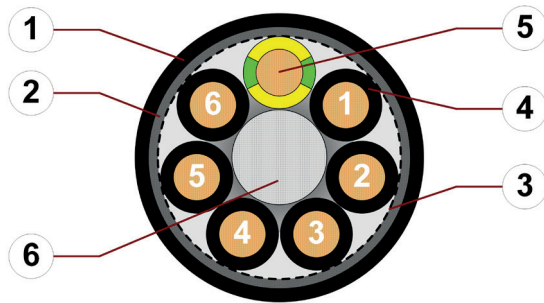


# Data sheet

## chainflex® CF881



Control cable (Class 3.1.1.1) • For flexing applications • PVC outer jacket • Shielded  
• Flame-retardant



**Example image**  
For detailed overview please see design table

1. Outer jacket: Pressure extruded PVC mixture
2. Overall shield: Braiding made of tinned copper wires
3. Banding: Plastic foil
4. Core insulation: Mechanically high-quality TPE mixture
5. Conductor: Stranded conductor consisting of bare copper wires
6. Filling: Plastic yarns

### Cable structure

|  |                            |  |
|--|----------------------------|--|
|  | <b>Conductor</b>           | Conductor consisting of bare copper wires (according to DIN EN 60228).   |
|  | <b>Core insulation</b>     | Mechanically high-quality TPE mixture.   |
|  | <b>Core structure</b>      | Cores wound with an optimised pitch length.  |
|  | <b>Core identification</b> | Black cores with white numbers, one green-yellow core.   |
|  | <b>Overall shield</b>      | Braiding made of tinned copper wires.<br>Coverage approx. 60% optical  |
|  | <b>Outer jacket</b>        | Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®.<br>Colour: Jet black (similar to RAL 9005)<br>Printing: white |

„00000 m\*\*\* igus chainflex M CF881.---① ---② 300/500V E310776

cRUus AWM Style 2464 VW-1 AWM I/II A/B 80°C 300V FT1 CE

conform RoHS-II conform [www.igus.de](http://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).  
Example: ... chainflex **CF881.15.04 (4G1.5)C 300 V/500 V** ...



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chainflex cable  
guarantee and  
service life  
calculator based  
on 2 billion test  
cycles per year








# Data sheet

## chainflex® CF881



Control cable (Class 3.1.1.1) • For flexing applications • PVC outer jacket • Shielded  
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### Dynamic information

|   |                        |   |   |
|---|------------------------|---|---|
|  | <b>Bend radius</b>     | <b>e-chain® linear</b><br><b>flexible</b><br><b>fixed</b> | minimum 12.5 x d<br>minimum 10 x d<br>minimum 7 x d   |
|  | <b>Temperature</b>     | <b>e-chain® linear</b><br><b>flexible</b><br><b>fixed</b> | +5°C up to +70°C<br>-5°C up to +70°C (following DIN EN 60811-504)<br>-15°C up to +70°C (following DIN EN 50305) |
|  | <b>v max.</b>          | <b>unsupported</b>  | 3m/s  |
|  | <b>a max.</b>          |   | 20m/s <sup>2</sup>  |
|  | <b>Travel distance</b> |   | Unsupported travels up to 10m, Class 1  |



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

### Guaranteed service life according to guarantee conditions

| Double strokes            | 1 million    | 3 million    | 5 million    |
|---------------------------|--------------|--------------|--------------|
| Temperature, from/to [°C] | R min. [x d] | R min. [x d] | R min. [x d] |
| +5/+15                    | 15           | 16           | 17           |
| +15/+60                   | 12.5         | 13.5         | 14.5         |
| +60/+70                   | 15           | 16           | 17           |

Minimum guaranteed service life of the cable under the specified conditions.  
The installation of the cable is recommended within the middle temperature range.

