

Bus cable | PUR | chainflex® CFBUS.PUR

CAT7 Ethernet-
for the e-chain®

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

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 to +70 °C
		flexible	-40 °C to +70 °C (following DIN EN 60811-504)
		fixed	-50 °C 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 travel distances and up to 20 m for gliding applications, Class 3	

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 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 approx. 55 % linear, approx. 80 % optical
	Outer jacket	Low-adhesion, 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)

Electrical information

	Nominal voltage	50 V
	Testing voltage	500 V

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	7	> 400 m
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	±180°				

Class 4.3.3.1

Properties and approvals

	UV resistance	Medium.
	Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3.
	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/CSA	Style 1598 and 20236, 30 V, 80 °C
	NFPA	Following NFPA 79-2012 chapter 12.9.
	DNV-GL	Certified according to GL type testing – 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 safety)
	CEI	Following CEI 20-35.
	Lead-free	Following 2011/65/EU (RoHS-II).
	Cleanroom	According to ISO Class 1. Outer jacket material complies with CF77.UL.05.12.D, tested by IPA according to standard 14644-1.
	DESINA	According to VDW, DESINA standardisation.
	CE	Following 2014/35/EU.

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

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

* Higher number of double strokes? Online lifetime calculation: www.igus.eu/chainflexlife

Typical mechanical application areas

- For medium duty applications
- Almost unlimited resistance to oil
- Indoor and outdoor applications without direct solar radiation
- Unsupported travel distances and up to 20 m for gliding applications
- Machining units/machine tools, low temperature applications



Example image

CFBUS.PUR.045

Bus cable | PUR | chainflex® CFBUS.PUR

Class 4.3.3.1

igus® chainflex® CFBUS.PUR.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
	[mm²]	[mm]	[kg/km]	[kg/km]		[Ω]		
Profibus								
CFBUS.PUR.001	(2x0.25)C	8.5	27	74	CFBUS.PUR.001	150	(2x0.25)C	red, green
CAN-Bus								
CFBUS.PUR.021	(2x0.5)C	8.5	33	83	CFBUS.PUR.021	120	(2x0.5)C	white, brown
CFBUS.PUR.022 ²⁾	(4x0.5)C	8.5	46	93	CFBUS.PUR.022 ²⁾	120	(4x0.5)C	white, green, brown, yellow (star-quad stranding)
CC-Link								
CFBUS.PUR.035	(3x0.5)C	8.0	42	79	CFBUS.PUR.035	110	(3x0.5)C	white, blue, yellow
Ethernet/CAT5								
CFBUS.PUR.040 ²⁾	(4x0.25)C	6.5	30	68	CFBUS.PUR.040 ²⁾	100	(4x0.25)C	white, green, brown, yellow (star-quad stranding)
Ethernet/CAT5e								
CFBUS.PUR.045	(4x(2x0.15))C	7.5	35	68	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	36	68	CFBUS.PUR.049	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
New CFBUS.PUR.H01.049	(4x(2x0.15))C+4x1.5	12.5	134	215	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	69	122	CFBUS.PUR.050	100	4x(2x0.20)C	white/blue, white/orange, white/green, white/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, white/orange, white/green, white/brown
FireWire IEEE 1394b								
CFBUS.PUR.056	(2x(2x0.15)C+2x0.38)C	9.0	62	94	CFBUS.PUR.056	100	(2x(2x0.15)C 2x0.38	orange/blue, blue/red black, white
Profinet								
CFBUS.PUR.060 ^{2) 16)}	(4x0.38)C	7.0	35	66	CFBUS.PUR.060 ^{2) 16)}	100	(4x0.38)C	white, orange, blue, yellow (star-quad stranding)
New CFBUS.PUR.H01.060	(4x0.38)C+4x1.5	11.5	128	206	CFBUS.PUR.H01.060	100	(4x0.38)C 4x1.5	white, orange, blue, yellow (star-quad stranding) black, brown, grey, blue
USB 3.0								
CFBUS.PUR.068	(2x(2xAWG28)+2x(2xAWG28)C)C	7.0	41	66	CFBUS.PUR.068	90	2x(2xAWG28) 2x(2xAWG28)C	red/black, green/white-green blue/yellow, orange/violet

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

¹⁶⁾ Colour outer jacket: Yellow-green (RAL 6013)

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

