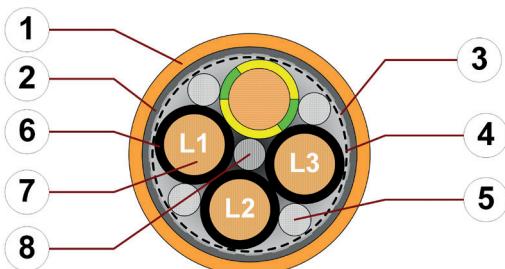


Data sheet chainflex® CF896



**Motor cable (Class 3.1.3.1) ● For flexing applications ● iguPUR outer jacket ● Oil-resistant
● Shielded ● Flame retardant**



1. Outer jacket: Pressure extruded iguPUR mixture
2. Overall shield: Braiding made of tinned copper wires
3. Shield foil: Aluminium clad plastic foil
4. Banding: Plastic foil
5. Filling: Plastic yarns
6. Core insulation: Mechanically high-quality, especially low-capacitance TPE mixture
7. Conductor: Stranded conductor consisting of bare copper wires
8. Strain relief: Plastic centre element

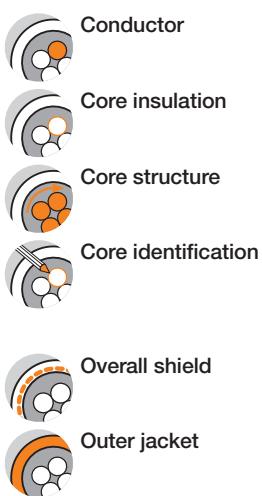


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chainflex cable
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service life
calculator based
on 2 billion test
cycles per year

Example image

For detailed overview please see design table

Cable structure



Conductor consisting of bare copper wires (according to DIN EN 60228).

Mechanically high-quality, especially low-capacitance TPE mixture.

Cores wound with an optimised pitch length.

Black cores with white numbers, one green-yellow core.

1. Core: U / L1 / C / L+
2. Core: V / L2
3. Core: W / L3 / D / L-

Braiding made of tinned copper wires.
Coverage approx. 60 % optical

Low-adhesion iguPUR mixture, adapted to suit the requirements in e-chains®.
Colour: Pastel orange (similar to RAL 2003)
Printing: black



„00000 m** igus chainflex M CF896.--- --- 600/1000V E310776

cULus AWM Style 20940 AWM I/II A/B 80°C 1000V FT1 EAC/CTP CE

RoHS-II conform www.igus.de +++ chainflex cable works +++

* **Length printing:** Not calibrated. Only intended as an orientation aid.
① / ② Cable identification according to Part No. (see technical table).
Example: ... chainflex ... CF886.15.04 ... (4G1.5)C ... 600/1000V ...

Example image

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**Motor cable (Class 3.1.3.1) ● For flexing applications ● iguPUR outer jacket ● Oil-resistant
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Dynamic information



	Bend radius	e-chain® linear flexible fixed	minimum 15 x d minimum 12 x d minimum 8 x d	
	Temperature	e-chain® linear flexible fixed	-20 °C up to +80 °C -40 °C up to +80 °C (following DIN EN 60811-504) -50 °C up to +80 °C (following DIN EN 50305)	
	v max.	unsupported	3 m/s	
	a max.		20 m/s ²	
	Travel distance	Unsupported travel distances up to 10 m, Class 1		



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These values are based on specific applications or tests. They do not represent the limit of what is technically feasible.

Guaranteed service life according to guarantee conditions

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/+70	15	16	17
+70/+80	17.5	18.5	19.5

Minimum guaranteed service life of the cable under the specified conditions.

The installation of the cable is recommended within the middle temperature range.

