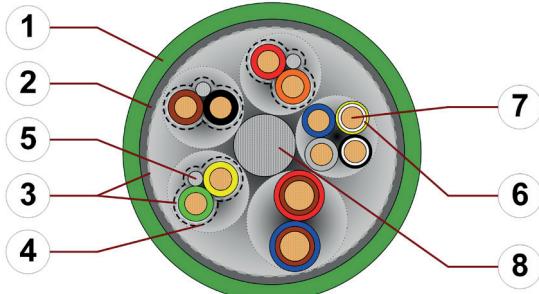


Data sheet chainflex® CF894



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



igus 4-year
chainflex cable
guarantee and
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 TPE mixture.

According to measuring system specification.

According to measuring system specification.
► Design table

Foil taping of optimised, bending-resistant foil shield.
Coverage approx. 100% optical

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

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 cЯUus AWM

Style 20236 VW-1 AWM I/II A/B 80°C 30V FT1 CE RoHS-II conform

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+++ 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 ...

Example image

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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

3m/s



a max.

20m/s²



Travel distance

Unsupported travels up to 10m, 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. [x d]	R min. [x d]	R min. [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

50V
30V (following UL)



Testing voltage

500V

Example image

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Properties and approvals



UV resistance



Oil resistance



Flame-retardant



Silicone-free



PTFE-free



UL-verified



UL/CSA AWM



NFPA



REACH



RoHS



CE

Medium

Oil-resistant (following DIN EN 50363-10-2), Class 3

According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame

Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)

The design of these products does not contain PTFE

Certificate No. V293650: „igus 4-year chainflex cable guarantee and service life calculator based on 2 billion test cycles per year“

See table UL/CSA AWM for details

Following NFPA 79-2018, chapter 12.9

In accordance with regulation (EC) No. 1907/2006 (REACH)

Following 2011/65/EC (RoHS-II/RoHS-III)

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

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Data sheet

chainflex® CF894

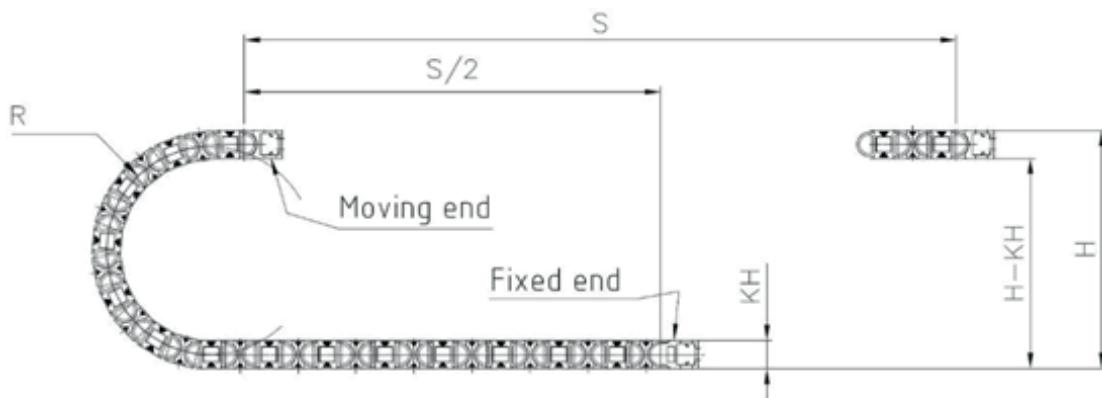


Measuring system cable (Class 3.1.3.1) • For flexing applications • iguPUR outer jacket
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Typical lab test setup for this cable series

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



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Example image

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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]
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



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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]	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.

Example image



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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	



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Example image