Data sheet
chainflex® CF886

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

1. Outer jacket: Pressure extruded PVC mixture
2. Overall shield: Braiding made of tinned copper wires
3. Shield foil: Aluminium clad plastic foil
4. Banding: Plastic foil
5. Filling: Plastic yarns
6. Core insulation: Mechanically high-quality, especially low-capacitance TPE mixture
7. Conductor: Stranded conductor consisting of bare copper wires
8. Strain relief: Plastic centre element

Example image
For detailed overview please see design table

Cable structure

Conductor
Conductor consisting of bare copper wires (according to DIN EN 60228).

Core insulation
Mechanically high-quality, especially low-capacitance TPE mixture.

Core structure
Cores wound with an optimised pitch length.

Core identification
Black cores with white numbers, one green-yellow core.
1. Core: U / L1 / C / L+
2. Core: V / L2
3. Core: W / L3 / D / L-

Overall shield
Braiding made of tinned copper wires.
Coverage approx. 60 % optical

Outer jacket
Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®.
Colour: Pastel orange (similar to RAL 2003)
Printing: black

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

"000000 m" igus chainflex M CF886.--.--.-- 600/1000V E310776

cRUs AW Style 2570 VW-1 AWM I/II A/B 80°C 1000V FT1 EAC/CTP

* Length printing: Not calibrated. Only intended as an orientation aid.
① / ② Cable identification according to Part No. (see technical table).
Example: ... chainflex ... CF886.15.04 ... (4G1.5)C ... 600/1000V ...
Data sheet
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Dynamic information
- **Bend radius**
  - e-chain® linear
    - flexible: minimum 15 x d
    - fixed: minimum 8 x d
  - e-chain® linear
    - flexible: +5 °C up to +70 °C
    - fixed: -5 °C up to +70 °C (following DIN EN 60811-504)
  - fixed: -15 °C up to +70 °C (following DIN EN 50305)
- **v max.**
  - unsupported: 3 m/s
- **a max.**
  - 20 m/s²
- **Travel distance**
  - Unsupported travel distances up to 10 m, 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

<table>
<thead>
<tr>
<th>Double strokes</th>
<th>1 million</th>
<th>3 million</th>
<th>5 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature, from/to [°C]</td>
<td>R min. [factor x d]</td>
<td>R min. [factor x d]</td>
<td>R min. [factor x d]</td>
</tr>
<tr>
<td>+5/+15</td>
<td>17.5</td>
<td>18.5</td>
<td>19.5</td>
</tr>
<tr>
<td>+15/+60</td>
<td>15</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>+60/+70</td>
<td>17.5</td>
<td>18.5</td>
<td>19.5</td>
</tr>
</tbody>
</table>

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
- **Nominal voltage**
  - 600/1000 V (following DIN VDE 0298-3)
- **Testing voltage**
  - 4000 V (following DIN EN 50395)
Data sheet
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Properties and approvals

- Flame retardant: According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
- Silicone-free: Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
- UL/CSA: Style 10492 and 2570, 1000 V, 80 °C
- NFPA: Following NFPA 79-2012, chapter 12.9
- EAC: Certificate No. RU C-DE.ME77.B.01561 (TR ZU)
- CTP: Certificate No. C-DE.PB49.B.00450 (Fire protection)
- Lead-free: Following 2011/65/EC (RoHS-II)
- CE: Following 2014/35/EU

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 / s²
Data sheet
chainflex® CF886

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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, supply systems, Handling, adjusting equipment
Data sheet
chainflex® CF886

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Technical tables:

Mechanical information

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Number of cores and conductor nominal cross section [mm²]</th>
<th>Outer diameter (d) max. [mm]</th>
<th>Copper index</th>
<th>Weight [kg/km]</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF886.15.04</td>
<td>(4G1.5)C</td>
<td>9.5</td>
<td>79</td>
<td>133</td>
</tr>
<tr>
<td>CF886.25.04</td>
<td>(4G2.5)C</td>
<td>11.0</td>
<td>122</td>
<td>191</td>
</tr>
<tr>
<td>CF886.40.04</td>
<td>(4G4.0)C</td>
<td>13.0</td>
<td>186</td>
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<td>CF886.60.04</td>
<td>(4G6.0)C</td>
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<td>381</td>
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<td>CF886.100.04</td>
<td>(4G10)C</td>
<td>17.5</td>
<td>444</td>
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<td>CF886.160.04</td>
<td>(4G16)C</td>
<td>20.5</td>
<td>691</td>
<td>854</td>
</tr>
</tbody>
</table>

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

Electrical information

<table>
<thead>
<tr>
<th>Conductor nominal cross section [mm²]</th>
<th>Maximum conductor resistance at 20 °C [Ω/km] (following DIN EN 50289-1-2)</th>
<th>Maximum current rating at 30 °C [A] (following DIN VDE 0298-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td>13.3</td>
<td>21</td>
</tr>
<tr>
<td>2.5</td>
<td>7.98</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>4.95</td>
<td>41</td>
</tr>
<tr>
<td>6</td>
<td>3.3</td>
<td>53</td>
</tr>
<tr>
<td>10</td>
<td>1.91</td>
<td>74</td>
</tr>
<tr>
<td>16</td>
<td>1.21</td>
<td>99</td>
</tr>
</tbody>
</table>

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**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Number of cores</th>
<th>Core design</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF886.XX.04</td>
<td>4</td>
<td></td>
</tr>
</tbody>
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