

Control cables



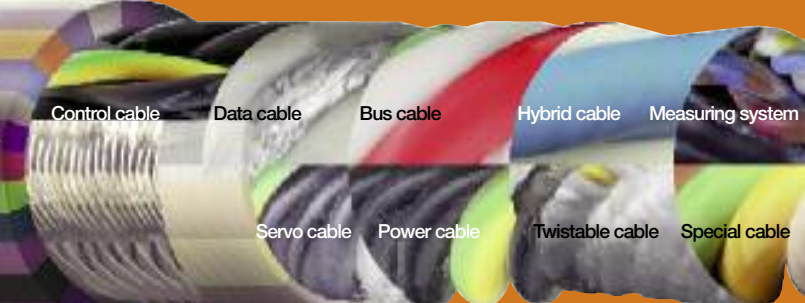
chainflex® type



chainflex® cable	Jacket	Shield	Minimum bending radius, moved [factor x d]	Temperatur moved 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										
New! chainflex® guarantee club – Guaranteed lifetime							▶ Selection table page 64			
CF130.UL	PVC		7,5-10	+5/ +70	CE RoHS REACH UL US G ENEC	✓	3	2	20	66
CF140.UL	PVC	✓	7,5-15	+5/ +70	CE RoHS REACH UL US G ENEC		3	2	20	70
CF5	PVC		6,8-7,5	+5/ +70	CE RoHS REACH UL US G ENEC	✓	✓	10	5	80
CF6	PVC	✓	6,8-7,5	+5/ +70	CE RoHS REACH UL US G ENEC	✓		10	5	80
CF170.D	PUR		7,5-10	-35/ +80	CE RoHS REACH ENEC	✓		3		20
CF180	PUR	✓	7,5-15	-35/ +80	CE RoHS REACH ENEC	✓		3		20
CF77.UL.D	PUR		6,8-7,5	-35/ +80	CE RoHS REACH UL US G ENEC	✓	✓	10	5	80
CF78.UL	PUR	✓	6,8-7,5	-35/ +80	CE RoHS REACH UL US G ENEC	✓		10	5	80
CF2	PUR	✓	5	-20/ +80	CE RoHS REACH UL US G ENEC	✓		10	5	80
CF9	TPE		5	-35/ +100	CE RoHS REACH ENEC	✓	✓	10	6	100
CF10	TPE	✓	5	-35/ +100	CE RoHS REACH ENEC	✓		10	6	100
CF9.UL	TPE		5	-35/ +100	CE RoHS REACH UL US G ENEC	✓	✓	10	6	100
CF10.UL	TPE	✓	5	-35/ +100	CE RoHS REACH UL US G ENEC	✓		10	6	100
CF98	TPE		4	-35/ +90	CE RoHS REACH ENEC	✓	✓	10	6	100
CF99	TPE	✓	4	-35/ +90	CE RoHS REACH ENEC	✓		10	6	100

Whip up your own chainflex® cable ... in 3 min.

igus® revolutionizes the manufacturing of individual cables that can't be found in any catalogue. Simply choose the model, material, structure, and color online and order your individual cable starting at 300 m length. Your desired cable from 3 weeks delivery time. Try the new configurator here igus.eu/whipup



... from 300 m in 3 weeks ... igus.eu/whipup

New!

chainflex® cables

Temperature, from/to [°C]

v max. [m/s]
unsupported gliding

a max. [m/s²]

Travel distance [m]

Bending radius min. [factor x d]

Bending radius min. [factor x d]

Bending radius min. [factor x d]

Page

< 10 m ≥ 10 m

< 10 m ≥ 10 m
















< 10 m ≥ 10 m

Control cables

5 million double strokes *

7,5 million double strokes *

10 million double strokes *

Cable	Temperature [°C]	v max. [m/s]		a max. [m/s²]	Travel distance [m]	Bending radius min. [factor x d]		Bending radius min. [factor x d]		Bending radius min. [factor x d]		Page							
		unsupported	gliding			< 10 m	≥ 10 m	< 10 m	≥ 10 m	< 10 m	≥ 10 m								
 CF130.UL	+5 / +15	3	2	20	≤ 50		10	12,5	11	13,5	12	14,5	66						
	+15 / +60													7,5	10	8,5	11	9,5	12
	+60 / +70													10	12,5	11	13,5	12	14,5
 CF140.UL	+5 / +15	3	2	20	≤ 50		10	12,5	11	13,5	12	14,5	70						
	+15 / +60													7,5	10	8,5	11	9,5	12
	+60 / +70													10	12,5	11	13,5	12	14,5
 CF5	+5 / +15	10	5	80	≤ 100		7,5	10	8,5	11	9,5	12	74						
	+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
 CF6	+5 / +15	10	5	80	≤ 100		7,5	10	8,5	11	9,5	12	78						
	+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
 CF170.D	-35 / -25	3	2	20	≤ 20		10	12,5	11	13,5	12	14,5	82						
	-25 / +70													7,5	10	8,5	11	9,5	12
	+70 / +80													10	12,5	11	13,5	12	14,5
 CF180	-35 / -25	3	2	20	≤ 20		10	12,5	11	13,5	12	14,5	86						
	-25 / +70													7,5	15	8,5	16	9,5	17
	+70 / +80													10	12,5	11	13,5	12	14,5
 CF77.UL.D	-35 / -25	10	5	80	≤ 100		8,5	10	9,5	11	10,5	12	88						
	-25 / +70													6,8	7,5	7,5	8,5	8,5	9,5
	+70 / +80													7,5	10	9,5	11	10,5	12
 CF78.UL	-35 / -25	10	5	80	≤ 100		8,5	10	9,5	11	10,5	12	92						
	-25 / +70													6,8	7,5	7,5	8,5	8,5	9,5
	+70 / +80													7,5	7,5	9,5	11	10,5	12
 CF2	-20 / -10	10	5	80	≤ 100		6,8		7,5		8,5		96						
	-10 / +70													5		6,8		7,5	
	+70 / +80													6,8		7,5		8,5	
 CF9	-35 / -25	10	6	100	> 400		6,8		7,5		8,5		100						
	-25 / +90													5		6		7	
	+90 / +100													6,8		7,5		8,5	
 CF10	-35 / -25	10	6	100	> 400		6,8		7,5		8,5		104						
	-25 / +90													5		6		7	
	+90 / +100													6,8		7,5		8,5	
 CF9.UL	-35 / -25	10	6	100	> 400		6,8		7,5		10		108						
	-25 / +90													5		6		7	
	+90 / +100													6,8		7,5		10	
 CF10.UL	-35 / -25	10	6	100	> 400		6,8		7,5		8,5		112						
	-25 / +90													5		6		7	
	+90 / +100													6,8		7,5		8,5	
 CF98	-35 / -25	10	6	100	≤ 100		5		5		5		116						
	-25 / +80													4		4		4	
	+80 / +90													5		5		5	
 CF99	-35 / -25	10	6	100	≤ 100		5		5		5		118						
	-25 / +80													4		4		4	
	+80 / +90													5		5		5	

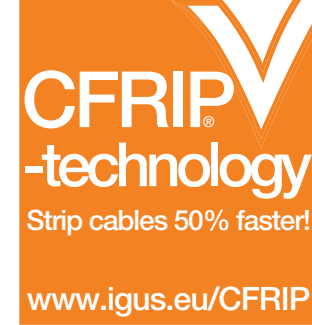
⁽¹⁾ New! Guaranteed lifetime for these series according to the "chainflex® guarantee club" conditions ▶ Page 22-25

* Guaranteed lifetime, higher number of double strokes possible.

PVC Control cable | CF130.UL

- for medium load requirements
- PVC outer jacket
- flame-retardant

Product improvement!



- Conductor** Fine-wire stranded conductor consisting of bare copper wires (following EN 60228).
- Core insulation** Mechanically high-quality TPE mixture.
- Core stranding** **Number of cores < 12:** cores stranded in a layer with short pitch length. **Number of cores ≥ 12:** cores combined in bundles and stranded together around a centre for high tensile stresses with adapted, short pitch lengths and pitch directions, especially low-torsion structure.
- Core identification** **Cores < 0,5 mm²:** Colour code in accordance with DIN 47100
Cores ≥ 0,5 mm²: cores black with white numerals, one core green-yellow
- Outer jacket** Low-adhesion mixture on the basis of PVC, adapted to suit the requirements in energy chains® (following DIN VDE 0281 Part 5). Colour: Silver grey (similar to RAL 7001)
- CFRIP** Strip cables 50% faster! The tear strip is in the outer jacket (starting from manufacturing date 5/2013).
Video ▶ www.igus.eu/CFRIP
- Bending radius** **moved** < 10 m travel moved minimum 7,5 x d
≥ 10 m travel moved minimum 10 x d
fixed minimum 5 x d
- Temperature** **moved** +5 °C to +70 °C for use in energy chains® with > 50.000 cycles
-5 °C to +70 °C following DIN EN 60811, part 1-4 chapter 8.2
fixed -20 °C to +70 °C
- v max. unsupported/gliding** 3 m/s, 2 m/s
- a max.** 20 m/s²
- Travel distance** Freely suspended travel distances and up to 50 m for gliding applications, Class 3
- Torsion** ± 90°, with 1 m cable length
- Nominal voltage** **Number of cores < 12:** 300/500 V
Number of cores < 12 (0,25-0,34): 300/300 V
Number of cores ≥ 12: 300/300 V (following DIN VDE 0245).

www.igus.eu/CFRIP

eplan download, configurator ▶ www.igus.eu/CF130

1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

Class 4.3.1 (4 medium load requirements 3 travel distance up to 50 m 1 no oil-resistance)

- Testing voltage** 2000 V (following DIN VDE 0281-2).
- Flame-retardant** According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
- Silicon-free** Free from silicon 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 79-2012 chapter 12.9
- CEI** Following CEI 20-35
- CE** Following 2006/95/EG
- Lead free** Following 2011/65/EC (RoHS-II)
- Clean room** According to ISO Class 1. Outer jacket material complies with CF130.15.07.UL, tested by IPA according to standard 14644-1
- CTP** Certified according to N° C-DE.PB49.V.00396
- EAC** Certified according to N° TC RU C-DE.ME77.B.00960

New! Guaranteed lifetime for this series according to the "chainflex® guarantee club" conditions ▶ Page 22-25

Temperature, from/to [°C]	Travel distance [m]	5 million		7,5 million		10 million	
		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	≤ 50	< 10 m	≥ 10 m	< 10 m	≥ 10 m	< 10 m	≥ 10 m
+15 / +60		10	12,5	11	13,5	12	14,5
+60 / +70		7,5	10	8,5	11	9,5	12
		10	12,5	11	13,5	12	14,5

* higher number of double strokes possible

Typical application area

- for medium load requirements
- without influence of oil
- preferably indoor applications
- freely suspended travel distances and up to 50 m for gliding applications
- Wood/stone processing, packaging industry, supply system, handling, adjusting equipment



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

... no minimum order quantity ...

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Strip cables 50% faster!

IGUS® CHAINFLEX® CF130.UL


Image exemplary.

Delivery program Part No.	Number of cores and conductor nominal cross section [mm²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF130.02.03.UL	3 x 0,25	5,0	9	25
CF130.02.04.UL	4 x 0,25	5,5	11	29
CF130.02.06.UL	6 x 0,25	6,0	17	49
CF130.02.07.UL	7 x 0,25	6,5	20	47
CF130.02.12.UL	12 x 0,25	8,5	35	98
CF130.02.20.UL	20 x 0,25	10,5	54	148
CF130.02.25.UL	25 x 0,25	11,5	70	158
CF130.02.30.UL	30 x 0,25	12,5	80	189
CF130.03.02.UL	2 x 0,34	5,0	8	26
CF130.03.05.UL	5 x 0,34	6,0	19	41
CF130.05.02.UL	2 x 0,5	5,5	11	38
CF130.05.03.UL	3 G 0,5	5,5	17	40
CF130.05.04.UL	4 G 0,5	6,0	22	48
CF130.05.05.UL	5 G 0,5	6,5	28	57
CF130.05.07.UL	7 G 0,5	7,5	39	78
CF130.05.12.UL	12 G 0,5	10,0	66	143
CF130.05.18.UL	18 G 0,5	12,0	99	188
CF130.05.25.UL	25 G 0,5	13,5	138	268
CF130.07.02.UL	2 x 0,75	6,0	16	42
CF130.07.03.UL	3 G 0,75	6,0	24	51
CF130.07.04.UL	4 G 0,75	6,5	32	59
CF130.07.05.UL	5 G 0,75	7,0	40	71
CF130.07.07.UL	7 G 0,75	8,0	56	98
CF130.07.12.UL	12 G 0,75	11,5	96	158
CF130.07.18.UL	18 G 0,75	13,5	143	235
CF130.07.25.UL	25 G 0,75	15,5	198	355
CF130.07.36.UL	36 G 0,75	18,5	313	550
CF130.07.42.UL ⁽¹⁾	42 G 0,75	21,0	365	632
CF130.10.02.UL	2 x 1,0	6,0	22	52
CF130.10.03.UL	3 G 1,0	6,5	32	62
CF130.10.04.UL	4 G 1,0	7,0	43	76
CF130.10.05.UL	5 G 1,0	7,5	53	92
CF130.10.07.UL	7 G 1,0	9,0	74	125
CF130.10.12.UL	12 G 1,0	12,0	127	206
CF130.10.18.UL	18 G 1,0	14,5	191	290
CF130.10.25.UL	25 G 1,0	17,0	264	411

(1) Delivery time upon inquiry
Note: The mentioned external diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core

Delivery program Part No.	Number of cores and conductor nominal cross section [mm²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF130.15.02.UL	2 x 1,5	7,0	32	64
CF130.15.03.UL	3 G 1,5	7,0	48	79
CF130.15.04.UL	4 G 1,5	8,0	64	100
CF130.15.05.UL	5 G 1,5	8,5	80	120
CF130.15.07.UL ⁽¹⁷⁾	7 G 1,5	9,5	111	160
CF130.15.12.UL	12 G 1,5	13,0	191	287
CF130.15.18.UL	18 G 1,5	17,5	286	484
CF130.15.25.UL	25 G 1,5	19,5	396	617
CF130.15.36.UL ⁽¹⁾	36 G 1,5	23,5	624	932
CF130.15.42.UL ⁽¹⁾	42 G 1,5	26,5	729	1084
CF130.25.03.UL	3 G 2,5	8,5	80	123
CF130.25.04.UL	4 G 2,5	9,5	106	153
CF130.25.07.UL ⁽¹⁷⁾	7 G 2,5	12,0	185	261
CF130.25.12.UL	12 G 2,5	17,5	317	530
CF130.40.03.UL	3 G 4,0	10,0	127	196
CF130.60.04.UL	4 G 6,0	13,5	254	387
CF130.60.05.UL	5 G 6,0	14,5	319	491

(17) Using the cables with "7 G 1,5 mm²" and "7 G 2,5 mm²" it is essential: bending radius 17 x d with travel distance ≥ 5 m. When the travel distance is not less than 5 m, a bending radius not less than 17 x d has to be used.
Note: The mentioned external 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 – in your desired length (0,5 m steps)
CF130.UL chainflex® series .05 Code nominal cross section .02 Number of cores

 prices price list online
www.chainflex.eu/CF130

 delivery time despatched in
24 hours or today

 eplan download, configurator ► www.igus.eu/CF130

... no minimum order quantity ...

