

# Motor cable | TPE | chainflex® CF38

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

- For heaviest duty applications
- TPE outer jacket
- Shielded
- Oil and bio-oil-resistant
- PVC and halogen-free
- UV-resistant
- Hydrolysis and microbe-resistant

## Dynamic information

<b>Bend radius</b>	<b>e-chain® linear flexible</b>	minimum 7.5 x d
	<b>fixed</b>	minimum 6 x d
<b>Temperature</b>	<b>e-chain® linear flexible</b>	-35 °C up to +90 °C
	<b>fixed</b>	-50 °C up to +90 °C (following DIN EN 60811-504)
<b>v max.</b>	<b>unsupported</b>	10 m/s
	<b>gliding</b>	6 m/s
<b>a max.</b>		80 m/s <sup>2</sup>
<b>Travel distance</b>		Unsupported travels and up to 400 m and more for gliding applications, Class 6

## Cable structure

<b>Conductor</b>	<b>Cores &lt; 10 mm<sup>2</sup>:</b> Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228). <b>Cores ≥ 10 mm<sup>2</sup>:</b> Conductor cable consisting of pre-leads (following DIN EN 60228).
<b>Core insulation</b>	Mechanically high-quality, especially low-capacitance XLPE mixture.
<b>Core structure</b>	Cores wound with a short pitch length around a high tensile strength centre element.
<b>Core identification</b>	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- 4. Core: 4 / N
<b>Inner jacket</b>	TPE mixture adapted to suit the requirements in e-chains®.
<b>Overall shield</b>	Extremely bending-resistant braiding made of tinned copper wires. Coverage linear approx. 70 %, optical approx. 90 %
<b>Outer jacket</b>	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005)
<b>CFRIP®</b>	Strip cables faster: a tear strip is moulded into the inner jacket Video ► <a href="http://www.igus.eu/CFRIP">www.igus.eu/CFRIP</a>

## Electrical information

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

EPLAN download, configurators ► [www.igus.eu/CF38](http://www.igus.eu/CF38)

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

Basic requirements  
Travel distance  
Oil resistance  
Torsion

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

## Class 7.6.4.1

### 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>Silicone-free</b>	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
<b>Halogen-free</b>	Following DIN EN 60754
<b>UL verified</b>	Certificate No. B129699: „igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year“
<b>EAC</b>	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
<b>REACH</b>	In accordance with regulation (EC) No. 1907/2006 (REACH)
<b>Lead-free</b>	Following 2011/65/EC (RoHS-II/RoHS-III)
<b>Cleanroom</b>	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
<b>CE</b>	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]
-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](http://www.igus.eu/chainflexlife)

### Typical mechanical application areas

- For heaviest duty applications, Class 7
- 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 <sup>2</sup> ]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF38.15.04	(4G1.5)C	10.0	89	140
CF38.25.04	(4G2.5)C	11.5	133	198
CF38.40.04	(4G4.0)C	13.0	203	280
CF38.60.04	(4G6.0)C	16.0	288	409
CF38.100.04	(4G10)C	18.5	468	613
CF38.160.04	(4G16)C	23.0	738	943
CF38.250.04	(4G25)C	27.0	1153	1432
CF38.100.03.O.PE	(3x10)C	17.0	358	494
CF38.160.03.O.PE <sup>1)</sup>	(3x16)C	20.5	565	762
CF38.500.03.O.PE	(3x50)C	33.0	1714	2129

<sup>1)</sup> Phase-out model

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

Guarantee  
igus chainflex  
**36**  
month guarantee

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CE LISTED

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CE

EAC

REACH

RoHS

Clean-Room

CE

CE