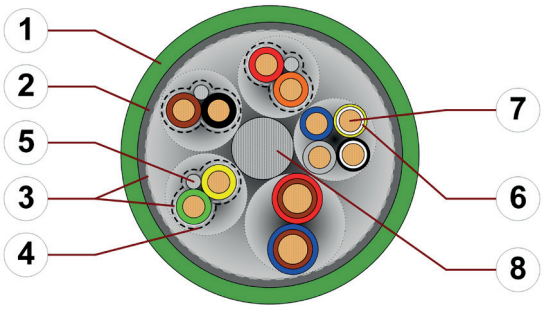
Data sheet
chainflex® CF884

Measuring system cable (Class 3.1.1.1) ● For flexing applications ● PVC outer jacket ● Shielded ● Flame retardant

Example image



1. Outer jacket: Pressure extruded PVC 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 PVC mixture, adapted to suit the requirements in e-chains®. **Colour:** Yellow-green (similar to RAL 6018) **Printing:** black

„00000 m“* igus chainflex M CF884.---① -----② E310776 cЯUus AWM

Style 2560 VW-1 AWM I/II A/B 60°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 **CF884.011 (4x(2x0.34)+4x0.5)C E310776** ...

Guarantee igus chainflex 4 YEARS up to 4 years guarantee

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

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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**	+5 °C up to +70 °C
	flexible	-5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	**unsupported**	3 m/s
a max.		20 m/s²
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]
+5/+15	17.5	18.5	19.5
+15/+60	15	16	17
+60/+70	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

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Properties and approvals

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]
CF884.001	1589	2560	30	60
CF884.006	1589	2560	30	60
CF884.009	1589	2560	30	60
CF884.011	1589	2560	30	60
CF884.015	1589	2560	30	60
CF884.022	1589	2560	30	60
CF884.028	1589	2560	30	60

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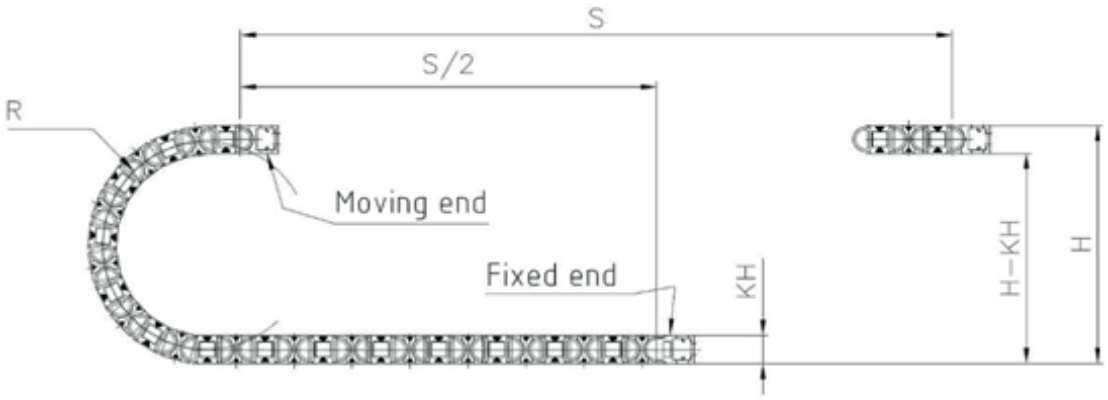
Example image

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 / s²



Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

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Example image

Technical tables:

Mechanical information

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF884.001	(3x(2x0.14)C+(4x0.14)+(2x0.5))C	8.5	41	91
CF884.006	(3x(2x0.14)C+(4x0.14) +(4x0.22)+(2x0.5))C	9.0	50	101
CF884.009	(4x(2x0.25)+2x0.5)C	8.0	44	91
CF884.011	(4x(2x0.34)+4x0.5)C	9.5	64	117
CF884.015	(4x(2x0.14)+4x0.5)C	8.5	44	92
CF884.022	((2x0.25)+5x0.5)C	8.0	44	79
CF884.028	(2x(2x0.15)+(2x0.38))C	7.5	41	58

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 [mm²]	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.

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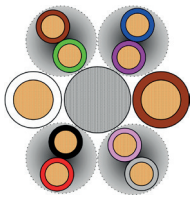
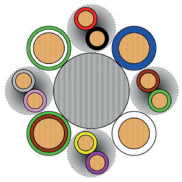
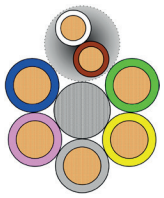
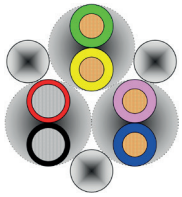
Example image

Design table

Part No.	Core group	Colour code	Core design
CF884.001	3x(2x0.14)C	green/yellow, black/brown, red/orange	
	4x0.14	grey, blue, white-yellow, white-black	
	2x0.5	brown-red, brown-blue	
CF884.006	3x(2x0.14)C	green/yellow, black/brown, red/orange	
	4x0.14	grey, blue, white-yellow, white-black	
	4x0.22	brown-yellow, brown-grey, green-black, green-red	
	2x0.5	brown-red, brown-blue	
CF884.009	(4x(2x0.25)	brown/green, blue/violet, grey/pink, red/black	
	2x0.5)C	white, brown	
CF884.011	4x(2x0.34)	black/brown, red/orange, yellow/green, blue/violet	
	4x0.5	blue-white, black-white, red-white, yellow-white	
CF884.015	4x(2x0.14)	brown/green, yellow/violet, grey/pink, red/black	
	4x0.5	blue, white, brown-green, white-green	
CF884.022	2x0.25	white, brown	
	5x0.5	green, yellow, grey, pink, blue	
CF884.028	2x(2x0.15)	green/yellow, pink/blue	
	2x0.38	red/black	

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CF884.001 CF884.022 CF884.015 CF884.006 CF884.011 CF884.009 CF884.028