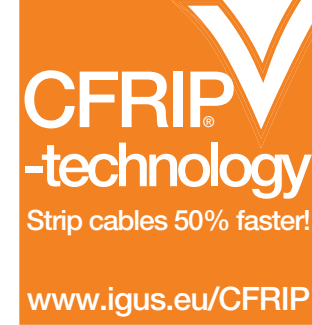
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1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)



PVC Control cable | CF140.UL

Product improvement!



- for medium load requirements
- PVC outer jacket
- shielded
- flame-retardant

- Conductor** Fine-wire stranded conductor consisting of bare copper wires (following EN 60228).
- Core insulation** Mechanically high-quality TPE mixture.
- Core stranding** **Number of cores < 12:** cores stranded in a layer with short pitch length. **Number of cores ≥ 12:** cores combined in bundles and stranded together around a centre for high tensile stresses with adapted, short pitch lengths and pitch directions, especially low-torsion structure.
- Core identification** **Cores < 0,5 mm²:** Colour code in accordance with DIN 47100 **Cores ≥ 0,5 mm²:** cores black with white numerals, one core green-yellow
- Inner jacket** PVC mixture adapted to suit the requirements in energy chains®.
- Overall shield** Bending-resistant braiding made of tinned copper wires. Coverage approx. 55% linear, approx. 80% optical.
- Outer jacket** Low-adhesion mixture on the basis of PVC, adapted to suit the requirements in energy chains® (following DIN VDE 0281 Part 5). Colour: Silver grey (similar to RAL 7001)
- CFRIP** Strip cables 50% faster! The tear strip is in the inner jacket (starting from manufacturing date 5/2013). Video ► www.igus.eu/CFRIP
- Bending radius** **moved** < 10 m travel moved minimum 7,5 x d
≥ 10 m travel moved minimum 15 x d
fixed minimum 7,5 x d
- Temperature** **moved** +5 °C to +70 °C for use in energy chains® with > 50.000 cycles
-5 °C to +70 °C following DIN EN 60811, part 1-4 chapter 8.2
fixed -20 °C to +70 °C
- v max. unsupported/gliding** 3 m/s, 2 m/s
- a max.** 20 m/s²
- Travel distance** Freely suspended travel distances and up to 50 m for gliding applications, Class 3

www.igus.eu/CFRIP

eplan download, configurator ► www.igus.eu/CF140

1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

Class 4.3.1 (4 medium load requirements 3 travel distance up to 50 m 1 no oil-resistance)

- Nominal voltage** **Number of cores < 12:** 300/500 V
Number of cores < 12 (0,25-0,34): 300/300 V
Number of cores ≥ 12: 300/300 V (following DIN VDE 0245).
- Testing voltage** 2000 V (following DIN VDE 0281-2).
- Flame-retardant** According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
- Silicon-free** Free from silicon 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 79-2012 chapter 12.9
- CEI** Following CEI 20-35
- CE** Following 2006/95/EG
- Lead free** Following 2011/65/EC (RoHS-II)
- Clean room** Gemäß ISO Klasse 1. Außenmantelwerkstoff entspricht der CF130.15.07.UL, geprüft durch IPA nach Norm 146 44-1
- CTP** Certified according to N° C-DE.PB49.V.00396
- EAC** Certified according to N° TC RU C-DE.ME77.B.00960

New! Guaranteed lifetime for this series according to the "chainflex® guarantee club" conditions ► Page 22-25

Double strokes*	Temperature, from/to [°C]	Travel distance [m]	5 million		7,5 million		10 million	
			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] ≥ 10 m
+5 / +15			10	12,5	11	13,5	12	14,5
+15 / +60	≤ 50		7,5	10	8,5	11	9,5	12
+60 / +70			10	12,5	11	13,5	12	14,5

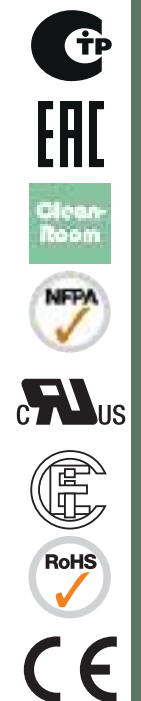
* higher number of double strokes possible

Typical application area

- for medium load requirements
- without influence of oil
- preferably indoor applications
- freely suspended travel distances and up to 50 m for gliding applications
- Wood/stone processing, packaging industry, supply system, handling, adjusting equipment

... no minimum order quantity ...

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Strip cables 50% faster!

IGUS® CHAINFLEX® CF140.UL

Image exemplary.

Delivery program Part No.	Number of cores and conductor nominal cross section [mm²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF140.02.12.UL	(12 x 0,25)C	10,5	76	118
CF140.03.05.UL	(5 x 0,34)C	7,5	37	74
CF140.05.03.UL	(3 G 0,5)C	7,0	34	74
CF140.05.05.UL	(5 G 0,5)C	8,5	48	94
CF140.05.18.UL	(18 G 0,5)C	14,5	156	257
CF140.05.36.UL	(36 G 0,5)C	19,0	274	485
CF140.07.03.UL	(3 G 0,75)C	8,0	44	87
CF140.07.04.UL	(4 G 0,75)C	8,5	54	104
CF140.07.05.UL	(5 G 0,75)C	9,0	64	118
CF140.07.07.UL	(7 G 0,75)C	10,0	87	156
CF140.07.12.UL	(12 G 0,75)C	13,5	145	273
CF140.07.18.UL	(18 G 0,75)C	16,0	207	372
CF140.07.25.UL	(25 G 0,75)C	18,0	278	497
CF140.07.36.UL	(36 G 0,75)C	21,5	416	764
CF140.07.42.UL ⁽¹⁾	(42 G 0,75)C	23,5	489	837
CF140.10.02.UL	(2 x 1,0)C	8,0	37	88
CF140.10.03.UL	(3 G 1,0)C	8,5	54	103
CF140.10.04.UL	(4 G 1,0)C	9,0	65	114
CF140.10.05.UL	(5 G 1,0)C	9,5	78	132
CF140.10.07.UL	(7 G 1,0)C	11,0	110	182
CF140.10.12.UL	(12 G 1,0)C	14,5	178	307
CF140.10.18.UL	(18 G 1,0)C	17,5	256	430
CF140.10.25.UL	(25 G 1,0)C	19,5	347	584
CF140.15.03.UL	(3 G 1,5)C	9,0	72	124
CF140.15.04.UL	(4 G 1,5)C	9,5	90	146
CF140.15.05.UL	(5 G 1,5)C	10,5	115	175
CF140.15.07.UL	(7 G 1,5)C	12,0	153	235
CF140.15.12.UL	(12 G 1,5)C	16,5	249	403
CF140.15.18.UL	(18 G 1,5)C	19,0	368	486
CF140.15.25.UL	(25 G 1,5)C	22,5	495	768
CF140.15.36.UL ⁽¹⁾	(36 G 1,5)C	26,5	715	1202
CF140.15.42.UL ⁽¹⁾	(42 G 1,5)C	29,5	841	1422
CF140.25.03.UL	(3 G 2,5)C	11,0	113	208
CF140.25.04.UL	(4 G 2,5)C	11,5	148	219

⁽¹⁾ Delivery time upon inquiry

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

 Order example: CF140.10.04.UL – in your desired length (0,5 m steps)
CF140.UL chainflex® series .10 Code nominal cross section .04 Number of cores

 prices price list online
www.chainflex.eu/CF140

 delivery time despatched in
24 hours or today



chainflex® CF140.UL for automatic feeder units. e-chain®: easychain®

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... no minimum order quantity ...

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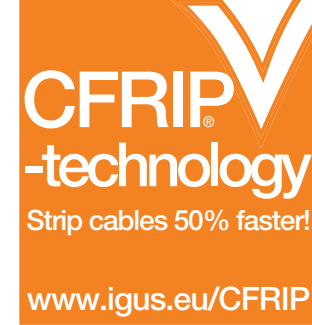
1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)



PVC Control cable | CF5

- for high load requirements
- PVC outer jacket
- oil-resistant
- flame-retardant

Product improvement!



- Conductor** Fine-wire stranded conductor consisting of bare copper wires (following EN 60228).
- Core insulation** **Cores < 0,5 mm²:** Mechanically high-quality PP mixture. **Cores ≥ 0,5 mm²:** Mechanically high-quality PVC mixture (following DIN VDE 0207 Part 4).
- Core stranding** **Number of cores < 12:** cores stranded in a layer with short pitch length. **Number of cores ≥ 12:** cores combined in bundles and stranded together around a centre for high tensile stresses with adapted, short pitch lengths and pitch directions, especially low-torsion structure.
- Core identification** **Cores < 0,5 mm²:** Colour code in accordance with DIN 47100 **Cores ≥ 0,5 mm²:** cores black with white numerals, one core green-yellow
- Outer jacket** Low-adhesion, oil-resistant mixture on the basis of PVC, adapted to suit the requirements in energy chains® (following DIN VDE 0281 Part 13).
Colour: Moss green (similar to RAL 6005)
- CFRIP** Strip cables 50% faster! The tear strip is in the outer jacket. Video ► www.igus.eu/CFRIP
- Bending radius** **moved** < 10 m travel moved minimum 6,8 x d
≥ 10 m travel moved minimum 7,5 x d
fixed minimum 4 x d
- Temperature** **moved** +5 °C to +70 °C for use in energy chains® with > 50.000 cycles
-5 °C to +70 °C following DIN EN 60811, part 1-4 chapter 8.2
fixed -20 °C to +70 °C
- v max. unsupported/gliding** 10 m/s, 5 m/s
- a max.** 80 m/s²
- Travel distance** Freely suspended travel distances and up to 100 m for gliding applications, Class 4
- Torsion** ± 90°, with 1 m cable length
- UV-resistant** Medium

www.igus.eu/CFRIP

eplan download, configurator ► www.igus.eu/CF5

1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

Class 5.4.2 (5 high load requirements 4 travel distance up to 100 m 2 oil-resistant)

- Nominal voltage** 300/500 V (following DIN VDE 0245).
- Testing voltage** 2000 V (following DIN VDE 0281-2).
- Oil** Oil-resistant (following DIN EN 50363-4-1), Class 2.
- Flame-retardant** According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
- Silicon-free** Free from silicon which can affect paint adhesion (following PV 3.10.7 – status 1992).
- UL/CSA** < 0,5 mm²: Style 10492 and 2570, 600 V, 80 °C
≥ 0,5 mm²: Style 11113 and 2570, 600 V, 80 °C
- NFPA** Following NFPA 79-2012 chapter 12.9
- CEI** Following CEI 20-35
- CE** Following 2006/95/EG
- 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
- CTP** Certified according to N° C-DE.PB49.V.00396
- EAC** Certified according to N° TC RU C-DE.ME77.B.00960

New! Guaranteed lifetime for this series according to the "chainflex® guarantee club" conditions ► Page 22-25

Double strokes*	Temperature, from/to [°C]	Travel distance [m]	5 million		7,5 million		10 million	
			R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]		
			< 10 m	≥ 10 m	< 10 m	≥ 10 m	< 10 m	≥ 10 m
	+5 / +15		7,5	10	8,5	11	9,5	12
	+15 / +60	≤ 100	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 possible

Typical application area

- for high load requirements
- light oil influence
- preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- freely suspended travel distances and up to 100 m for gliding applications
- Storage and retrieval units for high-bay warehouses, machining units/packages machines, quick handling, indoor cranes

... no minimum order quantity ...

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Strip cables 50% faster!



Image exemplary.

