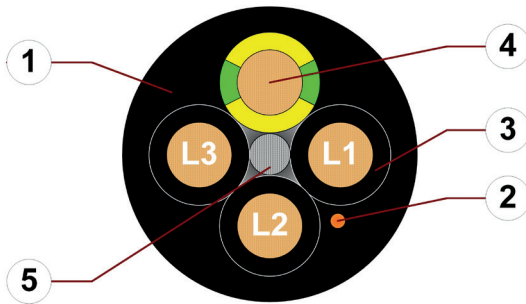


# Data sheet

## chainflex® CF30









Motor cable (Class 5.5.2.2) ● For heavy duty applications ● PVC outer jacket ● Oil-resistant ● Flame retardant



1. Outer jacket: Pressure extruded, gusset-filling, oil-resistant PVC mixture
2. CFRIP: Tear strip for faster cable stripping
3. Core insulation: Mechanically high-quality, especially low-capacitance XLPE mixture
4. Conductor: Especially bending-stable version consisting of bare copper wires
5. Strain relief: Tensile stress-resistant centre element

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

### Cable structure

	<p><b>Conductor</b></p> <p><b>Cores &lt; 10 mm<sup>2</sup>:</b> Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).  <b>Cores ≥ 10 mm<sup>2</sup>:</b> Conductor cable consisting of pre-leads (following DIN EN 60228).</p>
	<p><b>Core insulation</b></p> <p>Mechanically high-quality, especially low-capacitance XLPE mixture.</p>
	<p><b>Core structure</b></p> <p>Cores wound with a short pitch length around a high tensile strength centre element.</p>
	<p><b>Core identification</b></p> <p>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- 4. Core: 4 / N</p>
	<p><b>Outer jacket</b></p> <p>Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1).          Colour: Jet black (similar to RAL 9005)          Printing: white</p>
	<p><b>CFRIP®</b></p> <p>Strip cables faster: a tear strip is moulded into the outer jacket          Video ▶ <a href="http://www.igus.eu/CFRIP">www.igus.eu/CFRIP</a></p>

„00000 m“\* igus chainflex CF30.--.---① ----② 600/1000V E310776

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

CE 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 ... CF30.15.04 ... 4G1.5 ... 600/1000V ...



# Data sheet







## chainflex® CF30



Motor cable (Class 5.5.2.2) ● For heavy duty applications ● PVC outer jacket ● Oil-resistant ● Flame retardant



### Dynamic information

	<b>Bend radius</b>	<b>e-chain® linear</b> <b>flexible</b> <b>fixed</b>	minimum 7.5 x d minimum 6 x d minimum 4 x d
	<b>Temperature</b>	<b>e-chain® linear</b> <b>flexible</b> <b>fixed</b>	+5 °C up to +70 °C -5 °C up to +70 °C (following DIN EN 60811-504) -15 °C up to +70 °C (following DIN EN 50305)
	<b>v max.</b>	<b>unsupported</b> <b>gliding</b>	10 m/s 5 m/s
	<b>a max.</b>		80 m/s <sup>2</sup>
	<b>Travel distance</b>		Unsupported travels and up to 100 m for gliding applications, Class 5
	<b>Torsion</b>		Torsion ± 90°, with 1 m cable length



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	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]
+5/+15	10	11	12
+15/+60	7.5	8.5	9.5
+60/+70	10	11	12

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>	600/1000 V (following DIN VDE 0298-3) 1000 V (following UL)
	<b>Testing voltage</b>	4000 V (following DIN EN 50395)



Example image




# Data sheet

## chainflex® CF30



Motor cable (Class 5.5.2.2) ● For heavy duty applications ● PVC outer jacket ● Oil-resistant ● Flame retardant

### Properties and approvals

-  **UV resistance** Medium
-  **Oil resistance** Oil-resistant (following DIN EN 50363-4-1), Class 2
-  **Flame retardant** According to IEC 60332-1-2, FT1, VW-1
-  **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
-  **EAC** Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
-  **CTP** Certificate No. C-DE.PB49.B.00420 (Fire protection)
-  **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 2. The outer jacket material of this series complies with CF5.10.07 - tested by IPA according to standard DIN EN ISO 14644-1
-  **CE** Following 2014/35/EU



