

Control cable | TPE | chainflex® CF10.UL

36 10 million Double strokes guaranteed **5 x d** Bend radius, e-chain® **400m** Travel distance, e-chain®

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

Dynamic information

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

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	Number of cores < 12: Cores wound in a layer with short pitch length. Number of cores ≥ 12: Cores wound in bundles which are then wound around a high tensile strength centre element, all with optimised short pitch lengths and directions. Especially low-torsion structure.
Core identification	Cores < 0.75mm²: Colour code in accordance with DIN 47100. Cores ≥ 0.75mm²: Black cores with white numbers, one green-yellow core.
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage linear approx. 70%, optical approx. 90%
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

EPLAN download, configurators ► www.igus.eu/CF10UL

36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



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Class 6.6.4.1

Basic requirements
Travel distance
Oil resistance
Torsion

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

Electrical information

Nominal voltage	300/500V (following DIN VDE 0298-3) Cores < 0.5mm²: 300V (following UL) Cores ≥ 0.5mm²: 1000V (following UL)
Testing voltage	2,000V (following DIN EN 50395)

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 60811-404), bio-oil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
UL/CSA AWM	See data sheet for details ► www.igus.eu/CF10UL
NFPA	Following NFPA 79-2018, chapter 12.9
DNV	Type Approval Certificate TAE00003X2
EAC	Certificate No. RU C-DE.ME77.B.00300/19
REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
Cleanroom	According to ISO Class 1. The outer jacket material of this series complies with CF34.UL.25.04.D - tested by IPA according to standard DIN EN ISO 14644-1 Following 2014/35/EU
CE	
UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

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

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

Typical application areas

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

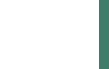


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UL-verified chainflex® guarantee ... www.igus.eu/ul-verified



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



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Strip cables 50% faster with CFRIP® tear strip



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	6.5	24	60
CF10.UL.02.08	(8x0.25)C	8.5	40	94
CF10.UL.02.12	(12x0.25)C	9.5	64	137
CF10.UL.02.25	(25x0.25)C	12.5	110	241
CF10.UL.05.04	(4x0.5)C	7.5	37	83
CF10.UL.05.05	(5x0.5)C	8.0	44	98
CF10.UL.05.12	(12x0.5)C	11.5	103	211
CF10.UL.05.25	(25x0.5)C	15.5	186	383
CF10.UL.07.04	(4G0.75)C	8.0	49	101
CF10.UL.07.05 ¹¹⁾	(5G0.75)C	8.5	59	119
CF10.UL.07.07	(7G0.75)C	10.0	89	171
CF10.UL.07.12	(12G0.75)C	12.5	135	268
CF10.UL.07.25 ¹¹⁾	(25G0.75)C	17.0	256	489
CF10.UL.10.02	(2x1.0)C	7.5	38	88
CF10.UL.10.03 ¹¹⁾	(3G1.0)C	8.0	48	99
CF10.UL.10.04	(4G1.0)C	8.5	61	117
CF10.UL.10.05 ¹¹⁾	(5G1.0)C	9.0	72	137
CF10.UL.10.07	(7G1.0)C	11.0	110	204
CF10.UL.10.25 ¹¹⁾	(25G1.0)C	18.5	348	608
CF10.UL.15.04	(4G1.5)C	9.0	83	144
CF10.UL.15.05 ¹¹⁾	(5G1.5)C	10.0	111	184
CF10.UL.15.07 ¹⁷⁾	(7G1.5)C	11.5	148	250
CF10.UL.15.12	(12G1.5)C	15.0	240	420
CF10.UL.15.18	(18G1.5)C	18.5	365	613
CF10.UL.25.04	(4G2.5)C	11.0	140	232
CF10.UL.25.07 ¹⁷⁾	(7G2.5)C	14.0	226	369
CF10.UL.25.12	(12G2.5)C	18.5	395	666
CF10.UL.40.04	(4G4.0)C	12.5	205	315

¹¹⁾ Phase-out model

¹⁷⁾ When using the cables with "7G1.5mm²" and "7G2.5mm²" minimum bend radius must be 17.5xd with gliding travel distance ≥ 5m.

