

Motor cable | PUR | chainflex® CFROBOT6

36 10 million
Cycles guaranteed

10 x d
Bend radius, e-chain®

±180°/m
Torsion angle

- For torsion applications
- PUR outer jacket
- Oil-resistant and coolant-resistant
- Flame-retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

	Bend radius	flexible twisted	minimum 10 x d
		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°/s ²
	Travel distance	Robots and 3D movements, Class 1	
	Torsion	Torsion ±180°, with 1m cable length, Class 3	

Cable structure

	Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
	Core insulation	Mechanically high-quality TPE mixture.
	Core identification	Black cores with white numbers 1-2, one green-yellow core.
	Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2) Colour: Steel blue (similar to RAL 5011)

Electrical information

	Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
	Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

	UV resistance	High
	Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
	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)
	Halogen-free	Following DIN EN 60754

Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 400m	
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Class 6.1.3.3

- UL verified
- UL/CSA AWM
- NFPA
- EAC
- REACH
- Lead-free
- Cleanroom
- CE
- UKCA

Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
See data sheet for details ► www.igus.eu/CFROBOT6

Following NFPA 79-2018, chapter 12.9

Certificate No. RU C-DE.ME77.B.00863/20

In accordance with regulation (EC) No. 1907/2006 (REACH)

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

According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
Following 2014/35/EU

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

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]
-25/-15	±150	±90	±30
-15/+70	±180	±120	±60
+70/+80	±150	±90	±30

* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

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

Part No.	Number of cores and conductor nominal cross section [mm ²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CFROBOT6.160.03 ¹⁾	3G16	18.0	475	578
CFROBOT6.250.03 ¹⁾	3G25	22.0	737	896

¹⁾ 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

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igus chainflex
36
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CFRIP

UL LISTED

UL US

NEC

NFPA

CE

DNV

EAC

REACH

RoHS

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Example image

IGUS® CHAINFLEX® CF ROBOT 6

EPLAN download, configurators ► www.igus.eu/CFROBOT6

36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges

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UL-verified chainflex® guarantee ... www.igus.eu/ul-verified