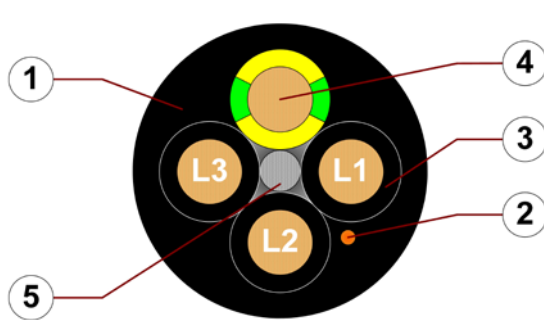


# Data sheet

## chainflex® CF37.D



Motor cable (Class 7.6.4.2) ● For heaviest duty applications ● TPE outer jacket ● Oil and bio-oil resistant ● PVC and halogen-free ● UV-resistant ● Hydrolysis and microbe-resistant



1. Outer jacket: Pressure extruded, gusset-filling, halogen-free TPE 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



**Conductor**

**Cores < 10 mm<sup>2</sup>:** Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).  
**Cores ≥ 10 mm<sup>2</sup>:** Conductor cable consisting of pre-leads (following DIN EN 60228).



**Core insulation**

Mechanically high-quality, especially low-capacitance XLPE mixture.



**Core structure**

Cores wound with a short pitch length around a high tensile strength centre element.



**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-



**Outer jacket**

Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®.  
Colour: Jet black (similar to RAL 9005)  
Printing: white



**CFRIP®**

Strip cables faster: a tear strip is moulded into the outer jacket  
Video ► [www.igus.eu/CFRIP](http://www.igus.eu/CFRIP)

„00000 m“\* igus chainflex CF37.--.D① ----② 600/1000V E310776

RU AWM Style 22351 90°C 1000V EAC CE UKCA DESINA RoHS-II conform

[www.igus.eu](http://www.igus.eu) +++ 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 ... CF37.15.04.D ... 4G1.5 ... 600/1000V ...



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### 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>	-35 °C up to +90 °C -50 °C up to +90 °C (following DIN EN 60811-504) -55 °C up to +90 °C (following DIN EN 50305)
	<b>v max.</b>	<b>unsupported</b> <b>gliding</b>	10 m/s 6 m/s
	<b>a max.</b>		80 m/s <sup>2</sup>
	<b>Travel distance</b>		Unsupported travel distances and up to 400 m for gliding applications, Class 6
	<b>Torsion</b>		Torsion ± 90°, with 1 m cable length, Class 2

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	12.5 million
<b>Temperature, from/to [°C]</b>	<b>R min. [Faktor x d]</b>	<b>R min. [Faktor x d]</b>	<b>R min. [Faktor x d]</b>
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	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

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### Properties and approvals

-  **UV resistance** High
-  **Oil resistance** Oil-resistant (following DIN EN 60811-404), bio-oil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
-  **Silicone-free** Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
-  **Halogen-free** Following DIN EN 60754
-  **UL verified** Certificate No. B129699: „igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year“
-  **UL AWM** Details see table UL AWM
-  **EAC** Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
-  **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 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
-  **DESINA** According to VDW, DESINA standardisation
-  **CE** Following 2014/35/EU
-  **UKCA** In accordance with the valid regulations of the United Kingdom (as at 08/2021)



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



### Properties and approvals

#### UL AWM details

Conductor nominal cross section [mm <sup>2</sup> ]	UL style core insulation	UL style outer jacket	UL Voltage Rating [V]	UL Temperature Rating [°C]
1.5	30052	22351	1000	90
2.5	30052	22351	1000	90
4	30052	22351	1000	90
6	30052	22351	1000	90
10	30052	22351	1000	90
16	30052	22351	1000	90
25	30052	22351	1000	90
50	30052	22351	1000	90

Example image



# Data sheet

## chainflex® CF37.D

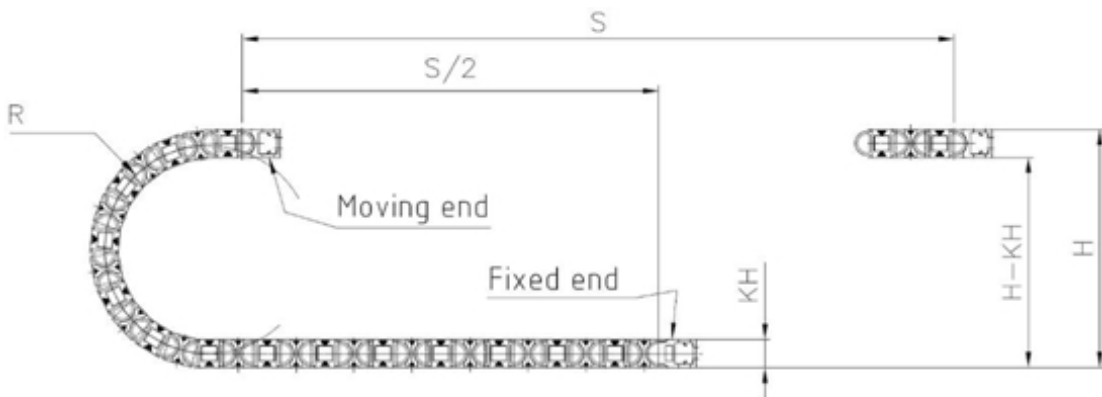


Motor cable (Class 7.6.4.2) ● For heaviest duty applications ● TPE outer jacket ● Oil and bio-oil resistant ● PVC and halogen-free ● UV-resistant ● Hydrolysis and microbe-resistant



### 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 extremely heavy duty applications, Class 7
- Unsupported travel distances and up to 400 m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ± 90°, with 1 m cable length, Class 2
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications



Example image

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### Technical tables:

#### Mechanical information

Art.-Nr.	Number of cores and conductor nominal cross section [mm <sup>2</sup> ]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF37.15.04.D	4G1.5	8.0	61	95
CF37.25.04.D	4G2.5	10.0	100	149
CF37.40.04.D	4G4.0	11.5	163	221
CF37.60.04.D	4G6.0	13.5	237	317
CF37.60.05.D	5G6.0	15.0	297	387
CF37.100.04.D	4G10	16.5	407	503
CF37.100.05.D	5G10	19.0	515	634
CF37.160.04.D	4G16	20.0	646	773
CF37.160.05.D	5G16	22.5	815	963
CF37.250.04.D	4G25	24.0	1014	1203
CF37.500.03.O.PE.D	3x50	30.0	1530	1826

**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	21
2.5	7.98	30
4	4.95	41
6	3.3	53
10	1.91	74
16	1.21	99
25	0.78	131
50	0.39	202

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® CF37.D



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### Design table

Part No.	Number of cores	Core design
CF37.XX.03.O.PE.D	3	
CF37.XX.04.D	4	
CF37.XX.05.D	5	



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



Example image

igus® chainflex® CF37.D