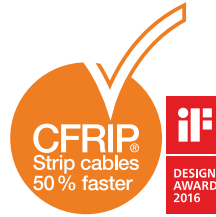


# Control cable | TPE | chainflex® CF10

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



## Dynamic information

|  |                        |   |
|--|------------------------|---|
|  | <b>Bend radius</b>     | <b>e-chain® linear</b> minimum 5 x d<br><b>flexible</b> minimum 4 x d<br><b>fixed</b> minimum 3 x d   |
|  | <b>Temperature</b>     | <b>e-chain® linear</b> -35 °C to +100 °C<br><b>flexible</b> -50 °C to +100 °C (following DIN EN 60811-504)<br><b>fixed</b> -55 °C to +100 °C (following DIN EN 50305) |
|  | <b>v max.</b>          | <b>unsupported</b> 10 m/s<br><b>gliding</b> 6 m/s   |
|  | <b>a max.</b>          | 100 m/s <sup>2</sup>  |
|  | <b>Travel distance</b> | Unsupported travel distances and up to 400 m and more for gliding applications, Class 6   |

## Cable structure

|  |                            |   |
|--|----------------------------|---|
|  | <b>Conductor</b>           | Stranded conductor in especially bending-resistant design consisting of bare copper wires (following DIN EN 60228).   |
|  | <b>Core insulation</b>     | Mechanically high-quality TPE mixture.  |
|  | <b>Core structure</b>      | <b>Number of cores &lt; 12:</b> Cores wound in a layer with a short pitch length.<br><b>Number of cores ≥ 12:</b> Cores wound in bundles which are then wound around a high tensile strength centre element, all with optimised short pitch lengths and directions. |
|  | <b>Core identification</b> | <b>Cores &lt; 0.75 mm<sup>2</sup>:</b> Colour code in accordance with DIN 47100.<br><b>Cores ≥ 0.75 mm<sup>2</sup>:</b> Black cores with white numerals, one core green-yellow.<br><b>CF10.03.05.INI:</b> brown blue, black, white, green-yellow                    |
|  | <b>Inner jacket</b>        | TPE mixture, adapted to suit the requirements in e-chains®.   |
|  | <b>Overall shield</b>      | Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % inear, 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: Steel-blue (similar to RAL 5011)  |
|  | <b>CFRIP®</b>              | Strip cables faster: a tear strip is moulded into the inner jacket<br>Video ► <a href="http://www.igus.eu/CFRIP">www.igus.eu/CFRIP</a>  |

## Electrical information

|  |                        |                                      |
|--|------------------------|--------------------------------------|
|  | <b>Nominal voltage</b> | 300/500 V (following DIN VDE 0298-3) |
|  | <b>Testing voltage</b> | 2000 V (following DIN EN 50395)      |

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

|  |                       |  |
|--|-----------------------|--|
|  | <b>UV resistance</b>  | High.  |
|  | <b>Oil resistance</b> | Oil resistant (following DIN EN 60811-404), bio-oil resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4. |
|  | <b>Silicone-free</b>  | Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992).  |
|  | <b>Halogen-free</b>   | Following DIN EN 60754.  |
|  | <b>EAC</b>            | Certificate no. RU C-DE.ME77.B.01254 (TR ZU)   |
|  | <b>Lead-free</b>      | Following 2011/65/EU (RoHS-II).  |
|  | <b>Cleanroom</b>      | According to ISO Class 1. Outer jacket material complies with CF9.15.07, tested by IPA according to standard 14644-1.              |
|  | <b>CE</b>             | 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                   | 6.8                 | 7.5                 | 8.5                 |
| -25/+90                   | 5                   | 6                   | 7                   |
| +90/+100                  | 6.8                 | 7.5                 | 8.5                 |

\* Higher number of double strokes? Online lifetime calculation: [www.igus.eu/chainflexlife](http://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, UV resistant
- 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, outdoor cranes, low temperature applications