### Electrical information

|   |                        |                                 |
|---|------------------------|---------------------------------|
|  | <b>Nominal voltage</b> | 300/500V<br>300V (following UL) |
|  | <b>Testing voltage</b> | 2000V (following DIN EN 50395)  |



Example image

igus® chainflex® CF881

# Data sheet

## chainflex® CF881



Control cable (Class 3.1.1.1) • For flexing applications • PVC outer jacket • Shielded  
• Flame-retardant



### Properties and approvals

|  |                        |  |
|--|------------------------|--|
|  | <b>Flame-retardant</b> | According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame   |
|  | <b>Silicone-free</b>   | Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)   |
|  | <b>PTFE-free</b>       | The design of these products does not contain PTFE   |
|  | <b>UL-verified</b>     | Certificate No. V293650: „igus 4-year chainflex cable guarantee and service life calculator based on 2 billion test cycles per year“ |
|  | <b>UL/CSA AWM</b>      | Details see table UL AWM   |
|  | <b>NFPA</b>            | Following NFPA 79-2018, chapter 12.9   |
|  | <b>REACH</b>           | In accordance with regulation (EC) No. 1907/2006 (REACH)   |
|  | <b>Lead-free</b>       | Following 2011/65/EC (RoHS-II/RoHS-III)  |
|  | <b>CE</b>              | Following 2014/35/EU   |

### Properties and approvals

#### UL/CSA AWM Details

| Conductor nominal cross section [mm²] | Number of cores | UL style core insulation | UL style outer jacket | UL Voltage Rating [V] | UL Temperature Rating [°C] |
|---------------------------------------|-----------------|--------------------------|-----------------------|-----------------------|----------------------------|
| 0.5                                   | 3-25            | 10493                    | 2464                  | 300                   | 80                         |
| 0.75                                  | 2-25            | 10493                    | 2464                  | 300                   | 80                         |
| 1                                     | 2-25            | 10493                    | 2464                  | 300                   | 80                         |
| 1.5                                   | 2-25            | 10493                    | 2464                  | 300                   | 80                         |
| 2.5                                   | 4-12            | 10493                    | 2464                  | 300                   | 80                         |



Example image

# Data sheet

## chainflex® CF881

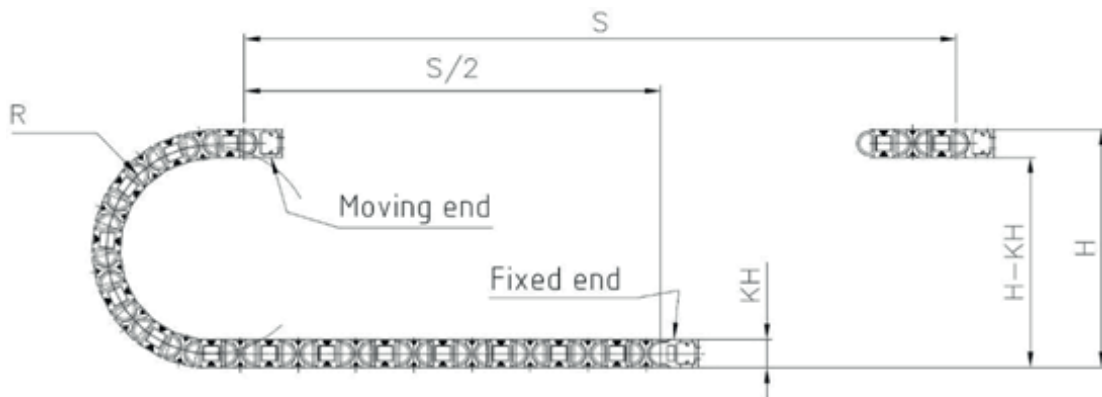


Control cable (Class 3.1.1.1) ● For flexing applications ● PVC outer jacket ● Shielded  
● Flame-retardant



### Typical lab test setup for this cable series

|                    |                                      |
|--------------------|--------------------------------------|
| Test bend radius R | approx. 75 - 225 mm                  |
| Test travel S      | 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 flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, packaging industry, feeding, handling, adjusting devices



