF211.032	222
CF211.033	222
CF211.036	222
CF211.037	222
CF211.038	222
CF211.039	222
Data cable CF211.PUR	
CF211.PUR.02.01.02	134
CF211.PUR.02.02.02	134
CF211.PUR.02.03.02	134

igus® Part No.	Page
CF211.PUR.02.04.02	134
CF211.PUR.02.05.02	134
CF211.PUR.02.06.02	134
CF211.PUR.02.08.02	134
CF211.PUR.02.10.02	134
CF211.PUR.02.14.02	134
CF211.PUR.03.03.02	134
CF211.PUR.03.08.02	134
CF211.PUR.05.01.02	134
CF211.PUR.05.02.02	134
CF211.PUR.05.03.02	134
CF211.PUR.05.04.02	134
CF211.PUR.05.05.02	134
CF211.PUR.05.06.02	134
CF211.PUR.05.08.02	134
CF211.PUR.05.10.02	134
CF211.PUR.05.14.02	134
Hybrid Servo cable CF220.UL.H	
CF220.UL.H100.07.04	262
CF220.UL.H101.10.04	262
CF220.UL.H101.15.04	262
CF220.UL.H102.25.04	262
CF220.UL.H102.40.04	262
Data cable CF240	
CF240.01.03	122
CF240.01.04	122
CF240.01.05	122
CF240.01.07	122
CF240.01.14	122
CF240.01.18	122
CF240.01.24	122
CF240.02.03	122
CF240.02.04	122
CF240.02.05	122
CF240.02.07	122
CF240.02.08	122
CF240.02.14	122
CF240.02.18	122
CF240.02.24	122
CF240.03.02	122
CF240.03.03	122
CF240.03.04	122
CF240.03.05	122
CF240.03.07	122
CF240.03.10	122
CF240.03.14	122
CF240.03.18	122
CF240.03.24	122
Data cable CF240.PUR	
CF240.PUR.01.04	126
CF240.PUR.01.07	126
CF240.PUR.01.08	126
CF240.PUR.01.14	126
CF240.PUR.01.18	126
CF240.PUR.01.25	126
CF240.PUR.02.03	126
CF240.PUR.02.04	126
CF240.PUR.02.05	126
CF240.PUR.02.07	126
CF240.PUR.02.08	126
CF240.PUR.02.14	126
CF240.PUR.02.18	126
CF240.PUR.02.25	126

igus® Part No.	Page
CF240.PUR.03.03	126
CF240.PUR.03.04	126
CF240.PUR.03.05	126
CF240.PUR.03.07	126
CF240.PUR.03.14	126
CF240.PUR.03.18	126
Motor cable CF270.UL.D	
CF270.UL.07.04.D	310
CF270.UL.15.04.D	310
CF270.UL.25.04.D	310
CF270.UL.40.04.D	310
CF270.UL.60.04.D	310
CF270.UL.100.04.D	310
CF270.UL.160.04.D	310
CF270.UL.250.04.D	310
CF270.UL.350.04.D	310
Single core CF270.UL.D	
CF270.UL.60.01.D	336
CF270.UL.100.01.D	336
CF270.UL.160.01.D	336
CF270.UL.250.01.D	336
CF270.UL.350.01.D	336
CF270.UL.500.01.D	336
CF270.UL.700.01.D	336
Servo cable CF270.UL.D	
CF270.UL.15.15.02.01.D	272
CF270.UL.25.15.02.01.D	272
CF270.UL.40.15.02.01.D	272
CF270.UL.60.15.02.01.D	272
CF270.UL.100.15.02.01.D	272
CF270.UL.160.15.02.01.D	272
CF270.UL.250.15.02.01.D	272
CF270.UL.07.03.02.02.D	272
CF270.UL.10.07.02.02.D	272
CF270.UL.15.07.02.02.D	272
CF270.UL.25.15.02.02.D	272
CF270.UL.40.15.02.02.D	272
CF270.UL.60.15.02.02.D	272
CF270.UL.100.15.02.02.D	272
CF270.UL.160.15.02.02.D	272
CF270.UL.250.15.02.02.D	272
Hybrid Servo cable CF280.UL.H	
CF280.UL.H100.07.04.D	276
CF280.UL.H101.10.04.D	276
CF280.UL.H101.15.04.D	276
CF280.UL.H102.25.04.D	276
CF280.UL.H102.40.04.D	276
CF280.UL.H102.60.04.D	276
CF280.UL.H200.15.07.D	276
CF280.UL.H200.25.07.D	276
CF280.UL.H201.15.04.D	276
CF280.UL.H201.25.04.D	276
CF280.UL.H203.15.04.D	276
CF280.UL.H203.25.04.D	276
CF280.UL.H204.15.04.D	276
CF280.UL.H206.40.04.D	276
CF280.UL.H206.60.04.D	276
CF280.UL.H300.03.04.D	276
CF280.UL.H301.07.04.D	276
CF280.UL.H400.25.05.D	276
CF280.UL.H501.15.04.D	276
CF280.UL.H502.40.04.D	276
CF280.UL.H601.25.05	276