# Control cable | TPE | chainflex® CF10

## Class 7.6.4.1

Strip cables 50% faster

igus® chainflex® CF10

Example image

| Part No.                  | Number of cores and conductor nominal cross section [mm²] | Outer diameter (d) max. mm | Copper index kg/km | Weight kg/km |
|---------------------------|---|----------------------------|--------------------|--------------|
| CF10.01.12                | (12x0.14)C  | 8.0                        | 40                 | 82           |
| CF10.01.18                | (18x0.14)C  | 9.5                        | 68                 | 127          |
| CF10.02.04                | (4x0.25)C   | 6.5                        | 26                 | 52           |
| CF10.02.08                | (8x0.25)C   | 8.0                        | 42                 | 81           |
| CF10.02.12                | (12x0.25)C  | 9.5                        | 70                 | 127          |
| CF10.02.25                | (25x0.25)C  | 12.5                       | 119                | 225          |
| CF10.03.05.INI            | (5x0.34)C   | 7.0                        | 36                 | 65           |
| CF10.05.04                | (4x0.5)C  | 7.0                        | 39                 | 69           |
| CF10.05.05                | (5x0.5)C  | 7.5                        | 46                 | 79           |
| CF10.05.07                | (7x0.5)C  | 8.5                        | 60                 | 103          |
| CF10.05.12                | (12x0.5)C   | 12.0                       | 113                | 199          |
| CF10.05.18                | (18x0.5)C   | 13.5                       | 153                | 263          |
| CF10.05.25                | (25x0.5)C   | 15.0                       | 198                | 335          |
| CF10.07.04                | (4G0.75)C   | 7.5                        | 51                 | 87           |
| CF10.07.05                | (5G0.75)C   | 8.0                        | 61                 | 99           |
| CF10.07.07                | (7G0.75)C   | 9.5                        | 94                 | 145          |
| CF10.07.12                | (12G0.75)C  | 12.5                       | 146                | 246          |
| CF10.07.20                | (20G0.75)C  | 15.0                       | 226                | 368          |
| CF10.07.25                | (25G0.75)C  | 16.5                       | 270                | 450          |
| CF10.10.02                | (2x1.0)C  | 7.5                        | 39                 | 72           |
| CF10.10.03                | (3G1.0)C  | 7.5                        | 51                 | 83           |
| CF10.10.04                | (4G1.0)C  | 8.0                        | 64                 | 103          |
| CF10.10.05                | (5G1.0)C  | 8.5                        | 74                 | 120          |
| CF10.10.07                | (7G1.0)C  | 10.0                       | 116                | 179          |
| CF10.10.12                | (12G1.0)C   | 13.5                       | 186                | 302          |
| CF10.10.18                | (18G1.0)C   | 16.0                       | 262                | 415          |
| CF10.10.25                | (25G1.0)C   | 18.0                       | 344                | 550          |
| CF10.15.04                | (4G1.5)C  | 9.0                        | 99                 | 145          |
| CF10.15.05                | (5G1.5)C  | 10.0                       | 119                | 176          |
| CF10.15.07 <sup>17)</sup> | (7G1.5)C  | 11.5                       | 159                | 235          |
| CF10.15.12                | (12G1.5)C   | 15.5                       | 259                | 391          |
| CF10.15.18                | (18G1.5)C   | 20.0                       | 398                | 624          |
| CF10.25.04                | (4G2.5)C  | 11.0                       | 149                | 224          |
| CF10.25.07 <sup>17)</sup> | (7G2.5)C  | 13.5                       | 244                | 364          |
| CF10.25.12                | (12G2.5)C   | 19.0                       | 411                | 653          |
| CF10.40.04                | (4G4.0)C  | 12.5                       | 222                | 317          |
| CF10.40.05                | (5G4.0)C  | 13.5                       | 271                | 386          |

<sup>17)</sup> When using the cables with „7 G 1.5 mm²“ and „7 G 2.5 mm²“ minimum bend radius must be 17.5 x d with gliding travel distance ≥ 5 m.  
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: CF10.01.12 – to your desired length (0.5 m steps)**  
CF10 chainflex® series .01 Code nominal cross section .12 Code Number of cores



Online order ► [www.chainflex.eu/CF10](http://www.chainflex.eu/CF10)



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



Control cable chainflex® CF10 in storage and retrieval units for high-bay warehouses. e-chain®: System E2