Delivery program Part No.	Number of cores and conductor nominal cross section [mm ²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF5.02.36	36 x 0,25	15,0	105	215
CF5.03.15	15 x 0,34	10,0	54	141
CF5.03.18	18 x 0,34	11,5	65	208
CF5.03.25	25 x 0,34	13,5	90	295
CF5.05.02	2 x 0,5	6,0	11	38
CF5.05.03	3 G 0,5	6,0	16	42
CF5.05.05	5 G 0,5	7,0	27	71
CF5.05.07	7 G 0,5	8,0	38	80
CF5.05.12	12 G 0,5	11,0	64	134
CF5.05.18	18 G 0,5	13,0	96	195
CF5.05.25	25 G 0,5	16,0	132	289
CF5.05.30	30 G 0,5	18,0	159	451
CF5.07.03	3 G 0,75	6,5	24	56
CF5.07.04	4 G 0,75	7,0	33	68
CF5.07.05	5 G 0,75	7,5	41	84
CF5.07.07	7 G 0,75	9,0	58	118
CF5.07.12	12 G 0,75	12,5	96	194
CF5.07.18	18 G 0,75	15,0	143	278
CF5.07.25	25 G 0,75	17,5	203	397
CF5.07.36	36 G 0,75	22,0	285	605
CF5.07.42	42 G 0,75	24,0	333	658
CF5.10.03	3 G 1,0	6,5	32	57
CF5.10.04	4 G 1,0	7,0	43	80
CF5.10.05	5 G 1,0	8,0	53	97
CF5.10.07	7 G 1,0	9,5	78	135
CF5.10.12	12 G 1,0	13,0	127	235
CF5.10.18	18 G 1,0	16,5	191	318
CF5.10.25	25 G 1,0	19,5	264	503

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

Delivery program Part No.	Number of cores and conductor nominal cross section [mm ²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF5.15.03	3 G 1,5	7,5	48	77
CF5.15.04	4 G 1,5	8,0	64	108
CF5.15.05	5 G 1,5	9,0	79	132
CF5.15.07 ⁽¹⁷⁾	7 G 1,5	10,5	112	187
CF5.15.12	12 G 1,5	15,0	191	276
CF5.15.18	18 G 1,5	19,5	285	496
CF5.15.25	25 G 1,5	21,5	396	670
CF5.15.36	36 G 1,5	26,5	570	1001
CF5.25.04	4 G 2,5	10,0	102	176
CF5.25.05	5 G 2,5	11,0	128	208
CF5.25.07 ⁽¹⁷⁾	7 G 2,5	13,0	181	291
CF5.25.12	12 G 2,5	18,5	303	499
CF5.25.18	18 G 2,5	23,5	456	794
CF5.25.25	25 G 2,5	27,5	637	1100

⁽¹⁷⁾ Using the cables with "7 G 1,5 mm²" and "7 G 2,5 mm²" it is essential: bending radius 17 x d with travel distance ≥ 5 m. When the travel distance is not less than 5 m, a bending radius not less than 17 x d has to be used.

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

Order example: CF5.07.03 – in your desired length (0,5 m steps)
CF5 chainflex® series .07 Code nominal cross section .03 Number of cores

prices price list online
www.chainflex.eu/CF5

delivery time despatched in 24 hours or today



chainflex® CF5/CF6 for shelf control units: long travel in the longitudinal axis. e-chain®: Serie E4/00 with igus® guide trough out of steel

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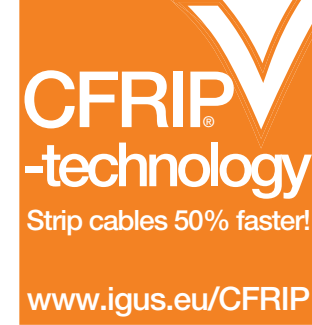
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PVC Control cable | CF6

Product improvement!



- for high load requirements
- PVC outer jacket
- shielded
- oil-resistant
- flame-retardant

- Conductor** Fine-wire stranded conductor consisting of bare copper wires (following EN 60228).
- Core insulation** **Cores < 0,5 mm²:** Mechanically high-quality PP mixture. **Cores ≥ 0,5 mm²:** Mechanically high-quality PVC mixture (following DIN VDE 0207 Part 4).
- Core stranding** **Number of cores < 12:** cores stranded in a layer with short pitch length. **Number of cores ≥ 12:** cores combined in bundles and stranded together around a centre for high tensile stresses with adapted, short pitch lengths and pitch directions, especially low-torsion structure.
- Core identification** **Cores < 0,5 mm²:** Colour code in accordance with DIN 47100 **Cores ≥ 0,5 mm²:** cores black with white numerals, one core green-yellow
- Inner jacket** PVC mixture adapted to suit the requirements in energy 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 mixture on the basis of PVC, adapted to suit the requirements in energy chains® (following DIN VDE 0281 Part 13).
Colour: Moss green (similar to RAL 6005)
- CFRIP** Strip cables 50% faster! The tear strip is in the inner jacket. Video ► www.igus.eu/CFRIP
- Bending radius** **moved** < 10 m travel moved minimum 6,8 x d
≥ 10 m travel moved minimum 7,5 x d
fixed minimum 4 x d
- Temperature** **moved** +5 °C to +70 °C for use in energy chains® with > 50.000 cycles
-5 °C to +70 °C following DIN EN 60811, part 1-4 chapter 8.2
fixed -20 °C to +70 °C
- v max. unsupported/gliding** 10 m/s, 5 m/s
- a max.** 80 m/s²
- Travel distance** Freely suspended travel distances and up to 100 m for gliding applications, Class 4

www.igus.eu/CFRIP
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1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

Class 5.4.2 (5 high load requirements 4 travel distance up to 100 m 2 oil-resistant)

- UV-resistant** Medium
- Nominal voltage** 300/500 V (following DIN VDE 0245).
- Testing voltage** 2000 V (following DIN VDE 0281-2).
- Oil** Oil-resistant (following DIN EN 50363-4-1), Class 2.
- Flame-retardant** According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
- Silicon-free** Free from silicon which can affect paint adhesion (following PV 3.10.7 – status 1992).
- UL/CSA** **< 0,5 mm²:** Style 10492 and 2570, 600 V, 80 °C
≥ 0,5 mm²: Style 11113 and 2570, 600 V, 80 °C
- NFPA** Following NFPA 79-2012 chapter 12.9
- CEI** Following CEI 20-35
- CE** Following 2006/95/EG
- Lead free** Following 2011/65/EC (RoHS-II)
- Clean room** According to ISO Class 2. Outer jacket material complies with CF5.10.07, tested by IPA according to standard 14644-1.
- CTP** Certified according to N° C-DE.PB49.V.00396
- EAC** Certified according to N° TC RU C-DE.ME77.B.00960

New! Guaranteed lifetime for this series according to the "chainflex® guarantee club" conditions ► Page 22-25

Temperature, from/to [°C]	Travel distance [m]	5 million		7,5 million		10 million	
		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	≤ 100	< 10 m	≥ 10 m	< 10 m	≥ 10 m	< 10 m	≥ 10 m
+15 / +60		7,5	10	8,5	11	9,5	12
+60 / +70		6,8	7,5	7,8	8,5	8,8	9,5

* higher number of double strokes possible

Typical application area

- for high load requirements
- light oil influence
- preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- freely suspended travel distances and up to 100 m for gliding applications
- Storage and retrieval units for high-bay warehouses, machining units/package machines, quick handling, indoor cranes

... no minimum order quantity ...

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Strip cables 50% faster!



Image exemplary.

Delivery program Part No.	Number of cores and conductor nominal cross section [mm²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF6.02.04	(4 x 0,25)C	7,0	28	75
CF6.02.24 ^(3/11)	(24 x 0,25)C	13,5	113	231
CF6.02.25	(25 x 0,25)C	14,0	118	267
CF6.03.05	(5 x 0,34)C	7,5	38	96
CF6.05.02	(2 x 0,5)C	7,0	31	78
CF6.05.05	(5 G 0,5)C	9,0	51	121
CF6.05.07	(7 G 0,5)C	10,0	67	131
CF6.05.09	(9 G 0,5)C	12,0	98	226
CF6.05.12	(12 G 0,5)C	13,0	104	238
CF6.05.18	(18 G 0,5)C	15,0	154	295
CF6.05.24 ^(3/11)	(24 G 0,5)C	17,5	200	399
CF6.05.25	(25 G 0,5)C	17,5	205	412
CF6.07.03	(3 G 0,75)C	8,0	49	101
CF6.07.04	(4 G 0,75)C	8,5	59	116
CF6.07.05	(5 G 0,75)C	9,0	71	132
CF6.07.07	(7 G 0,75)C	10,5	91	157
CF6.07.12	(12 G 0,75)C	14,0	137	275
CF6.07.18	(18 G 0,75)C	17,5	209	413
CF6.07.24 ^(3/11)	(24 G 0,75)C	19,5	266	530
CF6.07.25	(25 G 0,75)C	19,5	283	554
CF6.10.03	(3 G 1,0)C	8,0	57	110
CF6.10.04	(4 G 1,0)C	9,0	68	120
CF6.10.05	(5 G 1,0)C	9,5	81	141
CF6.10.07	(7 G 1,0)C	12,0	109	211
CF6.10.12	(12 G 1,0)C	15,0	172	330
CF6.10.18	(18 G 1,0)C	19,0	261	498
CF6.10.24 ^(3/11)	(24 G 1,0)C	21,0	335	586
CF6.10.25	(25 G 1,0)C	21,0	344	617

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 minimum crosstalk), these cables can virtually be used in all cases in which otherwise twisted-pair cables are required.

(11) Phase-out model

Note: The mentioned external diameters are maximum values and may tend toward lower tolerance limits.


G = with green-yellow earth core x = without earth core

* New in this catalogue.

Delivery program Part No.	Number of cores and conductor nominal cross section [mm²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF6.15.03	(3 G 1,5)C	9,0	76	126
CF6.15.04	(4 G 1,5)C	9,5	92	160
CF6.15.05	(5 G 1,5)C	10,5	112	184
CF6.15.07	(7 G 1,5)C	13,0	156	268
CF6.15.12	(12 G 1,5)C	17,0	240	390
CF6.15.18	(18 G 1,5)C	21,0	368	604
CF6.15.25	(25 G 1,5)C	24,0	493	896
CF6.15.36	(36 G 1,5)C	30,0	728	1346
CF6.25.04	(4 G 2,5)C	11,5	140	231

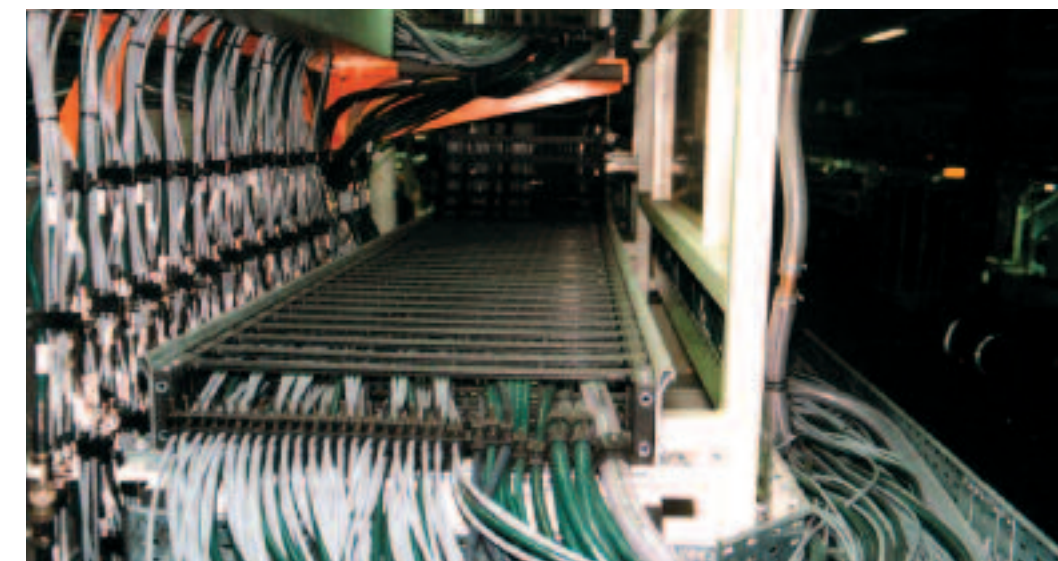
Note: The mentioned external diameters are maximum values and may tend toward lower tolerance limits.

