Motor cable | PUR | chainflex® CFROBOT7

Example image

10 million Cycles guaranteed

10 x d Bend radius, e-chain®

±180°/m Torsion angle

- For torsion applications
- PUR outer jacket
- Shielded
- 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°/s²
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	**Power cores:** Black cores with white numbers, one green-yellow core. **2 control pairs:** Black cores with white numbers. 1. Control core: 5 2. Control core: 6 3. Control core: 74. Control core: 8 **4 Control pairs:** Colour code in accordance with DIN 47100
Overall shield	Extremely torsion-resistant tinned wound copper shield. Coverage approx. 85% optical
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)

Class 6.1.3.3

Basic requirements	low 1 2 3 4 5 **6** 7 highest
Travel distance	unsupported **1** 2 3 4 5 6 ≥ 400m
Oil resistance	none 1 2 **3** 4 highest
Torsion	none 1 2 **3** 4 ±360°

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
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
UL/CSA AWM	See data sheet for details ▶ www.igus.eu/CFROBOT7
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.00863/20
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 CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU
UKCA	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

CFROBOT7
PUR
±180°/m

Guarantee igus chainflex 36 up to 36 months guarantee

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

EPLAN download, configurators ▶ www.igus.eu/CFROBOT7

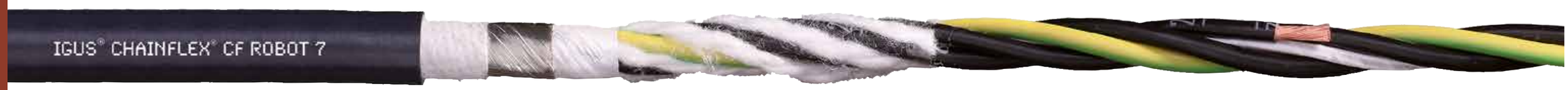
PVC | iguPUR | **PUR** | TPE

Motor cable | PUR | chainflex® CFROBOT7

Class 6.1.3.3

Basic requirements	low	1	2	3	4	5	**6**	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6		≥ 400m
Oil resistance	none	1	2	**3**	4				highest
Torsion	none	1	2	**3**	4				±360°

CFROBOT7
PUR
±180°/m



Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
2 control pairs				
CFROBOT7.07.03.02.02.C [11)]	(4G0.75+2x(2x0.34)C)C	11.5	88	155
CFROBOT7.15.15.02.02.C	(4G1.5+2x(2x1.5)C)C	16.5	197	304
CFROBOT7.25.15.02.02.C	(4G2.5+2x(2x1.5)C)C	16.5	243	349
4 control pairs				
CFROBOT7.40.02.02.04.C	(4G4.0+4x(2x0.25)C)C	17.0	253	366
without control pair				
CFROBOT7.15.03.C	(3G1.5)C	8.5	61	98
CFROBOT7.15.04.C	(4G1.5)C	9.5	77	120
CFROBOT7.25.03.C	(3G2.5)C	10.0	93	142
CFROBOT7.25.04.C	(4G2.5)C	11.0	119	173
CFROBOT7.60.04.C	(4G6.0)C	15.0	278	374

[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

Order example: CFROBOT7.15.03.C – to your desired length (0.5m steps)
CFROBOT7 chainflex® series .15 Code nominal cross section .03 Number of cores

Order online ▶ www.igus.eu/CFROBOT7

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

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

EPLAN download, configurators ▶ www.igus.eu/CFROBOT7