## Bus cable | PUR | chainflex® CFROBOT8.PLUS









New



- PUR outer jacket
- Shielded
- Oil-resistant and coolant-resistant
- Flame-retardant

### • PVC and halogen-free Notch-resistant

- Hydrolysis and microbe-resistant

### and a stand a sure and a s

Dynamic information				
Bend radius	flexible twisted	minimum 10 x d		
(L_R	fixed	minimum 5 x d		
🛌 Temperature	flexible twisted	-25°C up to +70°C		
	fixed	-50°C up to +70°C (following DIN EN 50305)		
v max.	twisted	360°/s		
a max.	twisted	60°/s <sup>2</sup>		
Travel distance	Robots and 3D movements, Class 1			
Torsion	Torsion $\pm 360^{\circ}$ , with 1m cable length, Class 4			
Cable structure				
Conductor	Stranded conduc	tor in especially bending-resistant version consisting of bare		
	copper wires (follo	copper wires (following DIN EN 60228).		
Core insulation	According to bus specification.			
Core structure	According to bus specification.			
K Core identification	According to bus specification.			
	Product range table			
Intermediate layer	Foil taping over th	e outer layer.		
Overall shield	Torsion resistant tinned braided copper shield.			
	Coverage approx	. 80% optical		

aye appi 770 OD Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains<sup>®</sup> (following DIN EN 50363-10-2) Colour: Steel blue (similar to RAL 5011)

### Electrical information

Outer jacket



50V 30V (following UL) 500V

### Properties ar UV res Oil res

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Class 6.1.3.4

**Basic requirements Travel distance Oil resistance** Torsion

Properties and approvals	
UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 5036
Flame-retardant	According to IEC 60332-1-2, Cable
Silicone-free	Free from silicone which can affect p 1992)
Halogen-free	Following DIN EN 60754
UL verified	Certificate No. B129699: "igus 3 service life calculator based on 2 b
Rus UL/CSA AWM	See data sheet for details ► www.
EAC	Certificate No. RU C-DE.ME77.B.0
REACH REACH	In accordance with regulation (EC)
Rous Lead-free	Following 2011/65/EC (RoHS-II/Ro
Cleanroom	According to ISO Class 1. The outer CF77.UL.05.12.D - tested by IPA ar
CECE	Following 2014/35/EU
	In accordance with the valid regulat

### Guaranteed service life (details see page 28-29)

Cycles*	5 million	
Temperature, from/to [°C]	Torsion max. [°/m]	To
-25/-15	±330	
-15/+60	±360	
+60/+70	±330	

\* 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 ±360°, with 1m cable length, Class 4
- Indoor and outdoor applications, UV-resistant
- Robots, handling, spindle drives

### EPLAN download, configurators ► www.igus.eu/CFROBOT8PLUS



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363-10-2), Class 3

le Flame, VW-1, FT1, FT2 / Horizontal Flame

paint adhesion (following PV 3.10.7 – status

36-month chainflex cable guarantee and billion test cycles per year" .igus.eu/CFROBOT8PLUS

00295/19

No. 1907/2006 (REACH)

oHS-III)

er jacket material of this series complies with according to standard DIN EN ISO 14644-1

ations of the United Kingdom (as at 08/2021)

Torsion max.

[°/m]

±150

±180

±150

orsion max. [°/m] ±240

±270 ±240

































### Bus cable | PUR | chainflex<sup>®</sup> CFROBOT8.PLUS

# New

igus chainflex CFROBOT8.PLUS

Example image

	Example intege				
	Part No.	Number of cores and conductor nominal cross section [mm <sup>2</sup> ]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
	Profibus (1x2x0.64mm)				
PROFU <sup>*</sup> Bús	CFROBOT8.PLUS.001	(2x0.25)C	9.0	30	80
	CAN-Bus				
New	CFROBOT8.PLUS.022	(4x0.5)C	9.5	47	103
	Ethernet/CAT5e/PoE				
	CFROBOT8.PLUS.045	(4x(2x0.15))C	7.5	32	67
	Ethernet/CAT6/PoE				
New	CFROBOT8.PLUS.049	(4x(2x0.15))C	7.5	32	67
	Ethernet/CAT6A				
New	CFROBOT8.PLUS.050	(4x(2x0.15)C)C	10.5	49	115
	Profinet				
EtherCAT	CFROBOT8.PLUS.060 <sup>2)</sup>	(4x0.34)C	7.0	32	64

The chainflex®	<sup>)</sup> types marked with <sup>2</sup>	) are cables	designed as a star-quad.	

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



### Cables available in the chainflex<sup>®</sup> CASE

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



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



Order online ► www.igus.eu/CFROBOT8PLUS

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

#### 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 to take all these factors into account and, with extensive tests, helps you to ensure the process reliability of your system from the very beginning.

### EPLAN download, configurators ► www.igus.eu/CFROBOT8PLUS

Class 6.1.3.4	Basic requirements Travel distance Oil resistance Torsion	low 1 2 unsupported 1 2 none 1 2 none 1 2	2 3 4 5 6 7 highest   2 3 4 5 6 $\geq$ 400m   2 3 4 highest   2 3 4 $\pm$ 360°	CFROBOT8. PLUS PUR ±360°/m
				Guarantee gus cholinflex 36
				igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles ger year
Part No.	Characteristic wave impedance approx. [Ω]	Core group	Colour code	<b>A</b>
Profibus (1x2x0.64mm)				CERIP II
CFROBOT8.PLUS.001	150	(2x0.25)C	red, green	Di sica Avisao 2016
CAN-Bus				
CFROBOT8.PLUS.022	120	(4x0.5)C	white, green, brown, yellow (star-quad)	
Ethernet/CAT5e/PoE				
CFROBOT8.PLUS.045	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown	c <b>FL</b> us
Ethernet/CAT6/PoE				
CFROBOT8.PLUS.049	100	4x(2x0.15)C	white-green/green, white-orange/orange, white-blue/blue, white-brown/brown	
Ethernet/CAT6A				NFPA
CFROBOT8.PLUS.050	100	4x(2x0.15)C	white-green/green, white-orange/orange, white-blue/blue, white-brown/brown	GLPA
Profinet				
CFROBOT8.PLUS.060 <sup>2)</sup>	100	(4x0.38)C	white, orange, blue, yellow (star-quad)	(And and and a second s

# Order example: CFROBOT8.PLUS.060 - to your desired length (0.5m steps)





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EAC

REACH

RoHS

clean-room

CE

UK CA