











Bus cable | PVC | chainflex® CF888

- For flexing applications
- PVC outer jacket
- Shielded
- Flame retardant



Dynamic information

	Bend radius	e-chain® linear	minimum 15 x d
		flexible	minimum 12 x d
		fixed	minimum 8 x d
	Temperature	e-chain® linear	+5 °C to +70 °C
		flexible	-5 °C to +70 °C (following DIN EN 60811-504)
		fixed	-15 °C to +70 °C (following DIN EN 50305)
		unsupported	3 m/s
	v max.		
		a max.	20 m/s ²
	Travel distance	Unsupported travel distances up to 10 m, Class 1	

Cable structure

	Conductor	Conductor consisting of bare copper wires (following DIN EN 60228).
	Core insulation	According to bus specification.
	Core structure	According to bus specification.
	Core identification	According to bus specification. ▶ Product range table
	Overall shield	Braiding made of tinned copper wires. Coverage approx. 60 % optical
	Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Red lilac (similar to RAL 4001)








Electrical information

	Nominal voltage	50 V
	Testing voltage	500 V

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	5	6	7	highest
Torsion	none	1	2	3	4	5	6	7	±180°

Class 3.1.1.1

Properties and approvals

	Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
	Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992).
	UL/CSA	CF888.001: Style 1589 and 2560, 30 V, 60 °C CF888.021-CF888.060: Style 1598 and 2571, 30 V, 80 °C Certificate no. RU C-DE.ME77.B.01559 (TR ZU)
	EAC	
	CTP	Certificate no. C-DE.PB49.B.00449 (Fire safety)
	Lead-free	Following 2011/65/EU (RoHS-II).
	CE	Following 2014/35/EU.

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

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	17.5	18.5	19.5
+15/+60	15	16	17
+60/+70	17.5	18.5	19.5

* Higher number of double strokes? Online lifetime calculation: www.igus.eu/chainflexlife

Typical mechanical application areas

- For flexing applications
- Without influence of oil
- Preferably indoor applications
- Especially for unsupported travels
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

igus® chainflex® CF888.045

Example image

Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight	Part No.	Characteristic wave impedance approx.	Core group	Colour code
	[mm²]	[mm]	[kg/km]	[kg/km]		[Ω]		
Profibus								
CF888.001	(2x0.25)C	8.0	19	62	CF888.001	150	(2x0.25)C	red, green
CAN-Bus								
CF888.021	(2x0.5)C	8.5	26	82	CF888.021	120	(2x0.5)C	white, brown
Ethernet/CAT5e								
CF888.045	(4x(2x0.14))C	7.5	27	68	CF888.045	100	(4x(2x0.14))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Profinet								
EtherCAT® CF888.060 ^{2) 16)}	(4x0.34)C	7.0	27	58	CF888.060 ^{2) 16)}	100	(4x0.34)C	white, orange, blue, yellow (star-quad stranding)

The chainflex® types marked with ²⁾ are cables designed as a star-quad.

¹⁶⁾ Colour outer jacket: Yellow-green (RAL 6018)

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

Technical note on bus cables

chainflex® bus cables have been specially developed and tested for continuously moving use in e-chains®. Depending on the material used for the outer jacket and on the underlying construction principle, the bus cables are designed for different mechanical requirements and resistance to diverse media. The cables have been electrically designed in such a way that, on the one hand, the electrical requirements of the respective bus specification are reliably met and, on the other, that greater value is placed on a high degree of EMC reliability.

It is also ensured that the electrical values remain stable over the long term in spite of permanent movement.

The overall quality of transmission in a complete bus communication system, however, is not solely dependent on the cable used. What is also essential is that all components (electronic parts, connecting system and cable) are precisely matched to each other and that the maximum transmission lengths, which are dependent on the respective system, are adhered to with regard to the data transmission rates needed. A cable is thus not solely responsible for the reliable transmission of signals.

igus® advises you when you are designing your bus system so that all these factors are taken into account and, with extensive tests, helps you to ensure the process reliability of your system from the very beginning.