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

Class 6.6.4.1

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Travel distance
Oil resistance
Torsion

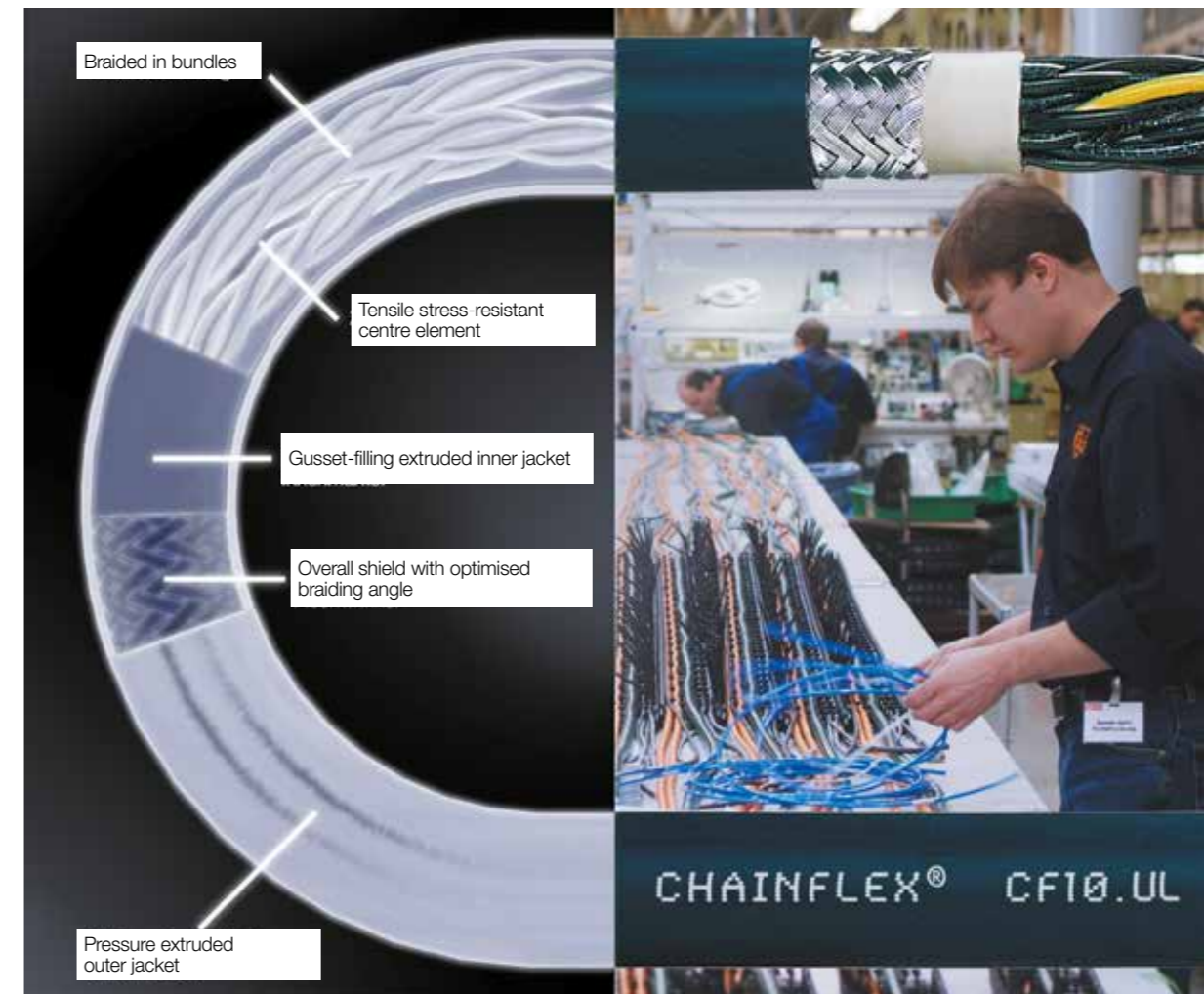
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Cables available in the chainflex® CASE

Simple savings on delivery, storage space and re-ordering with the chainflex® CASE - ship'n store by igus®.

More on this on page 24/25 and online: www.igus.eu/cf-case



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



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