

Bus cable | iguPUR | chainflex® CF898



36 5,000,000
Double strokes guaranteed



15 x d
Bend radius, e-chain®



10m
Travel distance, e-chain®

- For flexing applications
- iguPUR outer jacket
- Oil-resistant
- 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	-20°C up to +70°C
		flexible	-40°C up to +70°C (following DIN EN 60811-504)
		fixed	-50°C up to +70°C (following DIN EN 50305)
	v max.	unsupported	3m/s
	a max.		20m/s²
	Travel distance		Unsupported travels up to 10m, Class 1

Cable structure

	Conductor	Conductor consisting of bare copper wires (according to 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 iguPUR mixture, adapted to suit the requirements in e-chains®. Colour: Red lilac (similar to RAL 4001) Variants ► Product range table

Electrical information

	Nominal voltage	50V 300V (following UL), except CF898.001 : 30V (following UL)
	Testing voltage	500V

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°			

Class 3.1.3.1

Properties and approvals

	UV resistance	Medium
	Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
	Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame CF898.082-CF898.083 : According to IEC 60332-1-2, FT2
	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"
	UL/CSA AWM	See data sheet for details ► www.igus.eu/CF898
	NFPA	CF898.001-CF898.060 : Following NFPA 79-2018, Kapitel 12.9
	EAC	Certificate No. RU C-DE.ME77.B.00295/19
	REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
	Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
	CE	Following 2014/35/EU
	UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

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]
-20/-10	17.5	18.5	19.5
-10/+60	15	16	17
+60/+70	17.5	18.5	19.5

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

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- With influence of oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct sun radiation
- Machining units/machine tools, low temperature applications

CF898
iguPUR
15 x d

Guarantee
igus chainflex

36

up to 36 months guarantee

igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year

Guarantee
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36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges

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

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Class 3.1.3.1

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low	1	2	3	4	5	6	7	highest
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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]
Profibus (1x2x0.64mm)				
 CF898.001	(2x0.25)C	8.0	18	56
CAN-Bus				
CF898.021	(2x0.5)C	8.5	24	80
Ethernet/CAT5e				
CF898.045	(4x(2x0.14))C	7.0	25	54
Profinet				
 CF898.060 ¹³⁾	(4x0.34)C	7.0	25	58
CF898.061.FC	(4x0.34)C	7.0	25	72
ASI BUS (flat cables)				
CF898.082 ¹⁴⁾	According to ASI	4.0	50	82
CF898.083 ¹⁵⁾	According to ASI	4.0	50	79

¹³⁾ Colour outer jacket: Yellow-green (RAL 6018)
¹⁴⁾ Colour outer jacket: Yellow (RAL 1021)
¹⁵⁾ Colour outer jacket: Jet black (RAL 9005)

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

Part No.	Characteristic wave impedance approx. [Ω]	Core group	Colour code
Profibus (1x2x0.64mm)			
CF898.001	150	2x0.25	red, green
CAN-Bus			
CF898.021	120	2x0.5	white, brown
Ethernet/CAT5e			
CF898.045	100	4x(2x0.14)	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Profinet			
CF898.060 ¹³⁾	100	4x0.34	white, orange, blue, yellow (star-quad)
CF898.061.FC	100	4x0.34	white, orange, blue, yellow (star-quad)
ASI BUS (flat cables)			
CF898.082 ¹⁴⁾	According to ASI	2x2.5	blue, brown
CF898.083 ¹⁵⁾	According to ASI	2x2.5	blue, brown



Adjustment device with chainflex® CF898 bus cables



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



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 to take all these factors into account and, with extensive tests, helps you to ensure the process reliability of your system from the very beginning.

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