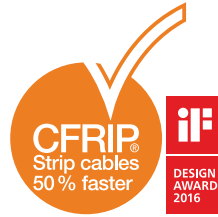


Control cable | TPE | chainflex® CF10.UL



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

Dynamic information

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

Cable structure

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

Electrical information

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

Example image

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	7	≥ 400 m
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	±180°				

Class 6.6.4.1

Properties and approvals

	UV resistance	High.
	Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4.
	Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
	Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992).
	UL/CSA	Cores < 0.5 mm²: Style 10479 and 21529, 300 V, 90 °C Cores ≥ 0.5 mm²: Style 10258 and 21387, 1000 V, 90 °C
	NFFPA	Following NFFPA 79-2012 chapter 12.9.
	DNV-GL	Certified according to GL type testing – Certificate no.: 61 935-14 HH
	EAC	Certificate no. RU C-DE.ME77.B.01254 (TR ZU)
	CTP	Certificate no. C-DE.PB49.B.00416 (Fire safety)
	CEI	Following CEI 20-35.
	Lead-free	Following 2011/65/EU (RoHS-II).
	Cleanroom	According to ISO Class 1. Outer jacket material complies with CF34.UL.25.04.D, tested by IPA according to standard 14644-1.
	CE	Following 2014/35/EU.

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

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

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

Typical mechanical application areas

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



Control cable | TPE | chainflex® CF10.UL

Class 6.6.4.1

Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
Travel distance	1	2	3	4	5	6	7	≥ 400 m
Oil resistance	none	1	2	3	4	highest		
Torsion	none	1	2	3	±180°			

Strip cables 50% faster



Example image

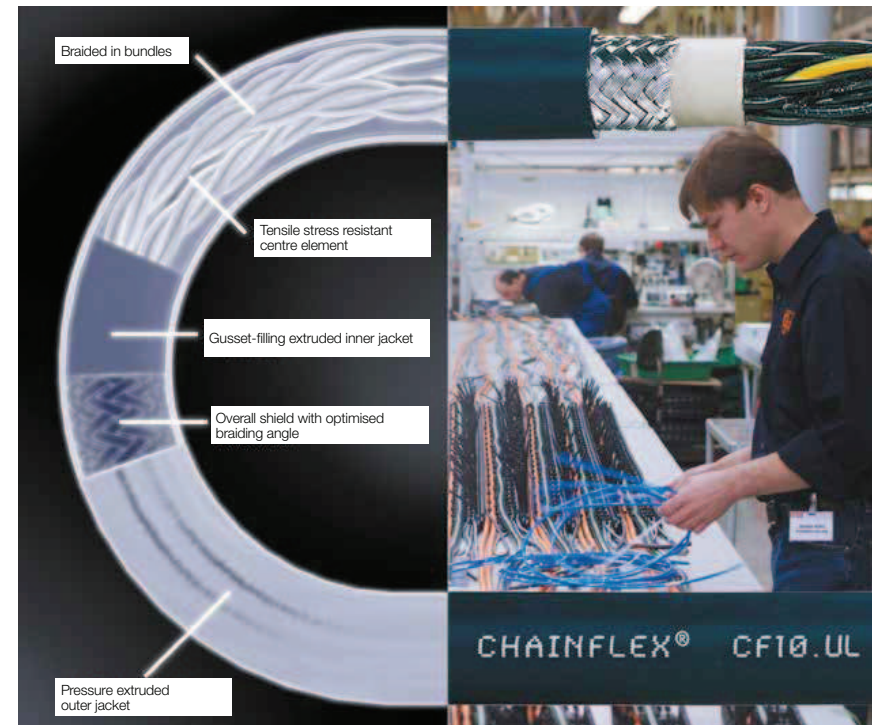
Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. mm	Copper index kg/km	Weight kg/km
CF10.UL.02.04	(4x0.25)C	7.0	28	69
CF10.UL.02.08	(8x0.25)C	9.0	41	104
CF10.UL.02.12	(12x0.25)C	10.5	70	158
New CF10.UL.02.25	(25x0.25)C	13.0	119	259
CF10.UL.05.04	(4x0.5)C	8.5	41	99
CF10.UL.05.05	(5x0.5)C	9.0	48	112
CF10.UL.05.12	(12x0.5)C	13.0	117	259
CF10.UL.05.18 ¹¹⁾	(18x0.5)C	15.0	161	349
CF10.UL.05.25	(25x0.5)C	16.5	204	420
CF10.UL.07.03	(3G0.75)C	8.5	44	106
CF10.UL.07.04	(4G0.75)C	9.0	54	123
CF10.UL.07.05	(5G0.75)C	10.0	75	156
CF10.UL.07.07	(7G0.75)C	11.0	99	203
CF10.UL.07.12	(12G0.75)C	14.5	158	342
CF10.UL.07.20	(20G0.75)C	17.0	235	482
CF10.UL.07.25	(25G0.75)C	19.0	307	618
CF10.UL.10.02	(2x1.0)C	8.5	42	105
CF10.UL.10.03	(3G1.0)C	9.0	53	121
CF10.UL.10.04	(4G1.0)C	10.0	79	158
CF10.UL.10.05	(5G1.0)C	10.5	92	181
CF10.UL.10.07	(7G1.0)C	12.0	120	238
CF10.UL.10.12 ¹¹⁾	(12G1.0)C	15.0	189	380
CF10.UL.10.18	(18G1.0)C	19.0	302	586
CF10.UL.10.25	(25G1.0)C	21.5	390	772
CF10.UL.15.04	(4G1.5)C	10.5	104	194
CF10.UL.15.05	(5G1.5)C	11.5	124	228
CF10.UL.15.07 ¹⁷⁾	(7G1.5)C	13.0	164	299
CF10.UL.15.12	(12G1.5)C	18.0	268	523
CF10.UL.15.18	(18G1.5)C	21.5	413	771
CF10.UL.25.04	(4G2.5)C	12.0	154	276
CF10.UL.25.07 ¹⁷⁾	(7G2.5)C	15.0	250	441
CF10.UL.25.12	(12G2.5)C	21.5	445	845
CF10.UL.40.04	(4G4.0)C	13.5	227	376

¹¹⁾ Phase-out model

¹⁷⁾ When using the cables with „7 G 1.5 mm²“ and „7 G 2.5 mm²“ minimum bend radius must be 17.5 x d with gliding travel distance ≥ 5 m.

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

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



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



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