

chainflex® CF270.UL.D



Image exemplary



10 million

Double strokes guaranteed



10 x d

Bend radius, e-chain®



10m

Travel distance, e-chain®

- For medium duty applications
- PUR outer jacket
- Shielded
- Oil-resistant and coolant-resistant
- Notch-resistant
- Flame-retardant
- Hydrolysis and microbe-resistant
- PVC and halogen-free

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

-25°C up to +80°C

flexible

-40°C up to +80°C (following DIN EN 60811-504)

fixed

-50°C up to +80°C (following DIN EN 50305)



v max.

unsupported

10m/s



a max.

gliding

2m/s



Travel distance

Unsupported travels and up to 10m for gliding applications, Class 2

Cable structure



Conductor

Multicore: Stranded conductor in bending-resistant version consisting of bare copper wires (following DIN EN 60228).

Single core: Conductor cable consisting of pre-leads (following DIN EN 60228).



Core insulation

Multicore: Mechanically high-quality, especially low-capacitance XLPE mixture.

Single core: Mechanically high-quality TPE mixture.



Core structure

Power cores and control pair elements wound with a short pitch length around a high tensile strength centre element.



Core identification

Power cores: 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-

1 control pair: Black cores with white numbers.

1. Control core: 4 2. Control core: 5

2 control pairs: Black cores with white numbers.

1. Control core: 5 2. Control core: 6

3. Control core: 7 4. Control core: 8



Element shield

Bending-resistant braiding made of tinned copper wires.



Intermediate layer

Foil taping over the outer layer.



Overall shield

Bending-resistant braiding made of tinned copper wires.

Coverage linear approx. 55%, optical approx. 80%



Outer jacket

Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2)

Colour: Pastel orange (similar to RAL 2003)

Now with 90°C
UL/CSA AWM
approval

igus

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°

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Class 4.2.3.1

Electrical information



Nominal voltage

600/1,000V (following DIN VDE 0298-3)



Testing voltage

4,000V (following DIN EN 50395)

Properties and approvals



UV resistance

Medium



Oil resistance

Oil-resistant (following DIN EN 50363-10-2), Class 3



Offshore

MUD-resistant following NEK 606 - status 2016



Flame-retardant

According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame



Silicone-free

Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)



Halogen-free

Following DIN EN 60754



PTFE-free

The design of these products does not contain PTFE



UL-verified

Certificate No. V293650: „igus 4-year chainflex cable guarantee and service life calculator based on 2 billion test cycles per year“



UL/CSA AWM

See data sheet for details ► www.igus.sk/CF270ULD

NFPA

Following NFPA 79-2018, chapter 12.9



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 CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1



DESINA

According to VDW, DESINA standardisation



CE

Following 2014/35/EU

Guaranteed service life (details see page 14-15)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [x d]	R min. [x d]	R min. [x d]
-25/-15	12.5	13.5	14.5
-15/+70	10	11	12
+70/+80	12.5	13.5	14.5

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

Typical application areas

- For medium duty applications, Class 4
- Unsupported travels and up to 10m for gliding applications, Class 2
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct sun radiation
- Machining units/machine tools, low temperature applications



Guarantee
igus chainflex
4 years
to 2 billion test cycles per year



igus® chainflex® CF270.UL.D

Image exemplary

	Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]	Shop and prices online	
New	1 control pair shielded						
	CF270.UL.07.03.02.01.D	(4G0.75+(2x0.34)C)C	9.0	72	108	 www.igus.sk/ CF270ULD	
	CF270.UL.15.15.02.01.D	(4G1.5+(2x1.5)C)	11.5	146	190		
	CF270.UL.25.15.02.01.D	(4G2.5+(2x1.5)C)C	13.0	195	248		
	CF270.UL.40.15.02.01.D	(4G4.0+(2x1.5)C)C	15.0	260	328		
	CF270.UL.60.15.02.01.D	(4G6.0+(2x1.5)C)C	16.5	350	430		
	CF270.UL.100.15.02.01.D	(4G10+(2x1.5)C)C	19.0	541	624		
	CF270.UL.160.15.02.01.D	(4G16+(2x1.5)C)C	22.0	786	900		
	2 control pairs shielded						
	CF270.UL.07.03.02.02.D	(4G0.75+2x(2x0.34)C)C	11.0	96	151		
	CF270.UL.10.07.02.02.D	(4G1.0+2x(2x0.75)C)	12.5	139	200		
	CF270.UL.15.07.02.02.D	(4G1.5+2x(2x0.75)C)C	12.5	162	210		
	CF270.UL.25.15.02.02.D	(4G2.5+2x(2x1.5)C)C	15.5	265	322		
	CF270.UL.40.15.02.02.D	(4G4.0+2x(2x1.5)C)C	16.5	322	403		
	CF270.UL.60.15.02.02.D	(4G6.0+2x(2x1.5)C)C	18.5	407	505		
	CF270.UL.100.15.02.02.D	(4G10+2x(2x1.5)C)C	21.0	604	703		
	CF270.UL.160.15.02.02.D	(4G16+2x(2x1.5)C)C	24.0	857	997		
	CF270.UL.250.15.02.02.D	(4G25+2x(2x1.5)C)C	27.5	1219	1422		
	without control pair						
	CF270.UL.07.04.D	(4G0.75)C	8.0	47	81		
	CF270.UL.10.06.D	(6G1.0)C	9.5	87	133		
	CF270.UL.15.04.D	(4G1.5)C	9.0	78	116		
	CF270.UL.25.04.D	(4G2.5)C	10.5	129	173		
	CF270.UL.40.04.D	(4G4.0)C	12.5	193	255		
	CF270.UL.60.04.D	(4G6.0)C	14.5	297	356		
	CF270.UL.100.04.D	(4G10)C	17.0	495	551		
	CF270.UL.160.04.D	(4G16)C	20.5	755	819		
	CF270.UL.250.04.D	(4G25)C	25.0	1117	1256		
	CF270.UL.350.04.D	(4G35)C	28.0	1597	1696		
	Spindle cable/Single core						
	CF270.UL.60.01.D	(1x6.0)C	7.5	72	95		
	CF270.UL.100.01.D	(1x10)C	8.5	114	145		
	CF270.UL.160.01.D	(1x16)C	9.5	178	209		
	CF270.UL.250.01.D	(1x25)C	11.0	269	304		
	CF270.UL.350.01.D	(1x35)C	13.0	374	419		
	CF270.UL.500.01.D	(1x50)C	15.0	525	579		
CF270.UL.700.01.D	(1x70)C	17.0	751	804			

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

4-year guarantee ... more than 1,350 cable types from stock ... no cutting costs

Order example: **CF270.UL.40.15.02.01.D** - to your required length (0.5m steps)
CF270.UL.D chainflex® series .40 Code nominal cross section .15 Code nominal cross section signal pairs
.02 Identification pairs .01 Number of pairs

Order online ► www.igus.sk/CF270ULD

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



Cables available in the chainflex® CASE

Simple savings on delivery, storage space and re-ordering with the chainflex® CASE - ship'n store by igus®.

More on this online: www.igus.sk/cf-case



Linear robot with chainflex® servo and measuring system cables, short travel distance



igus 4-year chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



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