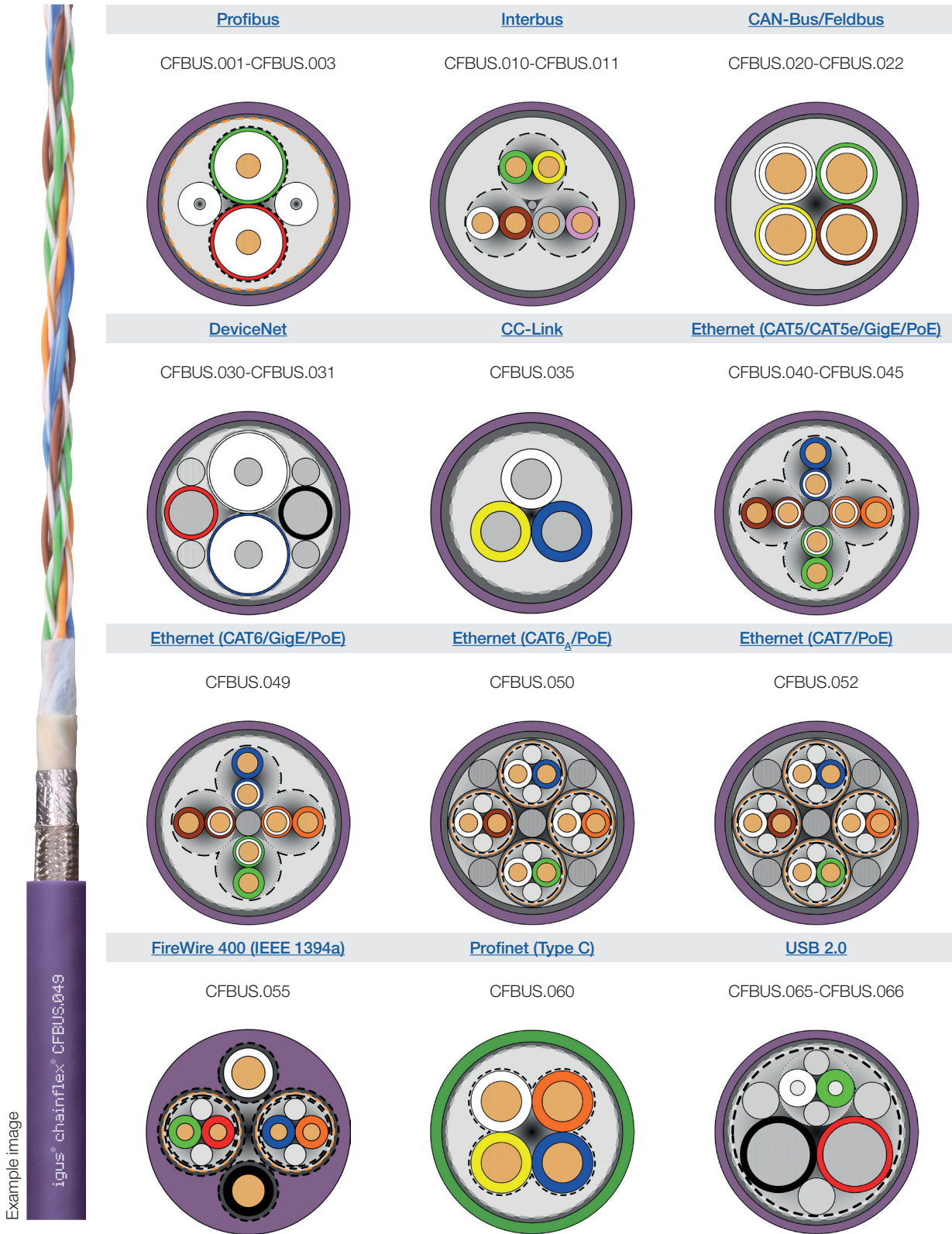


# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
 ● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant



igus 36-month  
chainflex cable  
guarantee and  
service life  
calculator based  
on 2 billion test  
cycles per year



# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
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# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant

### Cable structure

|  |                            |  |
|--|----------------------------|--|
|   | <b>Conductor</b>           | Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).   |
|   | <b>Core insulation</b>     | According to bus specification.  |
|   | <b>Core structure</b>      | According to bus specification.  |
|   | <b>Core identification</b> | According to bus specification.<br>► Product range table   |
|   | <b>Inner jacket</b>        | TPE mixture adapted to suit the requirements in e-chains®.   |
|   | <b>Overall shield</b>      | Aluminum/Polyester tape and extremely bending-resistant braiding made of tinned copper wires.<br>Coverage approx. 70 % linear, approx. 90 % optical  |
|  | <b>Outer jacket</b>        | Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®.<br>Colour: Red lilac (similar to RAL 4001), Variants ► Product range table<br>Printing: black |

„00000 m\*\* igus chainflex CFBUS.---① -----② E310776 cRUus AWM

Style -----③ VW-1 AWM I/II A/B 80°C ---V④ FT1 DNV-GL ⑤ EAC/ CTP CE

---⑥ ---⑦ conform RoHS-II conform www.igus.de+++ chainflex cable works +++

\* **Length printing:** Not calibrated. Only intended as an orientation aid.

① / ② Cable identification according to Part No. (see technical table).

③ / ④ Printing of UL Style and UL Voltage rating (see related chapter).

⑤ Printing DNV-GL Type Approval Certificate.

⑥ Printing: DESINA (only if DESINA is fulfilled).

⑦ Printing according to bus specification (inclusive wave resistance).

Example: chainflex CFBUS.001 (2x0.25)C

### Guaranteed service life according to guarantee conditions

| Double strokes | 5 million              |                        | 7.5 million            |                        | 10 million             |                        |
|----------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|                | CFBUS<br>.001-.049     | CFBUS<br>.050-.070     | CFBUS<br>.001-.049     | CFBUS<br>.050-.070     | CFBUS<br>.001-.049     | CFBUS<br>.050-.070     |
|                | R min.<br>[factor x d] | R min.<br>[factor x d] | R min.<br>[factor x d] | R min.<br>[factor x d] | R min.<br>[factor x d] | R min.<br>[factor x d] |
| -35/-25        | 12.5                   | 15                     | 13.5                   | 16                     | 14.5                   | 17                     |
| -25/+60        | 10                     | 12.5                   | 11                     | 13.5                   | 12                     | 14.5                   |
| +60/+70        | 12.5                   | 15                     | 13.5                   | 16                     | 14.5                   | 17                     |

Minimum guaranteed service life of the cable under the specified conditions.

The installation of the cable is recommended within the middle temperature range.



