

TPE Motor cable | CF310-UL

- For very high mechanical load requirements
- TPE outer jacket
- Shielded
- Oil-resistant, bio-oil-resistant
- Flame-retardant
- UV-resistant
- Hydrolysis/microbe-resistant

Dynamic Information

	Bend radius	E-Chain®	min. 7.5 x d
		flexible	min. 6 x d
		fixed	min. 4 x d
	Temperature	E-Chain®	-31 °F to +194 °F (-35 °C to +90 °C)
		flexible	-49 °F to +194 °F (-45 °C to +90 °C)
		fixed	-58 °F to +194 °F (-50 °C to +90 °C)
	v max.	unsupported	32.81 ft/s (10 m/s)
		gliding	19.69 ft/s (6 m/s)
	a max.	328.1 ft/s ² (100 m/s ²)	
	Travel distance	Unsupported travel distances and for gliding applications up to 1312 ft (400 m) and more, Class 6	

Cable structure

	Conductors	Conductor consisting of bare copper wires (according to EN 60228).
	Conductor insulation	Mechanically high-quality TPE mixture.
	Overall shield	Extremely bending-resistant tinned copper braid. 90 % optical coverage
	Outer jacket	Mechanically high-quality TPE mixture. Color: Signal black (similar to RAL 9004)

Electrical Information

	Nominal voltage	1000 V
	Test voltage	4000 V (following DIN EN 50396)

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 resistance	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
	Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
	UL/CSA	Style 10492 and 21218, 1000 V, 80 °C
	NFFPA 79	Complies to NFFPA 79-2015 chapter 12.9

Requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	1,312 ft +	
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	±180°				

Class 6.6.4.1

	DNV-GL	Certified according to GL type testing – Certificate no.: 61 938-14 HH
	EAC	Certified according to no. TC RU C-DE.ME77.B.01255
	CTP	Certified according to no. C-DE.PB49.B.00420
	CEI	Following CEI 20-35
	Lead-free	Following 2011/65/EC (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/EC

Guaranteed lifetime according to guarantee conditions (Page 22-25)

Cycles*	5 million 7.5 million 10 million						
	Temperature, from/to [°F]	v max. [ft/s] unsupported	a max. [ft/s ²] gliding	Travel distance [ft]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-31 / -13				≤ 1,312	10	11	12
-13 / +176	32.81	19.69	328.10		7.5	8.5	9.5
+176 / +194					10	11	12

* Higher number of cycles possible - please ask for your individual calculation.

Typical application areas

- For very high mechanical load requirements
- Almost unlimited resistance to oil, also with bio-oils
- Indoor and outdoor applications, UV-resistant
- Unsupported travel distances and for gliding applications up to 1312 ft (400 m) and more
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

Part No.	AWG	Number of Conductors and rated cross section [mm ²]	Outer diameter max.		Copper index		Weight	
			in.	mm	lbs/mft	kg/km	lbs/mft	kg/km
CF310-UL-25-01	14	1 x 2.5	0.26	6.5	26.2	39	41.0	61
CF310-UL-40-01	12	1 x 4.0	0.28	7.0	36.3	54	53.1	79
CF310-UL-60-01	10	1 x 6.0	0.30	7.5	51.1	76	68.5	102
CF310-UL-100-01	8	1 x 10.0	0.33	8.5	78.6	117	100.8	150
CF310-UL-160-01	6	1 x 16.0	0.39	10.0	119.6	178	145.8	217
CF310-UL-250-01	4	1 x 25.0	0.47	12.0	182.1	271	214.4	319
CF310-UL-350-01	2	1 x 35.0	0.51	13.0	257.4	383	289.6	431
CF310-UL-500-01	1	1 x 50.0	0.59	15.0	352.8	525	386.4	575
CF310-UL-700-01	2/0	1 x 70.0	0.69	17.5	512.7	763	557.1	829
CF310-UL-950-01	3/0	1 x 95.0	0.83	21.0	668.6	995	739.2	1100
CF310-UL-1200-01	4/0	1 x 120.0	0.87	22.0	836.6	1245	905.1	1347
CF310-UL-1500-01	300	1 x 150.0	0.96	24.5	1048.3	1560	1120.8	1668
CF310-UL-1850-01	350	1 x 185.0	1.08	27.5	1270.0	1890	1442.7	2147

Note: The mentioned outer diameters are maximum values.
G = with green-yellow earth core x = without earth core

1,244 types from stock ... no cutting costs*
... no minimum order quantity ... *(up to 10 cuts of the same part number)

36 months guarantee on every chainflex® cable ...
... up to 10 million cycles guaranteed ...

