

Spindle cable/Single core | TPE | chainflex® CF310.UL

36 10 million Guaranteed double strokes **7.5 x d** Bend radius, e-chain® **400 m** Travel distance, e-chain®

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

Dynamic information

Bend radius	e-chain® linear flexible	minimum 7.5 x d minimum 6 x d
	fixed	minimum 4 x d
Temperature	e-chain® linear flexible	-35 °C up to +90 °C -45 °C up to +90 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +90 °C (following DIN EN 50305)
v max.	unsupported	10 m/s
	gliding	6 m/s
a max.		100 m/s ²
Travel distance		Unsupported travels and up to 400 m and more for gliding applications, Class 6

Cable structure

Conductor	Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage 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: Signal black (similar to RAL 9004)

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3) 1000 V (following UL)
Testing voltage	4000 V (following DIN EN 50395)

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 60811-404), bio-oil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame retardant	According to IEC 60332-1-2, FT1, VW-1
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/CF310.UL

EPLAN download, configurators ► www.igus.eu/CF310.UL

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

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

Class 6.6.4.1

NFPA	Following NFPA 79-2018, chapter 12.9
DNV-GL	Type approval certificate No. TAE00003XC
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
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
CE	Following 2014/35/EU

Guaranteed service life (details see page 26-27)

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]	R min. [factor x d]	R min. [factor x d]
-35/-25		10	11		12	
-25/+80		7.5	8.5		9.5	
+80/+90		10	11		12	

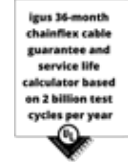
* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical mechanical application areas

- For extremely heavy duty applications, Class 6
- Unsupported travels and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Cleanroom, semiconductor insertion, outdoor cranes, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm ²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF310.UL.25.01	(1x2.5)C	6.0	41	58
CF310.UL.40.01	(1x4.0)C	6.5	57	77
CF310.UL.60.01	(1x6.0)C	7.0	80	101
CF310.UL.100.01	(1x10)C	8.5	121	146
CF310.UL.160.01	(1x16)C	10.0	184	223
CF310.UL.250.01	(1x25)C	12.0	280	329
CF310.UL.350.01	(1x35)C	13.0	395	444
CF310.UL.500.01	(1x50)C	15.0	536	587
CF310.UL.700.01	(1x70)C	18.0	779	851
CF310.UL.950.01	(1x95)C	21.0	1015	1125
CF310.UL.1200.01	(1x120)C	22.0	1270	1378
CF310.UL.1500.01	(1x150)C	24.5	1592	1700
CF310.UL.1850.01	(1x185)C	27.5	2066	2189

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



Example image

igus® chainflex® CF310.UL