Example image

igus® chainflex® CFBUS.049

# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant

### 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                         |
|  | Flame retardant | According to IEC 60332-1-2, FT1, VW-1<br><b>CFBUS.030/CFBUS.065/CFBUS.066:</b> According to IEC 60332-1-2, FT2  |
|  | Silicone-free   | Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)  |
|  | UL verified     | Certificate No. B129699: „igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year“                    |
|  | UL/CSA AWM      | See table UL/CSA AWM for details  |
|  | NFPA            | Following NFPA 79-2018, chapter 12.9  |
|  | CLPA            | <b>CFBUS.045:</b> <b>CC-Link IE Field</b> , Reference no. 130<br><b>CFBUS.049:</b> <b>CC-Link IE Field</b> , Reference no. 137                            |
|  | DNV-GL          | Type approval certificate No. TAE00003X5<br><b>CFBUS.040-CFBUS.052:</b> Type approval certificate No. TAE00003X7  |
|  | EAC             | Certificate No. RU C-DE.ME77.B.00295/19 (TR ZU)   |
|  | 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 CF34. UL25.04.D - tested by IPA according to standard DIN EN ISO 14644-1 |
|  | DESINA          | According to VDW, DESINA standardisation  |
|  | CE              | Following 2014/35/EU  |



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



Example image

igus® chainflex® CFBUS.049



# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant



### Properties and approvals

UL/CSA AWM Details

| Part No.  | UL style core insulation                                       | UL style outer jacket | UL Voltage Rating<br>V | UL Temperature Rating<br>°C |
|-----------|--|-----------------------|------------------------|-----------------------------|
| CFBUS.001 | 11807  | 21218                 | 600                    | 80                          |
| CFBUS.002 | 11807 (0.25 mm <sup>2</sup> )<br>11551 (1.5 mm <sup>2</sup> )  | 21218                 | 600                    | 80                          |
| CFBUS.003 | 11807 (0.25 mm <sup>2</sup> )<br>11551 (0.75 mm <sup>2</sup> ) | 21218                 | 600                    | 80                          |
| CFBUS.010 | 11551  | 21218                 | 600                    | 80                          |
| CFBUS.011 | 11551  | 21218                 | 600                    | 80                          |
| CFBUS.020 | 11807  | 21218                 | 600                    | 80                          |
| CFBUS.021 | 11807  | 21218                 | 600                    | 80                          |
| CFBUS.022 | 11807  | 21218                 | 600                    | 80                          |
| CFBUS.030 | 11807 (AWG24)<br>11551 (AWG22)                                 | 21187                 | 600                    | 80                          |
| CFBUS.031 | 11807 (AWG24)<br>11551 (AWG22)                                 | 21218                 | 600                    | 80                          |
| CFBUS.035 | 11807  | 21218                 | 600                    | 80                          |
| CFBUS.040 | 11632  | 21218                 | 600                    | 80                          |
| CFBUS.045 | 11632  | 21218                 | 600                    | 80                          |
| CFBUS.049 | 11632  | 21218                 | 600                    | 80                          |
| CFBUS.050 | 11632  | 21218                 | 600                    | 80                          |
| CFBUS.052 | 11632  | 21218                 | 600                    | 80                          |
| CFBUS.055 | 11632 (0.15 mm <sup>2</sup> )<br>11551 (0.34 mm <sup>2</sup> ) | 21218                 | 600                    | 80                          |
| CFBUS.060 | 11632  | 21218                 | 600                    | 80                          |
| CFBUS.065 | 1589   | 22186                 | 30                     | 80                          |
| CFBUS.066 | 1589   | 22186                 | 30                     | 80                          |



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



Example image






# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant

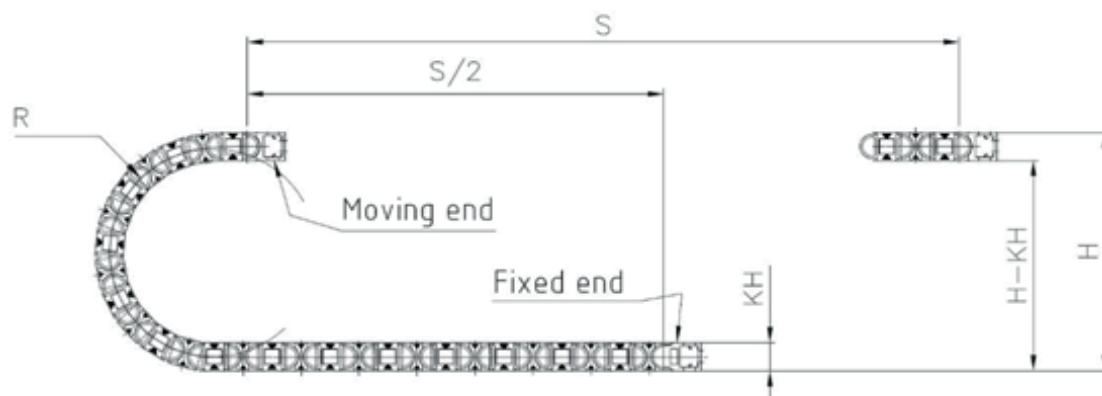
### Dynamic information

|   |                 |  |  |
|---|-----------------|--|--|
|  | Bend radius     | e-chain® linear  | min. 10 x d (CFBUS.001-.049 and CFBUS.060)<br>min. 12.5 x d (CFBUS.050-.055 and CFBUS.070) |
|   |                 | flexible   | min. 8 x d   |
|   |                 | fixed  | min. 5 x d   |
|  | Temperature     | e-chain® linear  | -35 °C up to +70 °C  |
|   |                 | flexible   | -45 °C up to +70 °C (following DIN EN 60811-504)   |
|   |                 | fixed  | -50 °C up to +70 °C (following DIN EN 50305)   |
|  | v max.          | unsupported  | 10 m/s   |
|   |                 | gliding  | 6 m/s  |
|  | a max.          |  | 100 m/s <sup>2</sup>   |
|  | Travel distance | Unsupported travel distances and up to 400 m for gliding applications, Class 6 |  |

These values are based on specific applications or tests. They do not represent the limit of what is technically feasible.

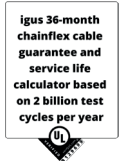
### Typical lab test setup for this cable series

|                              |                                      |
|------------------------------|--------------------------------------|
| Test bend radius R           | approx. 75 - 100 mm                  |
| Test travel S/S <sub>2</sub> | approx. 1 - 15 m                     |
| Test duration                | minimum 2 - 4 million double strokes |
| Test speed                   | approx. 0,5 - 2 m / s                |
| Test acceleration            | approx. 0.5 - 1.5 m / s <sup>2</sup> |



### Typical application areas

- For extremely heavy duty applications, Class 6
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications without direct solar radiation
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, indoor cranes, low temperature applications



