Coax cable | TPE | chainflex® CFKoax

10 million
Guaranteed double strokes

10 x d
Bend radius, e-chain®

400 m
Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Oil and bio-oil-resistant
- UV-resistant
- Hydrolysis and microbe-resistant

Example image

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 (CFKoax1/3) -35 °C up to +70 °C (CFKoax2)
	flexible	-50 °C up to +100 °C (CFKoax1/3) -50 °C up to +70 °C (CFKoax2)
	fixed	-55 °C up to +100 °C (CFKoax1/3) -55 °C up to +70 °C (CFKoax2)
v max.	**unsupported**	10 m/s
	gliding	5 m/s
a max.		100 m/s²
Travel distance		Unsupported travels and up to 400 m and more for gliding applications, Class 6

Cable structure

Conductor	Multi-wire; adapted to single-wire diameter with pitch length to suit the requirements in e-chains®.
Core insulation	Special FEP mixture (CFKoax1/3) Special PE mixture (CFKoax2)
Core structure	Cores wound in a layer with especially short pitch length.
Core identification	Coaxial elements ▶ Product range table
Element shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
Element jacket	TPE mixture adapted to suit the requirements in e-chains®.
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: ▶ Product range table

Electrical information

Nominal voltage	500/500 V (following DIN VDE 0298-3)
Testing voltage	1500 V (following DIN EN 50395)

EPLAN download, configurators ▶ www.igus.eu/CFKoax

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

Class 6.6.4.1

Basic requirements	low	1	2	3	4	5	**6**	7 highest
Travel distance	unsupported	1	2	3	4	5	**6**	≥ 400 m
Oil resistance	none	1	2	3	**4**	highest		
Torsion	none	**1**	2	3	4	±360°		

Properties and approvals

UV resistance	Medium
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)
UL verified	Certificate No. B129699: “igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year”
EAC	Certificate No. RU C-DE.ME77.B.00300/19 (TR ZU)
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
Info	The coaxial elements used in cables of the CFKoax1 series are comparable with a HF75-0.3/1.6 according to MIL-C-17/94-RG179 and thus fit into an RG179 plug! The coaxial elements used in cables of the CFKoax2 series are comparable with a HF50-0.9/2.95 according to MIL-C-17/28-RG58 and thus fit into an RG58 plug! The coaxial elements used in cables of the CFKoax3 series are comparable with a HF50-0.3/0.84 according to MIL-C-17/93-RG178 and thus fit into an RG178 plug!

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	12.5	13.5	14.5
-25/+60 (CFKoax2)	10	11	12
-25/+90 (CFKoax1/CFKoax3)	10	11	12
+60/+70 (CFKoax2)	12.5	13.5	14.5
+90/+100 (CFKoax1/CFKoax3)	12.5	13.5	14.5

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

Typical mechanical application areas

- For extremely heavy duty applications, Class 6
- 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 with average sun radiation
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Cleanroom, semiconductor insertion, indoor cranes, low temperature applications

CFKoax
TPE
10 x d

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CFKoax
TPE
10 x d

Example image

Part No.	Coaxial elements	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CFKoax1.01	1	4.5	8	23
CFKoax1.05	5	10.0	34	110
CFKoax2.01	1	5.5	19	36
CFKoax3.01	1	3.5	6	12

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

Part No.	Characteristic wave impedance approx.	Conductor/ Core diameter nominal [mm]	Colour code	Colour outer jacket (similar to RAL)
CFKoax1.01	75	0.3/1.6	red	Steel-blue (similar to RAL 5011)
CFKoax1.05	75	0.3/1.6	red, green, blue, white, black	Steel-blue (similar to RAL 5011)
CFKoax2.01	50	0.9/2.95	-	Jet black (similar to RAL 9005)
CFKoax3.01	50	0.3/0.85	-	Window-grey (similar to RAL 7040)

Order example: CFKoax1.01 – to your desired length (0.5 m steps)
CFKoax **chainflex® series** .01 **Number of coaxial elements**

Online order ▶ www.chainflex.eu/CFKoax

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

Guarantee igus chainflex 36 month guarantee

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

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