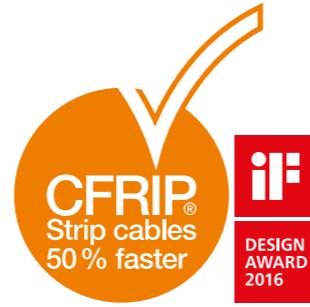


# TPE Motor cable | CF35-UL

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



### Dynamic Information

	<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>		262.5 ft/s² (80 m/s²)
	<b>Travel distance</b>	Unsupported travel distances and for gliding applications up to 1312 ft (400 m) and more, Class 6	

### Cable structure

	<b>Conductors</b>	<b>20-10 AWG:</b> Conductor consisting of bare copper wires (according to EN 60228). <b>8-1 AWG:</b> Conductor cable consisting of pre-leads (following EN 60228).
	<b>Conductor insulation</b>	Mechanically high-quality, especially low-capacitance TPE mixture.
	<b>Core construction</b>	Conductors cabled with short pitch length around a high-tensile strength core.
	<b>Color code</b>	Black with white numbers, one conductor green-yellow. 1. U / L1 / C / L+ 2. V / L2 3. W / L3 / D / L- 4. green/yellow
	<b>Inner jacket</b>	TPE mixture adapted to suit the requirements in E-Chains®.
	<b>Overall shield</b>	Extremely bending-resistant tinned copper braid. 90 % optical coverage
	<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)
	<b>CFRIP®</b>	Strip cables 50% faster: The tear strip is in the inner jacket Video ► <a href="http://www.igus.com/CFRIP">www.igus.com/CFRIP</a>

**Configurators** ► [www.igus.com/CF35](http://www.igus.com/CF35)

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

## Class 6.6.4.1

	<b>Electrical Information</b>	
	<b>Nominal voltage</b>	1000 V
	<b>Test voltage</b>	4000 V (following DIN EN 50396)
	<b>Properties and approvals</b>	
	<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 21184, 1000 V, 80 °C
	<b>NFFPA 79</b>	Complies to NFFPA 79-2015 chapter 12.9
	<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>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]
-31 / -13				≤ 1,312	10	11	12
-13 / +176		32.81	19.69	262.48	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, Ship to shore, outdoor cranes, low temperature applications

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



# TPE Motor cable | CF35-UL

## Class 6.6.4.1

Requirements  
Travel distance  
Oil resistance  
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	1,312 ft +	
none	1	2	3	4	highest			
none	1	2	3	±180°				

Strip cables 50% faster!

IGUS® CHAINFLEX® CF35.UL

Image exemplary.

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
CF35-UL-05-04	20	4 G 0.5	0.31	8.0	29.6	44	59.1	88
CF35-UL-07-04	18	4 G 0.75	0.33	8.5	39.0	58	73.9	110
CF35-UL-15-04	16	4 G 1.5	0.39	10.0	63.2	94	106.2	158
CF35-UL-25-04	14	4 G 2.5	0.45	11.5	95.4	142	149.8	223
CF35-UL-40-04	12	4 G 4.0	0.53	13.5	149.8	223	229.1	341
CF35-UL-60-04	10	4 G 6.0	0.63	16.0	219.1	326	323.9	482
CF35-UL-100-04	8	4 G 10.0	0.77	19.5	336.0	500	484.5	721
CF35-UL-160-04	6	4 G 16.0	0.91	23.0	536.2	798	727.7	1083
CF35-UL-250-04	4	4 G 25.0	1.08	27.5	855.4	1273	1099.3	1636
CF35-UL-60-03-O-PE	10	3 x 6.0	0.59	15.0	172.0	256	260.1	387
CF35-UL-100-03-O-PE <sup>1)</sup>	8	3 x 10.0	0.69	17.5	262.7	391	407.2	606
CF35-UL-160-03-O-PE	6	3 x 16.0	0.83	21.0	409.9	610	569.8	848
CF35-UL-250-03-O-PE	4	3 x 25.0	0.98	25.0	653.8	973	872.9	1299
CF35-UL-350-03-O-PE	2	3 x 35.0	1.12	28.5	885.7	1318	1207.5	1797
CF35-UL-500-03-O-PE	1	3 x 50.0	1.32	33.5	1228.4	1828	1647.7	2452

<sup>1)</sup> Delivery time upon request

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



Order example: **CF35-UL-15-04** – In your desired length  
CF35-UL Chainflex® series -15 Code nominal cross section -04 Number of conductors



Online order ► [www.chainflex.com/CF35](http://www.chainflex.com/CF35)



Delivery time 24hr or today.  
Delivery time means time until shipping of goods.



Configurators ► [www.igus.com/CF35](http://www.igus.com/CF35)