Example image

igus® chainflex® CFBUS.049

# Data sheet






## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant

### Technical tables:

#### Mechanical information

| Part No.                        | Number of cores and conductor nominal cross section [mm²]   | Outer diameter (d) max. [mm] | Copper index [kg/km] | Weight [kg/km] |
|---------------------------------|---|------------------------------|----------------------|----------------|
| Profibus (1x2x0,64 mm)          |   |                              |                      |                |
| CFBUS.001                       | (2x0.25)C   | 9.0                          | 33                   | 92             |
| CFBUS.002                       | (2x0.25)C+4x1.5   | 12.5                         | 94                   | 191            |
| CFBUS.003                       | (2x0.25)C+3G0.75  | 11.5                         | 55                   | 145            |
| Interbus                        |   |                              |                      |                |
| CFBUS.010                       | (3x(2x0.25))C   | 9.0                          | 47                   | 91             |
| CFBUS.011                       | (3x(2x0.25)+(3G1.0))C   | 10.5                         | 87                   | 152            |
| CAN-Bus/Feldbus                 |   |                              |                      |                |
| CFBUS.020 <sup>2)</sup>         | (4x0.25)C   | 6.5                          | 28                   | 58             |
| CFBUS.021                       | (2x0.5)C  | 8.0                          | 39                   | 81             |
| CFBUS.022 <sup>2)</sup>         | (4x0.5)C  | 8.0                          | 43                   | 87             |
| DeviceNet                       |   |                              |                      |                |
| CFBUS.030 <sup>4)</sup>         | ((2xAWG24)C+2xAWG22)C   | 7.0                          | 36                   | 57             |
| CFBUS.031 <sup>4)</sup>         | ((2xAWG18)C+2xAWG15)C   | 11.5                         | 103                  | 174            |
| CC-Link                         |   |                              |                      |                |
| CFBUS.035                       |  (3xAWG20)C    | 8.5                          | 43                   | 96             |
| Ethernet/CAT5/PoE               |   |                              |                      |                |
| CFBUS.040                       |  (4x0.25)C     | 7.0                          | 33                   | 59             |
| Ethernet/CAT5e/PoE              |   |                              |                      |                |
| CFBUS.045                       |  (4x(2x0.15))C | 8.5                          | 42                   | 84             |
| Ethernet/CAT6/PoE               |   |                              |                      |                |
| CFBUS.049                       |  (4x(2x0.15))C | 8.5                          | 42                   | 84             |
| Ethernet/CAT6 <sub>A</sub> /PoE |   |                              |                      |                |
| CFBUS.050 <sup>4)</sup>         | (4x(2x0.15)C)C  | 10.5                         | 83                   | 134            |
| Ethernet/CAT7/PoE               |   |                              |                      |                |
| CFBUS.052 <sup>4)</sup>         | (4x(2x0.15)C)C  | 10.5                         | 89                   | 133            |
| FireWire 1394a                  |   |                              |                      |                |
| CFBUS.055                       | 2x(2x0.15)C+2x(0.34)C   | 8.0                          | 39                   | 76             |
| Profinet                        |   |                              |                      |                |
| CFBUS.060 <sup>2) 13)</sup>     |  (4x0.38)C     | 7.5                          | 39                   | 74             |
| USB                             |   |                              |                      |                |
| CFBUS.065                       | ((2xAWG28)+2xAWG20)C  | 5.5                          | 28                   | 45             |
| CFBUS.066                       | ((2xAWG24)+2xAWG20)C  | 6.5                          | 32                   | 51             |
| DVI                             |   |                              |                      |                |
| CFBUS.070 <sup>4) 6)</sup>      | (4x(2xAWG28)C<br>+(2xAWG28)+3xAWG28)C   | 9.0                          | 35                   | 95             |

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

<sup>4)</sup> Manufactured without inner jacket

<sup>6)</sup> without cULus

<sup>13)</sup> Colour outer jacket: Yellow-green (RAL 6018)

G = with green-yellow earth core

x = without earth core

**Note:** The given outer diameters are maximum values and may tend toward lower tolerance limits.



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



Example image

igus® chainflex® CFBUS.049

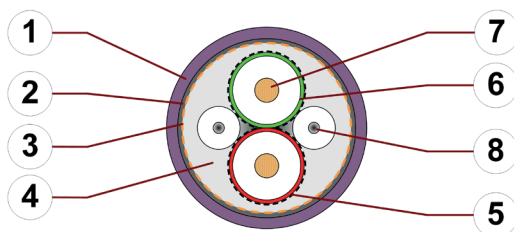
Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant

### Profibus

CFBUS.001-CFBUS.003

### Cable structure

(Electrical information please see next page)



1. Outer jacket: Pressure extruded, flame-retardant TPE mixture
2. Overall shield: Extremely bending-stable braid made of tinned copper wires
3. Shield foil: Copper clad plastic foil
4. Inner jacket: Pressure extruded, gusset-filling TPE mixture
5. Banding: Plastic foil
6. Core insulation: Mechanically high quality TPE mixture (according to bus specification)
7. Conductor: Fine-wire strand in especially bending-stable version consisting of bare copper wires
8. Filler: Plastic dummy

### Example image

For detailed overview please see design table

### Design table

| Part No.  | Core group | Colour code                  | Drawing |
|-----------|------------|------------------------------|---------|
| CFBUS.001 | 2x0.25     | red, green                   |         |
| CFBUS.002 | (2x0.25)   | red/green                    |         |
|           | 4x1.5      | black with white numbers 1-4 |         |
| CFBUS.003 | (2x0.25)   | red/green                    |         |
|           | 3G0.75     | black, blue, green-yellow    |         |



Example image



# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant

### Profibus

CFBUS.001-CFBUS.003

### Electrical information

(Cable structure please see previous page)

| Part No.   | CFBUS.001                    | CFBUS.002 | CFBUS.003 |
|--|------------------------------|-----------|-----------|
| Nominal voltage  | 50 V<br>600 V (following UL) |           |           |
| Testing voltage<br>(following DIN EN 50289-1-3)                | 500 V                        |           |           |
| Characteristic wave impedance<br>(following DIN EN 50289-1-11) | 150 ± 15 Ω (20 MHz)          |           |           |

Line attenuation approx. [dB/100m]

| Part No.  | 9.6<br>kHz | 38.4<br>kHz | 4<br>MHz | 16<br>MHz |
|-----------|------------|-------------|----------|-----------|
| CFBUS.001 | 0.3        | 0.4         | 2.6      | 5.5       |
| CFBUS.002 | 0.3        | 0.4         | 2.6      | 5.5       |
| CFBUS.003 | 0.3        | 0.4         | 2.6      | 5.5       |

| Conductor nominal cross<br>section | Maximum conductor resistance at 20 °C<br>(following DIN EN 50289-1-2) | Maximum current rating at 30 °C<br>(following DIN VDE 0298-4) |
|------------------------------------|---|---|
| [mm²]                              | [Ω/km]  | [A]   |
| 0.25                               | 68  | 5   |
| 0.75                               | 28.6  | 14  |
| 1.5                                | 14.6  | 21  |

The final maximum current rating depends among other things on the ambient conditions, the type of the installation and the number of loaded cores.