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# Data sheet

## chainflex® CF881



Control cable (Class 3.1.1.1) • For flexing applications • PVC outer jacket • Shielded  
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### 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] |
|----------------------------|---|------------------------------|----------------------|----------------|
| CF881.05.03                | (3G0.5)C  | 6.0                          | 28                   | 47             |
| CF881.05.04                | (4G0.5)C  | 6.5                          | 35                   | 54             |
| CF881.05.05                | (5G0.5)C  | 7.0                          | 41                   | 65             |
| CF881.05.07                | (7G0.5)C  | 8.0                          | 59                   | 75             |
| CF881.05.12                | (12G0.5)C   | 9.0                          | 91                   | 125            |
| CF881.05.18                | (18G0.5)C   | 11.0                         | 136                  | 177            |
| CF881.05.25                | (25G0.5)C   | 13.0                         | 210                  | 243            |
| CF881.07.02                | (2x0.75)C   | 6.5                          | 30                   | 50             |
| CF881.07.03                | (3G0.75)C   | 7.0                          | 37                   | 66             |
| CF881.07.04                | (4G0.75)C   | 7.5                          | 46                   | 72             |
| CF881.07.05                | (5G0.75)C   | 8.0                          | 61                   | 87             |
| CF881.07.07                | (7G0.75)C   | 9.0                          | 83                   | 112            |
| CF881.07.12                | (12G0.75)C  | 10.5                         | 124                  | 170            |
| CF881.07.18                | (18G0.75)C  | 12.0                         | 183                  | 238            |
| CF881.07.25 <sup>11)</sup> | (25G0.75)C  | 14.5                         | 222                  | 309            |
| CF881.10.02                | (2x1.0)C  | 6.5                          | 30                   | 52             |
| CF881.10.03                | (3G1.0)C  | 7.0                          | 46                   | 73             |
| CF881.10.04                | (4G1.0)C  | 7.5                          | 63                   | 102            |
| CF881.10.05                | (5G1.0)C  | 8.0                          | 76                   | 110            |
| CF881.10.07                | (7G1.0)C  | 9.5                          | 100                  | 130            |
| CF881.10.12                | (12G1.0)C   | 11.5                         | 167                  | 229            |
| CF881.10.18                | (18G1.0)C   | 13.0                         | 213                  | 281            |
| CF881.10.25                | (25G1.0)C   | 16.0                         | 291                  | 390            |
| CF881.15.02                | (2x1.5)C  | 7.5                          | 60                   | 71             |
| CF881.15.03                | (3G1.5)C  | 7.5                          | 63                   | 87             |
| CF881.15.04                | (4G1.5)C  | 8.5                          | 90                   | 111            |
| CF881.15.05                | (5G1.5)C  | 9.0                          | 94                   | 131            |
| CF881.15.07                | (7G1.5)C  | 11.0                         | 153                  | 183            |
| CF881.15.12                | (12G1.5)C   | 13.0                         | 212                  | 282            |
| CF881.15.18                | (18G1.5)C   | 15.0                         | 399                  | 458            |
| CF881.15.25                | (25G1.5)C   | 18.5                         | 425                  | 573            |
| CF881.25.04                | (4G2.5)C  | 10.0                         | 141                  | 163            |
| CF881.25.05                | (5G2.5)C  | 11.0                         | 149                  | 195            |
| CF881.25.07                | (7G2.5)C  | 13.0                         | 204                  | 262            |
| CF881.25.12 <sup>11)</sup> | (12G2.5)C   | 16.0                         | 342                  | 428            |

<sup>11)</sup> Phase-out model

**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



igus 4-year chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



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### Electrical information

| Conductor nominal cross section [mm²] | Maximum conductor resistance at 20 °C (following DIN EN 50289-1-2) [Ω/km] | Max. current rating at 30 °C [A] |
|---------------------------------------|---|----------------------------------|
| 0.5                                   | 39  | 10                               |
| 0.75                                  | 26  | 13                               |
| 1                                     | 19.5  | 15                               |
| 1.5                                   | 13.3  | 19                               |
| 2.5                                   | 8   | 27                               |

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



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### Design table

| Part No.    | Number of cores | Core design | Part No.    | Number of cores | Core design |
|-------------|-----------------|-------------|-------------|-----------------|-------------|
| CF881.XX.02 | 2               |             | CF881.XX.07 | 7               |             |
| CF881.XX.03 | 3               |             | CF881.XX.12 | 12              |             |
| CF881.XX.04 | 4               |             | CF881.XX.18 | 18              |             |
| CF881.XX.05 | 5               |             | CF881.XX.25 | 25              |             |

