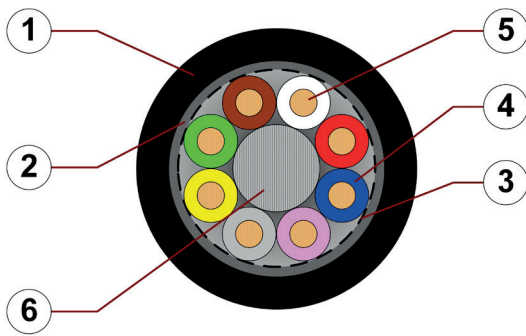


# Data sheet

## chainflex® CF8821



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



1. Outer jacket: Pressure extruded, oil-resistant PVC mixture
2. Overall shield: Braiding made of tinned copper wires
3. Overall banding: Plastic foil
4. Core insulation: Mechanically high-quality TPE mixture
5. Conductor: Stranded conductor consisting of bare copper wires
6. Strain relief: Tensile stress-resistant centre element

**Example image**  
For detailed overview please see design table

### Cable structure

	<b>Conductor</b>	Conductor consisting of bare copper wires (according to DIN EN 60228).
	<b>Core insulation</b>	Mechanically high-quality TPE mixture.
	<b>Core structure</b>	Cores wound with an optimised pitch length.
	<b>Core identification</b>	Colour code in accordance with DIN 47100.
	<b>Overall shield</b>	Braiding made of tinned copper wires. Coverage approx. 60 % optical
	<b>Outer jacket</b>	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005) Printing: white

„00000 m\*\*\* igus chainflex CF8821.--.① -----② 300/300V E310776

cRUus AWM Style 2464 VW-1 AWM I/II A/B 80°C 300V 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 ... CF8821.01.02 ... (2x0.14)C ... 300/300 ...



Example image

# Data sheet

## chainflex® CF8821








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



Example image

### Dynamic information

	<b>Bend radius</b>	<b>e-chain® linear</b> <b>flexible</b> <b>fixed</b>	minimum 12.5 x d minimum 10 x d minimum 7 x d
	<b>Temperature</b>	<b>e-chain® linear</b> <b>flexible</b> <b>fixed</b>	+5 °C up to +70 °C -5 °C up to +70 °C (following DIN EN 60811-504) -15 °C up to +70 °C (following DIN EN 50305)
	<b>v max.</b>	<b>unsupported</b>	3 m/s
	<b>a max.</b>		20 m/s <sup>2</sup>
	<b>Travel distance</b>		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	15	16	17
+15/+60	12.5	13.5	14.5
+60/+70	15	16	17

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

	<b>Nominal voltage</b>	300/300 V (following DIN VDE 0298-3)
	<b>Testing voltage</b>	1500 V (following DIN EN 50395)



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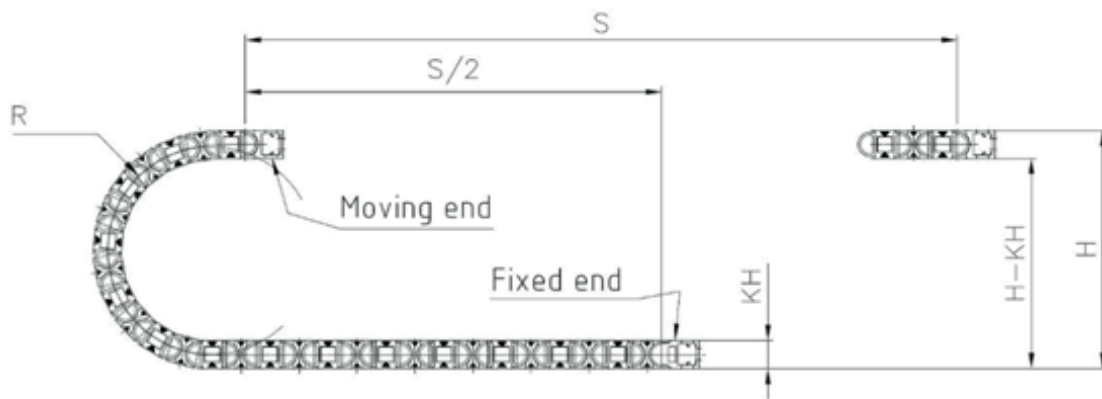


### Properties and approvals

	<b>Flame retardant</b>	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
	<b>Silicone-free</b>	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
	<b>UL/CSA</b>	Style 10493 and 2464, 300 V, 80 °C
	<b>NFPA</b>	Following NFPA 79-2012, chapter 12.9
	<b>Lead-free</b>	Following 2011/65/EC (RoHS-II)
	<b>CE</b>	Following 2014/35/EU

### Typical lab test setup for this cable series

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



### 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



Example image

# Data sheet

## chainflex® CF8821



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

### 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]
CF8821.01.02	(2x0.14)C	5.0	11	31
CF8821.01.03	(3x0.14)C	5.5	13	35
CF8821.01.04	(4x0.14)C	5.5	15	41
CF8821.01.05	(5x0.14)C	6.0	18	46
CF8821.01.07	(7x0.14)C	6.5	23	57
CF8821.02.02	(2x0.25)C	5.5	13	34
CF8821.02.03	(3x0.25)C	5.5	16	40
CF8821.02.04	(4x0.25)C	6.0	20	46
CF8821.02.05	(5x0.25)C	6.0	23	53
CF8821.02.07	(7x0.25)C	7.0	30	66

G = with green-yellow earth core

x = without earth core

**Note:** The given outer diameters are maximum values and may tend toward lower tolerance limits.

#### 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 (following DIN VDE 0298-4) [A]
0.14	138.0	2.5
0.25	79.0	5

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



# Data sheet

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



Example image

### Design table

Part No.	Number of cores	Core design	Part No.	Number of cores	Core design
CF8821.XX.02	2		CF8821.XX.05	5	
CF8821.XX.03	3		CF8821.XX.07	7	
CF8821.XX.04	4				



# Data sheet

## chainflex® CF8821



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



Example image

### Colour code in accordance with DIN 47100.

Conductor no.	Colours according to DIN ISO 47100	Conductor no.	Colours according to DIN ISO 47100	Conductor no.	Colours according to DIN ISO 47100
1	white	22	brown-blue	43	blue-black
2	brown	23	white-red	44	red-black
3	green	24	brown-red	45	white-brown-black
4	yellow	25	white-black	46	yellow-green-black
5	grey	26	brown-black	47	grey-pink-black
6	pink	27	grey-green	48	red-blue-black
7	blue	28	yellow-grey	49	white-green-black
8	red	29	pink-green	50	brown-green-black
9	black	30	yellow-pink	51	white-yellow-black
10	violet	31	green-blue	52	yellow-brown-black
11	grey-pink	32	yellow-blue	53	white-grey-black
12	red-blue	33	green-red	54	grey-brown-black
13	white-green	34	yellow-red	55	white-pink-black
14	brown-green	35	green-black	56	pink-brown-black
15	white-yellow	36	yellow-black	57	white-blue-black
16	brown-yellow	37	grey-blue	58	brown-blue-black
17	white-grey	38	pink-blue	59	white-red-black
18	brown-grey	39	grey-red	60	brown-red-black
19	white-pink	40	pink-red	61	black-white
20	white-brown	41	grey-black		
21	white-blue	42	pink-black		