Information | Table of contents by part number

igus® Part No.	Page
Data cable CF298	
CF298.01.02	148
CF298.01.04	148
CF298.01.08	148
CF298.02.03	148
CF298.02.04	148
CF298.02.07	148
CF298.02.08	148
CF298.03.04	148
CF298.03.07	148
CF298.05.04	148
Data cable CF298	
CF299.01.02	150
CF299.01.04	150
CF299.01.08	150
CF299.02.04	150
CF299.02.07	150
Single core CF300.UL.D	
CF300.UL.40.01.D	338
CF300.UL.60.01.D	338
CF300.UL.100.01.D	338
CF300.UL.160.01.D	338
CF300.UL.250.01.D	338
CF300.UL.350.01.D	338
CF300.UL.500.01.D	338
CF300.UL.700.01.D	338
CF300.UL.950.01.D	338
CF300.UL.1200.01.D	338
CF300.UL.1500.01.D	338
CF300.UL.1850.01.D	338
Single core CF310.UL	
CF310.UL.25.01	342
CF310.UL.40.01	342
CF310.UL.60.01	342
CF310.UL.100.01	342
CF310.UL.160.01	342
CF310.UL.250.01	342
CF310.UL.350.01	342
CF310.UL.500.01	342
CF310.UL.700.01	342
CF310.UL.950.01	342
CF310.UL.1200.01	342
CF310.UL.1500.01	342
CF310.UL.1850.01	342
Single core CF330.D	
CF330.60.01.D	344
CF330.100.01.D	344
CF330.160.01.D	344
CF330.250.01.D	344
CF330.350.01.D	344
CF330.500.01.D	344
CF330.700.01.D	344
CF330.950.01.D	344
CF330.1200.01.D	344
CF330.1500.01.D	344
CF330.1850.01.D	344
Single core CF340	
CF340.40.01	346
CF340.160.01	346
Control cable CF880	
CF880.05.02	48
CF880.05.03	48
CF880.05.04	48
CF880.05.05	48
CF880.05.07	48
CF880.05.12	48
CF880.05.18	48
CF880.05.25	48
CF880.07.02	48
CF880.07.03	48
CF880.07.04	48
CF880.07.05	48
CF880.07.07	48
CF880.07.12	48
CF880.07.18	48
CF880.07.25	48
CF880.10.02	48
CF880.10.03	48
CF880.10.04	48
CF880.10.05	48
CF880.10.07	48
CF880.10.12	48
CF880.10.18	48
CF880.10.25	48
CF880.15.02	48
CF880.15.03	48
CF880.15.04	48
CF880.15.05	48
CF880.15.07	48
CF880.15.12	48
CF880.15.18	48
CF880.15.25	48
CF880.25.03	48
CF880.25.04	48
CF880.25.05	48
CF880.25.07	48
CF880.25.12	48
CF880.25.25	48
Control cable CF881	
CF881.05.03	52
CF881.05.04	52
CF881.05.05	52
CF881.05.07	52
CF881.05.12	52
CF881.05.18	52
CF881.05.25	52
CF881.07.02	52
CF881.07.03	52
CF881.07.04	52
CF881.07.05	52
CF881.07.07	52
CF881.07.12	52
CF881.07.18	52
CF881.07.25	52
CF881.10.02	52
CF881.10.03	52
CF881.10.04	52
CF881.10.05	52
CF881.10.07	52
CF881.10.12	52
CF881.10.18	52
CF881.10.25	52
CF881.15.02	52
CF881.15.03	52
CF881.15.04	52
CF881.15.05	52
CF881.15.07	52
CF881.15.12	52
CF881.15.18	52
CF881.15.25	52
CF881.25.04	52
CF881.25.05	52
CF881.25.07	52
CF881.25.12	52
CF881.25.25	52
Measuring system cable CF884	
CF884.001	218
CF884.006	218
CF884.009	218
CF884.011	218
CF884.015	218
CF884.022	218
CF884.028	218
Motor cable CF885	
CF885.15.04	292
CF885.25.04	292
CF885.40.04	292
CF885.60.04	292
CF885.100.04	292
CF885.160.04	292
Single core CF885	
CF885.40.01	330
CF885.60.01	330
CF885.100.01	330
CF885.160.01	330
CF885.250.01	330
CF885.350.01	330
CF885.500.01	330
CF885.700.01	330
CF885.950.01	330
Single core CF885.PE	
CF885.PE.25.01	332
CF885.PE.40.01	332
CF885.PE.60.01	332
CF885.PE.100.01	332
CF885.PE.160.01	332
CF885.PE.250.01	332
Motor cable CF886	
CF886.15.04	294
CF886.25.04	294
CF886.40.04	294
CF886.60.04	294
CF886.100.04	294
CF886.160.04	294
Single core CF886	
CF886.160.01	334
CF886.250.01	334
CF886.350.01	334
Servo cable CF887	
CF887.15.15.02.01	256
CF887.25.15.02.01	256
CF887.40.15.02.01	256
