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

Example: ... chainflex ... CF886.15.04 ... (4G1.5)C ... 600/1000V ...

 guaranty month guarantee

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05/2019
Data sheet
chainflex® CF896

Motor cable (Class 3.1.3.1) ● For flexing applications ● iguPUR outer jacket ● Oil-resistant ● Shielded ● Flame retardant

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**Dynamic information**

- **Bend radius**
  - e-chain® linear flexible: minimum 15 x d
  - fixed: minimum 8 x d

- **Temperature**
  - e-chain® linear flexible: -20 °C up to +80 °C
  - fixed: -50 °C up to +80 °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>-20/-10</td>
<td>17.5</td>
<td>18.5</td>
<td>19.5</td>
</tr>
<tr>
<td>-10/+70</td>
<td>15</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>+70/+80</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)

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Properties and approvals

- UV resistance: Medium
- Oil resistance: Oil-resistant (following DIN EN 50363-10-2), Class 3
- 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 20940, 1000 V, 80 °C
- NFPA: Following NFPA 79-2012, chapter 12.9
- EAC: Certificate No. RU C-DE.ME77.B.01561 (TR ZU)
- EAC: 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® CF896

Motor cable (Class 3.1.3.1) ● For flexing applications ● iguPUR outer jacket ● Oil-resistant ● Shielded ● Flame retardant

Typical application areas
● For flexing applications, Class 3
● Especially for unsupported travels, Class 1
● With influence of oil, Class 3
● No torsion, Class 1
● Indoor and outdoor applications without direct solar radiation
● Machining units/machine tools, low temperature applications

Example image

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Motor cable (Class 3.1.3.1) ● For flexing applications ● iguPUR outer jacket ● Oil-resistant ● Shielded ● Flame retardant

Technical tables:

<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>CF896.15.04</td>
<td>(4G1.5)C</td>
<td>9.0</td>
<td>79</td>
<td>126</td>
</tr>
<tr>
<td>CF896.25.04</td>
<td>(4G2.5)C</td>
<td>10.5</td>
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<tr>
<td>CF896.40.04</td>
<td>(4G4.0)C</td>
<td>12.5</td>
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<td>259</td>
</tr>
<tr>
<td>CF896.60.04</td>
<td>(4G6.0)C</td>
<td>14.5</td>
<td>278</td>
<td>367</td>
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<tr>
<td>CF896.100.04</td>
<td>(4G10)C</td>
<td>17.5</td>
<td>444</td>
<td>553</td>
</tr>
<tr>
<td>CF896.160.04</td>
<td>(4G16)C</td>
<td>20.5</td>
<td>691</td>
<td>831</td>
</tr>
</tbody>
</table>

1) 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

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.
Data sheet
chainflex® CF896

Motor cable (Class 3.1.3.1) • For flexing applications • iguPUR outer jacket • Oil-resistant • Shielded • Flame retardant

Design table

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Number of cores</th>
<th>Core design</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF896.XX.04</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

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