G = with green-yellow earth core x = without earth core

 Order example: CF6.15.12 – in your desired length (0,5 m steps)
CF6 chainflex® series .15 Code nominal cross section .12 Number of cores

 prices price list online
www.chainflex.eu/CF6

 delivery time despatched in
24 hours or today



chainflex® CF5 and CF6 control cable (green) as well as CF211 measuring system cable (grey) in a screwing station of a motor factory. e-chain®: System E4/00 with chainfix Clip Strain Relief Devices

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












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PUR Control cable | CF170.D

- for medium load requirements
- PUR outer jacket
- oil-resistant and coolant-resistant
- PVC-free/halogen-free
- low-temperature-flexible






	Conductor	Fine-wire stranded conductor consisting of bare copper wires (following EN 60228).
	Core insulation	Mechanically high-quality TPE mixture.
	Core stranding	Cores stranded in layers with short pitch length.
	Core identification	Cores black with white numerals, one core green-yellow.
	Outer jacket	Low-adhesion mixture on the basis of PUR, adapted to suit the requirements in energy chains® (following DIN VDE 0282 Part 10). Colour: Window grey (similar to RAL 7040)
	Bending radius	moved < 10 m travel moved minimum 7,5 x d ≥ 10 m travel moved minimum 10 x d fixed minimum 5 x d
	Temperature	moved -35 °C to +80 °C fixed -40 °C to +80 °C
	v max.	3 m/s, 2 m/s
	unsupported/gliding	
	a max.	20 m/s²
	Travel distance	Freely suspended travel distances and up to 20 m for gliding applications, Class 2
	UV-resistant	Medium
	Nominal voltage	300/500 V (following DIN VDE 0245).
	Testing voltage	2000 V (following DIN VDE 0281-2).
	Oil	Oil-resistant (following DIN EN 50363-10-2), Class 3.
	Offshore	MUD-resistant following NEK 606 – status 2009.
	Silicon-free	Free from silicon which can affect paint adhesion (following PV 3.10.7 – status 1992).
	Halogen-free	Following EN 50267-2-1.
	CE	Following 2006/95/EG

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1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

Class 4.2.3 (4 medium load requirements 2 travel distance up to 20 m 3 oil-resistant)

-  **DESINA** According to VDW, DESINA standardisation
-  **Lead free** Following 2011/65/EC (RoHS-II)
-  **EAC** Certified according to N° TC RU C-DE.ME77.B.00960

New! Guaranteed lifetime for this series according to the "chainflex® guarantee club" conditions ► Page 22-25

Double strokes*	Temperature, from/to [°C]	Travel distance [m]	5 million		7,5 million		10 million	
			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] ≥ 10 m
-35 / -25			10	12,5	11	13,5	12	14,5
-25 / +70	≤ 20		7,5	10	8,5	11	9,5	12
+70 / +80			10	12,5	11	13,5	12	14,5

* higher number of double strokes possible

Typical application area

- for medium load requirements
- almost unlimited resistance to oil
- indoor and outdoor applications without direct sun radiation
- freely suspended travel distances and up to 20 m for gliding applications
- Machining units/machine tools, low temperature applications


... no minimum order quantity ...
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Image exemplary.

Delivery program Part No.	Number of cores and conductor nominal cross section [mm²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF170.05.12.D	12 G 0,5	9,0	64	129
CF170.05.18.D	18 G 0,5	10,5	96	186
CF170.05.30.D	30 G 0,5	13,0	150	296
CF170.07.03.D	3 G 0,75	6,0	24	49
CF170.07.05.D	5 G 0,75	7,0	40	81
CF170.07.07.D	7 G 0,75	8,0	56	106
CF170.07.12.D	12 G 0,75	10,0	93	164
CF170.07.18.D	18 G 0,75	11,5	143	242
CF170.07.20.D	20 G 0,75	12,0	152	260
CF170.10.03.D	3 G 1,0	6,5	32	58
CF170.10.04.D	4 G 1,0	7,0	43	76
CF170.10.05.D	5 G 1,0	7,5	53	92
CF170.10.07.D	7 G 1,0	8,5	74	124
CF170.10.12.D	12 G 1,0	10,5	121	197
CF170.10.18.D	18 G 1,0	12,5	184	291
CF170.10.25.D	25 G 1,0	15,0	264	397
CF170.15.03.D	3 G 1,5	7,0	48	85
CF170.15.04.D	4 G 1,5	7,5	61	106
CF170.15.05.D	5 G 1,5	8,0	80	119
CF170.15.07.D ⁽¹⁷⁾	7 G 1,5	10,0	112	176
CF170.15.12.D	12 G 1,5	12,5	191	287
CF170.15.18.D	18 G 1,5	14,0	285	413
CF170.15.25.D	25 G 1,5	17,5	396	579
CF170.25.04.D	4 G 2,5	9,0	106	168
CF170.25.05.D	5 G 2,5	10,0	132	201
CF170.25.07.D ⁽¹⁷⁾	7 G 2,5	12,5	185	288
CF170.40.04.D	4 G 4,0	11,0	169	258
CF170.60.04.D	4 G 6,0	13,0	253	393
CF170.100.04.D	4 G 10,0	17,5	423	604

(17) Using the cables with "7 G 1,5 mm²" and "7 G 2,5 mm²" it is essential: bending radius 17 x d with travel distance ≥ 5 m. When the travel distance is not less than 5 m, a bending radius not less than 17 x d has to be used.
Note: The mentioned external diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core

 Order example: CF170.10.05.D – in your desired length (0,5 m steps)
CF170.D chainflex® series .10 Code nominal cross section .05 Number of cores

 prices price list online
www.chainflex.eu/CF170D

 delivery time despatched in
24 hours or today




















1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

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PUR Control cable | CF180





- for medium load requirements
- PUR outer jacket
- shielded
- oil-resistant and coolant-resistant
- PVC-free/halogen-free
- low-temperature-flexible

	Conductor	Fine-wire stranded conductor consisting of bare copper wires (following EN 60228).
	Core insulation	Mechanically high-quality TPE mixture.
	Core stranding	Cores stranded in layers with short pitch length.
	Core identification	Cores black with white numerals, one core green-yellow.
	Inner jacket	PUR mixture adapted to suit the requirements in energy chains®.
	Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage approx. 55% linear, approx. 80% optical.
	Outer jacket	Low-adhesion mixture on the basis of PUR, adapted to suit the requirements in energy chains® (following DIN VDE 0282 Part 10). Colour: Window grey (similar to RAL 7040)
	Bending radius	moved < 10 m travel moved minimum 7,5 x d ≥ 10 m travel moved minimum 15 x d fixed minimum 7,5 x d
	Temperature	moved -35 °C to +80 °C fixed -40 °C to +80 °C
	v max.	3 m/s, 2 m/s
	unsupported/gliding	
	a max.	20 m/s²
	Travel distance	Freely suspended travel distances and up to 20 m for gliding applications, Class 2
	UV-resistant	Medium
	Nominal voltage	300/500 V (following DIN VDE 0245).
	Testing voltage	2000 V (following DIN VDE 0281-2).
	Oil	Oil-resistant (following DIN EN 50363-10-2), Class 3.
	Offshore	MUD-resistant following NEK 606 – status 2009.
	Silicon-free	Free from silicon which can affect paint adhesion (following PV 3.10.7 – status 1992).

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1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

Class 4.2.3 (4 medium load requirements 2 travel distance up to 20 m 3 oil-resistant)

	Halogen-free	Following EN 50267-2-1.
	CE	Following 2006/95/EG
	Lead free	Following 2011/65/EC (RoHS-II)
	EAC	Certified according to N° TC RU C-DE.ME77.B.00960

New! Guaranteed lifetime for this series according to the "chainflex® guarantee club" conditions ► Page 22-25

Temperature, from/to [°C]	Travel distance [m]	5 million		7,5 million		10 million	
		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] ≥ 10 m
-35 / -25	≤ 20	10	12,5	11	13,5	12	14,5
-25 / +70		7,5	15	8,5	16	9,5	17
+70 / +80		10	12,5	11	13,5	12	14,5


* higher number of double strokes possible

Typical application area

- for medium load requirements
- almost unlimited resistance to oil
- indoor and outdoor applications without direct sun radiation
- freely suspended travel distances and up to 20 m for gliding applications
- Machining units/machine tools, low temperature applications

Delivery program Part No.	Number of cores and conductor nominal cross section [mm²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF180.05.18	(18 G 0,5)C	12,0	134	213
CF180.07.03	(3 G 0,75)C	8,0	44	99
CF180.07.05	(5 G 0,75)C	8,5	68	125
CF180.07.12	(12 G 0,75)C	11,5	134	228
CF180.07.18	(18 G 0,75)C	13,5	193	317
CF180.10.05	(5 G 1,0)C	9,5	83	141
CF180.10.18	(18 G 1,0)C	14,5	262	380
CF180.15.03	(3 G 1,5)C	8,5	74	102
CF180.15.04	(4 G 1,5)C	9,0	94	141
CF180.15.07	(7 G 1,5)C	11,5	161	233
CF180.25.04	(4 G 2,5)C	11,5	143	234
CF180.25.05	(5 G 2,5)C	12,5	182	299
CF180.25.07	(7 G 2,5)C	14,0	248	361

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

 **Order example: CF180.07.05 – in your desired length (0,5 m steps)**
CF180 chainflex® series .07 Code nominal cross section .05 Number of cores

 **prices** price list online
www.chainflex.eu/CF180
















 **delivery time** despatched in 24 hours or today

... no minimum order quantity ...

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PUR Control cable | CF77.UL.D















- for high load requirements
- PUR outer jacket
- oil-resistant and coolant-resistant
- flame-retardant
- notch-resistant
- PVC-free/halogen-free

-  **Conductor** Fine-wire stranded conductor consisting of bare copper wires (following EN 60228)
-  **Core insulation** Mechanically high-quality TPE mixture.
-  **Core stranding** **Number of cores < 12:** cores stranded in a layer with short pitch length. **Number of cores ≥ 12:** cores combined in bundles and stranded together around a centre for high tensile stresses with adapted, short pitch lengths and pitch directions, especially low-torsion structure.
-  **Core identification** **Cores < 0,5 mm²:** Colour code in accordance with DIN 47100
Cores ≥ 0,5 mm²: cores black with white numerals, one core green-yellow
CF77.UL.03.04.INI: brown, blue, black, white
-  **Outer jacket** Low-adhesion, highly abrasion-resistant mixture on the basis of PUR, adapted to suit the requirements in energy chains® (following DIN VDE 0282 Part 10).
Colour: Window grey (similar to RAL 7040)
CF77.UL.03.04.INI: Colour: Colza yellow (similar to RAL 1021)
-  **Bending radius** **moved** < 10 m travel moved minimum 6,8 x d
≥ 10 m travel moved minimum 7,5 x d
fixed minimum 4 x d
-  **Temperature** **moved** -35 °C to +80 °C
fixed -40 °C to +80 °C
-  **v max.** 10 m/s, 5 m/s
-  **unsupported/gliding**
-  **a max.** 80 m/s²
-  **Travel distance** Freely suspended travel distances and up to 100 m for gliding applications, Class 4
-  **Torsion** ± 180°, with 1 m cable length
-  **UV-resistant** Medium
-  **Nominal voltage** **Number of cores < 12:** 300/500 V
Number of cores < 12 (0,25-0,34): 300/300 V
Number of cores ≥ 12: 300/300 V (following DIN VDE 0245)
-  **Testing voltage** 2000 V (following DIN VDE 0281-2)

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1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

Class 5.4.3 (5 high load requirements 4 travel distance up to 100 m 3 oil-resistant)

-  **Oil** 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
-  **Silicon-free** Free from silicon which can affect paint adhesion (following PV 3.10.7 – status 1992)
-  **Halogen-free** Following EN 50267-2-1
-  **UL/CSA** < 0,5 mm²: Style 10493 and 20233, 300 V, 80 °C
≥ 0,5 mm²: Style 11323 and 21223, 1000 V, 80 °C
-  **NFPA** Following NFPA 79-2012 chapter 12.9
-  **CEI** Following CEI 20-35
-  **CE** Following 2006/95/EG
-  **DESINA** According to VDW, DESINA standardisation
-  **Lead free** Following 2011/65/EC (RoHS-II)
-  **Clean room** According to ISO Class 1. Outer jacket material complies with CF77.UL.05.12.D, tested by IPA according to standard 14644-1
-  **CTP** Certified according to N° C-DE.PB49.V.00396
-  **EAC** Certified according to N° TC RU C-DE.ME77.B.00960

New! Guaranteed lifetime for this series according to the "chainflex® guarantee club" conditions ► Page 22-25

Double strokes*	Temperature, from/to [°C]	Travel distance [m]	5 million		7,5 million		10 million	
			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		< 10 m	≥ 10 m	< 10 m	≥ 10 m	< 10 m	≥ 10 m
	-25 / +70	≤ 100	8,5	10	9,5	11	10,5	12
	+70 / +80		6,8	7,5	7,5	8,5	8,5	9,5
			7,5	10	9,5	11	10,5	12

* higher number of double strokes possible

Typical application area

- for high load requirements
- almost unlimited resistance to oil
- indoor and outdoor applications with average sun radiation
- freely suspended travel distances and up to 100 m for gliding applications
- Machining units/machine tools, storage and retrieval units for high-bay warehouses, packaging industry, quick handling, refrigerating sector

... no minimum order quantity ...

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Image exemplary.