CF887.10.07.02.02	256
CF887.15.15.02.02	256
CF887.25.15.02.02	256
Bus cable CF888	
CF888.001	164
CF888.021	164
CF888.045	164
CF888.060	164
Control cable CF890	
CF890.05.02	76
CF890.05.03	76
CF890.05.04	76
CF890.05.05	76
CF890.05.07	76
CF890.05.12	76
CF890.05.18	76
CF890.05.25	76
CF890.07.02	76
CF890.07.03	76
CF890.07.04	76
CF890.07.05	76
CF890.07.07	76
CF890.07.12	76
CF890.07.18	76
CF890.07.25	76
CF890.10.02	76
CF890.10.03	76
CF890.10.04	76
CF890.10.05	76
CF890.10.07	76
CF890.10.12	76
CF890.10.18	76
CF890.10.25	76
CF890.15.02	76
CF890.15.03	76
CF890.15.04	76
CF890.15.05	76
CF890.15.07	76
CF890.15.12	76
CF890.15.18	76
CF890.15.25	76
CF890.25.03	76
CF890.25.04	76
CF890.25.05	76
CF890.25.07	76
CF890.25.12	76
CF890.25.25	76
Control cable CF891	
CF891.05.02	80
CF891.05.03	80
CF891.05.05	80
CF891.05.12	80
CF891.05.18	80
CF891.05.25	80
CF891.07.02	80
CF891.07.03	80
CF891.07.04	80
CF891.07.05	80
CF891.07.07	80
CF891.07.12	80
CF891.07.18	80
CF891.07.25	80
CF891.10.02	80
CF891.10.03	80
CF891.10.04	80
CF891.10.05	80
CF891.10.07	80
CF891.10.12	80
CF891.10.18	80
CF891.10.25	80
CF891.15.02	80
CF891.15.03	80
CF891.15.04	80
CF891.15.05	80
CF891.15.07	80
CF891.15.12	80
CF891.15.25	80
CF891.25.04	80
CF891.25.05	80
CF891.25.07	80
CF891.25.12	80
CF891.25.25	80
Measuring system cable CF894	
CF894.001	228
CF894.006	228
CF894.009	228
CF894.011	228
CF894.015	228
CF894.022	228
CF894.028	228
Motor cable CF895	
CF895.15.04	306
CF895.25.04	306
CF895.40.04	306
CF895.60.04	306
CF895.100.04	306
CF895.160.04	306
Motor cable CF896	
CF896.15.04	308
CF896.25.04	308
CF896.40.04	308
CF896.60.04	308
CF896.100.04	308
CF896.160.04	308
Servo cable CF897	
CF897.15.15.02.01	270
CF897.25.15.02.01	270
CF897.40.15.02.01	270
CF897.15.15.02.02	270
Bus cable CF898	
CF898.001	172
CF898.021	172
CF898.045	172
CF898.060	172
CF898.082	172
CF898.083	172
Data cable CF8821	
CF8821.01.02	120
CF8821.01.03	120
CF8821.01.04	120
CF8821.01.05	120
CF8821.01.07	120
CF8821.02.02	120
CF8821.02.03	120
CF8821.02.04	120
CF8821.02.05	120
CF8821.02.07	120
Pneumatic hose CFAIR	
CAPU.A.04.0	410
CAPU.A.06.0	410
CAPU.A.08.0	410
CAPU.A.10.0	410
CAPU.A.12.0	410
CAPU.A.16.0	410
Pneumatic hose CFCleanAIR	
CAPE.A.04.0	412
CAPE.A.06.0	412
CAPE.A.08.0	412
CAPE.A.10.0	412
CAPE.A.12.0	412
CAPE.A.16.0	412
Special cable CFBRAID	
CFBRAID.25.08	398
CFBRAID.25.08.C	398
Bus cable CFBUS	
CFBUS.001	180
CFBUS.002	180
CFBUS.003	180
CFBUS.010	180
CFBUS.011	180
CFBUS.020	180
CFBUS.021	180
CFBUS.022	180
CFBUS.030	180
CFBUS.031	180
CFBUS.035	180
CFBUS.040	180
CFBUS.045	180
CFBUS.049	180
CFBUS.050	180
CFBUS.052	180
CFBUS.055	180
CFBUS.060	180
CFBUS.065	180
CFBUS.066	180
CFBUS.070	180
Bus cable CFBUS.LB	
CFBUS.LB.001	186
CFBUS.LB.004	186
CFBUS.LB.020	186
CFBUS.LB.021	186
CFBUS.LB.022	186
CFBUS.LB.040	186
CFBUS.LB.045	186
CFBUS.LB.049	186
CFBUS.LB.060	186
Bus cable CFBUS.PUR	
CFBUS.PUR.001	176
CFBUS.PUR.020	176
CFBUS.PUR.021	176
CFBUS.PUR.022	176
CFBUS.PUR.035	176
CFBUS.PUR.040	176
CFBUS.PUR.045	176
CFBUS.PUR.049	176
CFBUS.PUR.H01.049	176
CFBUS.PUR.050	176
CFBUS.PUR.052	176
CFBUS.PUR.056	176
CFBUS.PUR.060	176
CFBUS.PUR.H01.060	176
CFBUS.PUR.068	176
Bus cable CFBUS.PVC	
CFBUS.PVC.001	168
CFBUS.PVC.020	168
CFBUS.PVC.021	168
CFBUS.PVC.022	168