Example image

igus® chainflex® CFBUS.049



# Data sheet

## chainflex® CFBUS



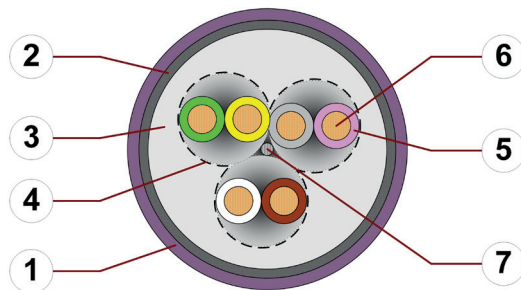
Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant

### Interbus

CFBUS.010-CFBUS.011

### Cable structure

(Electrical information please see next page)



1. Outer jacket: Pressure extruded, flame-retardant TPE mixture
2. Overall shield: Extremely bending-stable braid made of tinned copper wires
3. Inner jacket: Pressure extruded, gusset-filling TPE mixture
4. Banding: Plastic fleece
5. Core insulation: Mechanically high quality TPE mixture (according to bus specification)
6. Conductor: Fine-wire strand in especially bending-stable version consisting of bare copper wires
7. Strain relief: Tensile stress-resistant centre element

### Example image

For detailed overview please see design table

### Design table

| Part No.  | Core group | Colour code                          | Drawing |
|-----------|------------|--------------------------------------|---------|
| CFBUS.010 | 3x(3x0.25) | white/brown, green/yellow, grey/pink |         |
| CFBUS.011 | 3x(2x0.25) | white/brown, green/yellow, grey/pink |         |
|           | 3G1.0      | red, blue, green-yellow              |         |



Example image

igus® chainflex® CFBUS.049

# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant



### Interbus

CFBUS.010-CFBUS.011

### Electrical information

(Cable structure please see previous page)

| Part No.   | CFBUS.010                    | CFBUS.011 |
|--|------------------------------|-----------|
| Nominal voltage  | 50 V<br>600 V (following UL) |           |
| Testing voltage<br>(following DIN EN 50289-1-3)                | 500 V                        |           |
| Characteristic wave impedance<br>(following DIN EN 50289-1-11) | 100 ± 15 Ω (at 20 MHz)       |           |

| Conductor nominal cross section | Maximum conductor resistance at 20 °C<br>(following DIN EN 50289-1-2) | Maximum current rating at 30 °C<br>(following DIN VDE 0298-4) |
|---------------------------------|---|---|
| [mm²]                           | [Ω/km]  | [A]   |
| 0.25                            | 81  | 5   |
| 1                               | 21.5  | 17  |

The final maximum current rating depends among other things on the ambient conditions, the type of the installation and the number of loaded cores.



Example image

# Data sheet

## chainflex® CFBUS



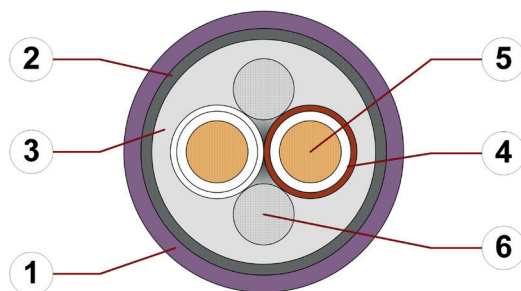
Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant

### CAN-Bus/Feldbus

CFBUS.020-CFBUS.022

### Cable structure

(Electrical information please see next page)



1. Outer jacket: Pressure extruded, flame-retardant TPE mixture
2. Overall shield: Extremely bending-stable braid made of tinned copper wires
3. Inner jacket: Pressure extruded, gusset-filling TPE mixture
4. Core insulation: Mechanically high quality TPE mixture (according to bus specification)
5. Conductor: Fine-wire strand in especially bending-stable version consisting of bare copper wires
6. Filler: Plastic yarns

### Example image

For detailed overview please see design table

### Design table

| Part No.  | Core group | Colour code                                | Drawing |
|-----------|------------|--|---------|
| CFBUS.020 | 4x0.25     | white, green, brown, yellow<br>(Star-quad) |         |
| CFBUS.021 | 2x0.5      | white, brown                               |         |
| CFBUS.022 | 4x0.5      | white, green, brown, yellow<br>(Star-quad) |         |



Example image

igus® chainflex® CFBUS.049

# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant



### CAN-Bus/Feldbus

CFBUS.020-CFBUS.022

### Electrical information

(Cable structure please see previous page)

| Part No.   | CFBUS.020                    | CFBUS.021 | CFBUS.022 |
|--|------------------------------|-----------|-----------|
| Nominal voltage  | 50 V<br>600 V (following UL) |           |           |
| Testing voltage<br>(following DIN EN 50289-1-3)                | 500 V                        |           |           |
| Characteristic wave impedance<br>(following DIN EN 50289-1-11) | 120 ± 12 Ω (at 1 MHz)        |           |           |

| Conductor nominal cross section | Maximum conductor resistance at 20 °C<br>(following DIN EN 50289-1-2) | Maximum current rating at 30 °C<br>(following DIN VDE 0298-4) |
|---------------------------------|---|---|
| [mm²]                           | [Ω/km]  | [A]   |
| 0.25                            | 79  | 5   |
| 0.5                             | 41  | 10  |

The final maximum current rating depends among other things on the ambient conditions, the type of the installation and the number of loaded cores.



Example image

# Data sheet

## chainflex® CFBUS



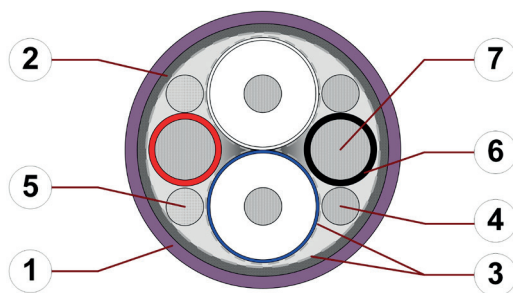
Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant

### DeviceNet

CFBUS.030-CFBUS.031

### Cable structure

(Electrical information please see next page)



1. Outer jacket: Pressure extruded, flame-retardant TPE mixture
2. Overall shield: Extremely bending-stable braid made of tinned copper wires
3. Shield foil: Aluminium clad plastic foil
4. Drain wire: Tinned copper wires
5. Filler: Plastic yarns
6. Core insulation: Mechanically high quality TPE mixture (according to bus specification)
7. Conductor: Fine-wire strand in especially bending-stable version consisting of tinned copper wires

### Example image

For detailed overview please see design table

### Design table

| Part No.  | Core group | Colour code | Drawing |
|-----------|------------|-------------|---------|
| CFBUS.030 | (2xAWG24)C | white/blue  |         |
|           | 2xAWG22    | red, black  |         |
| CFBUS.031 | (2xAWG18)C | white/blue  |         |
|           | 2xAWG15    | red, black  |         |



Example image

igus® chainflex® CFBUS.049



# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant



### DeviceNet

CFBUS.030-CFBUS.031

### Electrical information

(Cable structure please see previous page)

| Part No.   | CFBUS.030                    | CFBUS.031 |
|--|------------------------------|-----------|
| Nominal voltage  | 50 V<br>600 V (following UL) |           |
| Testing voltage<br>(following DIN EN 50289-1-3)                | 500 V                        |           |
| Characteristic wave impedance<br>(following DIN EN 50289-1-11) | 120 ± 12 Ω (at 1 MHz)        |           |

| Conductor nominal cross section | Maximum conductor resistance at 20 °C<br>(following DIN EN 50289-1-2) | Maximum current rating at 30 °C<br>(following DIN VDE 0298-4) |
|---------------------------------|---|---|
| [mm²]                           | [Ω/km]  | [A]   |
| AWG24                           | 86  | 5   |
| AWG22                           | 54,5  | 7   |
| AWG18                           | 21  | 14  |
| AWG15                           | 15  | 21  |

The final maximum current rating depends among other things on the ambient conditions, the type of the installation and the number of loaded cores.



