

Data cable | TPE | chainflex® CF12



12.5 million
Double strokes guaranteed



10 x d
Bend radius, e-chain®



400m
Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Double-shielded
- Oil and bio-oil-resistant
- PVC and halogen-free
- Hydrolysis and microbe-resistant

**Now available
with UL approval
& 25% longer
service life**

Dynamic information

Bend radius	e-chain® linear	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	e-chain® linear	-35°C up to +100°C
	flexible	-50°C up to +100°C (following DIN EN 60811-504)
	fixed	-55°C up to +100°C (following DIN EN 50305)
v max.	unsupported	10m/s
	gliding	6m/s
a max.		100m/s ²
Travel distance		Unsupported travels and up to 400m and more for gliding applications, Class 6

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	Cores twisted in pairs with a short pitch length, core pairs then wound with short pitch lengths.
Core identification	Cores < 0.5mm²: Colour code in accordance with DIN 47100. Cores ≥ 0.5mm²: Black cores with white numbers.
Element shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage linear approx. 70%, optical approx. 90%
Element shield	TPE mixture on pair shielding adapted to suit the requirements in e-chains®.
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Highly flexible shield consisting of galvanised steel wire braid. 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: Steel blue (similar to RAL 5011)

Electrical information

Nominal voltage	300/300V (following DIN VDE 0298-3) 300V (following UL)
Testing voltage	1,500V (following DIN EN 50395)

Properties and approvals

UV resistance	High
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Basic requirements
Travel distance
Oil resistance
Torsion

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

Class 6.6.4.1

- 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
- Silicone-free**
Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
- Halogen-free**
Following DIN EN 60754
- UL verified**
Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
- UL AWM**
See data sheet for details ► www.igus.eu/CF12 (from production date 01/2022)
- EAC**
Certificate No. RU C-DE.ME77.B.00300/19
- 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 CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
- CE**
Following 2014/35/EU
- UKCA**
In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	12.5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	12.5	13.5	14.5
-25/+90	10	11	12
+90/+100	12.5	13.5	14.5

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

Typical application areas

- For heavy-duty applications, Class 6
- Unsupported travels and up to 400m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- For maximum EMC protection
- Storage and retrieval units for high-bay warehouses, machining units/machine tools, quick handling, cleanroom, semiconductor insertion, outdoor cranes, low-temperature applications

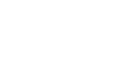
Part No.	Number of cores and conductor nominal cross section [mm ²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF12.02.04.02	(4x(2x0.25))C	11.5	52	172
CF12.05.03.02	(3x(2x0.5))C	13.5	65	224
CF12.05.04.02	(4x(2x0.5))C	14.5	83	267
CF12.05.06.02	(6x(2x0.5))C	17.0	128	376
CF12.05.08.02	(8x(2x0.5))C	20.5	163	503
CF12.05.10.02 ¹⁾	(10x(2x0.5))C	22.5	203	605
CF12.05.14.02	(14x(2x0.5))C	22.5	297	679
CF12.10.06.02	(6x(2x1.0))C	20.0	198	529

¹⁾ 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



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



Example image