

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. unsupported/gliding** 10 m/s, 6 m/s
- a max.** 100 m/s²
- 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).

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1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

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

Test data ▶ Page 40 or www.igus.eu/test3

... no minimum order quantity ...

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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

Other types ► Page 172

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1030 types from stock no cutting costs ...
(for up to 10 cuts of the same type)

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 prove for a perfect running system. Of course we support you with the details of these electrical tests. Just give us a call!

... no minimum order quantity ...

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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.
G = with green-yellow earth core x = without earth core

Other types ► Page 170

 **Order example: CFBUS.060 – in your desired length (0,5 m steps)**
CFBUS chainflex® series .060 Code BUS-type

 **prices** price list online
www.chainflex.eu/CFBUS

 **delivery time** despatched in
24 hours or today

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