Example image

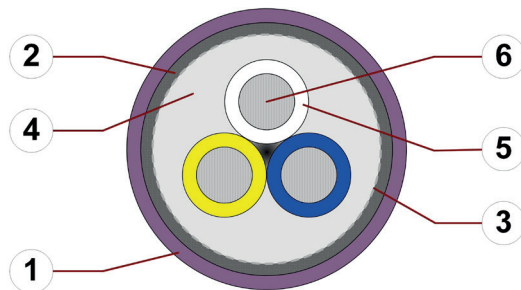
Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant



**CC-Link**  
CFBUS.035

### Cable structure

(Electrical information please see next page)



1. Outer jacket: Pressure extruded, flame-retardant TPE mixture
2. Overall shield: Extremely bending-stable braid made of tinned copper wires
3. Shield foil: Aluminium clad plastic foil
4. Inner jacket: Pressure extruded, gusset-filling TPE mixture
5. Core insulation: Mechanically high quality TPE mixture (according to bus specification)
6. Conductor: Fine-wire strand in especially bending-stable version consisting of tinned copper wires

### Example image

For detailed overview please see design table

### Design table

| Part No.  | Core group | Colour code         | Drawing |
|-----------|------------|---------------------|---------|
| CFBUS.035 | 3xAWG20    | white, blue, yellow |         |



Example image

# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant



**CC-Link**  
CFBUS.035

### Electrical information

(Cable structure please see previous page)

| Part No.   | CFBUS.035                    |
|--|------------------------------|
| Nominal voltage  | 50 V<br>600 V (following UL) |
| Testing voltage<br>(following DIN EN 50289-1-3)                | 500 V                        |
| Characteristic wave impedance<br>(following DIN EN 50289-1-11) | 110 ± 11 Ω (1-100 MHz)       |

| Conductor nominal cross section | Maximum conductor resistance at 20 °C<br>(following DIN EN 50289-1-2) | Maximum current rating at 30 °C<br>(following DIN VDE 0298-4) |
|---------------------------------|---|---|
| [mm²]                           | [Ω/km]  | [A]   |
| AWG20                           | 41  | 10  |

The final maximum current rating depends among other things on the ambient conditions, the type of the installation and the number of loaded cores.



Example image

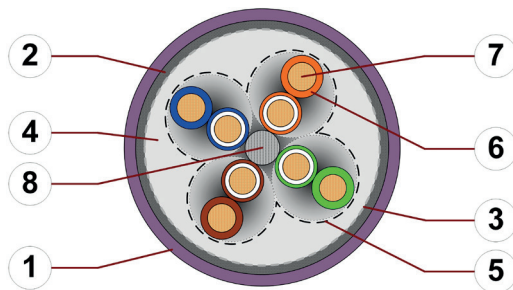
Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant

### Ethernet (CAT5/CAT5e/GigE/PoE)

CFBUS.040-CFBUS.045

### Cable structure

(Electrical information please see next page)



1. Outer jacket: Pressure extruded, flame-retardant TPE mixture
2. Overall shield: Extremely bending-stable braid made of tinned copper wires
3. Shield foil: Aluminium clad plastic foil
4. Inner jacket: Pressure extruded, gusset-filling TPE mixture
5. Banding: Plastic fleece
6. Core insulation: Mechanically high quality TPE mixture (according to bus specification)
7. Conductor: Fine-wire strand in especially bending-stable version consisting of bare copper wires
8. Strain relief: Tensile stress-resistant centre element

### Example image

For detailed overview please see design table

### Design table

| Part No.  | Core group    | Colour code   | Drawing |
|-----------|---------------|---|---------|
| CFBUS.040 | (4x0.25)C     | white, green, brown, yellow<br>(Star-quad)                                    |         |
| CFBUS.045 | (4x(2x0.15))C | white-blue/blue, white-orange/orange,<br>white-green/green, white-brown/brown |         |



Example image

igus® chainflex® CFBUS.049

# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant



### Ethernet (CAT5/CAT5e/GigE/PoE)

CFBUS.040-CFBUS.045

### Electrical information

(Cable structure please see previous page)

| Part No.   | CFBUS.040                    | CFBUS.045 |
|--|------------------------------|-----------|
| Nominal voltage  | 50 V<br>600 V (following UL) |           |
| Testing voltage<br>(following DIN EN 50289-1-3)                | 500 V                        |           |
| Characteristic wave impedance<br>(following DIN EN 50289-1-11) | 100 ± 25 Ω                   |           |
| Operating capacity<br>(following DIN EN 50289-1-5)             | 50 pF/m                      | 60 pF/m   |
| Nominal Velocity of Propagation (NVP)                          | 66 %                         | 67 %      |

Line attenuation approx. [dB/100m]

| Part No.  | 1 MHz | 4 MHz | 10 MHz | 16 MHz | 20 MHz | 31.25 MHz | 62.5 MHz | 100 MHz |
|-----------|-------|-------|--------|--------|--------|-----------|----------|---------|
| CFBUS.040 | 3.2   | 6.0   | 9.5    | 12.1   | 13.6   | 17.1      | 24.8     | 32.0    |
| CFBUS.045 | 3.2   | 6.0   | 9.5    | 12.1   | 13.6   | 17.1      | 24.8     | 32.0    |

| Conductor nominal cross section | Maximum conductor resistance at 20 °C<br>(following DIN EN 50289-1-2) | Maximum current rating at 30 °C<br>(following DIN VDE 0298-4) |
|---------------------------------|---|---|
| [mm²]                           | [Ω/km]  | [A]   |
| 0.15                            | 111   | 2.5   |
| 0.25                            | 70  | 5   |

The final maximum current rating depends among other things on the ambient conditions, the type of the installation and the number of loaded cores.

| Part No.  | Bus type       | Link class                                     | Maximum transmission length |
|-----------|----------------|--|-----------------------------|
| CFBUS.040 | Ethernet/CAT5  | Class D -<br>(Data applications up to 100 MHz) | 60 m                        |
| CFBUS.045 | Ethernet/CAT5e | Class D -<br>(Data applications up to 100 MHz) | 60 m                        |



Example image



# Data sheet

## chainflex® CFBUS



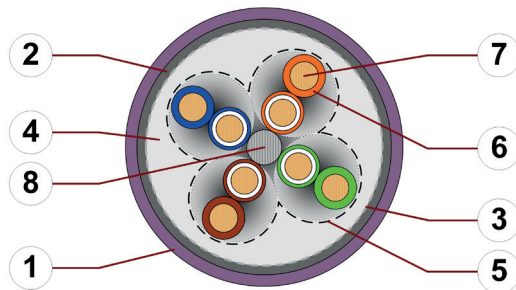
Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant

### Ethernet (CAT6/GigE/PoE)

CFBUS.049

### Cable structure

(Electrical information please see next page)



1. Outer jacket: Pressure extruded, flame-retardant TPE mixture
2. Overall shield: Extremely bending-stable braid made of tinned copper wires
3. Shield foil: Aluminium clad plastic foil
4. Inner jacket: Pressure extruded, gusset-filling TPE mixture
5. Banding: Plastic fleece
6. Core insulation: Mechanically high quality TPE mixture (according to bus specification)
7. Conductor: Fine-wire strand in especially bending-stable version consisting of bare copper wires
8. Strain relief: Tensile stress-resistant centre element

### Example image

For detailed overview please see design table

### Design table

| Part No.  | Core group | Colour code   | Drawing |
|-----------|------------|---|---------|
| CFBUS.049 | 4x(2x0.15) | white-blue/blue, white-orange/<br>orange, white-green/green,<br>white-brown/brown |         |



