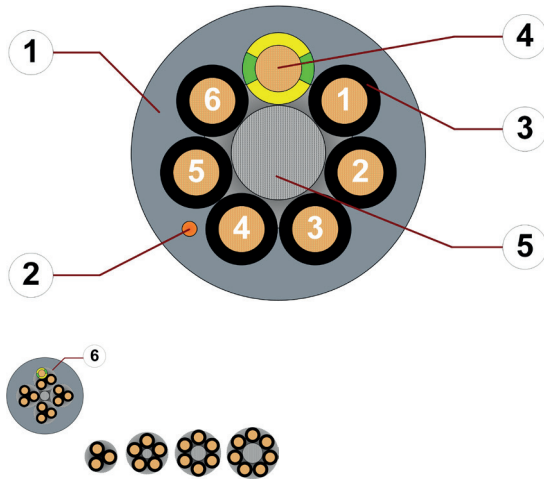


Data sheet

chainflex® CF130.UL



Control cable (Class 4.4.1.2) • For medium duty applications • PVC outer jacket • Flame retardant



1. Outer jacket: Pressure extruded, gusset-filling PVC mixture
2. CFRIP: Tear strip for faster cable stripping
3. Core insulation: Mechanically high-quality TPE mixture
4. Conductor: Fine-wire strand consisting of bare copper wires
5. Strain relief: Tensile stress-resistant centre element
6. 12 cores or more: Bundles with optimised pitch length and pitch direction

Example image
For detailed overview please see design table

Cable structure

	Conductor	Finely stranded conductor consisting of bare copper wires (following DIN EN 60228).
	Core insulation	Mechanically high-quality TPE mixture.
	Core structure	Number of cores < 12: Cores wound in a layer with short pitch length. Number of cores ≥ 12: Cores wound in bundles which are then wound around a high tensile strength centre element, all with optimised short pitch lengths and directions. Especially low-torsion structure.
	Core identification	Cores < 0.5 mm²: Colour code in accordance with DIN 47100. Cores ≥ 0.5 mm²: Black cores with white numbers, one green-yellow core.
	Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Silver-grey (similar to RAL 7001) Printing: black
	CFRIP®	Strip cables faster: a tear strip is moulded into the outer jacket Video ► www.igus.eu/CFRIP

„00000 m*** igus chainflex CF130.---.UL① -----② ---/---V③ E310776

cRUus AWM Style 20200 VW-1 AWM I/II A/B 60°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).
③ Printing of nominal voltage (see general electrical values).
Example: ... chainflex **CF130.02.30.UL 30x0.25 300 V/500 V ...**



igus 4-year chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



Data sheet







chainflex® CF130.UL



Control cable (Class 4.4.1.2) • For medium duty applications • PVC outer jacket • Flame retardant



Dynamic information

	Bend radius	e-chain® linear flexible fixed	minimum 7.5 x d minimum 6 x d minimum 4 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	3 m/s 2 m/s
	a max.		20 m/s ²
	Travel distance		Unsupported travels and up to 50 m for gliding applications, Class 4
	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		10 million	
	< 10 m	≥ 10 m	< 10 m	≥ 10 m	< 10 m	≥ 10 m
Temperature, from/to [°C]	R min. [x d]	R min. [x d]	R min. [x d]	R min. [x d]	R min. [x d]	R min. [x d]
+5/+15	10	12.5	11	13.5	12	14.5
+15/+60	7.5	10	8.5	11	9.5	12
+60/+70	10	12.5	11	13.5	12	14.5

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)



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Example image

Data sheet











chainflex® CF130.UL



Control cable (Class 4.4.1.2) • For medium duty applications • PVC outer jacket • Flame retardant



Properties and approvals

-  **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)
-  **PFAS-free** Use of PFAS-free materials according to the content of the REACH directive and its rules for the production and processing of chemical substances
-  **UL verified** Certificate No. V293560: „igus 4-year 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
-  **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, material/cable tested by IPA according to DIN EN ISO standard 14644-1
-  **CE** Following 2014/35/EU



