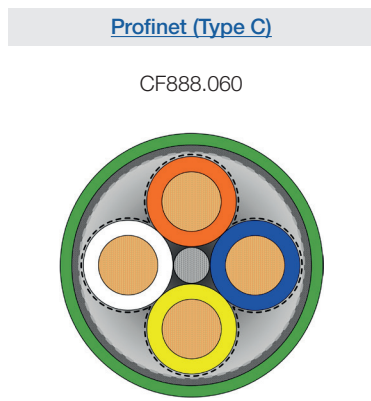
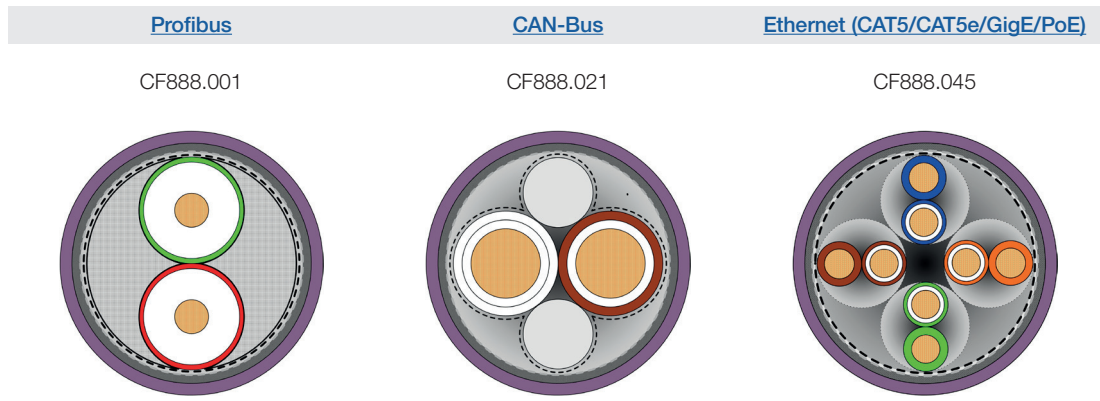


Data sheet

chainflex® CF888



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



Data sheet







chainflex® CF888



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



Cable structure

-  **Conductor** Conductor consisting of bare copper wires (according to DIN EN 60228).
-  **Core insulation** According to bus specification.
-  **Core structure** According to bus specification.
-  **Core identification** According to bus specification.
▶ Product range table
-  **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: Red lilac (similar to RAL 4001), Variants ▶ Product range table
Printing: black

„00000 m⁴* igus chainflex CF888.---① -----② E310776 cRUus AWM

Style 20601 VW-1 AWM I/II A/B 60°C 300V FT1 EAC/CTP CE ---③

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).
 ③ Printing according to bus specification (inclusive wave resistance).
 Example: ... chainflex **CF888.001 (2x0.25)C** ...



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.

Example image

Data sheet

chainflex® CF888



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



Example image

Properties and approvals

	Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
	Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
	UL/CSA	CF888.001: Style 1589 and 2560, 30 V, 60 °C CF888.021-CF888.060: Style 11602 and 20601, 300 V, 80 °C
	NFPA	Following NFPA 79-2018, chapter 12.9
	EAC	Certificate No. RU C-DE.ME77.B.01559 (TR ZU)
	CTP	Certificate No. C-DE.PB49.B.00449 (Fire protection)
	Lead-free	Following 2011/65/EC (RoHS-II)
	CE	Following 2014/35/EU



Dynamic information

	Bend radius	e-chain® linear flexible fixed	min. 15 x d min. 12 x d min. 8 x d
	Temperature	e-chain® linear flexible fixed	+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)
	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.



Data sheet

chainflex® CF888



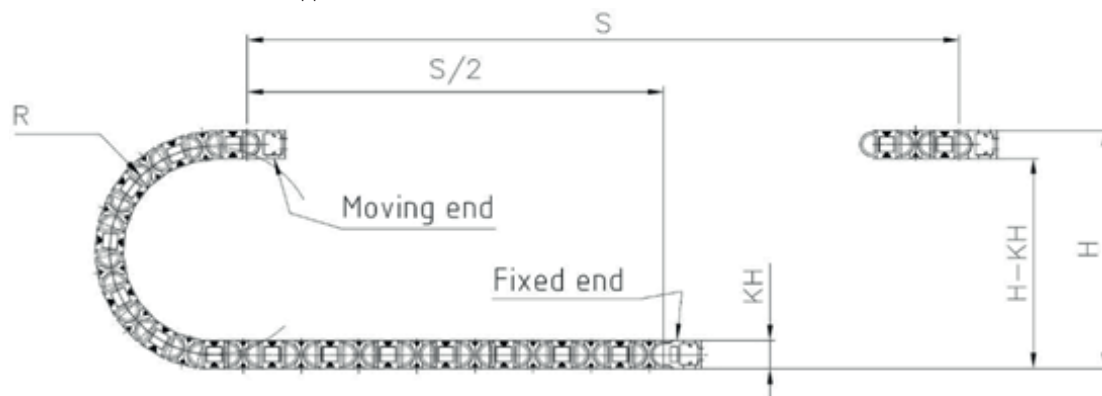
Bus cable (Class 3.1.1.1) ● For flexing applications ● PVC outer jacket ● Shielded ● Flame retardant



