






Bus cable | TPE | chainflex® CFBUS.LB








- For heaviest duty applications
- TPE outer jacket
- Shielded
- Oil-resistant, bio-oil-resistant
- Low-temperature-flexible
- PVC and halogen-free
- Hydrolysis and microbe-resistant

Bend radius
reduced by
25%!



Dynamic information

	Bend radius	e-chain® linear flexible	minimum 7.5 x d minimum 6 x d
	Temperature	e-chain® linear flexible	-35 °C to +70 °C -50 °C to +70 °C (following DIN EN 60811-504)
	v max.	unsupported gliding	10 m/s 6 m/s
	a max.		100 m/s ²
	Travel distance		Unsupported travel distances and up to 400 m and more for gliding applications, Class 6

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
	Inner jacket	TPE mixture, adapted to suit the requirements in e-chains®.
	Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical
	Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Red lilac (similar to RAL 4001)

Electrical information










	Nominal voltage	50 V
	Testing voltage	500 V

Example image

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

Class 7.6.4.1

Properties and approvals

	UV resistance	Medium.
	Oil resistance	Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4.
	Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992).
	Halogen-free	Following DIN EN 60754.
	EAC	Certificate no. RU C-DE.ME77.B.02780 (TR ZU)
	Lead-free	Following 2011/65/EU (RoHS-II).
	Cleanroom	According to ISO Class 1. Outer jacket material complies with CF9.15.07, 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]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+60	7.5	8.5	9.5
+60/+70	10	11	12

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

Typical mechanical application areas

- For heaviest duty applications
- Almost unlimited resistance to oil, also with bio-oils
- Indoor and outdoor applications without direct solar radiation
- Unsupported travel distances and up to 400 m and more for gliding applications
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling equipment, Clean room, semiconductor handling, indoor cranes, low temperature applications



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igus® chainflex® CFBUS.LB.049



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.LB.001	(2x0.25)C	9.0	34	80	CFBUS.LB.001	150	(2x0.25)C	red, green
CFBUS.LB.004	(4x0.25)C	9.0	37	82	CFBUS.LB.004	150	(4x0.25)C	white, green, brown, yellow (star-quad stranding)
CAN-Bus								
CFBUS.LB.020 ²⁾	(4x0.25)C	6.5	29	53	CFBUS.LB.020 ²⁾	120	(4x0.25)C	white, green, brown, yellow (star-quad stranding)
CFBUS.LB.021	(2x0.5)C	8.0	41	80	CFBUS.LB.021	120	(2x0.5)C	white, brown
CFBUS.LB.022 ²⁾	(4x0.5)C	8.5	46	87	CFBUS.LB.022 ²⁾	120	(4x0.5)C	white, green, brown, yellow (star-quad stranding)
Ethernet/CAT5								
CFBUS.LB.040 ²⁾	(4x0.25)C	7.0	35	66	CFBUS.LB.040 ²⁾	100	(4x0.25)C	white, green, brown, yellow (star-quad stranding)
Ethernet/CAT5e								
CFBUS.LB.041	(4x(2x0.25))C	10.0	52	113	CFBUS.LB.041	100	(4x(2x0.25))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
CFBUS.LB.045	(4x(2x0.15))C	8.5	44	88	CFBUS.LB.045	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Ethernet/CAT6								
CFBUS.LB.049	(4x(2x0.15))C	8.5	44	87	CFBUS.LB.049	100	(4x(2x0.15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown

The chainflex® types marked with ²⁾ 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

Order example: CFBUS.LB.045 – to your desired length (0.5 m steps)
CFBUS.LB chainflex® series .045 Code Bus-type

Online order ► www.chainflex.eu/CFBUS.LB

Delivery time 24h or today.
 Delivery time means time until shipping of goods.

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.