Information | Table of contents by part number

Contents

Information | Table of contents by part number

igus® Part No.	Page
CFBUS.PVC.035	168
CFBUS.PVC.040	168
CFBUS.PVC.045	168
CFBUS.PVC.049	168
CFBUS.PVC.050	168
CFBUS.PVC.052	168
CFBUS.PVC.056	168
CFBUS.PVC.060	168
CFBUS.PVC.068	168
Medium voltage cable CFCRANE.PUR	
CFCRANE.PUR.350.01.6/10kV	348
CFCRANE.PUR.500.01.6/10kV	348
CFCRANE.PUR.700.01.6/10kV	348
CFCRANE.PUR.950.01.6/10kV	348
Special cable CFFLAT	
CFFLAT.25.01	396
CFFLAT.40.01	396
Coaxial cable CFKoax	
CFKoax1.01	152
CFKoax1.05	152
CFKoax2.01	152
CFKoax3.01	152
Fibre Optic Cable CFLG88	
CFLG88.2.62.5/125	198
CFLG88.2.50/125	198
Fibre Optic Cable CFLG.G	
CFLG.6G.62.5/125.TC	208
CFLG.12G.62.5/125.TC	208
CFLG.6G.50/125.TC	208
CFLG.12G.50/125.TC	208
CFLG.12E.9/125.TC	208
Fibre Optic Cable CFLG.LB	
CFLG.2LB.200/230	204
CFLG.2LB.62.5/125	204
CFLG.4LB.62.5/125	204
CFLG.6LB.62.5/125	204
CFLG.12LB.62.5/125	204
CFLG.2LB.50/125	204
CFLG.4LB.50/125	204
CFLG.6LB.50/125	204
CFLG.12LB.50/125	204
Fibre Optic Cable CFLG.LB.PUR	
CFLG.2LB.PUR.62.5/125	200
CFLG.4LB.PUR.62.5/125	200
CFLG.6LB.PUR.62.5/125	200
CFLG.12LB.PUR.62.5/125	200
CFLG.2LB.PUR.50/125	200
CFLG.6LB.PUR.50/125	200
CFLG.12LB.PUR.50/125	200
CFLG.6LB.PUR.9/125	200
Fibre Optic Cable CFLK	
CFLK.L1.01	196
CFLK.L1.02	196
Single core CFPE	
CFPE.15.01	340
CFPE.25.01	340
CFPE.40.01	340
CFPE.60.01	340
CFPE.100.01	340
CFPE.160.01	340
CFPE.250.01	340
CFPE.350.01	340