Example image

igus® chainflex® CFBUS.049

# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant



**Ethernet (CAT6/GigE/PoE)**  
CFBUS.049

### Electrical information

(Cable structure please see previous page)

| Part No.   | CFBUS.049                    |
|--|------------------------------|
| Nominal voltage  | 50 V<br>600 V (following UL) |
| Testing voltage<br>(following DIN EN 50289-1-3)                | 500 V                        |
| Characteristic wave impedance<br>(following DIN EN 50289-1-11) | 100 ± 25 Ω                   |
| Operating capacity<br>(following DIN EN 50289-1-5)             | 60 pF/m                      |
| Nominal Velocity of Propagation (NVP)                          | 67 %                         |

Line attenuation approx. [dB/100m]

| Part No.  | 1 MHz | 4 MHz | 10 MHz | 16 MHz | 20 MHz | 31.25 MHz | 62.5 MHz | 100 MHz | 150 MHz | 200 MHz | 250 MHz |
|-----------|-------|-------|--------|--------|--------|-----------|----------|---------|---------|---------|---------|
| CFBUS.049 | 3.2   | 6.0   | 9.5    | 12.1   | 13.6   | 17.1      | 24.8     | 32.0    | 40.0    | 47.5    | 55.0    |

| Conductor nominal cross section | Maximum conductor resistance at 20 °C<br>(following DIN EN 50289-1-2) | Maximum current rating at 30 °C<br>(following DIN VDE 0298-4) |
|---------------------------------|---|---|
| [mm²]                           | [Ω/km]  | [A]   |
| 0.15                            | 111   | 2.5   |

The final maximum current rating depends among other things on the ambient conditions, the type of the installation and the number of loaded cores.

| Part No.  | Bus type      | Link class                                     | Maximum transmission length |
|-----------|---------------|--|-----------------------------|
| CFBUS.049 | Ethernet/CAT6 | Class E -<br>(Data applications up to 250 MHz) | 60 m                        |



Example image

# Data sheet

## chainflex® CFBUS



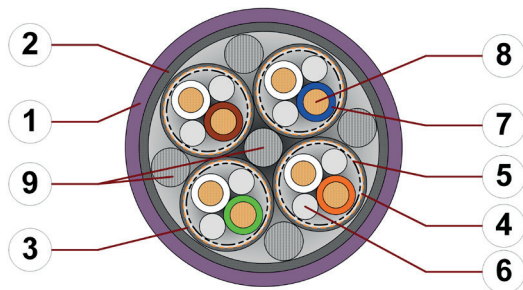
Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant



Ethernet (CAT6<sub>A</sub>/PoE)  
CFBUS.050

### Cable structure

(Electrical information please see next page)



1. Outer jacket: Pressure extruded, flame-retardant TPE mixture
2. Overall shield: Extremely bending-stable braid made of tinned copper wires
3. Element shield: Extremely bending-stable braid made of tinned copper wires
4. Element banding: Several layer of fleece, wrapped in different directions
5. Element shield foil: Copper clad plastic foil
6. Filler: Plastic dummy
7. Core insulation: Mechanically high quality TPE mixture (according to bus specification)
8. Conductor: Fine-wire strand in especially bending-stable version consisting of bare copper wires
9. Strain relief: Tensile stress-resistant centre element

### Example image

For detailed overview please see design table

### Design table

| Part No.  | Core group  | Colour code  | Drawing |
|-----------|-------------|--|---------|
| CFBUS.050 | 4x(2x0.15)C | white/blue, white/orange, white/green, white/brown |         |



Example image

# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant



**Ethernet (CAT6<sub>A</sub>/PoE)**  
CFBUS.050

### Electrical information

(Cable structure please see previous page)

| Part No.   | CFBUS.050                    |
|--|------------------------------|
| Nominal voltage  | 50 V<br>600 V (following UL) |
| Testing voltage<br>(following DIN EN 50289-1-3)                | 500 V                        |
| Characteristic wave impedance<br>(following DIN EN 50289-1-11) | 100 ± 25 Ω                   |
| Operating capacity<br>(following DIN EN 50289-1-5)             | 50 pF/m                      |
| Nominal Velocity of Propagation (NVP)                          | 64 %                         |

Line attenuation approx. [dB/100m]

| Part No.  | 1<br>MHz | 4<br>MHz | 10<br>MHz | 16<br>MHz | 20<br>MHz | 31.25<br>MHz | 62.5<br>MHz | 100<br>MHz | 150<br>MHz | 200<br>MHz | 250<br>MHz | 350<br>MHz | 500<br>MHz |
|-----------|----------|----------|-----------|-----------|-----------|--------------|-------------|------------|------------|------------|------------|------------|------------|
| CFBUS.050 | 3.2      | 5.7      | 8.9       | 11.2      | 12.6      | 15.8         | 22.5        | 28.7       | 35.5       | 41.4       | 46.6       | 55.9       | 67.9       |

| Conductor nominal cross<br>section<br>[mm <sup>2</sup> ] | Maximum conductor resistance at 20 °C<br>(following DIN EN 50289-1-2)<br>[Ω/km] | Maximum current rating at 30 °C<br>(following DIN VDE 0298-4)<br>[A] |
|--|---|--|
| 0.15   | 133   | 2.5  |

The final maximum current rating depends among other things on the ambient conditions, the type of the installation and the number of loaded cores.

| Part No.  | Bus type                   | Link class                                      | Maximum transmission length |
|-----------|----------------------------|---|-----------------------------|
| CFBUS.050 | Ethernet/CAT6 <sub>A</sub> | Class EA -<br>(Data applications up to 500 MHz) | 45 m                        |



# Data sheet

## chainflex® CFBUS



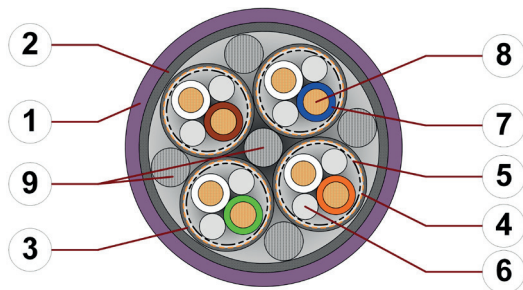
Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant

### Ethernet (CAT7/PoE)

CFBUS.052

### Cable structure

(Electrical information please see next page)



1. Outer jacket: Pressure extruded, flame-retardant TPE mixture
2. Overall shield: Extremely bending-stable braid made of tinned copper wires
3. Element shield: Extremely bending-stable braid made of tinned copper wires
4. Element banding: Several layer of fleece, wrapped in different directions
5. Element shield foil: Copper clad plastic foil
6. Filler: Plastic dummy
7. Core insulation: Mechanically high quality TPE mixture (according to bus specification)
8. Conductor: Fine-wire strand in especially bending-stable version consisting of bare copper wires
9. Strain relief: Tensile stress-resistant centre element

### Example image

For detailed overview please see design table

### Design table

| Part No.  | Core group  | Colour code  | Drawing |
|-----------|-------------|--|---------|
| CFBUS.052 | 4x(2x0.15)C | white/blue, white/orange, white/green, white/brown |         |



