

Bus cable | PUR | chainflex® CFBUS.PUR

36 10 million
Guaranteed double strokes

12.5 x d
Bend radius e-chain®

20 m
Travel distance, e-chain®

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

**CMX (UL-Listed)
and CC-Link IE
Field**

Dynamic information

Bend radius	e-chain® linear	min. 12.5 x d
	flexible	min. 10 x d
	fixed	min. 7 x d
Temperature	e-chain® linear	-20 °C up to +70 °C
	flexible	-40 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-50 °C up to +70 °C (following DIN EN 50305)
v max.	unsupported	3 m/s
	gliding	2 m/s
a max.		30 m/s ²
Travel distance		Unsupported travels and up to 20 m for gliding applications, Class 3

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	According to bus specification.
Core structure	According to bus specification.
Core identification	According to bus specification. ► Product range table
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage linear approx. 55 %, optical approx. 80 %
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: Red lilac (similar to RAL 4001) Variants ► Product range table

Electrical information

Nominal voltage	50 V
Testing voltage	500 V

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3

Basic requirements
Travel distance
Oil resistance
Torsion

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

Class 4.3.3.1

Offshore	MUD-resistant following NEK 606 - status 2009
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL-Listed	CMX, 75°C (except CFBUS.PUR.068)
UL/CSA	Style 1598 and 20236, 30 V, 80 °C CFBUS.PUR.H01.049: Style 10493 (1.5 mm ²), 11602 (0.15 mm ²) and 20233, 300 V, 80 °C CFBUS.PUR.H01.060: Style 10493 (1.5 mm ²), 11602 (0.38 mm ²) and 20233, 300 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
CLPA	CFBUS.PUR.045: <i>CC-Link IE Field</i> , Reference no. 151 CFBUS.PUR.049: <i>CC-Link IE Field</i> , Reference no. 152
DNV-GL	Type approval certificate No. 61 937-14 HH
EAC	Certificate No. RU C-DE.ME77.B.01218 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00416 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
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
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	15	16	17
-10/+60	12.5	13.5	14.5
+60/+70	15	16	17

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

Typical mechanical application areas

- For medium duty applications, Class 4
- Unsupported travels and up to 20 m for gliding applications, Class 3
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct sun radiation
- Machining units/machine tools, low temperature applications



Example image

igus® chainflex® CFBUS.PUR.049

Bus cable | PUR | chainflex® CFBUS.PUR

Class 4.3.3.1



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]	Part No.	Characteristic wave impedance approx. [Ω]	Core group	Colour code
Profibus (1x2x0,64 mm)								
CFBUS.PUR.001	(2x0.25)C	8.5	25	72	CFBUS.PUR.001	150	(2x0.25)C	red, green
CAN-Bus								
CFBUS.PUR.020 ²⁾	(4x0.25)C	7.5	23	66	CFBUS.PUR.020 ²⁾	120	(4x0.25)C	white, green, brown, yellow (Star-quad)
CFBUS.PUR.021	(2x0.5)C	8.5	32	82	CFBUS.PUR.021	120	(2x0.5)C	white, brown
CFBUS.PUR.022 ²⁾	(4x0.5)C	8.5	43	90	CFBUS.PUR.022 ²⁾	120	(4x0.5)C	white, green, brown, yellow (Star-quad)
CC-Link								
CFBUS.PUR.035	(3x0.5)C	8.0	40	77	CFBUS.PUR.035	110	(3x0.5)C	white, blue, yellow
Ethernet/CAT5								
CFBUS.PUR.040 ²⁾	(4x0.25)C	6.5	29	67	CFBUS.PUR.040 ²⁾	100	(4x0.25)C	white, green, brown, yellow (Star-quad)
Ethernet/CAT5e								
CFBUS.PUR.045	(4x(2x0.15))C	7.5	33	66	CFBUS.PUR.045	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Ethernet/CAT6								
CFBUS.PUR.049	(4x(2x0.15))C	7.5	34	66	CFBUS.PUR.049	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
CFBUS.PUR.H01.049	((4x(2x0.15))C+4x1.5)C	12.5	126	207	CFBUS.PUR.H01.049	100	(4x(2x0.15))C 4x1.5	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown black, brown, grey, blue
Ethernet/CAT6A								
CFBUS.PUR.050	4x(2x0.20)C	9.5	65	118	CFBUS.PUR.050	100	4x(2x0.20)C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Ethernet/CAT7								
CFBUS.PUR.052	(4x(2x0.15)C)C	9.5	89	129	CFBUS.PUR.052	100	(4x(2x0.15)C)C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
FireWire IEEE 1394b								
CFBUS.PUR.056	(2x(2x0.15)C+2x0.38)C	9.0	59	91	CFBUS.PUR.056	110	2x(2x0.15)C 2x0.38	orange/blue, blue/red black, white
Profinet								
CFBUS.PUR.060 ^{2) 13)}	(4x0.38)C	7.0	33	64	CFBUS.PUR.060 ^{2) 13)}	100	(4x0.38)C	white, orange, blue, yellow (Star-quad)
CFBUS.PUR.H01.060	((4x0.38)C+4x1.5)C	11.5	121	199	CFBUS.PUR.H01.060	100	(4x0.38)C 4x1.5	white, orange, blue, yellow (Star-quad) black, brown, grey, blue
USB 3.0								
CFBUS.PUR.068	(2x(2xAWG28) +2x(2xAWG28)C)C	7.0	39	64	CFBUS.PUR.068	90	2x(2xAWG28) 2x(2xAWG28)C	red/black, green/white-green red/black, green/white-green

²⁾ The chainflex® types marked with 2) are cables designed as a star-quad.
¹³⁾ Colour outer jacket: Yellow-green (RAL 6018)

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