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



### Properties and approvals

#### UL/CSA AWM Details

Conductor nominal cross section [mm <sup>2</sup> ]	Number of cores	UL style core insulation	UL style outer jacket	UL Voltage Rating [V]	UL Temperature Rating [°C]
1.5	4	3646	2570	1000	80
2.5	4-5	3646	2570	1000	80
4	4-5	3646	2570	1000	80
6	4-5	3646	2570	1000	80
10	4-5	3646	2570	1000	80
16	4-5	3646	2570	1000	80
25	4	3646	2570	1000	80
35	4	3646	2570	1000	80
50	4	3646	2570	1000	80

Example image

igus® chainflex® CF30

# Data sheet

## chainflex® CF30

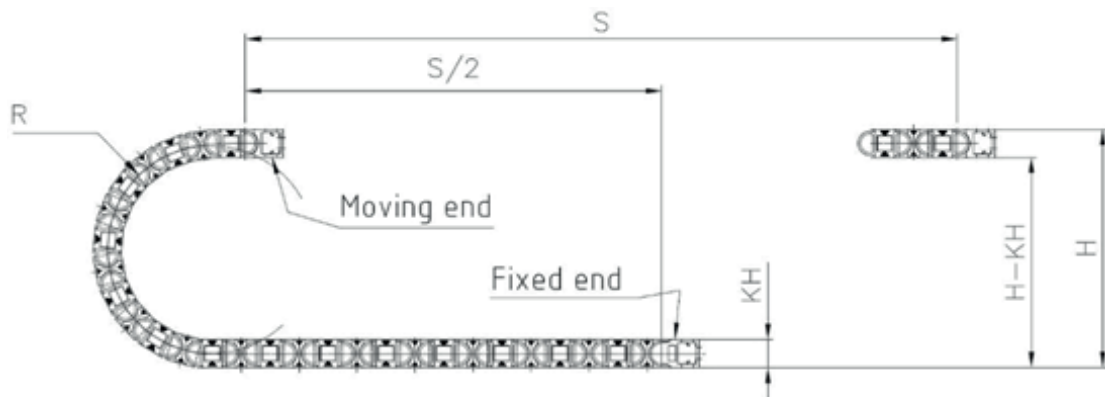


Motor cable (Class 5.5.2.2) ● For heavy duty applications ● PVC outer jacket ● Oil-resistant ● Flame retardant



### Typical lab test setup for this cable series

Test bend radius R	approx. 55 - 250 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 heavy duty applications, Class 5
- Unsupported travel distances and up to 100 m for gliding applications, Class 5
- Light oil influence, Class 2
- Torsion ± 90°, with 1 m cable length, Class 2
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Storage and retrieval units for high-bay warehouses, machining units/package machines, quick handling, indoor cranes



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



Example image

# Data sheet

## chainflex® CF30



Motor cable (Class 5.5.2.2) ● For heavy duty applications ● PVC outer jacket ● Oil-resistant ● Flame retardant

### Technical tables:

#### Mechanical information

Part No.	Number of cores and conductor nominal cross section [mm <sup>2</sup> ]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF30.15.04	4G1.5	8.0	61	104
CF30.25.04	4G2.5	10.0	100	166
CF30.25.05	5G2.5	11.0	124	203
CF30.40.04	4G4.0	11.5	163	249
CF30.40.05	5G4.0	12.5	204	302
CF30.60.04	4G6.0	13.5	237	343
CF30.60.05	5G6.0	15.0	297	410
CF30.100.04	4G10	16.5	407	548
CF30.100.05	5G10	19.5	515	684
CF30.160.04	4G16	20.0	646	826
CF30.160.05	5G16	23.5	815	1067
CF30.250.04	4G25	25.0	1014	1320
CF30.350.04	4G35	28.5	1439	1795
CF30.500.04	4G50	34.0	2061	2528

**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

Conductor nominal cross section [mm <sup>2</sup> ]	Maximum conductor resistance at 20 °C (following DIN EN 50289-1-2) [Ω/km]	Max. current rating at 30 °C [A]
1.5	13.3	19
2.5	7.98	27
4	4.95	37
6	3.3	48
10	1.91	69
16	1.21	92
25	0.78	121
35	0.56	152
50	0.39	191

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® CF30



# Data sheet

## chainflex® CF30



Motor cable (Class 5.5.2.2) ● For heavy duty applications ● PVC outer jacket ● Oil-resistant ● Flame retardant

### Design table

Part No.	Number of cores	Core design
CF30.XX.04	4	
CF30.XX.05	5	



Example image



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