Example image





# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant



### Ethernet (CAT7/PoE)

CFBUS.052

### Electrical information

(Cable structure please see previous page)

| Part No.   | CFBUS.052                    |
|--|------------------------------|
| Nominal voltage  | 50 V<br>600 V (following UL) |
| Testing voltage<br>(following DIN EN 50289-1-3)                | 500 V                        |
| Characteristic wave impedance<br>(following DIN EN 50289-1-11) | 100 ± 25 Ω                   |
| Operating capacity<br>(following DIN EN 50289-1-5)             | 50 pF/m                      |
| Nominal Velocity of Propagation (NVP)                          | 64 %                         |

Line attenuation approx. [dB/100m]

| Part No.  | 1<br>MHz | 4<br>MHz | 10<br>MHz | 16<br>MHz | 20<br>MHz | 31.25<br>MHz | 62.5<br>MHz | 100<br>MHz | 200<br>MHz | 300<br>MHz | 400<br>MHz | 500<br>MHz | 600<br>MHz |
|-----------|----------|----------|-----------|-----------|-----------|--------------|-------------|------------|------------|------------|------------|------------|------------|
| CFBUS.052 | 3.0      | 5.7      | 8.9       | 11.2      | 12.6      | 15.8         | 22.5        | 28.7       | 41.4       | 51.4       | 60.1       | 67.9       | 75.2       |

| Conductor nominal cross<br>section<br>[mm²] | Maximum conductor resistance at 20 °C<br>(following DIN EN 50289-1-2)<br>[Ω/km] | Maximum current rating at 30 °C<br>(following DIN VDE 0298-4)<br>[A] |
|---|---|--|
| 0.15  | 133   | 2.5  |

The final maximum current rating depends among other things on the ambient conditions, the type of the installation and the number of loaded cores.

| Part No.  | Bus type      | Link class                                     | Maximum transmission length |
|-----------|---------------|--|-----------------------------|
| CFBUS.052 | Ethernet/CAT7 | Class F -<br>(Data applications up to 600 MHz) | 45 m                        |



Example image

# Data sheet

## chainflex® CFBUS

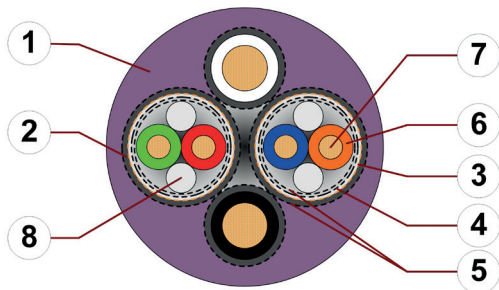


Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant

### FireWire 400 (IEEE 1394a) CFBUS.055

#### Cable structure

(Electrical information please see next page)



1. Outer jacket: Pressure extruded, gusset-filling, flame-retardant TPE mixture
2. Element shield: Extremely bending-stable wrapping made of tinned copper wires
3. Element shield foil: Copper clad plastic foil
4. Element banding: Two layer of gliding PTFE foil, wrapped in different directions
5. Element banding: Plastic foil
6. Core insulation: Mechanically high quality TPE mixture (according to bus specification)
7. Conductor: Fine-wire strand in especially bending-stable version consisting of bare copper wires
8. Filler: Plastic dummy

#### Example image

For detailed overview please see design table

#### Design table

| Part No.  | Core group  | Colour code            | Drawing |
|-----------|-------------|------------------------|---------|
| CFBUS.055 | 2x(2x0.15)C | orange/blue, green/red |         |
|           | 2x(0.34)C   | white, black           |         |



Example image



# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant



**FireWire 400 (IEEE 1394a)**  
CFBUS.055

### Electrical information

(Cable structure please see previous page)

| Part No.   | CFBUS.055                    |
|--|------------------------------|
| Nominal voltage  | 50 V<br>600 V (following UL) |
| Testing voltage<br>(following DIN EN 50289-1-3)                | 500 V                        |
| Characteristic wave impedance<br>(following DIN EN 50289-1-11) | 100 ± 15 Ω (1-250 MHz)       |
| Operating capacity<br>(following DIN EN 50289-1-5)             | 50 pF/m                      |

Line attenuation approx. [dB/100m]

| Part No.  | 1 MHz | 4 MHz | 10 MHz | 16 MHz | 20 MHz | 31.25 MHz | 62.5 MHz | 100 MHz | 155 MHz | 200 MHz | 250 MHz |
|-----------|-------|-------|--------|--------|--------|-----------|----------|---------|---------|---------|---------|
| CFBUS.055 | 3.4   | 6.4   | 9.9    | 12.5   | 14.1   | 17.7      | 25.5     | 32.9    | 41.8    | 48.1    | 54.5    |

| Conductor nominal cross section | Maximum conductor resistance at 20 °C<br>(following DIN EN 50289-1-2) | Maximum current rating at 30 °C<br>(following DIN VDE 0298-4) |
|---------------------------------|---|---|
| [mm²]                           | [Ω/km]  | [A]   |
| 0.15                            | 132   | 2.5   |
| 0.34                            | 58  | 7   |

The final maximum current rating depends among other things on the ambient conditions, the type of the installation and the number of loaded cores.



Example image

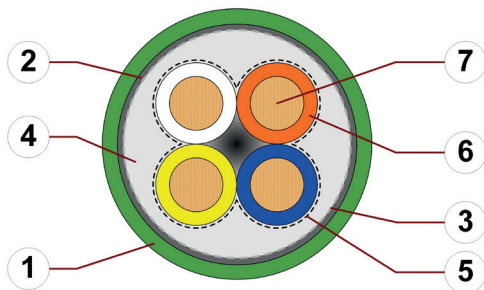
Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant

### Profinet (Type C)

CFBUS.060

### Cable structure

(Electrical information please see next page)



1. Outer jacket: Pressure extruded, flame-retardant TPE mixture
2. Overall shield: Extremely bending-stable braid made of tinned copper wires
3. Shield foil: Aluminium clad plastic foil
4. Inner jacket: Pressure extruded, gusset-filling TPE mixture
5. Banding: Plastic foil
6. Core insulation: Mechanically high quality TPE mixture (according to bus specification)
7. Conductor: Fine-wire strand in especially bending-stable version consisting of bare copper wires

### Example image

For detailed overview please see design table

### Design table

| Part No.  | Core group | Colour code                             | Drawing |
|-----------|------------|---|---------|
| CFBUS.060 | 4x0.38     | white, orange, blue, yellow (Star-quad) |         |



Example image

igus® chainflex® CFBUS.049

# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant



### Profinet (Type C)

CFBUS.060

### Electrical information

(Cable structure please see previous page)

| Part No.   | CFBUS.060                    |
|--|------------------------------|
| Nominal voltage  | 50 V<br>600 V (following UL) |
| Testing voltage<br>(following DIN EN 50289-1-3)                | 500 V                        |
| Characteristic wave impedance<br>(following DIN EN 50289-1-11) | 100 ± 10 Ω                   |
| Operating capacity<br>(following DIN EN 50289-1-5)             | 50 pF/m                      |
| Nominal Velocity of Propagation (NVP)                          | 66 %                         |

Line attenuation approx. [dB/100m]

| Part No.  | 1 MHz | 4 MHz | 10 MHz | 16 MHz | 20 MHz | 31.25 MHz | 62.5 MHz | 100 MHz |
|-----------|-------|-------|--------|--------|--------|-----------|----------|---------|
| CFBUS.060 | 2.4   | 4.8   | 7.6    | 9.6    | 10.7   | 13.4      | 19.0     | 24.0    |

| Conductor nominal cross section | Maximum conductor resistance at 20 °C<br>(following DIN EN 50289-1-2) | Maximum current rating at 30 °C<br>(following DIN VDE 0298-4) |
|---------------------------------|---|---|
| [mm²]                           | [Ω/km]  | [A]   |
| 0.38                            | 51  | 7   |

The final maximum current rating depends among other things on the ambient conditions, the type of the installation and the number of loaded cores.



