Bus cable | PUR | chainflex® CFBUS.PUR

Example image

10 million Double strokes guaranteed

12.5 x d Bend radius, e-chain®

20m 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

Single Pair Ethernet for e-chains®

SPE

Dynamic information

Bend radius	**e-chain® linear**	minimum 12.5 x d
	flexible	minimum 10 x d
	fixed	minimum 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**	3m/s
	gliding	2m/s
a max.		30m/s²
Travel distance		Unsupported travels and up to 20m 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	50V 300V (following UL), except **CFBUS.PUR.020:** 30V (following UL)
Testing voltage	500V

Properties and approvals

UV resistance	Medium

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

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CFBUS.PUR
PUR
12.5 x d

Class 4.3.3.1

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°

Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2016
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 listed	CMX, 75°C (except CFBUS.PUR.068)
UL/CSA AWM	See data sheet for details ▶ www.igus.eu/CFBUSPUR
NFPA	Following NFPA 79-2018, chapter 12.9
CLPA	**CFBUS.PUR.045:** CC-Link IE Field, Reference no. 151 **CFBUS.PUR.049:** CC-Link IE Field, Reference no. 152
DNV	Type Approval Certificate TAE00003X6 **CFBUS.PUR.040-.052:** Type Approval Certificate TAE00003X8
EAC	Certificate No. RU C-DE.ME77.B.00295/19
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
DESINA	According to VDW, DESINA standardisation
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)

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 application areas

- For medium duty applications, Class 4
- Unsupported travels and up to 20m 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

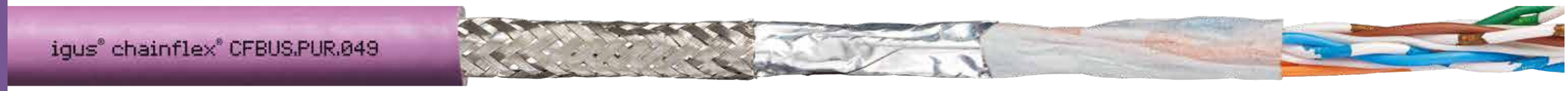
HENNLICH - ŽIJEME TECHNIKOU
o.z. LIN-TECH HENNLICH s.r.o.
Českolipská 9, 412 01 Litoměřice
Telefon: +420 416 711 333
E-mail: lin-tech@hennlich.cz
www.hennlich.cz/lin-tech

Bus cable | PUR | chainflex® CFBUS.PUR

Class 4.3.3.1

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°

CFBUS.PUR
PUR
12.5 x d



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]
Profibus (1x2x0.64mm)				
CFBUS.PUR.001	(2x0.25)C	8.5	25	75
CAN-Bus				
CFBUS.PUR.020 [2]	(4x0.25)C	7.5	23	64
CFBUS.PUR.021	(2x0.5)C	8.5	32	82
CFBUS.PUR.022 [2]	(4x0.5)C	8.5	43	91
CC-Link				
CFBUS.PUR.035	(3x0.5)C	8.0	40	76
Ethernet/CAT5I				
CFBUS.PUR.040 [2]	(4x0.25)C	6.5	29	69
Single Pair Ethernet/CAT5e				
CFBUS.PUR.042	(2x0.15)C	5.5	12	33
Ethernet/CAT5e				
CFBUS.PUR.045	(4x(2x0.15))C	7.5	33	66
Ethernet/CAT6				
CFBUS.PUR.049	(4x(2x0.15))C	7.5	33	66
CFBUS.PUR.H01.049	((4x(2x0.15))C+4x1.5)C	12.5	125	202
Ethernet/CAT6A				
CFBUS.PUR.050	4x(2x0.20)C	10.0	65	120
Ethernet/CAT7				
CFBUS.PUR.052	(4x(2x0.15)C)C	9.5	89	129
FireWire IEEE 1394b				
CFBUS.PUR.056	(2x(2x0.15)C+2x0.38)C	9.0	59	91
Profinet				
CFBUS.PUR.060 [2] [13]	(4x0.38)C	7.0	33	64
CFBUS.PUR.H01.060	((4x0.38)C+4x1.5)C	11.5	120	196
USB 3.0				
CFBUS.PUR.068	(2x(2xAWG28) +2x(2xAWG28)C)C	7.0	39	64

Part No.	Characteristic wave impedance approx. [Ω]	Core group	Colour code
Profibus (1x2x0.64mm)			
CFBUS.PUR.001	150	2x0.25	red, green
CAN-Bus			
CFBUS.PUR.020 [2]	120	4x0.25	white, green, brown, yellow (star-quad)
CFBUS.PUR.021	120	2x0.5	white, brown
CFBUS.PUR.022 [2]	120	4x0.5	white, green, brown, yellow (star-quad)
CC-Link			
CFBUS.PUR.035	110	3x0.5	white, blue, yellow
Ethernet/CAT5I			
CFBUS.PUR.040 [2]	100	4x0.25	white, green, brown, yellow (star-quad)
Single Pair Ethernet/CAT5e			
CFBUS.PUR.042		2x0.15	white/blue
Ethernet/CAT5e			
CFBUS.PUR.045	100	4x(2x0.15)	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Ethernet/CAT6			
CFBUS.PUR.049	100	4x(2x0.15)	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
CFBUS.PUR.H01.049	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
		4x1.5	black, brown, grey, blue
Ethernet/CAT6A			
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	110	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
FireWire IEEE 1394b			
CFBUS.PUR.056	110	2x(2x0.15)C	orange/blue, blue/red
		2x0.38	black, white
Profinet			
CFBUS.PUR.060 [2] [13]	100	4x0.38	white, orange, blue, yellow (star-quad)
CFBUS.PUR.H01.060	100	(4x0.38)C	white, orange, blue, yellow (star-quad)
		4x1.5	black, brown, grey, blue
USB 3.0			
CFBUS.PUR.068	90	2x(2xAWG28)	red/black, green/white-green
		2x(2xAWG28)C	blue/yellow, orange/violet

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

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HENNLICH - ŽIJEME TECHNIKOU
o.z. LIN-TECH HENNLICH s.r.o.
Českolipská 9, 412 01 Litoměřice
Telefon: +420 416 711 333
E-mail: lin-tech@hennlich.cz
www.hennlich.cz/lin-tech