

# TPE Motor cable | CF300-UL-D

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

### Dynamic Information

	<b>Bend radius</b>	<b>E-Chain®</b>	min. 7.5 x d
		<b>flexible</b>	min. 6 x d
		<b>fixed</b>	min. 4 x d
	<b>Temperature</b>	<b>E-Chain®</b>	-31 °F to +194 °F (-35 °C to +90 °C)
		<b>flexible</b>	-49 °F to +194 °F (-45 °C to +90 °C)
		<b>fixed</b>	-58 °F to +194 °F (-50 °C to +90 °C)
	<b>v max.</b>	<b>unsupported</b>	32.81 ft/s (10 m/s)
		<b>gliding</b>	19.69 ft/s (6 m/s)
	<b>a max.</b>	328.1 ft/s² (100 m/s²)	
	<b>Travel distance</b>	Unsupported travel distances and for gliding applications up to 1312 ft (400 m) and more, Class 6	
	<b>Torsion</b>	± 90°, with 3.281 ft (1 m) cable length	

### Cable structure

	<b>Conductors</b>	Conductor consisting of bare copper wires (according to EN 60228).
	<b>Conductor insulation</b>	Mechanically high-quality TPE mixture.
	<b>Outer jacket</b>	Low-adhesion mixture on the basis of TPE, especially abrasion-resistant and highly flexible, adapted to suit the requirements in E-Chains®. Color: Signal black (similar to RAL 9004)

### Electrical Information

	<b>Nominal voltage</b>	1000 V
	<b>Test voltage</b>	4000 V (following DIN EN 50396)

### Properties and approvals

	<b>UV resistance</b>	High
	<b>Oil resistance</b>	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
	<b>Flame resistance</b>	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
	<b>Silicone-free</b>	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
	<b>UL/CSA</b>	Style 10492 and 21218, 1000 V, 80 °C
	<b>NFFPA 79</b>	Complies to NFFPA 79-2015 chapter 12.9

**Configurators** ► [www.igus.com/CF300](http://www.igus.com/CF300)

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

## Class 6.6.4.2

	<b>DNV-GL</b>	Certified according to GL type testing – Certificate no.: 61 938-14 HH
	<b>EAC</b>	Certified according to no. TC RU C-DE.ME77.B.01255
	<b>CTP</b>	Certified according to no. C-DE.PB49.B.00420
	<b>CEI</b>	Following CEI 20-35
	<b>Lead-free</b>	Following 2011/65/EC (RoHS-II)
	<b>Cleanroom</b>	According to ISO Class 1. Outer jacket material complies with CF34-UL-25-04-D, tested by IPA according to standard 14644-1
	<b>DESINA</b>	According to VDW, DESINA standardisation
	<b>CE</b>	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/s²] gliding	Travel distance [ft]	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]
-31 / -13				≤ 1,312	10	11	12			
-13 / +176		32.81	19.69		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 [mm²]	Outer diameter max.		Copper index		Weight	
			in.	mm	lbs/mft	kg/km	lbs/mft	kg/km
CF300-UL-40-01-D	12	1 x 4.0	0.26	6.5	26.2	39	41.0	61
CF300-UL-60-01-D	10	1 x 6.0	0.28	7.0	39.0	58	55.1	82
CF300-UL-100-01-D	8	1 x 10.0	0.31	8.0	64.5	96	82.7	123
CF300-UL-160-01-D	6	1 x 16.0	0.37	9.5	103.5	154	127.0	189
CF300-UL-250-01-D	4	1 x 25.0	0.43	11.0	161.3	240	192.2	286
CF300-UL-350-01-D	2	1 x 35.0	0.49	12.5	225.8	336	258.0	384
CF300-UL-500-01-D	1	1 x 50.0	0.57	14.5	322.5	480	356.8	531
CF300-UL-700-01-D	2/0	1 x 70.0	0.65	16.5	467.7	696	508.7	757
CF300-UL-950-01-D	3/0	1 x 95.0	0.79	20.0	616.2	917	687.4	1023
CF300-UL-1200-01-D	4/0	1 x 120.0	0.85	21.5	779.5	1160	854.1	1271
CF300-UL-1500-01-D	300	1 x 150.0	0.93	23.5	964.3	1435	1041.6	1550
CF300-UL-1850-01-D	350	1 x 185.0	1.04	26.5	1193.4	1776	1353.3	2014

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 ...