Delivery program Part No.	Number of cores and conductor nominal cross section [mm ²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF77.UL.02.04.D	4 x 0,25	5,5	11	35
CF77.UL.03.04.INI	4 x 0,34	5,5	17	40
CF77.UL.05.04.D	4 G 0,5	6,0	22	44
CF77.UL.05.05.D	5 G 0,5	6,5	28	52
CF77.UL.05.07.D	7 G 0,5	8,0	41	80
CF77.UL.05.12.D	12 G 0,5	10,0	66	132
CF77.UL.05.18.D	18 G 0,5	12,0	99	184
CF77.UL.05.25.D	25 G 0,5	14,0	138	247
CF77.UL.05.30.D	30 G 0,5	15,0	165	325
CF77.UL.07.03.D	3 G 0,75	6,5	24	55
CF77.UL.07.04.D	4 G 0,75	7,0	32	64
CF77.UL.07.05.D	5 G 0,75	7,5	40	75
CF77.UL.07.07.D	7 G 0,75	8,5	56	106
CF77.UL.07.12.D	12 G 0,75	12,0	96	192
CF77.UL.07.18.D	18 G 0,75	13,5	143	260
CF77.UL.07.20.D	20 G 0,75	14,5	159	292
CF77.UL.07.25.D	25 G 0,75	16,0	198	368
CF77.UL.07.36.D	36 G 0,75	18,5	297	524
CF77.UL.07.42.D ⁽¹⁾	42 G 0,75	21,0	365	604
CF77.UL.10.02.D	2 x 1,0	6,5	22	54
CF77.UL.10.03.D	3 G 1,0	6,5	32	65
CF77.UL.10.04.D	4 G 1,0	7,0	43	79
CF77.UL.10.05.D	5 G 1,0	8,0	53	97
CF77.UL.10.07.D	7 G 1,0	9,0	74	119
CF77.UL.10.12.D	12 G 1,0	12,5	127	234
CF77.UL.10.18.D	18 G 1,0	15,0	191	339
CF77.UL.10.25.D	25 G 1,0	17,0	264	452
CF77.UL.10.42.D	42 G 1,0	22,5	462	708

(1) Delivery time upon inquiry.
Note: The mentioned external diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core

Delivery program Part No.	Number of cores and conductor nominal cross section [mm ²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF77.UL.15.03.D	3 G 1,5	7,5	48	86
CF77.UL.15.04.D	4 G 1,5	8,0	64	105
CF77.UL.15.05.D	5 G 1,5	8,5	80	125
CF77.UL.15.07.D ⁽¹⁷⁾	7 G 1,5	10,5	111	174
CF77.UL.15.12.D	12 G 1,5	14,0	191	308
CF77.UL.15.18.D	18 G 1,5	17,0	286	477
CF77.UL.15.25.D	25 G 1,5	19,5	396	630
CF77.UL.15.36.D ⁽¹⁾	36 G 1,5	23,5	594	891
CF77.UL.15.42.D ⁽¹⁾	42 G 1,5	26,5	729	1040
CF77.UL.25.03.D	3 G 2,5	8,5	80	124
CF77.UL.25.04.D	4 G 2,5	9,5	106	155
CF77.UL.25.05.D	5 G 2,5	10,5	132	192
CF77.UL.25.07.D ⁽¹⁷⁾	7 G 2,5	12,5	185	270
CF77.UL.40.04.D ⁽¹⁾	4 G 4,0	11,5	185	257

(1) Delivery time upon inquiry.
(17) Using the cables with "7 G 1,5 mm²" and "7 G 2,5 mm²" it is essential: bending radius 17 x d with travel distance ≥ 5 m. When the travel distance is not less than 5 m, a bending radius not less than 17 x d has to be used.
Note: The mentioned external 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.10.03.D – in your desired length (0,5 m steps)
CF77.UL.D chainflex® series .10 Code nominal cross section .03 Number of cores

prices price list online
www.chainflex.eu/CF77

delivery time despatched in 24 hours or today

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





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1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)



PUR Control cable | CF78.UL














- for high load requirements
- PUR outer jacket
- shielded
- oil-resistant and coolant-resistant
- flame-retardant
- notch-resistant
- PVC-free/halogen-free

-  **Conductor** Fine-wire stranded conductor consisting of bare copper wires (following EN 60228).
-  **Core insulation** Mechanically high-quality TPE mixture.
-  **Core stranding** **Number of cores < 12:** cores stranded in a layer with short pitch length. **Number of cores ≥ 12:** cores combined in bundles and stranded together around a centre for high tensile stresses with adapted, short pitch lengths and pitch directions, especially low-torsion structure.
-  **Core identification** **Cores < 0,5 mm²:** Colour code in accordance with DIN 47100 **Cores ≥ 0,5 mm²:** cores black with white numerals, one core green-yellow
-  **Inner jacket** PUR mixture adapted to suit the requirements in energy chains®.
-  **Overall shield** Bending-resistant braiding made of tinned copper wires. Coverage approx. 55% linear, approx. 80% optical.
-  **Outer jacket** Low-adhesion, highly abrasion-resistant mixture on the basis of PUR, adapted to suit the requirements in energy chains® (following DIN VDE 0282 Part 10). Colour: Window grey (similar to RAL 7040)
-  **Bending radius** **moved** < 10 m travel moved minimum 6,8 x d
≥ 10 m travel moved minimum 7,5 x d
fixed minimum 4 x d
-  **Temperature** **moved** -35 °C to +80 °C
fixed -40 °C to +80 °C
-  **v max.** 10 m/s, 5 m/s
-  **unsupported/gliding**
-  **a max.** 80 m/s²
-  **Travel distance** Freely suspended travel distances and up to 100 m for gliding applications, Class 4
-  **UV-resistant** Medium
-  **Nominal voltage** **Number of cores < 12:** 300/500 V
Number of cores < 12 (0,25-0,34): 300/300 V
Number of cores ≥ 12: 300/300 V (following DIN VDE 0245)
-  **Testing voltage** 2000 V (following DIN VDE 0281-2).

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1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

Class 5.4.3 (5 high load requirements 4 travel distance up to 100 m 3 oil-resistant)

-  **Oil** 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
-  **Silicon-free** Free from silicon which can affect paint adhesion (following PV 3.10.7 – status 1992).
-  **Halogen-free** Following EN 50267-2-1
-  **UL/CSA** < 0,5 mm²: Style 10493 and 20233, 300 V, 80 °C
≥ 0,5 mm²: Style 11323 and 21223, 1000 V, 80 °C
-  **NFPA** Following NFPA 79-2012 chapter 12.9
-  **CEI** Following CEI 20-35
-  **CE** Following 2006/95/EG
-  **Lead free** Following 2011/65/EC (RoHS-II)
-  **Clean room** According to ISO Class 1. Outer jacket material complies with CF77.UL.05.12.D, tested by IPA according to standard 14644-1
-  **CTP** Certified according to N° C-DE.PB49.V.00396
-  **EAC** Certified according to N° TC RU C-DE.ME77.B.00960

New! Guaranteed lifetime for this series according to the "chainflex® guarantee club" conditions ► Page 22-25

Double strokes*		5 million		7,5 million		10 million	
Temperature, from/to [°C]	Travel distance [m]	R min. [factor x d]		R min. [factor x d]		R min. [factor x d]	
		< 10 m	≥ 10 m	< 10 m	≥ 10 m	< 10 m	≥ 10 m
-35 / -25		8,5	10	9,5	11	10,5	12
-25 / +70	≤ 100	6,8	7,5	7,5	8,5	8,5	9,5
+70 / +80		7,5	7,5	9,5	11	10,5	12

* higher number of double strokes possible

Typical application area

- for high load requirements
- almost unlimited resistance to oil
- indoor and outdoor applications with average sun radiation
- freely suspended travel distances and up to 100 m for gliding applications
- Machining units/machine tools, storage and retrieval units for high-bay warehouses, packaging industry, quick handling, refrigerating sector

... no minimum order quantity ...

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Image exemplary.

Delivery program Part No.	Number of cores and conductor nominal cross section [mm²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF78.UL.05.04	(4 G 0,5)C	8,0	40	79
CF78.UL.05.05	(5 G 0,5)C	8,5	48	94
CF78.UL.05.07	(7 G 0,5)C	9,5	62	123
CF78.UL.05.09	(9 G 0,5)C	11,0	81	148
CF78.UL.05.12	(12 G 0,5)C	12,5	97	207
CF78.UL.05.18	(18 G 0,5)C	14,0	156	257
CF78.UL.05.25	(25 G 0,5)C	16,0	180	366
CF78.UL.07.03	(3 G 0,75)C	8,0	44	79
CF78.UL.07.04	(4 G 0,75)C	8,5	52	99
CF78.UL.07.05	(5 G 0,75)C	9,5	64	108
CF78.UL.07.07	(7 G 0,75)C	10,5	87	146
CF78.UL.07.12	(12 G 0,75)C	13,5	145	252
CF78.UL.07.18 ⁽¹⁾	(18 G 0,75)C	16,0	207	367
CF78.UL.07.36	(36 G 0,75)C	21,5	416	728
CF78.UL.07.42 ⁽¹⁾	(42 G 0,75)C	23,5	489	800
CF78.UL.10.03	(3 G 1,0)C	8,5	53	90
CF78.UL.10.04	(4 G 1,0)C	9,0	65	107
CF78.UL.10.05	(5 G 1,0)C	9,5	78	124
CF78.UL.10.07	(7 G 1,0)C	11,0	110	170
CF78.UL.10.12	(12 G 1,0)C	14,5	178	307
CF78.UL.10.18 ⁽¹⁾	(18 G 1,0)C	17,0	256	424
CF78.UL.10.25	(25 G 1,0)C	19,5	347	567
CF78.UL.15.03	(3 G 1,5)C	9,5	72	133
CF78.UL.15.04	(4 G 1,5)C	10,0	90	139
CF78.UL.15.05	(5 G 1,5)C	10,5	115	166
CF78.UL.15.07	(7 G 1,5)C	12,5	153	226
CF78.UL.15.12	(12 G 1,5)C	16,5	249	403
CF78.UL.15.18	(18 G 1,5)C	19,0	368	564
CF78.UL.15.25	(25 G 1,5)C	22,5	495	755
CF78.UL.15.36 ⁽¹⁾	(36 G 1,5)C	26,5	715	1147
CF78.UL.15.42 ⁽¹⁾	(42 G 1,5)C	29,5	884	1360
CF78.UL.25.04	(4 G 2,5)C	11,5	148	212
CF78.UL.25.05	(5 G 2,5)C	12,5	177	247
CF78.UL.25.07	(7 G 2,5)C	14,5	245	350
CF78.UL.40.04 ⁽¹⁾	(4 G 4,0)C	14,0	217	342

(1) Delivery time upon inquiry.

Note: The mentioned external 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.15.18 – in your desired length (0,5 m steps)
CF78.UL chainflex® series .15 Code nominal cross section .18 Number of cores

 prices price list online
www.chainflex.eu/CF78

 delivery time despatched in
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1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)



PUR Control cable | CF2












- for maximum load requirements
- PUR outer jacket
- shielded
- oil-resistant and coolant-resistant
- flame-retardant
- notch-resistant
- hydrolysis-resistant and microbe-resistant

	Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following EN 60228).
	Core insulation	Cores < 0,5 mm²: Mechanically high-quality PP mixture. Cores ≥ 0,5 mm²: Mechanically high-quality PVC mixture (following DIN VDE 0207 Part 4).
	Core stranding	Number of cores < 12: cores stranded in a layer with short pitch length. Number of cores ≥ 12: cores combined in bundles and stranded together around a centre for high tensile stresses with adapted, short pitch lengths and pitch directions, especially low-torsion structure.
	Core identification	Cores < 0,5 mm²: Colour code in accordance with DIN 47100 Cores ≥ 0,5 mm²: cores black with white numerals, one core green-yellow
	Inner jacket	PVC mixture adapted to suit the requirements in energy chains®.
	Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70% linear, approx. 90% optical.
	Outer jacket	Low-adhesion, highly abrasion-resistant mixture on the basis of PUR, adapted to suit the requirements in energy chains® (following DIN VDE 0282 Part 10). Colour: Anthracite grey (similar to RAL 7016)
	Bending radius	moved minimum 5 x d fixed minimum 4 x d
	Temperature	moved -20 °C to +80 °C fixed -40 °C to +80 °C
	v max.	10 m/s, 5 m/s
	unsupported/gliding	
	a max.	80 m/s²
	Travel distance	Freely suspended travel distances and up to 100 m for gliding applications, Class 4
	UV-resistant	High
	Nominal voltage	300/500 V (following DIN VDE 0245).
	Testing voltage	2000 V (following DIN VDE 0281-2).
	Oil	Oil-resistant (following DIN EN 50363-10-2), Class 3.

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1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

Class 6.4.3 (6 maximum load requirements 4 travel distance up to 100 m 3 oil-resistant)

	Offshore	MUD-resistant following NEK 606 – status 2009.
	Flame-retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
	Silicon-free	Free from silicon which can affect paint adhesion (following PV 3.10.7 – status 1992).
	UL/CSA	< 0,5 mm²: Style 10493 and 20317, 300 V, 80 °C ≥ 0,5 mm²: Style 1007 and 20317, 300 V, 80 °C
	NFFPA	Following NFFPA 79-2012 chapter 12.9
	CEI	Following CEI 20-35
	CE	Following 2006/95/EG
	Lead free	Following 2011/65/EC (RoHS-II)
	Clean room	According to ISO Class 1. Outer jacket material complies with CF27.07.05.02.01.D, tested by IPA according to standard 14644-1
	CTP	Certified according to N° C-DE.PB49.V.00396
	EAC	Certified according to N° TC RU C-DE.ME77.B.00960

New! Guaranteed lifetime for this series according to the "chainflex® guarantee club" conditions ► Page 22-25

Temperature, from/to [°C]	Double strokes*		Travel distance [m]	5 million	7,5 million	10 million
	v max. unsupported [m/s]	a max. gliding [m/s²]		R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20 / -10			≤ 100	6,8	7,5	8,5
-10 / +70	10	5		5	6,8	7,5
+70 / +80				6,8	7,5	8,5

* higher number of double strokes possible

Typical application area

- for maximum load requirements
- almost unlimited resistance to oil
- Indoor and outdoor applications
- freely suspended 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, refrigerating sector

... no minimum order quantity ...

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Image exemplary.

