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

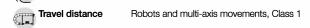
World premiere! CAT5e to CAT7 for Torsion

Dynamic information

Bend radius	e-chain® twisted	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	e-chain® twisted	-25 °C to +70 °C
	flexible	-40 °C to +70 °C

flexible	-40 °C to +70 °C (following DIN EN 60811-504)
fixed	-50 °C to +70 °C (following DIN FN 50305)

v max.	twisted	180 °/s
a a may	twisted	60 °/c²





Cable structure

Conductor	Stranded conductor in especially bending-resistant design consisting of bare
	copper wires (following DIN EN 60228).
Core insulation	According to bus specification.



Core identification	According to bus specification.	
((Cr.	▶ Product range table	
Intermediate lavor	Foil taning over the outer laver	

Overall shield	Torsion resistant tinned braided copper shield.
	00.00

Covorage approx. Co 70 option
Low-adhesion, highly abrasion-resistant PUR mixture, adapted to suit the
roquiromonte in a chaine® (following DIN EN 50363-10-2)

Colour: Steel-blue (similar to RAL 5011)

Electrical information

Outer jacket

40	Nominal voltage	50 V

500 V Testing voltage

Class 6.1.3.3

Basic requirements Travel distance unsupported Oil resistance



CFROBOT8 PUR ± 180°/m

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, CEI 20-35, FT1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status

FL us UL/CSA	Style 1589 and 20236, 30 V, 80 °C	

EAC	Certificate no. RU C-DE.ME77.B.01218 (TR ZU)
CTP	Certificate no. C-DE.PB49.B.00416 (Fire safety)

Following CEI 20-35.

CIP CIP	Certificate no. C-DE.PB49.B.00416 (Fire sat

Lead-free	Following 2011/65/EU (RoHS-II)

Cleanroom	According	to	ISO	Class	1.	Outer	jacket	material	complies	with
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CF27.07.05.02.01.D, tested by IPA according to standard 14644-1.

C E CE Following 2014/35/EU.

Guaranteed lifetime according to guarantee conditions (Page 22-23)

		TO million
Torsion max. [°/m]	Torsion max. [°/m]	Torsion max. [°/m]
±150	±90	±30
±180	±120	±60
±150	±90	±30
	Torsion max. [°/m] ±150 ±180	Torsion max. [°/m] Torsion max. [°/m] ±150 ±90 ±180 ±120

Typical mechanical application areas

- For extremely heavy duty applications with torsional movements
- Almost unlimited resistance to oil, also with bio-oils
- Indoor and outdoor applications, UV resistant
- Especially for robots and multi-axis movements
- Robots, Handling, spindle drives













Bus cable | PUR | chainflex® CFROBOT8

igus[®] chainflex[®] CFR0B0T8.045

Example image

	Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight	Part No.	Characteristic wave impedance approx.	Core group	Colour code
	Profibus	[mm²]	[mm]	[kg/km]	[kg/km]		Ω		
	CFROBOT8.001	(2x0.35)C	8.0	29	62	CFROBOT8.001	150	(2x0.35)C	red, green
	CAN-Bus	· · ·						, ,	
	CFROBOT8.022	(4x0.5)C	7.5	43	72	CFROBOT8.022	120	(4x0.5)C	white, green, brown, yellow(star-quad stranding)
	DeviceNet								
New	CFROBOT8.030	(2xAWG24)C+(2xAWG22)C	9.5	31	75	CFROBOT8.030	120	(2xAWG24)C 2xAWG22	
	Ethernet/CAT5e								
	CFROBOT8.045	4x(2x0.14)C	8.5	39	69	CFROBOT8.045	100	4x(2x0.14)C	white-green/green, white-orange/orange, white- blue/blue, white-brown/brown
	Ethernet/CAT6								
	CFROBOT8.049	4x(2x0.14)C	8.5	38	68	CFROBOT8.049	100	4x(2x0.14)C	white-green/green, white-orange/orange, white- blue/blue, white-brown/brown
	Ethernet/CAT6A								
	CFROBOT8.050	4x(2x0.15)C	10.5	54	127	CFROBOT8.050	100	4x(2x0.15)C	white-green/green, white-orange/orange, white- blue/blue, white-brown/brown
	Ethernet/CAT7								
	CFROBOT8.052	4x(2x0.15)C	10.5	55	129	CFROBOT8.052	100	4x(2x0.15)C	white-green/green, white-orange/orange, white- blue/blue, white-brown/brown
	Profinet								
Ether CAT.	CFROBOT8.060	(2x(2x0.34))C	8.5	36	70	CFROBOT8.060	100	(2x(2x0.34))C	white/blue, yellow/orange

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits G = with green-yellow earth core <math>x = without earth core

Technical note on bus cables

chainflex® bus cables have been specially developed and tested for continuously moving use in e-chains®. Depending on the material used for the outer jacket and on the underlying construction principle, the bus cables are designed for different mechanical requirements and resistance to diverse media. The cables have been electrically designed in such a way that, on the one hand, the electrical requirements of the respective bus specification are reliably met and, on the other, that greater value is placed on a high degree of EMC reliability.

It is also ensured that the electrical values remain stable over the long term in spite of permanent movement.

The overall quality of transmission in a complete bus communication system, however, is not solely dependent on the cable used. What is also essential is that all components (electronic parts, connecting system and cable) are precisely matched to each other and that the maximum transmission lengths, which are dependent on the respective system, are adhered to with regard to the data transmission rates needed. A cable is thus not solely responsible for the reliable transmission of signals.

igus[®] advises you when you are designing your bus system so that all these factors are taken into account and, with extensive tests, helps you to ensure the process reliability of your system from the very beginning.



















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