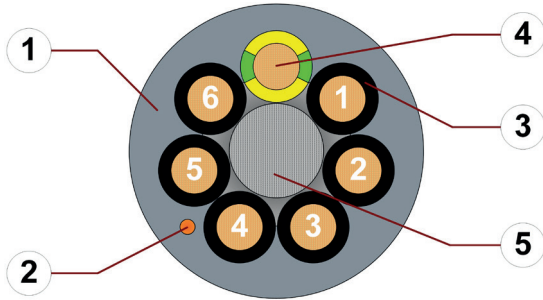


# Data sheet

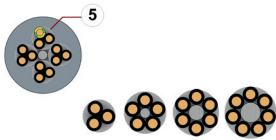
## chainflex® CF130.UL



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

	<b>Conductor</b>	Finely stranded conductor consisting of bare copper wires (following DIN EN 60228).
	<b>Core insulation</b>	Mechanically high-quality TPE mixture.
	<b>Core structure</b>	<b>Number of cores &lt; 12:</b> Cores wound in a layer with short pitch length. <b>Number of cores ≥ 12:</b> 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.
	<b>Core identification</b>	<b>Cores &lt; 0.5 mm<sup>2</sup>:</b> Colour code in accordance with DIN 47100. <b>Cores ≥ 0.5 mm<sup>2</sup>:</b> Black cores with white numbers, one green-yellow core.
	<b>Outer jacket</b>	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
	<b>CFRIP®</b>	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>

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

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



# Data sheet







## chainflex® CF130.UL



Control cable (Class 4.4.1.2) ● For medium duty applications ● PVC outer jacket ● 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>	3 m/s 2 m/s
	<b>a max.</b>		20 m/s <sup>2</sup>
	<b>Travel distance</b>		Unsupported travels and up to 50 m for gliding applications, Class 4
	<b>Torsion</b>		± 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. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor 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

	<b>Nominal voltage</b>	300/500 V (following DIN VDE 0298-3)
	<b>Testing voltage</b>	2000 V (following DIN EN 50395)



# Data sheet

## chainflex® CF130.UL



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

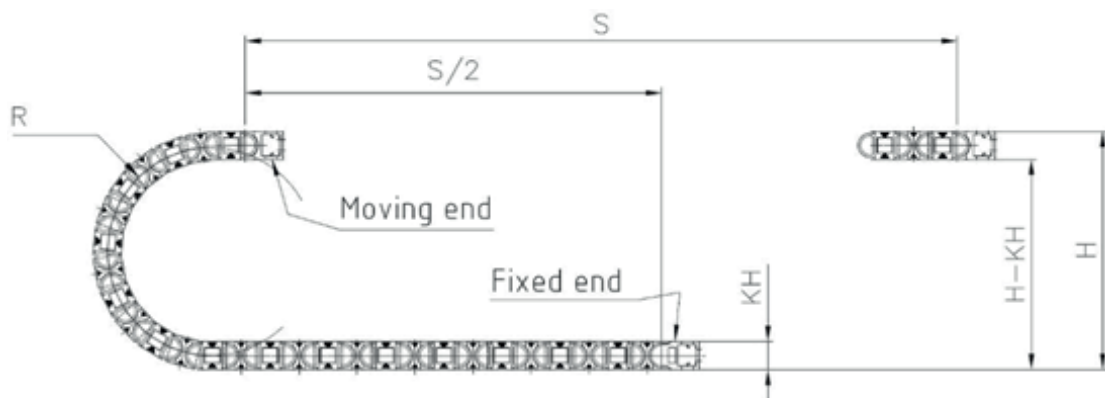


### Properties and approvals

	<b>Flame retardant</b>	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
	<b>Silicone-free</b>	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
	<b>UL/CSA</b>	Style 10493 and 20200, 300 V, 60 °C
	<b>NFA</b>	Following NFPA 79-2012, chapter 12.9
	<b>EAC</b>	Certificate No. RU C-DE.ME77.B.01254 (TR ZU)
	<b>CTP</b>	Certificate No. C-DE.PB49.B.00416 (Fire protection)
	<b>CEI</b>	Following CEI 20-35
	<b>Lead-free</b>	Following 2011/65/EC (RoHS-II)
	<b>Clean room</b>	According to ISO Class 1, material/cable tested by IPA according to DIN EN ISO standard 14644-1
	<b>CE</b>	Following 2014/35/EU

### Typical lab test setup for this cable series

<b>Test bend radius R</b>	approx. 38 - 200 mm
<b>Test travel S</b>	approx. 1 - 15 m
<b>Test duration</b>	minimum 2 - 4 million double strokes
<b>Test speed</b>	approx. 0.5 - 2 m / s
<b>Test acceleration</b>	approx. 0.5 - 1.5 m / s <sup>2</sup>



