

Motor cable | TPE | chainflex® CF35.UL

New



10 million
Guaranteed double strokes



7.5 x d
Bend radius, e-chain®



400 m
Travel distance, e-chain®

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

Dynamic information

	Bend radius	e-chain® linear	minimum 7.5 x d
		flexible	minimum 6 x d
		fixed	minimum 4 x d
	Temperature	e-chain® linear	-35 °C up to +90 °C
		flexible	-45 °C up to +90 °C (following DIN EN 60811-504)
		fixed	-50 °C up to +90 °C (following DIN EN 50305)
	v max.	unsupported	10 m/s
		gliding	6 m/s
	a max.		80 m/s²
	Travel distance		Unsupported travels and up to 400 m and more for gliding applications, Class 6

Cable structure

	Conductor	Cores < 10 mm²: Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228). Cores ≥ 10 mm²: Conductor cable consisting of pre-leads (following DIN EN 60228).
	Core insulation	Mechanically high-quality, especially low-capacitance XLPE mixture.
	Core structure	Cores wound with a short pitch length around a high tensile strength centre element.
	Core identification	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
	Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
	Overall shield	Extremely bending-resistant braiding made of tinned copper wires. 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: Signal black (similar to RAL 9004)
	CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ► www.igus.eu/CFRIP

Electrical information

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

EPLAN download, configurators ► www.igus.eu/CF35.UL

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

New core
insulation with
UL 90 °C

Class 6.6.4.1

Properties and approvals

	UV resistance	High
	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
	Flame retardant	According to IEC 60332-1-2, FT1, VW-1
	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“ See data sheet for details ► www.igus.eu/CF35.UL
	UL/CSA AWM	
	NFPA	Following NFPA 79-2018, chapter 12.9
	DNV-GL	Type approval certificate No. TAE00003X9
	EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
	CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
	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 CF34.UL.25.04.D - tested by IPA according to standard DIN EN ISO 14644-1 Following 2014/35/EU
	CE	

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

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, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Cleanroom, semiconductor insertion, outdoor cranes, low temperature applications

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°			

Guarantee
igus chainflex
36
month guarantee

igus 36-month
chainflex cable
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cycles per year

CFRIP
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UL
US

UL
US

NFPA

CTP

DNV-GL

EAC

CTP

REACH

RoHS

Clean-Room

7

CE

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UL-verified chainflex® guarantee ... www.igus.eu/ul-verified

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Example image

Motor cable | TPE | chainflex® CF35.UL

Strip cables 50 % faster

igus® chainflex® CF35.UL

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF35.UL.05.04	(4G0.5)C	7.5	42	79
CF35.UL.07.04	(4G0.75)C	8.0	58	90
CF35.UL.15.04	(4G1.5)C	10.0	89	146
CF35.UL.25.04	(4G2.5)C	11.5	133	207
CF35.UL.40.04	(4G4.0)C	13.0	203	290
CF35.UL.60.04	(4G6.0)C	16.0	288	423
CF35.UL.100.04	(4G10)C	18.5	468	632
CF35.UL.160.04	(4G16)C	23.0	738	974
CF35.UL.250.04	(4G25)C	27.5	1153	1481
CF35.UL.60.03.O.PE ¹¹⁾	(3x6.0)C	14.5	229	344
CF35.UL.250.03.O.PE ¹¹⁾	(3x25)C	24.5	880	1163


¹¹⁾ 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


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

Class 6.6.4.1

 Order example: **CF35.UL.05.04** – to your desired length (0.5 m steps)
CF35.UL chainflex® series **.05** Code nominal cross section **.04** Number of cores

 Online order ► www.chainflex.eu/CF35.UL

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

cost down...



...life up

Reduce cost, improve technology, now!

Do the chainflex® price check now ...
www.igus.eu/cf-price-check

... for example: Reduce cost with CF310.UL

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guarantee and
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CFRIP
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product
award

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LISTED

UL
EQUIV

NFPA

CE

UL
APPROVED
PRODUCT
DNV-GL
DNVGL.COM/AF

EAC

TP

REACH

RoHS

Clean
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CE

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