Properties and approvals

UL/CSA AWM Details

Conductor nominal cross section [mm ²]	Number of cores	UL style core insulation	UL style outer jacket	UL Voltage Rating [V]	UL Temperature Rating [°C]
0.25	3-30	10493	20200	300	60
0.34	2-5	10493	20200	300	60
0.5	2-25	10493	20200	300	60
0.75	2-42	10493	20200	300	60
1	2-25	10493	20200	300	60
1.5	2-36	10493	20200	300	60
2.5	3-12	10493	20200	300	60
4	3-5	10493	20200	300	60
6	4-5	10493	20200	300	60

Example image

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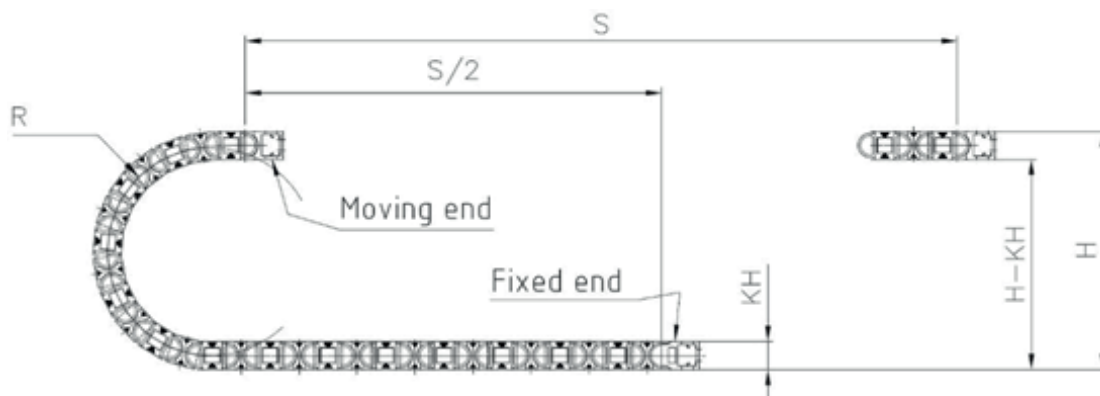


Control cable (Class 4.4.1.2) ● For medium duty applications ● PVC outer jacket ● Flame retardant



Typical lab test setup for this cable series

Test bend radius R	approx. 38 - 200 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 medium duty applications, Class 4
- Unsupported travel distances and up to 50 m for gliding applications, Class 4
- Without influence of oil, Class 1
- Torsion $\pm 90^\circ$, with 1 m cable length, Class 2
- Preferably indoor applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment



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chainflex® CF130.UL



Control cable (Class 4.4.1.2) ● For medium duty applications ● PVC outer jacket ● Flame retardant



Technical tables:

Mechanical information

Part No.	Number of cores and conductor nominal cross section [mm ²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF130.02.03.UL	3x0.25	5.0	9	26
CF130.02.04.UL	4x0.25	5.5	11	35
CF130.02.06.UL	6x0.25	6.0	16	48
CF130.02.07.UL	7x0.25	6.5	19	56
CF130.02.12.UL	12x0.25	8.5	33	96
CF130.02.20.UL	20x0.25	10.5	51	145
CF130.02.25.UL	25x0.25	11.5	66	164
CF130.02.30.UL	30x0.25	12.5	75	188
CF130.03.02.UL	2x0.34	5.0	8	27
CF130.03.05.UL	5x0.34	6.0	18	42
CF130.05.02.UL	2x0.5	5.5	11	38
CF130.05.03.UL	3G0.5	5.5	16	40
CF130.05.04.UL	4G0.5	6.0	21	47
CF130.05.05.UL	5G0.5	6.5	26	56
CF130.05.07.UL	7G0.5	7.5	37	76
CF130.05.12.UL	12G0.5	10.0	63	140
CF130.05.18.UL	18G0.5	12.0	94	192
CF130.05.25.UL	25G0.5	13.5	129	259
CF130.07.02.UL	2x0.75	6.0	16	48
CF130.07.03.UL	3G0.75	6.0	23	50
CF130.07.04.UL	4G0.75	6.5	31	60
CF130.07.05.UL	5G0.75	7.0	38	70
CF130.07.07.UL	7G0.75	8.0	54	96
CF130.07.12.UL	12G0.75	11.0	91	175
CF130.07.18.UL	18G0.75	13.5	134	248
CF130.07.25.UL	25G0.75	16.0	186	346
CF130.07.36.UL	36G0.75	19.0	293	531
CF130.07.42.UL	42G0.75	21.0	341	608
CF130.10.02.UL	2x1.0	6.0	21	55
CF130.10.03.UL	3G1.0	6.5	31	61
CF130.10.04.UL	4G1.0	7.0	41	74
CF130.10.05.UL	5G1.0	7.5	50	87
CF130.10.07.UL	7G1.0	9.0	71	118
CF130.10.12.UL	12G1.0	12.5	120	228
CF130.10.18.UL	18G1.0	15.0	179	308
CF130.10.25.UL	25G1.0	17.5	248	410