Delivery program Part No.	Number of cores and conductor nominal cross section [mm ²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF2.01.04	(4 x 0,14)C	6,0	17	40
CF2.01.08	(8 x 0,14)C	8,0	29	65
CF2.01.12	(12 x 0,14)C	9,0	49	101
CF2.01.18	(18 x 0,14)C	10,0	53	125
CF2.01.24 ⁽³⁾	(24 x 0,14)C	11,5	65	135
CF2.01.36	(36 x 0,14)C	14,0	88	200
CF2.01.48	(48 x 0,14)C	16,0	135	310
CF2.02.04	(4 x 0,25)C	7,0	24	53
CF2.02.08	(8 x 0,25)C	8,0	41	83
CF2.02.18	(18 x 0,25)C	13,0	96	190
CF2.02.24 ⁽³⁾	(24 x 0,25)C	14,0	120	220
CF2.02.48	(48 x 0,25)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 minimum crosstalk), these cables can virtually be used in all cases in which otherwise twisted-pair cables are required.
Note: The mentioned external diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x** = without earth core

 **Order example: CF2.02.18 – in your desired length (0,5 m steps)**
CF2 chainflex® series .02 Code nominal cross section .18 Number of cores

 **prices** **price list online**
www.chainflex.eu/CF2

 **delivery time** **despatched in 24 hours or today**



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





 **eplan download, configurator ► www.igus.eu/CF2**


1030 types from stock no cutting costs ...
 (for up to 10 cuts of the same type)








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TPE Control cable | CF9

- for maximum load requirements
- TPE outer jacket
- oil-resistant
- biooil-resistant
- PVC-free/halogen-free
- low-temperature-flexible
- hydrolysis-resistant and microbe-resistant

-  **Conductor** Stranded conductor in especially bending-resistant version consisting of bare copper wires (following EN 60228).
-  **Core insulation** Mechanically high-quality TPE mixture.
-  **Core stranding** **Number of cores < 12:** cores stranded in a layer with short pitch length. **Number of cores ≥ 12:** cores combined in bundles and stranded together around a centre for high tensile stresses with adapted, short pitch lengths and pitch directions, especially low-torsion structure.
-  **Core identification** **Cores < 0,75 mm²:** Colour code in accordance with DIN 47100
Cores ≥ 0,75 mm²: cores black with white numerals, one core green-yellow
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:
(0,34mm²): violet/red/grey/red-blue, green, grey-pink, white-green, white-yellow, white-grey/black/yellow-brown/brown-green, white/yellow/pink/grey-brown
(0,75mm²): blue/green-yellow/brown










-  **Outer jacket** Low-adhesion mixture on the basis of TPE, especially abrasion-resistant and highly flexible, adapted to suit the requirements in energy chains®.
Colour: Steel blue (similar to RAL 5011)

-  **Bending radius** **moved** minimum 5 x d
fixed minimum 3 x d
-  **Temperature** **moved** -35 °C to +100 °C
fixed -40 °C to +100 °C
-  **v max. unsupported/gliding** 10 m/s, 6 m/s
-  **a max.** 100 m/s²
-  **Travel distance** Freely suspended travel distances and up to 400 m and more for gliding applications, Class 5
-  **Torsion** ± 90°, with 1 m cable length
-  **UV-resistant** High

 eplan download, configurator ► www.igus.eu/CF9

1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

Class 7.5.4 (7 maximum load requirements 5 travel distance up to 400 m and more 4 oil-resistant)

-  **Nominal voltage** 300/500 V (following DIN VDE 0245).
-  **Testing voltage** 2000 V (following DIN VDE 0281-2).
-  **Oil** Oil-resistant (following DIN EN 60811-2-1), biooil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4.
-  **Silicon-free** Free from silicon which can affect paint adhesion (following PV 3.10.7 – status 1992).
-  **Halogen-free** Following EN 50267-2-1.
-  **CE** Following 2006/95/EG
-  **Lead free** Following 2011/65/EC (RoHS-II)
-  **Clean room** According to ISO Class 1, material/cable tested by IPA according to ISO standard 14644-1
-  **EAC** Certified according to N° TC RU C-DE.ME77.B.00960

New! Guaranteed lifetime for this series according to the "chainflex® guarantee club" conditions ► Page 22-25

Double strokes*				5 million	7,5 million	10 million
Temperature, from/to [°C]	v max. [m/s]	a max. [m/s²]	Travel distance [m]	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	10	6	> 400	5	6	7
+90 / +100				6,8	7,5	8,5

* higher number of double strokes possible

Typical application area

- for maximum load requirements
- almost unlimited resistance to oil, also with bio-oils
- Indoor and outdoor applications, UV-resistant
- freely suspended 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



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

Test data ► Page 58 or www.igus.eu/test13

... no minimum order quantity ...

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Image exemplary.

Delivery program Part No.	Number of cores and conductor nominal cross section [mm²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF9.02.02	2 x 0,25	4,5	6	18
CF9.02.03.INI	3 x 0,25	4,5	8	22
CF9.02.06	6 x 0,25	5,5	16	37
CF9.02.07	7 x 0,25	6,5	19	44
CF9.02.08	8 x 0,25	6,5	22	50
CF9.02.12	12 x 0,25	8,0	32	73
CF9.02.18 ⁽¹⁾	18 x 0,25	9,5	48	105
CF9.02.20	20 x 0,25	9,5	53	111
CF9.03.04.INI	4 x 0,34	5,0	15	32
CF9.03.05.INI	5 x 0,34	5,5	18	38
CF9.03.06	6 x 0,34	6,0	22	45
CF9.03.08	8 x 0,34	7,0	29	59
CF9.03.16.07.03.INI	4x(4x0,34)+(3x0,75)	11,0	82	159
CF9.05.02	2 x 0,5	5,0	11	26
CF9.05.03	3 x 0,5	5,0	16	32
CF9.05.04	4 x 0,5	5,5	22	40
CF9.05.05	5 x 0,5	6,0	27	48
CF9.05.07	7 x 0,5	7,0	37	66
CF9.05.12	12 x 0,5	10,0	64	120
CF9.05.18	18 x 0,5	11,5	96	177
CF9.05.25	25 x 0,5	13,0	132	236
CF9.05.36	36 x 0,5	15,5	191	334
CF9.07.04 ⁽¹⁾	4 G 0,75	6,0	32	55
CF9.07.05	5 G 0,75	6,5	40	68
CF9.07.07	7 G 0,75	8,0	56	94
CF9.07.12	12 G 0,75	11,0	96	170
CF9.07.20	20 G 0,75	13,5	159	267
CF9.07.25	25 G 0,75	14,5	198	329
CF9.10.03	3 G 1,0	6,0	32	54
CF9.10.04	4 G 1,0	6,5	43	69
CF9.10.05	5 G 1,0	7,5	53	84
CF9.10.12	12 G 1,0	12,0	127	214
CF9.10.18	18 G 1,0	14,5	191	314
CF9.10.25	25 G 1,0	17,0	264	450

New*

New*

Note: The mentioned external diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core
* New in this catalogue.

Delivery program Part No.	Number of cores and conductor nominal cross section [mm²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF9.15.02	2 x 1,5	6,5	32	57
CF9.15.04	4 G 1,5	7,5	64	90
CF9.15.05	5 G 1,5	8,0	81	110
CF9.15.07 ⁽¹⁷⁾	7 G 1,5	9,5	114	151
CF9.15.12	12 G 1,5	13,5	191	298
CF9.15.18	18 G 1,5	16,5	286	445
CF9.15.25	25 G 1,5	20,0	396	632
CF9.15.36	36 G 1,5	23,0	571	899
CF9.25.04	4 G 2,5	9,0	106	152
CF9.25.05	5 G 2,5	10,0	132	197
CF9.25.07 ⁽¹⁷⁾	7 G 2,5	12,0	187	245
CF9.25.12	12 G 2,5	17,5	317	515
CF9.25.16	16 G 2,5	19,5	423	687
CF9.25.18 ⁽⁷⁾	18 G 2,5	22,5	476	830
CF9.25.25	25 G 2,5	24,5	660	1059
CF9.40.04	4 G 4,0	10,5	169	236
CF9.60.04	4 G 6,0	12,5	254	332
CF9.60.05	5 G 6,0	13,5	317	410
CF9.100.04 ⁽⁶⁾	4 G 10,0	16,5	423	580
CF9.160.04 ⁽⁶⁾	4 G 16,0	18,0	528	719
CF9.350.04 ⁽⁶⁾	4 G 35,0	28,0	1479	1769

(7) Nominal voltage 600/1000 V (6) Nominal voltage 450/750 V
(17) Using the cables with "7 G 1,5 mm²" and "7 G 2,5 mm²" it is essential: bending radius 17 x d with travel distance ≥ 5 m. When the travel distance is not less than 5 m, a bending radius not less than 17 x d has to be used.
Note: The mentioned external 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 – in your desired length (0,5 m steps)
CF9 chainflex® series .25 Code nominal cross section .04 Number of cores

prices price list online
www.chainflex.eu/CF9

delivery time despatched in 24 hours or today

















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1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

TPE Control cable | CF10








- for maximum load requirements
- TPE outer jacket
- shielded
- oil-resistant
- biooil-resistant
- PVC-free/halogen-free
- low-temperature-flexible
- hydrolysis-resistant and microbe-resistant

	Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following EN 60228).
	Core insulation	Mechanically high-quality TPE mixture.
	Core stranding	Number of cores < 12: cores stranded in a layer with short pitch length. Number of cores ≥ 12: cores combined in bundles and stranded together around a centre for high tensile stresses with adapted, short pitch lengths and pitch directions, especially low-torsion structure.
	Core identification	Cores < 0,75 mm²: Colour code in accordance with DIN 47100 Cores ≥ 0,75 mm²: cores black with white numerals, one core green-yellow CF10.03.05.INI: brown, blue, black, white, green-yellow TPE mixture adapted to suit the requirements in energy chains®.
	Inner jacket	
	Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70% linear, approx. 90% optical.
	Outer jacket	Low-adhesion mixture on the basis of TPE, especially abrasion-resistant and highly flexible, adapted to suit the requirements in energy chains®. Colour: Steel blue (similar to RAL 5011)
	Bending radius	moved minimum 5 x d fixed minimum 3 x d
	Temperature	moved -35 °C to +100 °C fixed -40 °C to +100 °C
	v max.	10 m/s, 6 m/s
	unsupported/gliding	
	a max.	100 m/s²
	Travel distance	Freely suspended travel distances and up to 400 m and more for gliding applications, Class 5
	UV-resistant	High
	Nominal voltage	300/500 V (following DIN VDE 0245).
	Testing voltage	2000 V (following DIN VDE 0281-2).

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1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

Class 7.5.4 (7 maximum load requirements 5 travel distance up to 400 m and more 4 oil-resistant)

	Oil	Oil-resistant (following DIN EN 60811-2-1), biooil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4.
	Silicon-free	Free from silicon which can affect paint adhesion (following PV 3.10.7 – status 1992).
	Halogen-free	Following EN 50267-2-1.
	CE	Following 2006/95/EG
	Lead free	Following 2011/65/EC (RoHS-II)
	Clean room	According to ISO Class 1. Outer jacket material complies with CF9.15.07, tested by IPA according to standard 14644-1
	EAC	Certified according to N° TC RU C-DE.ME77.B.00960

New! Guaranteed lifetime for this series according to the "chainflex® guarantee club" conditions ► Page 22-25

Double strokes*	5 million		7,5 million		10 million		
Temperature, from/to [°C]	v max. [m/s] unsupported	v max. [m/s] gliding	a max. [m/s²]	Travel distance [m]	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	10	6	100	> 400	5	6	7
+90 / +100					6,8	7,5	8,5

* higher number of double strokes possible

Typical application area

- for maximum load requirements
- almost unlimited resistance to oil, also with bio-oils
- Indoor and outdoor applications, UV-resistant
- freely suspended 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



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

... no minimum order quantity ...
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Image exemplary.

Delivery program Part No.	Number of cores and conductor nominal cross section [mm²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF10.01.12	(12 x 0,14)C	8,0	40	82
CF10.01.18	(18 x 0,14)C	9,5	68	127
CF10.02.04	(4 x 0,25)C	6,5	26	52
CF10.02.08	(8 x 0,25)C	8,0	42	81
CF10.02.12	(12 x 0,25)C	9,5	70	127
CF10.02.24 ⁽¹⁾	(24 x 0,25)C	13,0	120	222
CF10.02.25 ⁽¹⁾	(25 x 0,25)C	12,5	119	225
CF10.03.05.INI	(5 x 0,34)C	7,0	36	65
CF10.05.04	(4 x 0,5)C	7,0	39	69
CF10.05.05	(5 x 0,5)C	7,5	46	79
CF10.05.07	(7 x 0,5)C	8,5	60	103
CF10.05.12	(12 x 0,5)C	12,0	113	199
CF10.05.18	(18 x 0,5)C	13,5	153	263
CF10.05.25	(25 x 0,5)C	15,0	198	335
CF10.07.04	(4 G 0,75)C	7,5	51	87
CF10.07.05	(5 G 0,75)C	8,0	61	99
CF10.07.07	(7 G 0,75)C	9,5	94	145
CF10.07.12	(12 G 0,75)C	12,5	146	246
CF10.07.20	(20 G 0,75)C	15,0	226	368
CF10.07.24 ⁽¹⁾	(24 G 0,75)C	16,0	262	423
CF10.07.25 ⁽¹⁾	(25 G 0,75)C	16,5	270	450
CF10.10.02	(2 x 1,0)C	7,5	39	72
CF10.10.03	(3 G 1,0)C	7,5	51	83
CF10.10.04	(4 G 1,0)C	8,0	64	103
CF10.10.05	(5 G 1,0)C	8,5	74	120
CF10.10.07	(7 G 1,0)C	10,0	116	179
CF10.10.12	(12 G 1,0)C	13,5	186	302
CF10.10.18	(18 G 1,0)C	16,0	262	415
CF10.10.24 ⁽¹⁾	(24 G 1,0)C	18,5	336	539
CF10.10.25 ⁽¹⁾	(25 G 1,0)C	18,0	344	550
CF10.15.04	(4 G 1,5)C	9,0	99	145
CF10.15.05	(5 G 1,5)C	10,0	119	176
CF10.15.07	(7 G 1,5)C	11,5	159	235
CF10.15.12	(12 G 1,5)C	15,5	259	391
CF10.15.18	(18 G 1,5)C	19,5	398	624

New*

New*

New*

Note: The mentioned external diameters are maximum values and may tend toward lower tolerance limits.


