According to ISO Class 1. The outer jacket material of this series complies with

In accordance with the valid regulations of the United Kingdom (as at 08/2021)

CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1



























Fibre Optic Cable | TPE | chainflex® CFROBOT5







- For torsion applications
- TPE outer jacket
- Oil and bio-oil-resistant
- UV-resistant

- Low-temperature-flexible
- Hydrolysis and microbe-resistant
- PVC and halogen-free

Dynamic information

Bend radius	flexible twisted	minimum 10 x d
(B	fixed	minimum 5 x d
~ Temperature	flexible twisted	-25°C up to +80°C
	fixed	-55°C up to +80°C (following DIN EN 50305)
v max.	twisted	180°/s
a max.	twisted	60°/s²

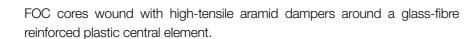
Robots and 3D movements, Class 1

(m) +	
Torsion	Torsion +180° with 1m cable length

Cable structure

Travel distance

Conductor	50/125µm, 62.5/125µm bending-resistant solid glass fibre optic cores, with
	aramid strain relief elements.



ore identification	► Product range table

Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture,
adapted to suit the requirements in e-chains®.

Colour: jet black (similar to RAL 9005)

Properties and approvals

RoHS Lead-free

igus" chainflex CFR0B0T 5

Outer jacket

Core structure

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 60811-404), bio-oil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
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)

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

Guaranteed service life (details see page 28-29)

•			
Cycles*	5 million	7.5 million	10 million
Temperature, from/to [°C]	Torsion max. [°/m]	Torsion max. [°/m]	Torsion max. [°/m]
-35/-25	±150	±90	±30
-25/+70	±180	±120	±60
+70/+80	±150	±90	±30

^{*} Higher number of double strokes? Service life calculation online ▶ www.igus.eu/chainflexlife

Basic requirements

Following 2014/35/EU

Travel distance

Oil resistance

Torsion

Typical application areas

Class 6.1.4.3

Cleanroom

(**E** CE

UK UKCA

- For heaviest duty applications with torsion movements, Class 6
- Especially for robots and 3D movements, Class 1
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ±180°, with 1m cable length, Class 3
- Indoor and outdoor applications, UV-resistant
- Robots, handling

Part No.	Number of fibres/ Fibre diameter/ Conductor nominal cross section	Outer diameter (d) max. [mm]	Weight [kg/km]
CFROBOT5.500 11)	2x62.5/125	8.5	53
CFROBOT5.501	2x50/125	8.5	53

¹¹⁾ Phase-out model

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

Part No.	Bandwidth [MHz x km] @ 650nm	Attenuation [dB/km] @ 650nm	Bandwidth [MHz x km] @ 850nm	Attenuation [dB/km] @ 850nm	Fibre identification
CFROBOT5.500 11)	≥ 200	≤ 3.0	≥ 500	≤ 0.7	orange with white numbers
CFROBOT5.501	≥ 500	≤ 2.5	≥ 500	≤ 0.7	blue with white numbers



Cables available in the chainflex® CASE

Simple savings on delivery, storage space and re-ordering with the chainflex® CASE - ship'n store by igus®.

More on this on page 24/25 and online: www.igus.eu/cf-case