Example image

Typical lab test setup for this cable series

Test bend radius R	approx. 75 - 100 mm
Test travel S/S ₂	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
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment



Data sheet

chainflex® CF888




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



Example image

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]
Profibus (1x2x0,64 mm)				
CF888.001	(2x0.25)C	8.0	18	61
CAN-Bus				
CF888.021	(2x0.5)C	8.5	24	80
Ethernet/CAT5e				
CF888.045	(4x(2x0.14))C	7.5	25	66
Profinet				
CF888.060 ^{2) 13)}	EtherCAT  (4x0.34)C	7.0	25	56

²⁾ The chainflex® types marked with 2) are cables designed as a star-quad.

¹³⁾ Colour outer jacket: Yellow-green (similar to RAL 6018)

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.



Data sheet

chainflex® CF888



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

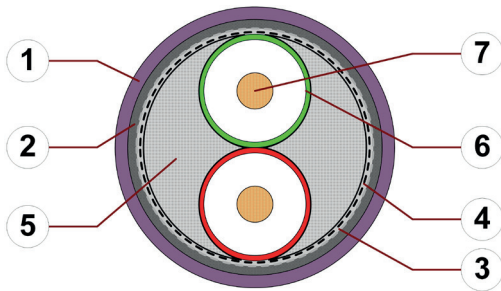


Example image

Profibus
CF888.001

Cable structure

(Electrical information please see next page)



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. Filler: Plastic yarns
6. Core insulation: Mechanically high quality TPE mixture (according to bus specification)
7. Conductor: Stranded conductor consisting of bare copper wires

Example image

For detailed overview please see design table

Design table

Part No.	Core group	Colour code	Drawing
CF888.001	2x0.25	red, green	



Data sheet

chainflex® CF888



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



Example image

Profibus CF888.001

Electrical information

(Cable structure please see previous page)

Part No.	CF888.001
Nominal voltage	50 V
Testing voltage (following DIN EN 50289-1-3)	500 V
Characteristic wave impedance (following DIN EN 50289-1-11)	150 ± 15 Ω (at 3-16 MHz)

Line attenuation approx. [dB/100m]

Part No.	9.6 kHz	38.4 kHz	4 MHz	16 MHz
CF888.001	0.3	0.4	2.5	5.2

Conductor nominal cross section	Maximum conductor resistance at 20 °C (following DIN EN 50289-1-2)	Maximum current rating at 30 °C (following DIN VDE 0298-4)
[mm ²]	[Ω/km]	[A]
0.25	88	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.



Data sheet

chainflex® CF888



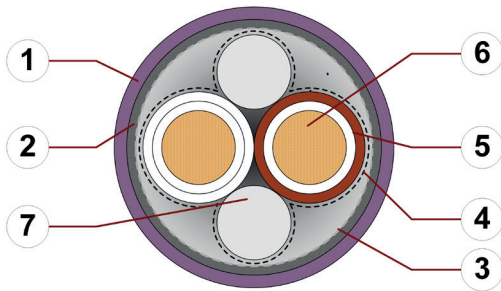
Bus cable (Class 3.1.1.1) ● For flexing applications ● PVC outer jacket ● Shielded ● Flame retardant



CAN-Bus CF888.021

Cable structure

(Electrical information please see next page)



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. Core insulation: Mechanically high quality TPE mixture (according to bus specification)
6. Conductor: Stranded conductor consisting of bare copper wires
7. Filler: Plastic dummy

Example image

For detailed overview please see design table

Design table

Part No.	Core group	Colour code	Drawing
CF888.021	2x0.5	white, brown	



Example image

igus® chainflex® CF888.021

Data sheet

chainflex® CF888



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



Example image

CAN-Bus
CF888.021

Electrical information

(Cable structure please see previous page)

Part No.	CF888.021
Nominal voltage	50 V
Testing voltage (following DIN EN 50289-1-3)	500 V
Characteristic wave impedance (following DIN EN 50289-1-11)	120 ± 12 Ω (at 1 MHz)

Conductor nominal cross section	Maximum conductor resistance at 20 °C (following DIN EN 50289-1-2)	Maximum current rating at 30 °C (following DIN VDE 0298-4)
[mm²]	[Ω/km]	[A]
0.5	39	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.



