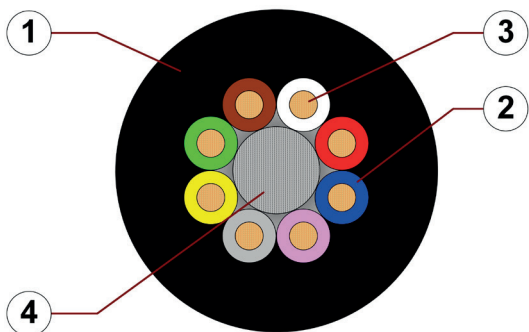


Data sheet

chainflex® CFSOFT1



Control cable (Class 7.1.2.1) ● For heaviest duty applications and especially small radii down to 5 x d ● Highly flexible, soft design ● PVC outer jacket ● Oil-resistant ● Flame retardant



Example image
For detailed overview please see design table

- 1. Outer jacket: Pressure extruded, oil-resistant PVC mixture
- 2. Core insulation: Mechanically high-quality TPE mixture
- 3. Conductor: Very finely stranded special conductors of particularly soft and bending resistant design made of bare copper wires
- 4. Strain relief: Tensile stress-resistant centre element

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



Cable structure

	Conductor	Very finely stranded special conductors of particularly soft and bending resistant design made of bare copper wires.
	Core insulation	Mechanically high-quality TPE mixture.
	Core structure	Cores wound in a layer with especially short pitch length.
	Core identification	Colour code in accordance with DIN 47100.
	Outer jacket	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

„00000 m*** igus chainflex CFSOFT1.--.---① -----② 300/500V E310776
cRUus AWM Style 2464 VW-1 AWM I/II A/B 80°C 300V FT1 CE UKCA
RoHS-II conform 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 CFSOFT1.02.03 3x0.25 300/500 ...

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Dynamic information

	Bend radius	e-chain® linear flexible fixed	minimum 5 x d minimum 4 x d minimum 3 x d
	Temperature	e-chain® linear flexible fixed	+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)
	v max.	unsupported gliding	10 m/s 5 m/s
	a max.		80 m/s ²
	Travel distance	Very short, very fast applications with small radii and tight design space, 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	10 million	15 million	20 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	6.8	7.5	8.5
+15/+60	5	6	7
+60/+70	6.8	7.5	8.5

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	300/500 V (following DIN VDE 0298-3) 300 V (following UL)
	Testing voltage	2000 V (following DIN EN 50395)



Example image

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Data sheet

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Control cable (Class 7.1.2.1) ● For heaviest duty applications and especially small radii down to 5 x d ● Highly flexible ● soft design ● 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, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
	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	Details see table UL AWM
	NFPA	Following NFPA 79-2018, chapter 12.9
	EAC	Certificate No. RU C-DE.ME77.B.00300/19
	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
	UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

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]
0.25	3-8	10493	2464	300	80
0.34	4	10493	2464	300	80
0.5	4	10493	2464	300	80



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



Example image

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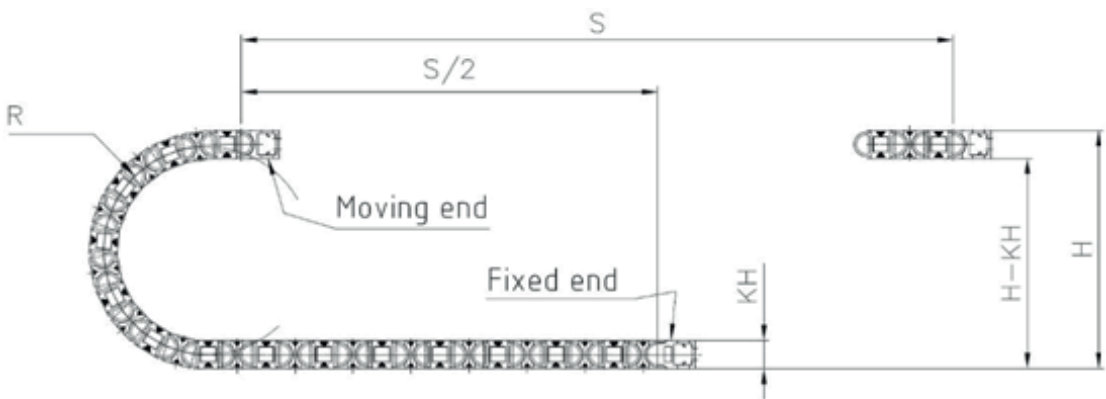
chainflex® CFSOFT1



Control cable (Class 7.1.2.1) ● For heaviest duty applications and especially small radii down to 5 x d ● Highly flexible ● soft design ● PVC outer jacket ● Oil-resistant ● Flame retardant

Typical lab test setup for this cable series

Test bend radius R	approx. 15 - 28 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 ²



Typical application areas

- For heaviest duty applications and especially small radii down to 5 x d, Class 7
- Especially for short, very fast applications with small radii and restricted installation space, Class 1
- Light oil influence, Class 2
- No torsion, Class 1
- Especially soft cable design, for reduced restoring forces
- Pick and place machines, automatic doors, Clean room, very quick handling



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



Example image

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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]
CFSOFT1.02.03	3x0.25	5.5	9	28
CFSOFT1.02.08	8x0.25	7.0	21	62
CFSOFT1.03.04	4x0.34	6.0	15	39
CFSOFT1.05.04	4x0.5	7.0	21	52

G = with green-yellow earth core

x = without earth core

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.

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]
0.25	79	5
0.34	57	7
0.5	39	10

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

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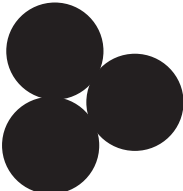
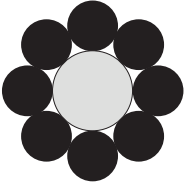
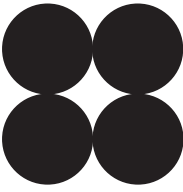
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Design table

Part No.	Number of cores	Core design	Part No.	Number of cores	Core design
CFSOFT1.XX.03	3		CFSOFT1.XX.08	8	
CFSOFT1.XX.04	4				



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Colour code in accordance with DIN 47100

Conductor no.	Colours according to DIN ISO 47100
1	white
2	brown
3	green
4	yellow
5	grey
6	pink
7	blue
8	red
9	black
10	violet
11	grey-pink
12	red-blue
13	white-green
14	brown-green
15	white-yellow
16	yellow-brown
17	white-grey
18	grey-brown

Conductor no.	Colours according to DIN ISO 47100
19	white-pink
20	pink-brown
21	white-blue
22	brown-blue
23	white-red
24	brown-red
25	white-black
26	brown-black
27	grey-green
28	yellow-grey
29	pink-green
30	yellow-pink
31	green-blue
32	yellow-blue
33	green-red
34	yellow-red
35	green-black
36	yellow-black



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