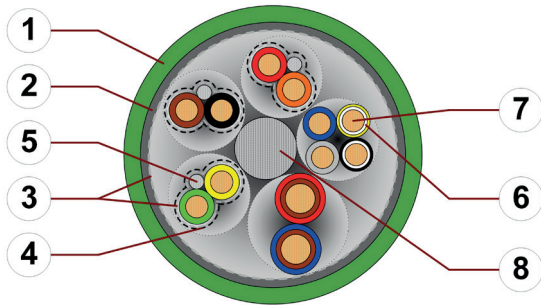


Data sheet

chainflex® CF894



Measuring system 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. Drain wire: Stranded conductor consisting of tinned copper wires
6. Core insulation: Mechanically high-quality TPE mixture
7. Conductor: Stranded conductor consisting of bare copper wires
8. Strain relief: Plastic centre element

Example image
 For detailed overview please see design table

Cable structure

	Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
	Core insulation	Mechanically high-quality TPE mixture.
	Core structure	According to measuring system specification.
	Core identification	According to measuring system specification. ► Product range table
	Element shield	aluminum/polyester tape Coverage approx. 100 % optical
	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: Yellow-green (similar to RAL 6018) Printing: black

„00000 m** igus chainflex M CF894.---① ---② E310776 cRUUs AWM

Style 20236 VW-1 AWM I/II A/B 80°C 30V FT1 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 **CF894.011 (4x(2x0.34)+4x0.5)C E310776 ...**



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



Example image

Data sheet






chainflex® CF894



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



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



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	50 V 30 V (following UL)
	Testing voltage	500 V



Example image

Data sheet












chainflex® CF894



Measuring system 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, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
-  **Silicone-free** Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
-  **PFAS-free** Use of PFAS-free materials according to the content of the REACH directive and its rules for the production and processing of chemical substances
-  **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
-  **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

Part No.	UL style core insulation	UL style outer jacket	UL Voltage Rating [V]	UL Temperature Rating [°C]
CF894.001	1589	20236	30	80
CF894.006	1589	20236	30	80
CF894.009	1589	20236	30	80
CF894.011	1589	20236	30	80
CF894.015	1589	20236	30	80
CF894.022	1589	20236	30	80
CF894.028	1589	20236	30	80

Example image

Data sheet

chainflex® CF894

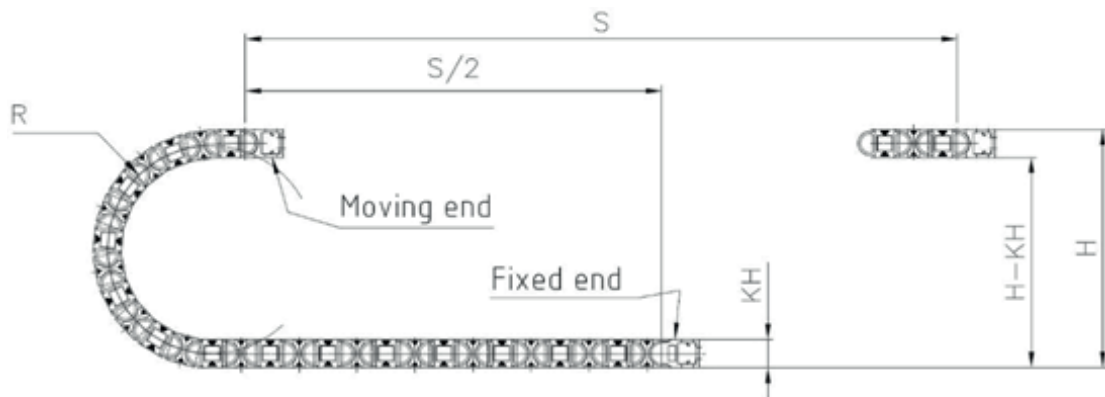


Measuring system cable (Class 3.1.3.1) ● For flexing applications ● iguPUR outer jacket
 ● Oil-resistant ● Shielded ● Flame retardant



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

Data sheet

chainflex® CF894



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



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]
CF894.001	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	8.5	41	80
CF894.006	(3x(2x0.14)C+(4x0.14)+(4x0.22)+(2x0.5))C	9.0	50	105
CF894.009	(4x(2x0.25)+2x0.5)C	8.0	44	80
CF894.011	(4x(2x0.34)+4x0.5)C	9.5	64	126
CF894.015	(4x(2x0.14)+4x0.5)C	8.5	44	84
CF894.022	((2x0.25)+5x0.5)C	8.0	44	78
CF894.028	(2x(2x0.15)+(2x0.38))C	7.5	41	57

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

Electrical information

Conductor nominal cross section [mm ²]	Maximum conductor resistance at 20 °C (following DIN EN 50289-1-2) [Ω/km]	Maximum current rating at 30 °C [A]
0.14	138.0	2.5
0.15	138.0	2.5
0.22	89.0	5
0.25	79.0	5
0.34	58.0	7
0.38	54.0	7
0.5	39.0	10

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



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



Example image

Data sheet

chainflex® CF894



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

Design table

Part No.	Core group	Colour code	Core design
CF894.001	3x(2x0.14)C	green/yellow, black/brown, red/orange	
	4x0.14	grey, blue, white-yellow, white-black	
	2x0.5	brown-red, brown-blue	
CF894.006	3x(2x0.14)C	green/yellow, black/brown, red/orange	
	4x0.14	grey, blue, white-yellow, white-black	
	4 x 0.22	brown-yellow, brown-grey, green-black, green-red	
	2x0.5	brown-red, brown-blue	
CF894.009	4x(2x0.25)	brown/green, blue/violet, grey/pink, red/black	
	2x0.5	white/brown	
CF894.011	4x(2x0.34)	black/brown, red/orange, yellow/green, blue/violet	
	4x0.5	blue-white, black-white, red-white, yellow-white	
CF894.015	4x(2x0.14)	brown/green, yellow/violet, grey/pink, red/black	
	4x0.5	blue, white, brown-green, white-green	
CF894.022	2x0.25	white, brown	
	5x0.5	green, yellow, grey, pink, blue	
CF894.028	2x(2x0.15)	green/yellow, pink/blue	
	2x0.38	red/black	



Example image



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