# Data sheet

## chainflex® CF130.UL



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



Example image

### 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



# Data sheet

## chainflex® CF130.UL



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



### Technical tables:

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]
CF130.02.03.UL	3x0.25	5.0	8	24
CF130.02.04.UL	4x0.25	5.5	11	29
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
CF130.02.18.UL	18x0.25	10.5	45	112
CF130.02.20.UL	20x0.25	10.5	51	145
CF130.02.25.UL	25x0.25	11.5	66	154
CF130.02.30.UL	30x0.25	12.5	75	184
CF130.03.02.UL	2x0.34	5.0	8	25
CF130.03.05.UL	5x0.34	6.0	18	40
CF130.05.02.UL	2x0.5	5.5	11	38
CF130.05.03.UL	3G0.5	5.5	16	39
CF130.05.04.UL	4G0.5	6.0	21	47
CF130.05.05.UL	5G0.5	6.5	26	55
CF130.05.07.UL	7G0.5	7.5	37	76
CF130.05.12.UL	12G0.5	10.0	63	139
CF130.05.18.UL	18G0.5	12.0	94	183
CF130.05.25.UL	25G0.5	13.5	129	259
CF130.07.02.UL	2x0.75	6.0	15	41
CF130.07.03.UL	3G0.75	6.0	23	49
CF130.07.04.UL	4G0.75	6.5	30	58
CF130.07.05.UL	5G0.75	7.0	38	68
CF130.07.07.UL	7G0.75	8.0	53	95
CF130.07.12.UL	12G0.75	11.0	90	152
CF130.07.18.UL	18G0.75	13.5	134	226
CF130.07.25.UL	25G0.75	16.0	186	342
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	20	51
CF130.10.03.UL	3G1.0	6.5	30	60
CF130.10.04.UL	4G1.0	7.0	40	74
CF130.10.05.UL	5G1.0	7.5	50	89
CF130.10.07.UL	7G1.0	9.0	70	121
CF130.10.12.UL	12G1.0	12.5	119	197
CF130.10.18.UL	18G1.0	15.0	178	278
CF130.10.25.UL	25G1.0	17.5	248	395

**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



# Data sheet

## chainflex® CF130.UL



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



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]
CF130.15.02.UL	2x1.5	7.0	30	62
CF130.15.03.UL	3G1.5	7.0	45	77
CF130.15.04.UL	4G1.5	8.0	60	97
CF130.15.05.UL	5G1.5	8.5	75	115
CF130.15.07.UL <sup>17)</sup>	7G1.5	9.5	104	153
CF130.15.12.UL	12G1.5	13.0	178	275
CF130.15.18.UL	18G1.5	17.5	267	466
CF130.15.25.UL	25G1.5	19.5	371	592
CF130.15.36.UL	36G1.5	23.5	579	887
CF130.25.03.UL	3G2.5	8.5	75	118
CF130.25.04.UL	4G2.5	9.5	100	147
CF130.25.07.UL <sup>17)</sup>	7G2.5	12.0	174	249
CF130.25.12.UL	12G2.5	17.5	297	510
CF130.40.03.UL	3G4.0	10.0	119	187
CF130.40.05.UL	5G4.0	12.0	198	299
CF130.60.04.UL	4G6.0	13.5	238	371
CF130.60.05.UL	5G6.0	14.5	299	471

<sup>17)</sup> When using the cables with "7 G 1.5 mm<sup>2</sup>" and "7 G 2.5 mm<sup>2</sup>" minimum bend radius must be 17.5 x d with gliding travel distance ≥ 5 m.

**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



# Data sheet

## chainflex® CF130.UL



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



### Electrical information

Conductor nominal cross section [mm <sup>2</sup> ]	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]
0.25	79.0	5
0.34	57.0	7
0.5	39.0	10
0.75	26.0	14
1	19.5	17
1.5	13.3	21
2.5	8.0	30
4	4.95	41
6	3.3	53

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® CF130.UL

# Data sheet

## chainflex® CF130.UL



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
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  
igus® chainflex® CF130.UL





# Data sheet

## chainflex® CF130.UL



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	Conductor no.	Colours according to DIN ISO 47100
1	white	22	brown-blue	43	blue-black
2	brown	23	white-red	44	red-black
3	green	24	brown-red	45	white-brown-black
4	yellow	25	white-black	46	yellow-green-black
5	grey	26	brown-black	47	grey-pink-black
6	pink	27	grey-green	48	red-blue-black
7	blue	28	yellow-grey	49	white-green-black
8	red	29	pink-green	50	brown-green-black
9	black	30	yellow-pink	51	white-yellow-black
10	violet	31	green-blue	52	yellow-brown-black
11	grey-pink	32	yellow-blue	53	white-grey-black
12	red-blue	33	green-red	54	grey-brown-black
13	white-green	34	yellow-red	55	white-pink-black
14	brown-green	35	green-black	56	pink-brown-black
15	white-yellow	36	yellow-black	57	white-blue-black
16	brown-yellow	37	grey-blue	58	brown-blue-black
17	white-grey	38	pink-blue	59	white-red-black
18	brown-grey	39	grey-red	60	brown-red-black
19	white-pink	40	pink-red	61	black-white
20	white-brown	41	grey-black		
21	white-blue	42	pink-black		

