PVC | iguPUR | PUR | TPE

New

Control cable | PVC | chainflex® CF140.UL

Example image

10 million
Double strokes guaranteed

7.5 x d
Bend radius, e-chain®

50m
Travel distance, e-chain®

- For medium duty applications
- PVC outer jacket
- Shielded
- Flame-retardant

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**	+5°C up to +70°C
	flexible	-5°C up to +70°C (following DIN EN 60811-504)
	fixed	-15°C up to +70°C (following DIN EN 50305)
v max.	**unsupported**	3m/s
	gliding	2m/s
a max.		20m/s²
Travel distance		Unsupported travels and up to 50m for gliding applications, Class 4

Cable structure

Conductor	Finely stranded conductor consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core structure	**Number of cores < 12:** Cores wound in a layer with short pitch length. **Number of cores ≥ 12:** Cores wound in bundles which are then wound around a high tensile strength centre element, all with optimised short pitch lengths and directions. Especially low-torsion structure.
Core identification	**Cores < 0.5mm²:** Colour code in accordance with DIN 47100. **Cores ≥ 0.5mm²:** Black cores with white numbers, one green-yellow core.
Inner jacket	PVC mixture adapted to suit the requirements in e-chains®.
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage linear approx. 55%, optical approx. 80%
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Silver-grey (similar to RAL 7001)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	300/500V (following DIN VDE 0298-3) 300V (following UL)
Testing voltage	2,000V (following DIN EN 50395)

EPLAN download, configurators ▶ www.igus.eu/CF140UL

Class 4.4.1.1

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

Properties and approvals

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)
PFAS-free	Use of PFAS-free materials according to the content of the REACH directive and its rules for the production and processing of chemical substances
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.eu/CF140UL
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 CF130.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see page 28-29)

Double strokes*	5 million		7.5 million		10 million	
Temperature, from/to [°C]	< 10m	≥ 10m	< 10m	≥ 10m	< 10m	≥ 10m
	R min. [x d]	R min. [x d]	R min. [x d]	R min. [x d]	R min. [x d]	R min. [x d]
+5/+15	10	12.5	11	13.5	12	14.5
+15/+60	7.5	10	8.5	11	9.5	12
+60/+70	10	12.5	11	13.5	12	14.5

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

Typical application areas

- For medium duty applications, Class 4
- Unsupported travels and up to 50m for gliding applications, Class 4
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, packaging industry, feeding, handling, adjusting devices

PVC | iguPUR | PUR | TPE

New

Control cable | PVC | chainflex® CF140.UL

Strip cables 50% faster with CFRIP® tear strip

Class 4.4.1.1

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

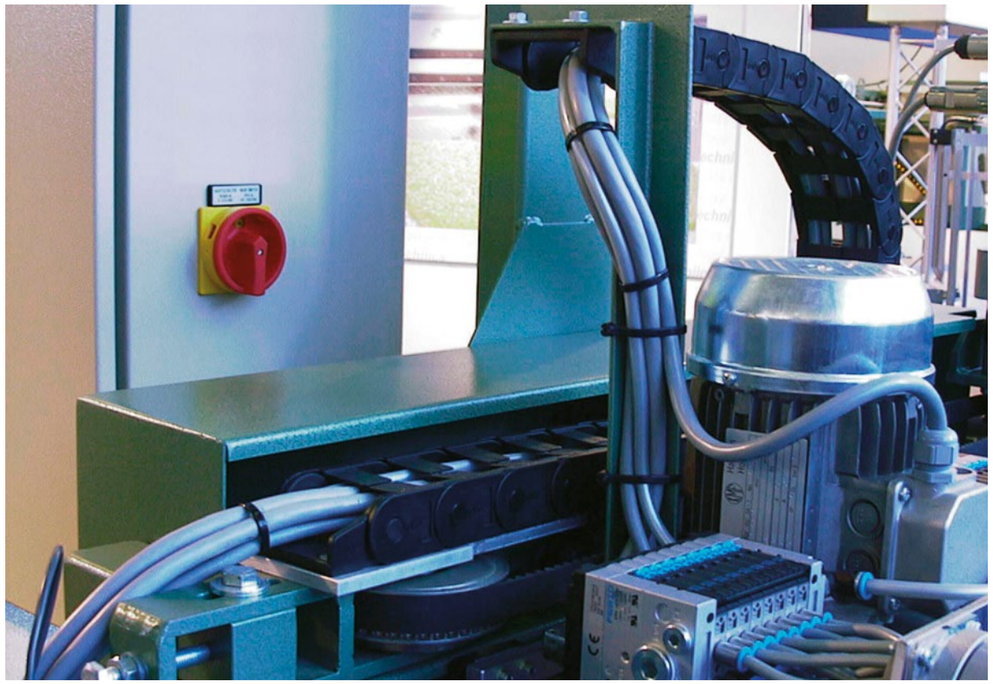
CF140.UL
PVC
7.5 x d

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]
	CF140.02.12.UL	(12x0.25)C	10.5	72	133
	CF140.03.05.UL	(5x0.34)C	7.5	36	72
	CF140.05.03.UL	(3G0.5)C	7.0	33	72
New	**CF140.05.04.UL**	(4G0,5)C	7.5	38	81
	CF140.05.05.UL	(5G0.5)C	8.0	45	91
	CF140.05.18.UL	(18G0.5)C	14.5	147	258
	CF140.05.36.UL	(36G0.5)C	18.5	258	468
	CF140.07.03.UL	(3G0.75)C	8.0	42	85
	CF140.07.04.UL	(4G0.75)C	8.5	51	102
	CF140.07.05.UL	(5G0.75)C	9.0	61	115
	CF140.07.07.UL	(7G0.75)C	10.0	83	152
	CF140.07.12.UL	(12G0.75)C	13.0	136	263
	CF140.07.18.UL	(18G0.75)C	15.5	194	359
	CF140.07.25.UL	(25G0.75)C	18.0	261	479
	CF140.10.02.UL	(2x1.0)C	8.0	35	86
	CF140.10.03.UL	(3G1.0)C	8.5	51	105
	CF140.10.04.UL	(4G1.0)C	9.0	62	118
	CF140.10.05.UL	(5G1.0)C	9.5	74	136
	CF140.10.07.UL	(7G1.0)C	10.5	104	176
	CF140.10.12.UL	(12G1.0)C	14.0	166	300
	CF140.10.18.UL	(18G1.0)C	16.5	240	413
	CF140.10.25.UL	(25G1.0)C	19.5	325	562
	CF140.15.03.UL	(3G1.5)C	9.0	68	126
	CF140.15.04.UL	(4G1.5)C	9.5	86	146
	CF140.15.05.UL	(5G1.5)C	9.5	108	168
	CF140.15.07.UL [17)]	(7G1.5)C	11.5	144	226
	CF140.15.12.UL	(12G1.5)C	16.0	233	387
	CF140.15.18.UL	(18G1.5)C	19.0	346	463
	CF140.15.25.UL	(25G1.5)C	22.5	464	737
	CF140.15.36.UL	(36G1.5)C	26.5	663	1150
	CF140.25.03.UL	(3G2.5)C	10.5	106	202
	CF140.25.04.UL	(4G2.5)C	11.5	140	210

[17)] When using the cables with "7G1.5mm²" and "7G2.5mm²" minimum bend radius must be 17.5xd with gliding travel distance ≥ 5m.

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



chainflex® CF140.UL in a feeder application. e-chain®: easychain®

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 on page 24/25 and online: www.igus.eu/cf-case

EPLAN download, configurators ▶ www.igus.eu/CF140UL

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