Electrical information

	Nominal voltage	600/1000 V (following DIN VDE 0298-3) 1000 V (following UL)
	Testing voltage	4000 V (following DIN EN 50395)

Example image

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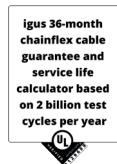


Motor cable (Class 3.1.3.1) ● For flexing applications ● iguPUR outer jacket ● Oil-resistant
● Shielded ● Flame retardant

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, FT1, VW-1
	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 table UL/CSA AWM for details
	NFPA	Following NFPA 79-2018, chapter 12.9
	EAC	Certificate No. RU C-DE.ME77.B.00302/19 (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



Properties and approvals

UL/CSA AWM Details

Conductor nominal cross section [mm ²]	Number of cores	UL style core insulation	UL style outer jacket	UL Voltage Rating [V]	UL Temperature Rating [°C]
1.5	4	10492	20940	1000	80
2.5	4	10492	20940	1000	80
4	4	10492	20940	1000	80
6	4	10492	20940	1000	80
10	4	10492	20940	1000	80
16	4	10492	20940	1000	80

Example image



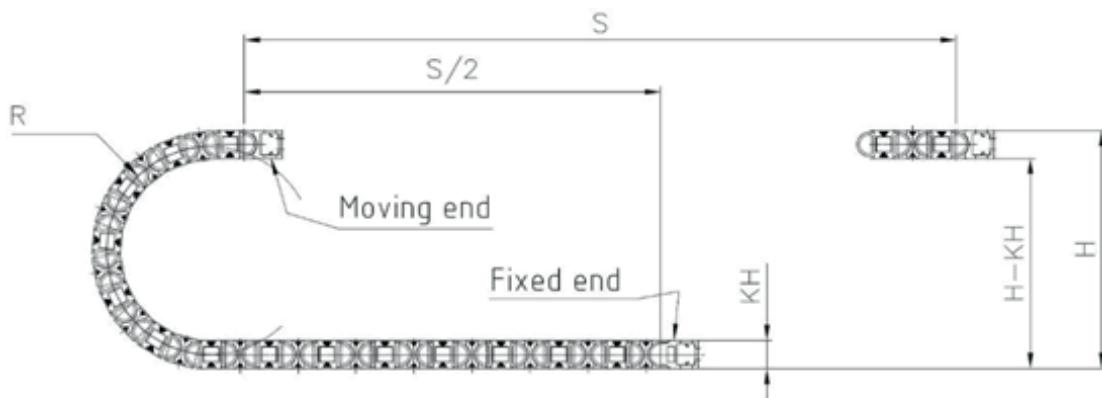
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Motor cable (Class 3.1.3.1) • For flexing applications • iguPUR outer jacket • Oil-resistant
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Typical lab test setup for this cable series

Test bend radius R	approx. 75 - 225 mm
Test travel S	approx. 1 - 15 m
Test duration	minimum 2 - 4 million double strokes
Test speed	approx. 0.5 - 2 m / s
Test acceleration	approx. 0.5 - 1.5 m / s ²



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 solar radiation
- Machining units/machine tools, low temperature applications

Example image



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**Motor cable (Class 3.1.3.1) ● For flexing applications ● iguPUR outer jacket ● Oil-resistant
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Technical tables:

Mechanical information

Part No.	Number of cores and conductor nominal cross section [mm ²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF896.15.04	(4G1.5)C	9.0	82	122
CF896.25.04	(4G2.5)C	10.5	132	173
CF896.40.04	(4G4.0)C	12.0	204	257
CF896.60.04	(4G6.0)C	14.5	306	378
CF896.100.04	(4G10)C	18.5	458	653
CF896.160.04	(4G16)C	21.0	709	835

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



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Electrical information

Conductor nominal cross section [mm ²]	Maximum conductor resistance at 20 °C (following DIN EN 50289-1-2) [Ω/km]	Max. current rating at 30 °C [A]
1.5	13.3	19
2.5	7.98	27
4	4.95	37
6	3.3	48
10	1.91	69
16	1.21	92

The final maximum current rating depends among other things on the ambient conditions, the type of the installation and the number of loaded cores.



Example image



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Design table

Part No.	Number of cores	Core design
CF896.XX.04	4	



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Example image