Data sheet

chainflex® CF888



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

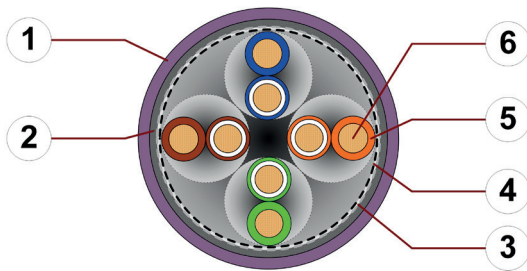


Example image

Ethernet (CAT5/CAT5e/GigE/PoE) CF888.045

Cable structure

(Electrical information please see next page)



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. Core insulation: Mechanically high quality TPE mixture (according to bus specification)
6. Conductor: Stranded conductor consisting of bare copper wires

Example image

For detailed overview please see design table

Design table

Part No.	Core group	Colour code	Drawing
CF888.045	4x(2x0.14)	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown	



Data sheet

chainflex® CF888



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



Example image

Ethernet (CAT5/CAT5e/GigE/PoE)

CF888.045

Electrical information

(Cable structure please see previous page)

Part No.	CF888.045
Nominal voltage	50 V
Testing voltage (following DIN EN 50289-1-3)	500 V
Characteristic wave impedance (following DIN EN 50289-1-11)	100 ± 25 Ω
Operating capacity	47 pF/m
Nominal Velocity of Propagation (NVP)	67 %

Line attenuation approx. [dB/100m]

Part No.	1 MHz	4 MHz	10 MHz	16 MHz	20 MHz	31.25 MHz	62.5 MHz	100 MHz
CF888.045	3.2	6.0	9.5	12.1	13.6	17.1	14.8	32.0

Conductor nominal cross section	Maximum conductor resistance at 20 °C (following DIN EN 50289-1-2)	Maximum current rating at 30 °C (following DIN VDE 0298-4)
[mm ²]	[Ω/km]	[A]
0.14	145	2.5

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



Data sheet

chainflex® CF888



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



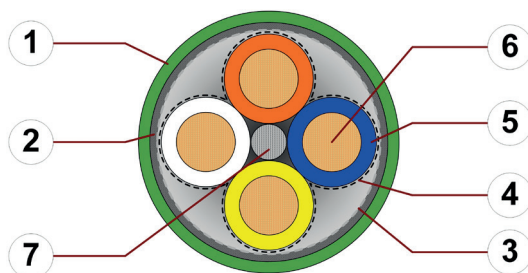
Example image

Profinet (Type C)

CF888.060

Cable structure

(Electrical information please see next page)



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. Core insulation: Mechanically high quality TPE mixture (according to bus specification)
6. Conductor: Stranded conductor consisting of bare copper wires
7. Filler: Plastic yarns

Example image

For detailed overview please see design table

Design table

Part No.	Core group	Colour code	Drawing
CF888.060	4x0.34	white, orange, blue, yellow (Star-quad)	



Data sheet

chainflex® CF888



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



Example image

Profinet (Type C)

CF888.060

Electrical information

(Cable structure please see previous page)

Part No.	CF888.060
Nominal voltage	50 V
Testing voltage (following DIN EN 50289-1-3)	500 V
Characteristic wave impedance (following DIN EN 50289-1-11)	100 ± 15 Ω
Operating capacity	53 pF/m
Nominal Velocity of Propagation (NVP)	67 %

Line attenuation approx. [dB/100m]

Part No.	1 MHz	4 MHz	10 MHz	16 MHz	20 MHz	31.25 MHz	62.5 MHz	100 MHz
CF888.060	3.2	6.0	9.5	12.1	13.6	17.1	14.8	32.0

Conductor nominal cross section	Maximum conductor resistance at 20 °C (following DIN EN 50289-1-2)	Maximum current rating at 30 °C (following DIN VDE 0298-4)
[mm ²]	[Ω/km]	[A]
0.34	59	7

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

