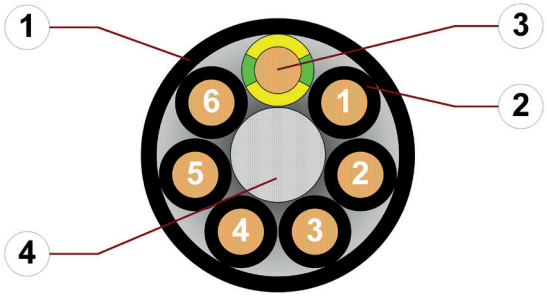
Data sheet
chainflex® CF880

Control cable (Class 3.1.1.1) ● For flexing applications ● PVC outer jacket ● Flame retardant



1. Outer jacket: Pressure extruded PVC mixture
2. Core insulation: Mechanically high-quality PVC mixture
3. Conductor: Stranded conductor consisting of bare copper wires
4. Filling: Plastic yarns



Example image

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 PVC mixture.
Core structure	Cores wound with an optimised pitch length.
Core identification	Black cores with white numbers, one green-yellow core.
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005) Printing: white

„00000 m“ igus chainflex M CF880.--.--① ---② 300/500V E310776**

cЯUus AWM Style 2464 VW-1 AWM I/II A/B 80°C 300V FT1 EAC/CTP

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 ... **CF880.15.04** ... **4G1.5** ... **300 V/500 V** ...

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Example image

Dynamic information

Bend radius	**e-chain® linear**	minimum 12.5 x d
	flexible	minimum 10 x d
	fixed	minimum 7 x d
Temperature	**e-chain® linear**	+5 °C up to +70 °C
	flexible	-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

Double strokes	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	15	16	17
+15/+60	12.5	13.5	14.5
+60/+70	15	16	17

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
Testing voltage	2000 V (following DIN EN 50395)

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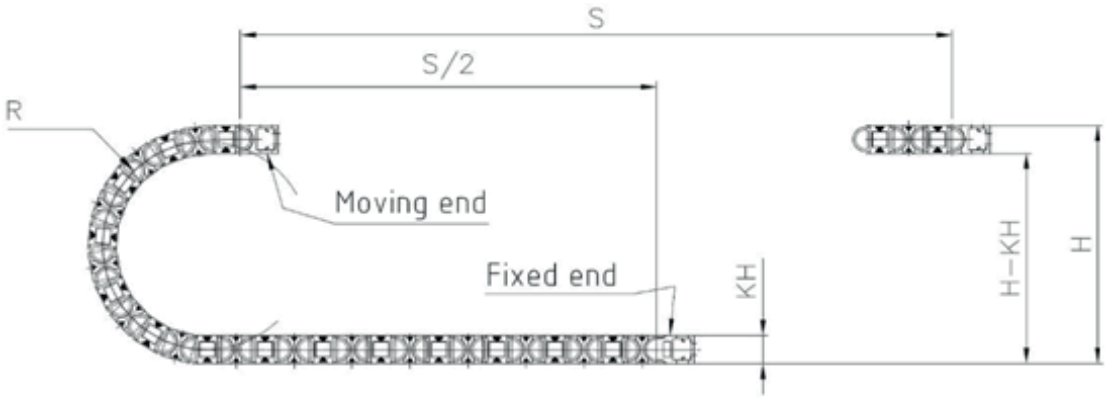
Example image

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 11008 and 2464, 300 V, 80 °C
NFPA	Following NFPA 79-2012, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01560 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00449 (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



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Data sheet
chainflex® CF880

Control cable (Class 3.1.1.1) ● For flexing applications ● PVC outer jacket ● Flame retardant



Example image

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

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Data sheet
chainflex® CF880

Control cable (Class 3.1.1.1) ● For flexing applications ● PVC outer jacket ● Flame retardant



Example image

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]
CF880.05.02	2x0.5	5.5	10	37
CF880.05.03	3G0.5	6.0	15	44
CF880.05.04	4G0.5	6.5	20	53
CF880.05.05	5G0.5	7.0	25	65
CF880.05.07	7G0.5	8.5	35	97
CF880.05.12	12G0.5	9.5	60	141
CF880.05.18	18G0.5	11.5	90	205
CF880.05.25	25G0.5	13.5	124	283
CF880.07.02	2x0.75	6.0	15	46
CF880.07.03	3G0.75	6.5	23	55
CF880.07.04	4G0.75	7.0	30	67
CF880.07.05	5G0.75	7.5	38	82
CF880.07.07	7G0.75	9.0	53	121
CF880.07.12	12G0.75	10.5	90	181
CF880.07.18	18G0.75	13.0	134	269
CF880.07.25	25G0.75	15.0	186	372
CF880.10.02	2x1.0	6.5	20	53
CF880.10.03	3G1.0	6.5	30	66
CF880.10.04	4G1.0	7.0	40	81
CF880.10.05	5G1.0	8.0	50	98
CF880.10.07	7G1.0	9.5	70	149
CF880.10.12	12G1.0	11.5	119	221
CF880.10.18	18G1.0	13.5	178	322
CF880.10.25	25G1.0	16.0	248	454
CF880.15.02	2x1.5	7.5	30	82
CF880.15.03	3G1.5	8.5	45	103
CF880.15.04	4G1.5	9.0	60	127
CF880.15.05	5G1.5	10.0	75	161
CF880.15.07	7G1.5	12.5	104	243
CF880.15.12	12G1.5	14.5	178	360
CF880.15.18	18G1.5	17.5	267	530
CF880.15.25	25G1.5	21.0	371	743
CF880.25.03	3G2.5	9.0	75	143
CF880.25.04	4G2.5	10.0	100	183
CF880.25.05	5G2.5	11.5	124	226
CF880.25.07	7G2.5	14.0	174	343
CF880.25.12	12G2.5	16.5	297	513
CF880.25.25	25G2.5	24.0	612	1064