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



igus 4-year chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



Data sheet

chainflex® CF130.UL



Control cable (Class 4.4.1.2) ● For medium duty applications ● PVC outer jacket ● Flame retardant



Technical tables:

Mechanical information

Part No.	Number of cores and conductor nominal cross section [mm ²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF130.15.02.UL	2x1.5	6.5	31	71
CF130.15.03.UL	3G1.5	7.0	46	76
CF130.15.04.UL	4G1.5	8.0	61	93
CF130.15.05.UL	5G1.5	8.5	75	111
CF130.15.07.UL ¹⁷⁾	7G1.5	10.5	105	166
CF130.15.12.UL	12G1.5	13.0	179	288
CF130.15.18.UL	18G1.5	17.0	268	438
CF130.15.25.UL	25G1.5	19.5	371	563
CF130.15.36.UL	36G1.5	23.0	579	887
CF130.25.03.UL	3G2.5	8.5	75	118
CF130.25.04.UL	4G2.5	9.5	100	149
CF130.25.07.UL ¹⁷⁾	7G2.5	12.0	174	250
CF130.25.12.UL	12G2.5	16.5	297	445
CF130.40.03.UL	3G4.0	10.0	119	209
CF130.40.05.UL	5G4.0	12.0	198	294
CF130.60.04.UL	4G6.0	13.0	237	392
CF130.60.05.UL	5G6.0	14.0	299	471
CF130.02.18.UL	18x0.25	10.0	46	123

¹⁷⁾ When using the cables with „7G1.5mm²“ and „G2.5mm²“ minimum bend radius must be 17.5xd with gliding travel distance ≥ 5m.



igus 4-year chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



Example image

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Control cable (Class 4.4.1.2) ● For medium duty applications ● PVC outer jacket ● Flame retardant



Electrical information

Conductor nominal cross section [mm ²]	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
0.75	26	13
1	19.5	15
1.5	13.3	19
2.5	8	27
4	4.95	37
6	3.3	48

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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Example image

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Control cable (Class 4.4.1.2) • For medium duty applications • PVC outer jacket • Flame retardant

Design table

Part No.	Number of cores	Core design	Part No.	Number of cores	Core design
			Part No.	Number of cores	Core design
CF130.XX.02.UL	2		CF130.XX.18.UL	6x3	
CF130.XX.03.UL	3		CF130.XX.20.UL	5x4	
CF130.XX.04.UL	4		CF130.XX.25.UL	5x5	
CF130.XX.05.UL	5		CF130.XX.30.UL	6x5	
CF130.XX.06.UL	6		CF130.XX.36.UL	6x6	
CF130.XX.07.UL	7		CF130.XX.42.UL	7x6	
CF130.XX.12.UL	4x3				

Example image



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Control cable (Class 4.4.1.2) ● For medium duty applications ● PVC outer jacket ● Flame retardant

Colour code in accordance with DIN 47100

Conductor no.	Colours according to DIN ISO 47100	Conductor no.	Colours according to DIN ISO 47100
1	white	19	white-pink
2	brown	20	pink-brown
3	green	21	white-blue
4	yellow	22	brown-blue
5	grey	23	white-red
6	pink	24	brown-red
7	blue	25	white-black
8	red	26	brown-black
9	black	27	grey-green
10	violet	28	yellow-grey
11	grey-pink	29	pink-green
12	red-blue	30	yellow-pink
13	white-green	31	green-blue
14	brown-green	32	yellow-blue
15	white-yellow	33	green-red
16	yellow-brown	34	yellow-red
17	white-grey	35	green-black
18	grey-brown	36	yellow-black



igus 4-year chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



Example image