

# Bus cable | iguPUR | chainflex® CF898

**36** 5,000,000  
Cycles guaranteed

**15 x d**  
Bend radius E-Chain®

**32.8 ft**  
Travel distance E-Chain®

- For low duty flexing applications
- iguPUR outer jacket
- Oil-resistant
- Shielded
- Flame-retardant

Now with 300 V  
UL approval

### Dynamic Information

	Bend radius	E-Chain® linear	min. 15 x d
		flexible	min. 12 x d
		fixed	min. 8 x d
	Temperature	E-Chain® linear	-4 °F to +158 °F (-20 °C to +70 °C)
		flexible	-40 °F to +158 °F (-40 °C to +70 °C)
		fixed	-58 °F to +158 °F (-50 °C to +70 °C)
	v max.	unsupported	9.84 ft/s (3 m/s)
	a max.		65.6 ft/s² (20 m/s²)
	Travel distance		Unsupported travel distances up to 32.8 ft (10 m), Class 1

### Cable structure

	Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
	Conductor insulation	According to bus specification.
	Conductor construction	According to bus specification.
	Color code	According to bus specification. ▶ See P/N Table
	Overall shield	aluminum/polyester tape and tinned cooper braid. 60 % optical coverage
	Outer jacket	Low-adhesion mixture on the basis of iguPUR, adapted to suit the requirements in E-Chains®. Color: Violet (similar to RAL 4001) Variants ▶ See P/N Table

### Electrical Information

	Nominal voltage	300 V, except CF898-001: 30 V
	Test voltage	500 V

Example image

Configurators ▶ [www.igus.com/CF898](http://www.igus.com/CF898)

36 month guarantee ... 1,354 types from stock ... no cutting charges



Basic requirements  
Travel distance  
Oil resistance  
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 1312 ft	
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 resistance	CF898-001-CF898-060: According to IEC 60332-1-2, FT1, VW-1 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	300 V, +80 °C See data sheet for details ▶ <a href="http://www.igus.com/CF898">www.igus.com/CF898</a>
	NFPA 79	CF898-001-CF898-060: Complies to Electrical Standard for Industrial Machinery NFPA 79 Section 12.9
	EAC	Certificate No. RU C-DE.ME77.B.00295/19 (TR ZU)
	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

### Guaranteed service life (details see page 26-27)

Cycles*	1 million	3 million	5 million
Temperature, from/to [°F]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-4/+14	17.5	18.5	19.5
+14/+140	15	16	17
+140/+158	17.5	18.5	19.5

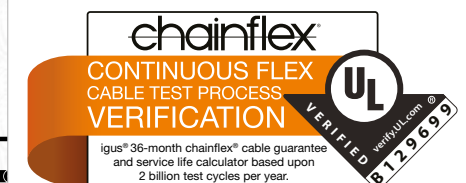
\* Higher number of cycles? Online lifetime calculation ▶ [www.chainflex.com/chainflexlife](http://www.chainflex.com/chainflexlife)

### Typical application areas

- For low duty flexing applications, Class 3
- Especially for unsupported travels, Class 1
- With influence of oil, Class 3
- Indoor and outdoor applications without direct sun radiation
- Machining units/machine tools, low temperature applications



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



UL-verified chainflex® guarantee ... [www.igus.com/ul-verified](http://www.igus.com/ul-verified)



Example image

Part No.	AWG	Number of Conductors and rated cross section	Outer diameter max.		Copper index		Weight		Part No.	Characteristic Impedance	Core group	Color code
			[in.]	[mm]	lbs/mft	[kg/km]	lbs/mft	[kg/km]				
<b>Profibus (1x2x0.64 mm)</b>												
CF898-001	24	1 PR x 0.25	0.31	8.0	12.1	18	37.6	56	CF898-001	150	(2x0.25)C	red, green
<b>CAN-Bus</b>												
CF898-021	20	1 PR x 0.5	0.33	8.5	16.1	24	53.8	80	CF898-021	120	(2x0.5)C	white, brown
<b>Ethernet/CAT5e</b>												
CF898-045	26	4 PR x 0.14	0.28	7.0	16.8	25	36.3	54	CF898-045	100	(4x(2x0.14)C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
<b>Profinet</b>												
CF898-060 <sup>13)</sup>	22	2 PR x 0.34	0.28	7.0	16.8	25	39.0	58	CF898-060 <sup>13)</sup>	100	(4x0.34)C	white, orange, blue, yellow (Star-quad)
<b>ASI BUS (flat cables)</b>												
CF898-082 <sup>14)</sup>	14	1 PR x 2.5	acc. to ASI		33.6	50	55.1	82	CF898-082 <sup>14)</sup>		2x2.5	blue, brown
CF898-083 <sup>15)</sup>	14	1 PR x 2.5	acc. to ASI		33.6	50	53.1	79	CF898-083 <sup>15)</sup>		2x2.5	blue, brown

<sup>13)</sup> Color outer jacket: Yellow-green (similar to RAL 6018)

<sup>14)</sup> Color outer jacket: Yellow (similar to RAL 1021)

<sup>15)</sup> Color outer jacket: Black (similar to RAL 9005)

Note: The given outer diameters are maximum values.  
G = with green-yellow earth core x = without earth core

PR = Twisted Pair

**Order example: CF898.045 – To your desired length**  
CF898 chainflex® series -045 Code Bus type

Online order ► [www.chainflex.com/CF898](http://www.chainflex.com/CF898)

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

**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 different 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, there is a high degree of EMC reliability.

It is also ensured that the electrical values remain stable over the long term in spite of constant 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 its extensive tests, helps you to ensure the process reliability of your system from the very beginning.

Configurators ► [www.igus.com/CF898](http://www.igus.com/CF898)



Adjusting device with chainflex® CF898 bus cables

