





























TPE Bus cable | CFBUS

- for maximum load requirements
- TPE outer jacket
- shielded
- oil-resistant
- biooil-resistant
- flame-retardant
- hydrolysis-resistant and microbe-resistant

	Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following EN 60228).
	Core insulation	According to bus specification.
	Core stranding	According to bus specification.
	Core identification	According to bus specification ▶ Schedule delivery program
	Inner jacket	TPE mixture adapted to suit the requirements in energy chains®.
	Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70% linear, approx. 90% optical.
	Outer jacket	Low-adhesion mixture on the basis of TPE, especially abrasion-resistant and highly flexible, adapted to suit the requirements in energy chains®. Colour: Red lilac (similar to RAL 4001)
	Bending radius	moved minimum 10-12,5 x d fixed minimum 5 x d
	Temperature	moved -35 °C to +70 °C fixed -40 °C to +70 °C
	v max.	10 m/s, 6 m/s
	unsupported/gliding	
	a max.	100 m/s ²
	Travel distance	Freely suspended travel distances and up to 400 m for gliding applications, Class 5
	UV-resistant	Medium
	Nominal voltage	50 V
	Testing voltage	500 V
	Oil	Oil-resistant (following DIN EN 60811-2-1), biooil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4.
	Flame-retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
	Silicon-free	Free from silicon which can affect paint adhesion (following PV 3.10.7 – status 1992).

Class 6.5.4 (6 maximum load requirements 5 travel distance up to 400 m 4 oil-resistant)

	UL/CSA	▶ Schedule delivery program
	NFPA	Following NFPA 79-2012 chapter 12.9
	CEI	Following CEI 20-35
	CE	Following 2006/95/EG
	DESINA	According to VDW, DESINA standardisation
	Lead free	Following 2011/65/EC (RoHS-II)
	Clean room	According to ISO Class 1. Outer jacket material complies with CF34.UL.25.04.D, tested by IPA according to standard 14644-1
	CTP	Certified according to N° C-DE.PB49.V.00396
	EAC	Certified according to N° TC RU C-DE.ME77.B.00963

New! Guaranteed lifetime for this series according to the "chainflex® guarantee club" conditions ▶ Page 22-25

Double strokes*				5 million	7,5 million	10 million
Temperature, from/to [°C]	v max. [m/s]	a max. [m/s ²]	Travel distance [m]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
	unsupported	gliding				
Art.-Nr. CFBUS.001-.045						
-35 / -25				12,5	13,5	14,5
-25 / +60	10	6	≤ 400	10	11	12
+60 / +70				12,5	13,5	14,5
Art.-Nr. CFBUS.050-.070						
-35 / -25				15	16	17
-25 / +60	10	6	≤ 400	12,5	13,5	14,5
+60 / +70				15	16	17

* higher number of double strokes possible

Typical application area

- for maximum load requirements
- almost unlimited resistance to oil, also with bio-oils
- indoor and outdoor applications without direct sun radiation
- freely suspended travel distances and up to 400 m for gliding applications
- Bus connection cable for storage and retrieval units for high-bay warehouses, machining units/machine tools, quick handling, clean room, semiconductor insertion, indoor cranes, low-temperature applications





Image exemplary.