igus® Part No.	Page
CFPE.500.01	340
CFPE.700.01	340
CFPE.950.01	340
Twistable cable CFROBOT	
CFROBOT.035	378
CFROBOT.036	378
CFROBOT.037	378
CFROBOT.038	378
Twistable cable CFROBOT2	
CFROBOT2.07.04.C	362
CFROBOT2.07.05.C	362
CFROBOT2.07.07.C	362
CFROBOT2.07.12.C	362
CFROBOT2.07.18.C	362
Twistable cable CFROBOT3	
CFROBOT3.02.03.02	364
CFROBOT3.02.04.02	364
CFROBOT3.02.06.02	364
CFROBOT3.02.08.02	364
CFROBOT3.05.05.02	364
Twistable cable CFROBOT4	
CFROBOT4.001	366
CFROBOT4.006	366
CFROBOT4.009	366
CFROBOT4.015	366
CFROBOT4.028	366
Twistable cable CFROBOT5	
CFROBOT5.500	370
CFROBOT5.501	370
Twistable cable CFROBOT6	
CFROBOT6.100.03	372
CFROBOT6.160.03	372
CFROBOT6.250.03	372
Twistable cable CFROBOT7	
CFROBOT7.15.03.C	374
CFROBOT7.15.04.C	374
CFROBOT7.25.03.C	374
CFROBOT7.25.04.C	374
CFROBOT7.60.04.C	374
CFROBOT7.15.15.02.02.C	374
CFROBOT7.25.15.02.02.C	374
CFROBOT7.40.02.02.04.C	374
Twistable cable CFROBOT8	
CFROBOT8.001	380
CFROBOT8.022	380
CFROBOT8.030	380
CFROBOT8.045	380
CFROBOT8.049	380
CFROBOT8.050	380
CFROBOT8.052	380
CFROBOT8.060	380
Twistable cable CFROBOT8.PLUS	
CFROBOT8.PLUS.001	384
CFROBOT8.PLUS.045	384
CFROBOT8.PLUS.060	384
Twistable cable CFROBOT9	
CFROBOT9.001	388
CFROBOT9.004	388
CFROBOT9.005	388
CFROBOT9.006	388
CFROBOT9.007	388
CFROBOT9.010	388

igus® Part No.	Page
Control cable CFSOFT1	
CFSOFT1.02.03	72
CFSOFT1.02.08	72
CFSOFT1.03.04	72
CFSOFT1.05.04	72
Control cable CFSOFT2	
CFSOFT2.02.03	74
CFSOFT2.02.08	74
CFSOFT2.03.04	74
CFSOFT2.05.04	74
CFSOFT2.07.04	74
Special cable CFSPECIAL.182	
CFSPECIAL.182.045	400
CFSPECIAL.182.060	400
Special cable CFSPECIAL.414	
CFSPECIAL.414.03.04	402
CFSPECIAL.414.03.06	402
Special cable CFSPECIAL.484	
CFSPECIAL.484.049	404
Special cable CFSPECIAL.792	
CFSPECIAL.792.011	406
CFSPECIAL.792.012	406
CFSPECIAL.792.013	406
CFSPECIAL.792.014	406
CFSPECIAL.792.015	406
CFSPECIAL.792.016	406
Special cable CFTHERMO	
CFTHERMO.J.001	394
CFTHERMO.K.001	394
CFTHERMO.K.002	394

igus.eu/8pm

Place your orders until late. Ordering and deliveries weekdays from 7.00 am to 8.00 pm, Saturday from 8.00 am to 12.00 pm.
No minimum order quantity, no surcharges. Quick delivery.
www.igus.eu Phone +49-2203 9649-800 Fax -222

igus.eu/24

Buy online – 24hrs !

/9001:2015 /16949:2016

igus® is certified in accordance with ISO 9001:2015 and IATF 16949:2016 in the field of energy supply systems, cables and harnessing, as well as plastic plain bearings.

/readychain®

Ask for fully harnessed and preassembled energy supply systems – increase your cash-flow and profit immediately with readychain®.
www.readychain.eu

/newsletter

Free of charge! Discover more about the latest trends and innovations from the igus® motion plastics® world. Register here: www.igus.eu/newsletter

igus.eu

igus® GmbH Spicher Straße 1a 51147 Cologne
Phone +49-2203 9649-800 Fax +49-2203 9649-222
info@igus.de www.igus.eu www.chainflex.eu

© 2019 igus® GmbH
Subject to technical alterations. MAT0070582.20 Issue 05/2019

motion plastics®