

# Data cable | PUR | chainflex® CF112

Now with offshore approval!

- For extremely heavy duty applications
- PUR outer jacket
- Double shielded, twisted pair
- Oil and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

### Dynamic information

	<b>Bend radius</b>	<b>e-chain® linear</b>	minimum 10 x d
		<b>flexible</b>	minimum 8 x d
		<b>fixed</b>	minimum 5 x d
	<b>Temperature</b>	<b>e-chain® linear</b>	-25 °C to +80 °C
		<b>flexible</b>	-40 °C to +80 °C (following DIN EN 60811-504)
		<b>fixed</b>	-50 °C to +80 °C (following DIN EN 50305)
	<b>v max.</b>	<b>unsupported</b>	10 m/s
		<b>gliding</b>	5 m/s
	<b>a max.</b>		80 m/s <sup>2</sup>
	<b>Travel distance</b>	Unsupported travel distances and up to 100 m for gliding applications, Class 5	

### Cable structure

	<b>Conductor</b>	Very finely stranded special conductors of particularly bending-resistant design made of bare copper wires.
	<b>Core insulation</b>	Mechanically high-quality TPE mixture.
	<b>Core structure</b>	Cores twisted in pairs with a short pitch length, core pairs then wound with short pitch lengths.
	<b>Core identification</b>	Colour code in accordance with DIN 47100.
	<b>Element shield</b>	Extremely bending-resistant braiding made of tinned copper wires. Bedeckung linear ca. 70 %, optisch ca. 90 %
	<b>Inner jacket</b>	PUR mixture, adapted to suit the requirements in e-chains®.
	<b>Overall shield</b>	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
	<b>Outer jacket</b>	Low-adhesion, highly abrasion-resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Anthracite grey (similar to RAL 7016)

### Electrical information

	<b>Nominal voltage</b>	300/300 V (following DIN VDE 0298-3)
	<b>Testing voltage</b>	1500 V (following DIN EN 50395)

Example image

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	7	≥ 400 m
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	±180°				

## Class 6.5.3.1

### Properties and approvals

	<b>UV resistance</b>	High.
	<b>Oil resistance</b>	Oil-resistant (following DIN EN 50363-10-2), Class 3.
	<b>Offshore</b>	MUD-resistant following NEK 606 - status 2009.
	<b>Flame retardant</b>	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
	<b>Silicone-free</b>	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992).
	<b>Halogen-free</b>	Following DIN EN 60754.
	<b>UL/CSA</b>	Style 10493 and 20233, 300 V, 80 °C
	<b>NFPA</b>	Following NFPA 79-2012 chapter 12.9.
	<b>DNV-GL</b>	Certified according to GL type testing – Certificate no.: 13 656-14 HH
	<b>EAC</b>	Certificate no. RU C-DE.ME77.B.01254 (TR ZU)
	<b>CTP</b>	Certificate no. C-DE.PB49.B.00416 (Fire safety)
	<b>CEI</b>	Following CEI 20-35.
	<b>Lead-free</b>	Following 2011/65/EU (RoHS-II).
	<b>Cleanroom</b>	According to ISO Class 1. Outer jacket material complies with CF77.UL.05.12.D, tested by IPA according to standard 14644-1.
	<b>CE</b>	Following 2014/35/EU.

### Guaranteed lifetime according to guarantee conditions (Page 22-23)

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]
-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? Online lifetime calculation: [www.igus.eu/chainflexlife](http://www.igus.eu/chainflexlife)

### Typical mechanical application areas

- For heaviest duty applications
- Almost unlimited resistance to oil
- Indoor and outdoor applications with average sun radiation
- Unsupported travel distances and up to 100 m for gliding applications
- Machining units/machine tools, Storage and retrieval units for high-bay warehouses, Packaging industry, quick handling equipment, refrigerating sector



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	±180°				



Example image

Part No.	Number of cores and conductor nominal cross section mm <sup>2</sup>	Outer diameter (d) max. mm	Copper index kg/km	Weight kg/km
CF112.02.02.02	(2x(2x0.25)C)C	9.5	59	131
CF112.02.03.02	(3x(2x0.25)C)C	10.0	75	151
CF112.02.04.02	(4x(2x0.25)C)C	11.0	86	167
CF112.02.05.02	(5x(2x0.25)C)C	11.5	105	194
CF112.02.06.02 <sup>11)</sup>	(6x(2x0.25)C)C	12.5	118	221
CF112.05.02.02	(2x(2x0.5)C)C	11.5	80	176
CF112.05.03.02	(3x(2x0.5)C)C	12.0	105	202
CF112.05.04.02	(4x(2x0.5)C)C	13.0	124	233
CF112.05.06.02	(6x(2x0.5)C)C	14.5	171	322

<sup>11)</sup> 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