G = with green-yellow earth core x = without earth core

* New in this catalogue.

Delivery program Part No.	Number of cores and conductor nominal cross section [mm²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF10.25.04	(4 G 2,5)C	11,5	149	224
CF10.25.07	(7 G 2,5)C	13,5	244	364
CF10.25.12	(12 G 2,5)C	19,0	401	644
CF10.40.04	(4 G 4,0)C	12,5	222	317
CF10.40.05	(5 G 4,0)C	13,5	271	386

Note: The mentioned external diameters are maximum values and may tend toward lower tolerance limits.

G = with green-yellow earth core x = without earth core

 Order example: CF10.10.12 – in your desired length (0,5 m steps)
CF10 chainflex® series .10 Code nominal cross section .12 Number of cores

 prices price list online
www.chainflex.eu/CF10

 delivery time despatched in
24 hours or today

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... no minimum order quantity ...

















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1030 types from stock no cutting costs ...

(for up to 10 cuts of the same type)

TPE Control cable | CF9.UL











- for maximum load requirements
- TPE outer jacket
- oil-resistant
- biooil-resistant
- flame-retardant
- PVC-free
- low-temperature-flexible
- hydrolysis-resistant and microbe-resistant

-  **Conductor** Stranded conductor in especially bending-resistant version consisting of bare copper wires (following EN 60228).
-  **Core insulation** Mechanically high-quality TPE mixture.
-  **Core stranding** **Number of cores < 12:** cores stranded in a layer with short pitch length. **Number of cores ≥ 12:** cores combined in bundles and stranded together around a centre for high tensile stresses with adapted, short pitch lengths and pitch directions, especially low-torsion structure.
-  **Core identification** **Cores < 0,75 mm²:** Colour code in accordance with DIN 47100
Cores ≥ 0,75 mm²: cores black with white numerals, one core green-yellow
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
Low-adhesion mixture on the basis of TPE, especially abrasion-resistant and highly flexible, adapted to suit the requirements in energy chains®.
Colour: Slate grey (similar to RAL 7015)
-  **Outer jacket**
-  **Bending radius** **moved** minimum 5 x d
fixed minimum 3 x d
-  **Temperature** **moved** -35 °C to +100 °C
fixed -40 °C to +100 °C
-  **v max.** 10 m/s, 6 m/s
-  **unsupported/gliding**
-  **a max.** 100 m/s²
-  **Travel distance** Freely suspended travel distances and up to 400 m and more for gliding applications, Class 5
-  **Torsion** ± 90°, with 1 m cable length
-  **UV-resistant** High
-  **Nominal voltage** 300/500 V (following DIN VDE 0245).
-  **Testing voltage** 2000 V (following DIN VDE 0281-2).
-  **Oil** Oil-resistant (following DIN EN 60811-2-1), biooil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4.

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1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

Class 6.5.4 (6 maximum load requirements 5 travel distance up to 400 m and more 4 oil-resistant)

-  **Flame-retardant** According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
-  **Silicon-free** Free from silicon which can affect paint adhesion (following PV 3.10.7 – status 1992).
-  **UL/CSA** < 0,5 mm²: Style 10479 and 21529, 300 V, 90 °C
≥ 0,5 mm²: Style 10258 and 21530, 600 V, 90 °C
-  **NFFPA** Following NFFPA 79-2012 chapter 12.9
-  **CEI** Following CEI 20-35
-  **CE** Following 2006/95/EG
-  **Lead free** Following 2011/65/EC (RoHS-II)
-  **Clean room** According to ISO Class 1. Outer jacket material complies with CF34.UL.25.04.D, tested by IPA according to standard 14644-1
-  **CTP** Certified according to N° C-DE.PB49.V.00396
-  **EAC** Certified according to N° TC RU C-DE.ME77.B.00960

New! Guaranteed lifetime for this series according to the "chainflex® guarantee club" conditions ► Page 22-25

Double strokes*	v max. [m/s]		Travel distance [m]	5 million	7,5 million	10 million
	from/to [°C]	unsupported		R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35 / -25			> 400	6,8	7,5	10
-25 / +90	10	6		5	6	7
+90 / +100				6,8	7,5	10

* higher number of double strokes possible

Typical application area

- for maximum load requirements
- almost unlimited resistance to oil, also with bio-oils
- Indoor and outdoor applications, UV-resistant
- freely suspended 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



igus® chainflex® cables in a rafting channel application.

... no minimum order quantity ...

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Image exemplary.


Delivery program Part No.	Number of cores and conductor nominal cross section [mm ²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF9.UL.02.02	2 x 0,25	5,0	6	28
CF9.UL.02.03.INI	3 x 0,25	5,5	8	32
CF9.UL.02.04	4 x 0,25	5,5	11	38
CF9.UL.02.06	6 x 0,25	6,5	16	49
CF9.UL.02.07 ⁽¹⁾	7 x 0,25	7,0	19	59
CF9.UL.02.08	8 x 0,25	7,5	22	64
CF9.UL.02.12	12 x 0,25	8,5	32	94
CF9.UL.03.04.INI	4 x 0,34	6,0	15	43
CF9.UL.03.05.INI ⁽¹⁾	5 x 0,34	6,5	18	53
CF9.UL.03.06	6 x 0,34	6,5	22	57
CF9.UL.03.08	8 x 0,34	7,5	29	76
CF9.UL.05.02	2 x 0,5	6,0	11	43
CF9.UL.05.03 ⁽¹⁾	3 x 0,5	6,5	16	52
CF9.UL.05.04	4 x 0,5	7,0	22	60
CF9.UL.05.05	5 x 0,5	7,5	27	70
CF9.UL.05.07	7 x 0,5	8,5	37	96
CF9.UL.05.12	12 x 0,5	11,5	64	170
CF9.UL.05.18	18 x 0,5	13,5	96	239
CF9.UL.05.25	25 x 0,5	14,5	132	296
CF9.UL.05.36 ⁽¹⁾	36 x 0,5	18,5	191	460
CF9.UL.07.05	5 G 0,75	8,0	40	96
CF9.UL.07.07	7 G 0,75	9,5	56	133
CF9.UL.07.12	12 G 0,75	13,0	96	234
CF9.UL.07.20 ⁽¹⁾	20 G 0,75	15,5	159	349
CF9.UL.07.25	25 G 0,75	16,5	198	421
CF9.UL.10.03	3 G 1,0	7,5	32	78
CF9.UL.10.04	4 G 1,0	8,0	43	97
CF9.UL.10.05 ⁽¹⁾	5 G 1,0	9,0	53	116
CF9.UL.10.12	12 G 1,0	14,0	127	283
CF9.UL.10.18	18 G 1,0	16,5	191	406
CF9.UL.10.25	25 G 1,0	18,5	264	541

(1) Delivery time upon inquiry.
Note: The mentioned external diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core

 eplan download, configurator ► www.igus.eu/CF9UL

Delivery program Part No.	Number of cores and conductor nominal cross section [mm ²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF9.UL.15.04	4 G 1,5	9,0	64	126
CF9.UL.15.05	5 G 1,5	9,5	80	150
CF9.UL.15.07 ⁽¹⁷⁾	7 G 1,5	11,5	111	206
CF9.UL.15.12	12 G 1,5	16,0	191	384
CF9.UL.15.18	18 G 1,5	19,0	286	553
CF9.UL.15.25	25 G 1,5	22,0	396	756
CF9.UL.25.04	4 G 2,5	10,5	106	194
CF9.UL.25.05	5 G 2,5	11,0	132	239
CF9.UL.25.07 ⁽¹⁷⁾	7 G 2,5	13,5	185	328
CF9.UL.25.12	12 G 2,5	19,0	317	620
CF9.UL.25.16 ⁽¹⁾	16 G 2,5	21,5	423	811
CF9.UL.25.18	18 G 2,5	24,0	476	917
CF9.UL.25.25	25 G 2,5	27,0	660	1199
CF9.UL.40.04	4 G 4,0	12,0	169	271
CF9.UL.60.04	4 G 6,0	14,0	254	380

(1) Delivery time upon inquiry.
(17) Using the cables with "7 G 1,5 mm²" and "7 G 2,5 mm²" it is essential: bending radius 17 x d with travel distance ≥ 5 m.
When the travel distance is not less than 5 m, a bending radius not less than 17 x d has to be used.
Note: The mentioned external 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.02.12 – in your desired length (0,5 m steps)
CF9.UL chainflex® series .02 Code nominal cross section .12 Number of cores

 prices price list online
www.chainflex.eu/CF9UL

 delivery time despatched in 24 hours or today

1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

... no minimum order quantity ...
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TPE Control cable | CF10.UL

- for maximum load requirements
- TPE outer jacket
- shielded
- oil-resistant, biooil-resistant
- flame-retardant
- PVC-free
- low-temperature-flexible
- hydrolysis-resistant and microbe-resistant

- Conductor** Stranded conductor in especially bending-resistant version consisting of bare copper wires (following EN 60228).
- Core insulation** Mechanically high-quality TPE mixture.
- Core stranding** **Number of cores < 12:** cores stranded in a layer with short pitch length. **Number of cores ≥ 12:** cores combined in bundles and stranded together around a centre for high tensile stresses with adapted, short pitch lengths and pitch directions, especially low-torsion structure.
- Core identification** **Cores < 0,75 mm²:** Colour code in accordance with DIN 47100 **Cores ≥ 0,75 mm²:** cores black with white numerals, one core green-yellow
- Inner jacket** TPE mixture adapted to suit the requirements in energy chains®.
- Overall shield** Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70% linear, approx. 90% optical.
- Outer jacket** Low-adhesion mixture on the basis of TPE, especially abrasion-resistant and highly flexible, adapted to suit the requirements in energy chains®. Colour: Slate grey (similar to RAL 7015)
- Bending radius** **moved** minimum 5 x d **fixed** minimum 3 x d
- Temperature** **moved** -35 °C to +100 °C **fixed** -40 °C to +100 °C
- v max.** 10 m/s, 6 m/s
- unsupported/gliding**
- a max.** 100 m/s²
- Travel distance** Freely suspended travel distances and up to 400 m and more for gliding applications, Class 5
- UV-resistant** High
- Nominal voltage** 300/500 V (following DIN VDE 0245).
- Testing voltage** 2000 V (following DIN VDE 0281-2).
- Oil** Oil-resistant (following DIN EN 60811-2-1), biooil-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

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1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

Class 6.5.4 (6 maximum load requirements 5 travel distance up to 400 m and more 4 oil-resistant)

- Silicon-free** Free from silicon which can affect paint adhesion (following PV 3.10.7 – status 1992).
- UL/CSA** < 0,5 mm²: Style 10479 and 21529, 300 V, 90 °C
≥ 0,5 mm²: Style 10258 and 21530, 600 V, 90 °C
- NFPA** Following NFPA 79-2012 chapter 12.9
- CEI** Following CEI 20-35
- CE** Following 2006/95/EG
- Lead free** Following 2011/65/EC (RoHS-II)
- Clean room** According to ISO Class 1. Outer jacket material complies with CF34.UL.25.04.D, tested by IPA according to standard 14644-1
- CTP** Certified according to N° C-DE.PB49.V.00396
- EAC** Certified according to N° TC RU C-DE.ME77.B.00960

New! Guaranteed lifetime for this series according to the "chainflex® guarantee club" conditions ► Page 22-25

Double strokes*				5 million	7,5 million	10 million
Temperature, from/to [°C]	v max. [m/s]	a max. [m/s²]	Travel distance [m]	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	10	6	> 400	5	6	7
+90 / +100				6,8	7,5	8,5

* higher number of double strokes possible

Typical application area

- for maximum load requirements
- almost unlimited resistance to oil, also with bio-oils
- Indoor and outdoor applications, UV-resistant
- freely suspended 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

... no minimum order quantity ...

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Image exemplary.