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

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Data sheet
chainflex® CF880

Control cable (Class 3.1.1.1) ● For flexing applications ● PVC outer jacket ● Flame retardant



Example image

Electrical information

Conductor nominal cross section [mm²]	Maximum conductor resistance at 20 °C (following DIN EN 50289-1-2) [Ω/km]	Maximum current rating at 30 °C (following DIN VDE 0298-4) [A]
0.5	39.0	8
0.75	26.0	12
1	19.5	15
1.5	13.3	18
2.5	8.0	26

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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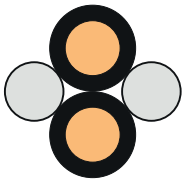
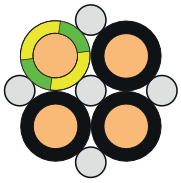
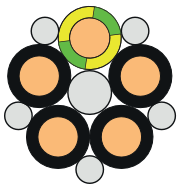
Data sheet
chainflex® CF880

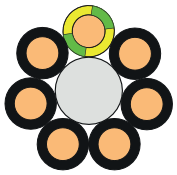
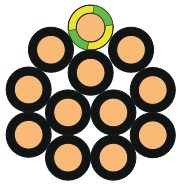
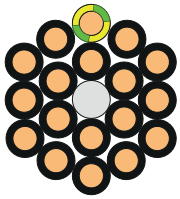
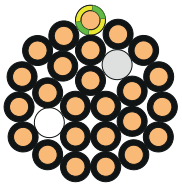
Control cable (Class 3.1.1.1) ● For flexing applications ● PVC outer jacket ● Flame retardant



Example image

Design table

Part No.	Number of cores	Core design
CF880.XX.02	2	
CF880.XX.03	3	
CF880.XX.04	4	
CF880.XX.05	5	

Part No.	Number of cores	Core design
CF880.XX.07	7	
CF880.XX.12	12	
CF880.XX.18	18	
CF880.XX.25	25	

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Control cable | PVC | chainflex® CF880

5 million
Double strokes guaranteed

12.5 x d
Bend radius, e-chain®

10 m
Travel distance, e-chain®

- For flexing applications
- PVC outer jacket
- Flame retardant



Example image

Dynamic information

Bend radius	e-chain® linear	minimum 12.5 x d
	flexible	minimum 10 x d
	fixed	minimum 7 x d
Temperature	e-chain® linear	+5 °C up to +70 °C
	flexible	-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

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality PVC mixture.
Core structure	Cores wound with an optimised pitch length.
Core identification	Black cores with white numbers, one green-yellow core.
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005)

Electrical information

Nominal voltage	300/500 V
Testing voltage	2000 V (following DIN EN 50395)

Class 3.1.1.1

Basic requirements	low	1	2	**3**	4	5	6	7	highest
Travel distance	unsupported	**1**	2	3	4	5	6	≥ 400 m	
Oil resistance	none	**1**	2	3	4	highest			
Torsion	none	**1**	2	3	±180°				

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 11008 and 2464, 300 V, 80 °C
NFPA	Following NFPA 79-2012, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.01560 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00449 (Fire protection)
Lead-free	Following 2011/65/EC (RoHS-II)
CE	Following 2014/35/EU

Guaranteed service life (details see page 22-23)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	15	16	17
+15/+60	12.5	13.5	14.5
+60/+70	15	16	17

* Higher number of double strokes? Service life calculation online ▶ www.igus.co.uk/chainflexlife

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

CF880
PVC
12.5 x d

Control cable | PVC | chainflex® CF880

Class 3.1.1.1

Basic requirements: low 1 2 3 4 5 6 7 highest
Travel distance: unsupported 1 2 3 4 5 6 ≥ 400 m
Oil resistance: none 1 2 3 4 highest
Torsion: none 1 2 3 ±180°

CF880
PVC
12.5 x d



Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF880.05.02	2x0.5	5.5	10	37
CF880.05.03	3G0.5	6.0	15	44
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CF880.10.05	5G1.0	8.0	50	98
CF880.10.07	7G1.0	9.5	70	149
CF880.10.12	12G1.0	11.5	119	221
CF880.10.18	18G1.0	13.5	178	322
CF880.10.25	25G1.0	16.0	248	454
CF880.15.02	2x1.5	7.5	30	82
CF880.15.03	3G1.5	8.5	45	103
CF880.15.04	4G1.5	9.0	60	127
CF880.15.05	5G1.5	10.0	75	161
CF880.15.07	7G1.5	12.5	104	243
CF880.15.12	12G1.5	14.5	178	360
CF880.15.18	18G1.5	17.5	267	530
CF880.15.25	25G1.5	21.0	371	743

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

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF880.25.03	3G2.5	9.0	75	143
CF880.25.04	4G2.5	10.0	100	183
CF880.25.05	5G2.5	11.5	124	226
CF880.25.07	7G2.5	14.0	174	343
CF880.25.12	12G2.5	16.5	297	513
CF880.25.25	25G2.5	24.0	612	1064

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

Order example: CF880.07.03 – to your desired length (0.5 m steps)
CF880 chainflex® series .07 Code nominal cross section .03 Number of cores

Online order ▶ www.chainflex.co.uk/CF880

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.