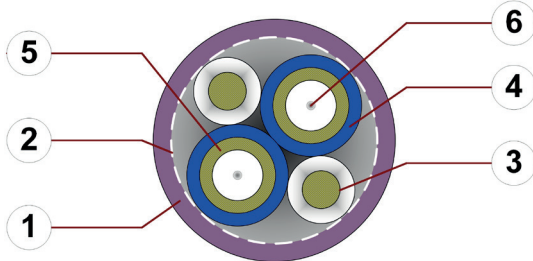# Data sheet
chainflex® CFLG88

Fibre Optic Cable (Class 3.1.1.1) ● Graded index glass-fibre cable for flexing applications
● PVC outer jacket ● Flame retardant

igus®

1. Outer jacket: Pressure extruded PVC mixture
2. Banding: Plastic fleece
3. Filler: Aramid damper for high tensile stresses
4. Fibre tube: LSZH („Low smoke & zero halogen") Material
5. Reinforcement: Extremely bending- and torsion-stable aramid wrapping
6. Fibre: Glass optical fibre (GOF)

Guarantee igus chainflex
36 month guarantee

igus 36-month 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

Fibre		50/125 μm, 62.5/125 μm especially bending-resistant solid glass fibre optic cores, with aramid strain relief elements.
Core structure		FOC cores wound with a short pitch length with high-tensile aramid dampers.
Core identification		FOC cores: Orange or blue with black numbers.
Outer jacket		Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. **Colour:** Jet black (similar to RAL 9005) **Printing:** white

„00000m"* igus chainflex CFLG88.2.--① -----② 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 **CFLG88.2.50/125 2x50/125** ...

Example image

igus® chainflex® CFLG88

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Dynamic information

Bend radius	e-chain® linear	min. 7.5 x d	
	flexible	min. 6 x d	
	fixed	min. 4 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/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]
+5/+15	10	11	12
+15/+60	7.5	8.5	9.5
+60/+70	10	11	12

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

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Properties and approvals

	Flame retardant	According to IEC 60332-1-2
	Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
	UL verified	Certificate No. B129699: „igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
	REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
	Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
	Cleanroom	According to ISO Class 1. The outer jacket material of this series complies with CF240.02.24 - tested by IPA according to standard DIN EN ISO 14644-1
	CE	Following 2014/35/EU

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
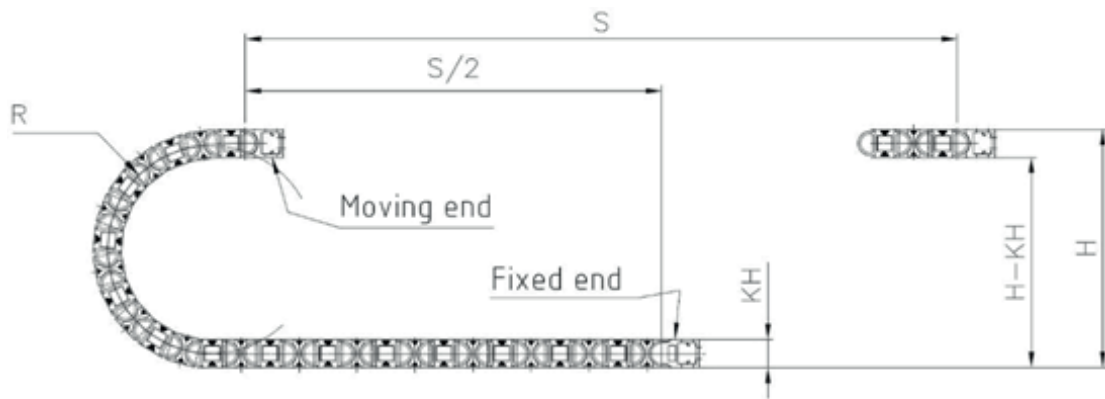
Typical application areas

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

Example image

igus® chainflex® CFLG88

Guarantee
igus chainflex
36
month guarantee

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

Data sheet
chainflex® CFLG88

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Fibre Optic Cable (Class 3.1.1.1) ● Graded index glass-fibre cable for flexing applications
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Technical tables:

Mechanical information

Part No.	Number of fibres/Fibre diameter/ Conductor nominal cross section	Outer diameter (d) max. [mm]	Weight [kg/km]
Multimode (Graded index)			
CFLG88.2.50/125	2x50/125	7.0	44
CFLG88.2.62.5/125 [11]	2x62,5/125	7.0	44

[11] Phase-out model
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.

Optical features

Fibre diameter [µm]	Wave length [nm]	Bandwidth [MHz x km]	Attenuation [dB/km]
50/125	850	≥ 500	≤ 3,0
50/125	1300	≥ 500	≤ 1,0
62.5/125	850	≥ 200	≤ 3,5
62.5/125	1300	≥ 500	≤ 1,5

Design table

Fibre diameter: 50/125

Art.-Nr. (Aderanzahl)	Core design
CFLG88.2.50/125 (2x50/125)	

Fibre diameter: 62.5/125

Art.-Nr. (Aderanzahl)	Core design
CFLG88.2.62.5/125 (2x62,5/125)	

Example image