Delivery program Part No.	Number of cores and conductor nominal cross section [mm ²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]	Delivery program Part No.	Characteristic wave impedance approx. [Ω]	Core group	Colour code
Profibus (minimum bending radius 10 x d) Style 1589/21371, 30 V, 80°C					Profibus			
CFBUS.001	(2x0,25)C	8,5	34	83	CFBUS.001	150	(2x0,25)C	red, green
CFBUS.002	(2x0,25)C+4x1,5	12,5	99	203	CFBUS.002	150	(2x0,25)C 4x1,5	red/green black with white numbers 1-4
CFBUS.003	(2x0,25)C+3G0,75	11,0	58	141	CFBUS.003	150	(2x0,25)C 3G0,75	red/green black, blue, green-yellow
Interbus (minimum bending radius 10 x d) Style 1589/21371, 30 V, 80°C					Interbus			
CFBUS.010	(3x(2x0,25))C	9,0	50	90	CFBUS.010	100	3x(2x0,25)	white/brown, green/yellow, grey/pink
CFBUS.011	(3x(2x0,25)+(3G1,0))C	10,5	88	142	CFBUS.011	100	3x(2x0,25) 3G1,0	white/brown, green/yellow, grey/pink red, blue, green-yellow
CAN-BUS/Fieldbus (minimum bending radius 10 x d) Style 1589/21371, 30 V, 80°C					CAN-BUS/Feldbus			
CFBUS.020 ⁽²⁾	(4x0,25)C	6,5	40	77	CFBUS.020 ⁽²⁾	120	(4x0,25)C	white, green, brown, yellow (star-quad stranding)
CFBUS.021	(2x0,5)C	8,0	41	88	CFBUS.021	120	(2x0,5)C	white, brown
CFBUS.022 ⁽²⁾	(4x0,5)C	8,0	46	90	CFBUS.022 ⁽²⁾	120	(4x0,5)C	white, green, brown, yellow (star-quad stranding)
DeviceNet (minimum bending radius 10 x d) Style 1589/21371, 30 V, 80°C					DeviceNet			
CFBUS.030 ⁽⁴⁾ Drop	((2xAWG24)C+2xAWG22)C	7,0	36	65	CFBUS.030 ⁽⁴⁾ Drop	120	(2xAWG24)C 2xAWG22	white/ blue red, black
CFBUS.031 Trunk	((2xAWG18)C+2xAWG15)C	11,5	110	200	CFBUS.031 Trunk	120	(2xAWG18)C 2xAWG15	white/ blue red, black
CC-Link (minimum bending radius 10 x d) Style 1589/21371, 30 V, 80°C					CC-Link			
CFBUS.035	(3xAWG20)C	8,5	46	94	CFBUS.035	110	(3xAWG20)C	white, blue, yellow
Ethernet/CAT5/GigE (minimum bending radius 10 x d) Style 10138/21235, 300 V, 80 °C – starting from manufacturing date 4/2012					Ethernet/CAT5/GigE			
CFBUS.040 ⁽²⁾	(4x0,25)C	7,0	35	66	CFBUS.040 ⁽²⁾	100	(4x0,25)C	white, green, brown, yellow (star-quad stranding)
CFBUS.041	(4x(2x0,25))C	10,0	52	113	CFBUS.041	100	(4x(2x0,25))C	white/brown, green/yellow, grey/pink, blue/red
CFBUS.044	(4x(2x0,15))C	8,5	44	88	CFBUS.044	100	(4x(2x0,15))C	white/brown, green/yellow, grey/pink, blue/red
CFBUS.045	(4x(2x0,15))C	8,5	44	88	CFBUS.045	100	(4x(2x0,15))C	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Ethernet/CAT6_A (minimum bending radius 12,5 x d) Style 1589/21371, 30 V, 80°C					Ethernet/CAT6_A			
CFBUS.050	(4x(2x0,15))C	10,5	76	139	CFBUS.050	100	(4x(2x0,15))C	white/blue, white/orange, white/green, white/brown

(4) manufactured without inner jacket
The chainflex® types marked with (2) are cables designed as a star-quad.
Other types available on request.
Note: The mentioned external diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core

Technical note

The USB, FireWire and GigE-cables shown on these pages were developed for the ambitious industrial usage in e-chains®.
High proofness to oil and lubricants is as secured as protection against electromagnetic interferences. This high mechanical service life was reached with the usage of high quality materials which even care for the electrical safeness. In single cases communication errors can occur, if very different hardware and software is combined. We recommend tests with all components and the cables before starting serial production, to get the proove for a perfect running system. Of course we support you with the details of these electrical tests. Just give us a call!





Image exemplary.

Delivery program Part No.	Number of cores and conductor nominal cross section [mm ²]	External diameter max. [mm]	Copper index [kg/km]	Weight [kg/km]	Delivery program Part No.	Characteristic wave impedance approx. [Ω]	Core group	Colour code
FireWire IEEE 1394a (minimum bending radius 12,5 x d) Style 1589/21371, 30 V, 80°C					FireWire IEEE 1394b			
CFBUS.055	2x(2x0,15)C+2x(0,34)C	8,0	41	84	CFBUS.055	100	2x(2x0,15)C 2x(0,34)C	orange/blue, green/red white, black
Profinet (minimum bending radius 12,5 x d) Style 10138/21235, 300 V, 80°C – starting from manufacturing date 4/2012					Profinet			
CFBUS.060 ^(2/16)	(4x0,38)C	7,5	41	75	CFBUS.060 ^(2/16)	100	(4x0,38)C	white, orange, blue, yellow (star-quad stranding)
USB (minimum bending radius 12,5 x d) Style 1589/21371, 30 V, 80°C					USB			
CFBUS.065	((2xAWG28)+2xAWG20)C	5,5	29	48	CFBUS.065	90	(2xAWG28) 2xAWG20	white/green red, black
CFBUS.066	((2xAWG24)+2xAWG20)C	6,5	33	56	CFBUS.066	90	(2xAWG24) 2xAWG20	white/green red, black
DVI (minimum bending radius 12,5 x d) Style 1589/21371, 30 V, 80°C					DVI			
CFBUS.070	(4x(2xAWG28)C+(2xAWG28)+3xAWG28)C	9,0	37	94	CFBUS.070	100	4x(2xAWG28)C (2xAWG28) 3xAWG28	4 x white/yellow with element jacket in blue, black, white, red white/brown green, yellow, grey

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

(16) Colour outer jacket: Yellow green (similar to RAL 6018)

Other types available on request.

Note: The mentioned external diameters are maximum values and may tend toward lower tolerance limits.

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