Example image

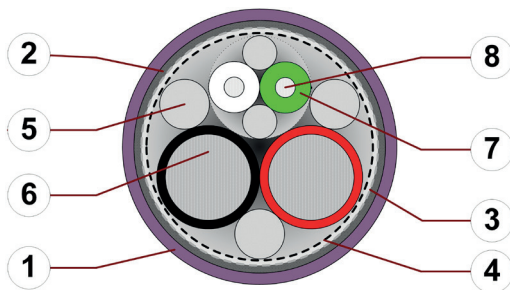
Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant

### USB 2.0

CFBUS.065-CFBUS.066

### Cable structure

(Electrical information please see next page)



1. Outer jacket: Pressure extruded, flame-retardant TPE mixture
2. Overall shield: Extremely bending-stable braid made of tinned copper wires
3. Shield foil: Aluminium clad plastic foil
4. Banding: Plastic foil
5. Filler: Plastic yarns
6. Conductor: Fine-wire strand in especially bending-stable version consisting of tinned copper wires
7. Core insulation: Mechanically high quality TPE mixture (according to bus specification)
8. Conductor: Fine-wire hybrid strand in especially bending-stable version consisting of silver-plated (.065.) or bare (.066) copper wires

### Example image

For detailed overview please see design table

### Design table

| Part No.  | Core group | Colour code | Drawing |
|-----------|------------|-------------|---------|
| CFBUS.065 | (2xAWG28)  | white/green |         |
|           | 2xAWG20    | red, black  |         |
| CFBUS.066 | (2xAWG24)  | white/green |         |
|           | 2xAWG20    | red, black  |         |



Example image

igus® chainflex® CFBUS.049



# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant

### USB 2.0

CFBUS.065-CFBUS.066

### Electrical information

(Cable structure please see previous page)

| Part No.   | CFBUS.065                   | CFBUS.066 |
|--|-----------------------------|-----------|
| Nominal voltage  | 50 V<br>30 V (following UL) |           |
| Testing voltage<br>(following DIN EN 50289-1-3)                | 500 V                       |           |
| Characteristic wave impedance<br>(following DIN EN 50289-1-11) | 90 ± 15 Ω (at 100 MHz)      |           |
| Operating capacity<br>(following DIN EN 50289-1-5)             | 50 pF/m                     | 60 pF/m   |

Line attenuation approx. [dB/100m]

| Part No.  | 1 MHz | 4 MHz | 8 MHz | 12 MHz | 24 MHz | 48 MHz | 96 MHz | 200 MHz | 400 MHz |
|-----------|-------|-------|-------|--------|--------|--------|--------|---------|---------|
| CFBUS.065 | 5.0   | 9.0   | 12.5  | 14.5   | 22.0   | 32.0   | 50.0   | 75.0    | 116.0   |
| CFBUS.066 | 5.0   | 9.0   | 12.5  | 14.5   | 22.0   | 32.0   | 50.0   | 75.0    | 116.0   |

| Conductor nominal cross section | Maximum conductor resistance at 20 °C<br>(following DIN EN 50289-1-2) | Maximum current rating at 30 °C<br>(following DIN VDE 0298-4) |
|---------------------------------|---|---|
| [mm²]                           | [Ω/km]  | [A]   |
| AWG28                           | 232   | 1   |
| AWG24                           | 81  | 5   |
| AWG20                           | 43  | 10  |

The final maximum current rating depends among other things on the ambient conditions, the type of the installation and the number of loaded cores.



Example image

igus® chainflex® CFBUS.049

# Data sheet

## chainflex® CFBUS

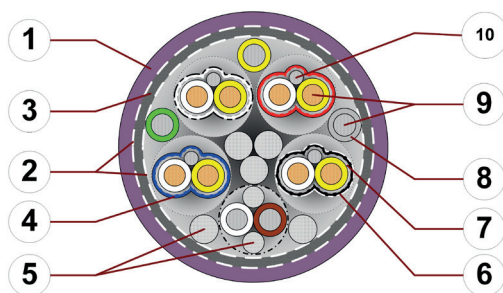


Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant

DVI  
CFBUS.070

### Cable structure

(Electrical information please see next page)



1. Outer jacket: Pressure extruded, halogen-free TPE mixture
2. Banding: Plastic fleece
3. Overall shield: Extremely bending-stable braid made of tinned copper wires
4. Element jacket: Tube extruded TPE mixture
5. Filler: Cotton yarn
6. Element banding: Gliding special foil
7. Element shield foil: Aluminium clad plastic foil
8. Core insulation: Mechanically high quality TPE mixture (according to bus specification)
9. Conductor: Fine-wire strand in especially bending-stable version consisting of tinned or bare copper wires
10. Drain wire: Fine-wire strand consisting of tinned copper wires

### Example image

For detailed overview please see design table

### Design table

| Part No.  | Core group   | Colour code   | Drawing |
|-----------|--------------|---|---------|
| CFBUS.070 | 4x(2xAWG28)C | 4 x white/yellow with element-shield in blue, black, red, white |         |
|           | (2xAWG28)    | white/brown   |         |
|           | 3xAWG28      | green, yellow, grey   |         |



Example image

igus® chainflex® CFBUS.049

# Data sheet

## chainflex® CFBUS



Bus cable (Class 6.6.4.1) ● For extremely heavy duty applications ● TPE outer jacket  
● Shielded ● Oil and bio-oil resistant ● Flame retardant ● Hydrolysis and microbe-resistant



DVI

CFBUS.070

### Electrical information

(Cable structure please see previous page)

| Part No.   | CFBUS.070               |
|--|-------------------------|
| Nominal voltage  | 50 V                    |
| Testing voltage<br>(following DIN EN 50289-1-3)                | 500 V                   |
| Characteristic wave impedance<br>(following DIN EN 50289-1-11) | 100 ± 10 Ω (at 100 MHz) |
| Operating capacity<br>(following DIN EN 50289-1-5)             | 40 pF/m                 |

| Conductor nominal cross section | Maximum conductor resistance at 20 °C<br>(following DIN EN 50289-1-2) | Maximum current rating at 30 °C<br>(following DIN VDE 0298-4) |
|---------------------------------|---|---|
| [mm²]                           | [Ω/km]  | [A]   |
| AWG28                           | 230   | 1   |

The final maximum current rating depends among other things on the ambient conditions, the type of the installation and the number of loaded cores.



Example image