Delivery program Part No.	Number of cores and conductor nominal cross section [mm ²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF10.UL.02.04	(4 x 0,25)C	7,0	28	69
CF10.UL.02.08	(8 x 0,25)C	9,0	41	104
CF10.UL.02.12	(12 x 0,25)C	10,5	70	158
CF10.UL.02.24	(24 x 0,25)C	13,0	120	255
CF10.UL.05.04	(4 x 0,5)C	8,5	41	99
CF10.UL.05.05 ⁽¹⁾	(5 x 0,5)C	9,0	48	112
CF10.UL.05.12	(12 x 0,5)C	13,0	117	259
CF10.UL.05.18 ⁽¹⁾	(18 x 0,5)C	15,0	161	349
CF10.UL.05.25	(25 x 0,5)C	16,5	204	420
CF10.UL.07.03	(3 G 0,75)C	8,5	44	106
CF10.UL.07.04	(4 G 0,75)C	9,0	54	123
CF10.UL.07.05	(5 G 0,75)C	10,0	75	156
CF10.UL.07.07	(7 G 0,75)C	11,0	99	203
CF10.UL.07.12	(12 G 0,75)C	14,5	158	342
CF10.UL.07.20 ⁽¹⁾	(20 G 0,75)C	17,0	235	482
CF10.UL.07.24 ⁽¹⁾	(24 G 0,75)C	19,5	304	588
CF10.UL.10.02 ⁽¹⁾	(2 x 1,0)C	8,5	42	105
CF10.UL.10.03 ⁽¹⁾	(3 G 1,0)C	9,0	53	121
CF10.UL.10.04	(4 G 1,0)C	10,0	79	158
CF10.UL.10.05 ⁽¹⁾	(5 G 1,0)C	10,5	92	181
CF10.UL.10.07	(7 G 1,0)C	12,0	120	238
CF10.UL.10.12	(12 G 1,0)C	15,0	189	380
CF10.UL.10.18 ⁽¹⁾	(18 G 1,0)C	19,0	302	586
CF10.UL.10.24 ⁽¹⁾	(24 G 1,0)C	21,5	381	753
CF10.UL.15.04	(4 G 1,5)C	10,5	104	194
CF10.UL.15.05	(5 G 1,5)C	11,5	124	228
CF10.UL.15.07	(7 G 1,5)C	13,0	164	299
CF10.UL.15.12	(12 G 1,5)C	18,0	268	523
CF10.UL.15.18	(18 G 1,5)C	21,5	413	771
CF10.UL.25.04	(4 G 2,5)C	12,0	154	276
CF10.UL.25.07	(7 G 2,5)C	15,0	250	441
CF10.UL.25.12	(12 G 2,5)C	21,5	445	845
CF10.UL.40.04	(4 G 4,0)C	13,5	227	376

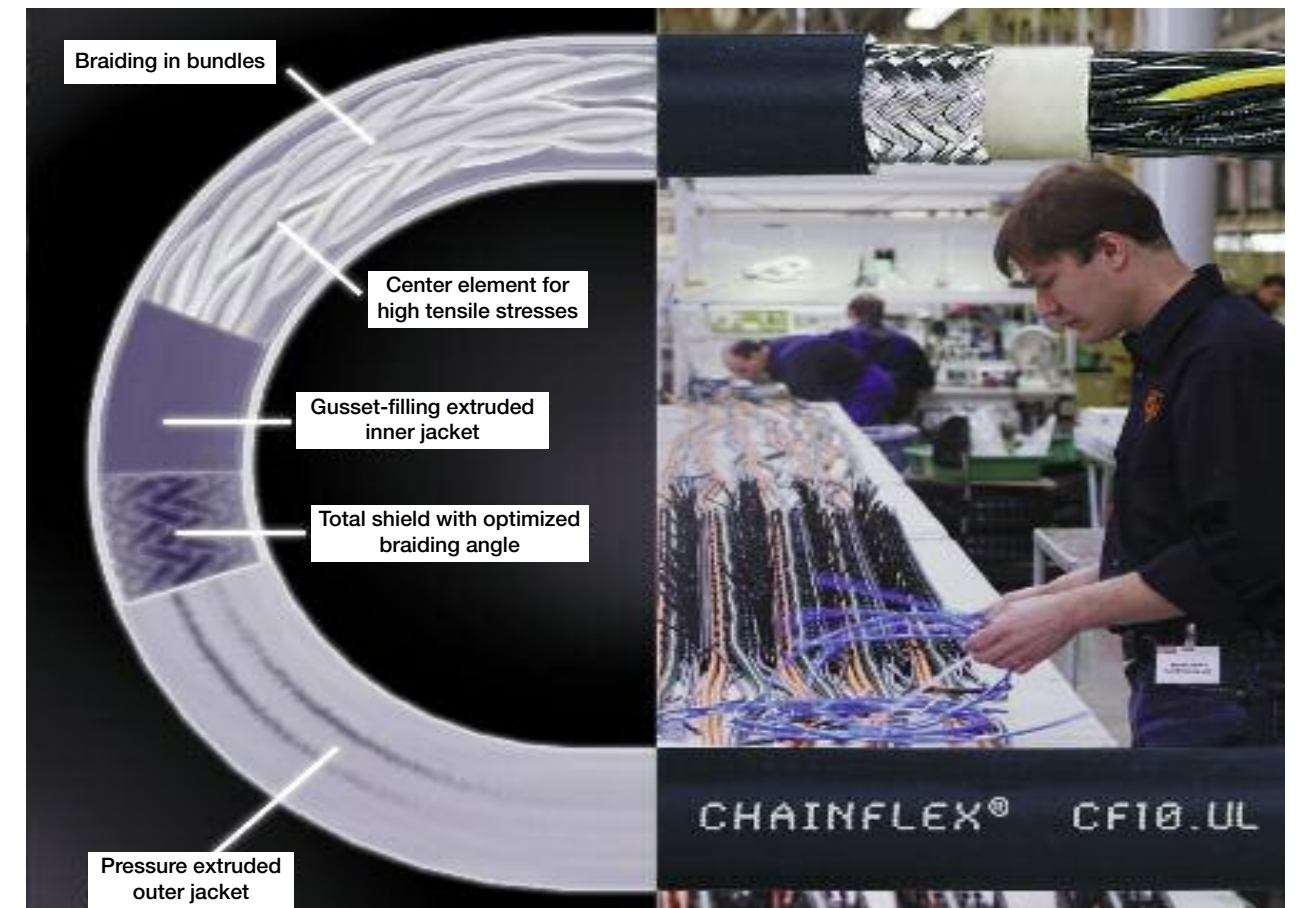
(1) Delivery time upon inquiry.
Note: The mentioned external diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core

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Order example: CF10.UL.10.02 – in your desired length (0,5 m steps)
CF10.UL chainflex® series .10 Code nominal cross section .02 Number of cores

prices price list online
www.chainflex.eu/CF10UL

delivery time despatched in
24 hours or today



The special cable structure of chainflex® CF10.UL guarantees quality – also in the igus® harnessing.

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











1030 types from stock no cutting costs ...

(for up to 10 cuts of the same type)



TPE Control cable | CF98





- for maximum load requirements and especially small radii up to 4xd
- TPE outer jacket
- oil-resistant, biooil-resistant
- PVC-free/halogen-free
- low-temperature-flexible
- hydrolysis-resistant and microbe-resistant

	Conductor	Conductor consisting of a highly flexible special alloy.
	Core insulation	Mechanically high-quality TPE mixture.
	Core stranding	Cores stranded in one 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 mixture on the basis of TPE, especially abrasion-resistant and highly flexible, adapted to suit the requirements in energy chains®. Colour: Steel blue (similar to RAL 5011)
	Bending radius	moved minimum 4 x d fixed minimum 3 x d
	Temperature	moved -35 °C to +90 °C fixed -40 °C to +90 °C
	v max. unsupported/gliding	10 m/s, 6 m/s
	a max.	100 m/s²
	Travel distance	Short, very fast applications with small radii and tight design space, Class 4
	Torsion	± 90°, with 1 m cable length
	UV-resistant	High
	Nominal voltage	300/300 V
	Testing voltage	1500 V
	Oil	Oil-resistant (following DIN EN 60811-2-1), biooil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4.
	Silicon-free	Free from silicon which can affect paint adhesion (following PV 3.10.7 – status 1992).
	Halogen-free	Following EN 50267-2-1.

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1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

Class 7.4.4 (7 maximum load requirements 4 travel distance up to 100 m 4 oil-resistant)

	CE	Following 2006/95/EG
	Lead free	Following 2011/65/EC (RoHS-II)
	Clean room	According to ISO Class 1. Outer jacket material complies with CF9.15.07, tested by IPA according to standard 14644-1
	EAC	Certified according to N° TC RU C-DE.ME77.B.00960

New! Guaranteed lifetime for this series according to the "chainflex® guarantee club" conditions ► Page 22-25

Double strokes*				5 million	7,5 million	10 million
Temperature, from/to [°C]	v max. [m/s]	a max. [m/s²]	Travel distance [m]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
	unsupported	gliding				
-35 / -25				5	5	5
-25 / +80	10	6	≤ 100	4	4	4
+80 / +90				5	5	5

* higher number of double strokes possible

Typical application area

- for maximum load requirements at 4 x d
- almost unlimited resistance to oil, also with bio-oils
- Indoor and outdoor applications, UV-resistant
- especially for short, very fast applications with small radii and tight design space
- automatic insertion machines, automatic doors, clean room, very quick handling

Delivery program Part No.	Number of cores and conductor nominal cross section [mm²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF98.01.02	2 x 0,14	4,0	4	11
CF98.01.03 ⁽¹⁾	3 x 0,14	4,5	6	14
CF98.01.04	4 x 0,14	5,0	9	16
CF98.01.07 ⁽¹⁾	7 x 0,14	6,0	14	21
CF98.01.08	8 x 0,14	6,5	16	24
CF98.02.03.INI	3 x 0,25	5,0	12	25
CF98.02.04	4 x 0,25	5,5	16	30
CF98.02.07	7 x 0,25	6,5	26	53
CF98.02.08	8 x 0,25	7,0	30	60
CF98.03.03 ⁽¹⁾	3 x 0,34	5,0	14	28
CF98.03.04.INI	4 x 0,34	5,5	19	35
CF98.03.07	7 x 0,34	7,0	32	55
CF98.03.08 ⁽¹⁾	8 x 0,34	7,5	38	63
CF98.05.04	4 x 0,5	6,0	31	40



















(1) Delivery time upon inquiry
Note: The mentioned external diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core

Test data ► Page 42 or www.igus.eu/test4

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TPE Control cable | CF99





- for maximum load requirements and especially small radii up to 4xd
- TPE outer jacket
- shielded
- oil-resistant, biooil-resistant
- PVC-free/halogen-free
- low-temperature-flexible
- hydrolysis-resistant and microbe-resistant

	Conductor	Conductor consisting of a highly flexible special alloy.
	Core insulation	Mechanically high-quality TPE mixture.
	Core stranding	Cores stranded in one layer with especially short pitch length.
	Core identification	Colour code in accordance with DIN 47100. CF99.02.03.INI: brown, blue, black CF99.03.04.INI: brown, blue, black, white
	Inner jacket	TPE mixture adapted to suit the requirements in energy chains®.
	Overall shield	Highly flexible alloyed special shield. Coverage approx. 70% linear, approx. 90% optical.
	Outer jacket	Low-adhesion mixture on the basis of TPE, especially abrasion-resistant and highly flexible, adapted to suit the requirements in energy chains®. Colour: Steel blue (similar to RAL 5011)
	Bending radius	moved minimum 4 x d fixed minimum 3 x d
	Temperature	moved -35 °C to +90 °C fixed -40 °C to +90 °C
	v max. unsupported/gliding	10 m/s, 6 m/s
	a max.	100 m/s ²
	Travel distance	Short, very fast applications with small radii and tight design space, Class 4
	UV-resistant	High
	Nominal voltage	300/300 V
	Testing voltage	1500 V
	Oil	Oil-resistant (following DIN EN 60811-2-1), biooil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4.
	Halogen-free	Following EN 50267-2-1.
	Silicon-free	Free from silicon which can affect paint adhesion (following PV 3.10.7 – status 1992).

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1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

Class 7.4.4 (7 maximum load requirements 4 travel distance up to 100 m 4 oil-resistant)

	CE	Following 2006/95/EG
	Lead free	Following 2011/65/EC (RoHS-II)
	Clean room	According to ISO Class 1. Outer jacket material complies with CF9.15.07, tested by IPA according to standard 14644-1
	EAC	Certified according to N° TC RU C-DE.ME77.B.00960

New! Guaranteed lifetime for this series according to the "chainflex® guarantee club" conditions ► Page 22-25

Double strokes*				5 million	7,5 million	10 million
Temperature, from/to [°C]	v max. [m/s]	a max. [m/s ²]	Travel distance [m]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35 / -25				5	5	5
-25 / +80	10	6	≤ 100	4	4	4
+80 / +90				5	5	5


* higher number of double strokes possible

Typical application area

- for maximum load requirements at 4xd
- almost unlimited resistance to oil, also with bio-oils
- Indoor and outdoor applications, UV-resistant
- especially for short, very fast applications with small radii and tight design space
- automatic insertion machines, automatic doors, clean room, very quick handling

Delivery program Part No.	Number of cores and conductor nominal cross section [mm ²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF99.01.02	(2 x 0,14)C	5,5	14	33
CF99.01.03 ⁽¹⁾	(3 x 0,14)C	6,0	17	37
CF99.01.04	(4 x 0,14)C	6,0	21	43
CF99.01.07 ⁽¹⁾	(7 x 0,14)C	7,5	32	62
CF99.01.08	(8 x 0,14)C	8,0	36	69
CF99.02.03.INI ⁽¹⁾	(3 x 0,25)C	6,5	25	48
CF99.02.04	(4 x 0,25)C	6,5	30	56
CF99.02.07	(7 x 0,25)C	8,0	48	85
CF99.02.08 ⁽¹⁾	(8 x 0,25)C	8,5	54	93
CF99.03.03 ⁽¹⁾	(3 x 0,34)C	6,5	27	51
CF99.03.04.INI ⁽¹⁾	(4 x 0,34)C	7,0	35	62
CF99.03.08	(8 x 0,34)C	9,0	64	105

⁽¹⁾ Delivery time upon inquiry
Note: The mentioned external diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core

 **Order example: CF99.01.02 – in your desired length (0,5 m steps)**
CF99 chainflex® series .01 Code nominal cross section .02 Number of cores

 **prices** price list online
www.chainflex.eu/CF99

 **delivery time** despatched in 24 hours or today

... no minimum order quantity ...

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