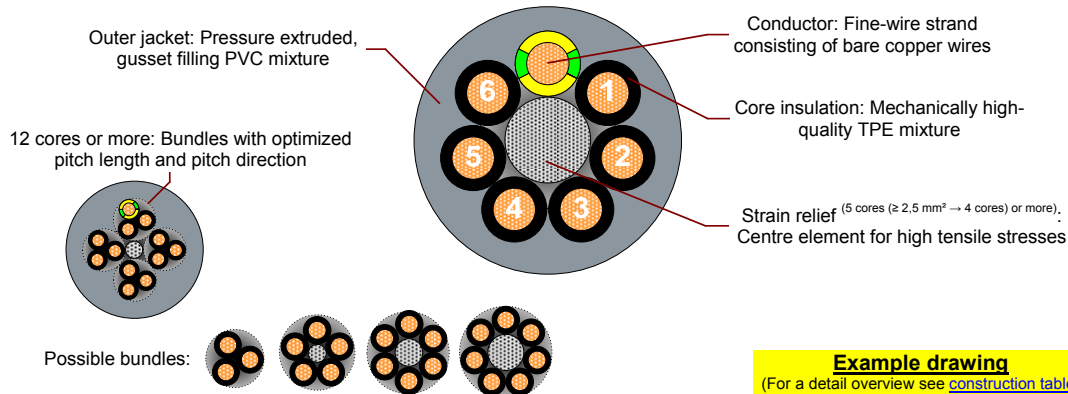


## PVC - e-chain<sup>®</sup> - control cable for medium load requirements (class 4.4.1): flame-retardant.



### Core design:

**Conductor:** Fine-wire strand consisting of bare copper wires (following DIN EN 60228).

**Core insulation:** Mechanically high-quality TPE mixture.

**Core identification:** ≤ 0,34 mm<sup>2</sup>: Colour code in accordance with DIN 47100. (see [colour code table](#))  
≥ 0,5 mm<sup>2</sup>: Black cores with white numerals & one core greenyellow\*.  
\* 3 cores and more.

### Jacket design:

**Outer jacket:** Low-adhesion mixture on the basis of PVC (following DIN VDE 0281-5), abrasion- and bending-stable, adapted to suit the requirements in e-chains<sup>®</sup>.

- flame-retardant (according to IEC 60332-1-2, CEI 20-35, VW-1, FT-1)
- silicon-free (following PV 3.10.7 - status 1992)
- lead-free (following 2011/65/EU (RoHS-II))
- clean room ISO class 1 (according to DIN ISO 14644-1 tested by IPA)
- UV-resistance: Low

**Colour outer jacket:** Silver grey (similar to RAL 7001)

**Cable marking (Black):**

„00000 m\*\*\* igus chainflex CF130.---.UL<sup>⊕</sup> -----<sup>⊗</sup> ---/---V<sup>⊗</sup> E310776

cAUs AWM Style 20200 VW-1 AWM I/II A/B 60°C 300V FT-1 EAC/CTP

CE RoHS-II conform www.igus.de +++ chainflex cable works +++

\*\* **Length printing:** Not calibrated. Only intended as an orientation aid.

⊕ / ⊗: Cable identification according to part no. (see [technical table](#) for details).

⊗: Printing of the nominal voltage (see [general electrical values](#) for details).

Ex.: CF130.02.30.UL: ⇒ ...x CF130.02.30.UL 30x0,25 300/300V E310776...

### General mechanical values:

(for individual details see [technical table](#))

Guaranteed lifetime for this series according to the "chainflex <sup>®</sup> guarantee club" conditions (see chainflex <sup>®</sup> catalogue and <a href="http://www.igus.eu/chainflex-guarantee">www.igus.eu/chainflex-guarantee</a> )							
Double strokes*		5 million		7,5 million		10 million	
Temperature (from/to) [°C]	Travel distance (TD)	Min. bending radius for e-chain <sup>®</sup> use [Factor multiplied by outer diameter (d)]					
		TD < 10 m	TD ≥ 10 m	TD < 10 m	TD ≥ 10 m	TD < 10 m	TD ≥ 10 m
+5 <sup>+</sup> / +15	≤ 50 m	10,0	12,5	11,0	13,5	12,0	14,5
+15 / +60		7,5	10,0	8,5	11,0	9,5	12,0
+60 / +70		10,0	12,5	11,0	13,5	12,0	14,5

\*: Minimum guarantee lifetime of the cable under the specified conditions. +: -5 °C at ≤ 50.000 strokes (following DIN EN 60811)  
The installation of the cable is recommended within the middle temperature range.

Temperature range	-20 °C ←	+5 °C ←	+15 °C ↔ +60 °C	→ +70 °C
Min. bending radius for fixed installation	10,0 x d	7,5 x d	5,0 x d	7,5 x d
Torsion (at 1 m cable length)	---	±45 °	±90 °	±45 °

## PVC - e-chain<sup>®</sup> - control cable for medium load requirements (class 4.4.1): flame-retardant.

### General electrical values:

(for individual details see [technical table](#))

**Nominal voltage:**                      **Less than 12 cores ( $\leq 0,34 \text{ mm}^2$ ):**    300 / 300 V  
    **Less than 12 cores ( $\geq 0,5 \text{ mm}^2$ ):**    300 / 500 V  
    **12 cores or more:**                            300 / 300 V  
     $\Rightarrow$  (following DIN VDE 0245)

**Test voltage:**                                2 kV (following VDE 0281-2)

**Certifications:**                            cULus: (E310776: Style 10493 & 20200, 300 V / 60 °C)

**Guidelines:**                                 CE, NFPA (following 79-2012 chapter 12.9), EAC & TR (CTP)

### Dynamic values:

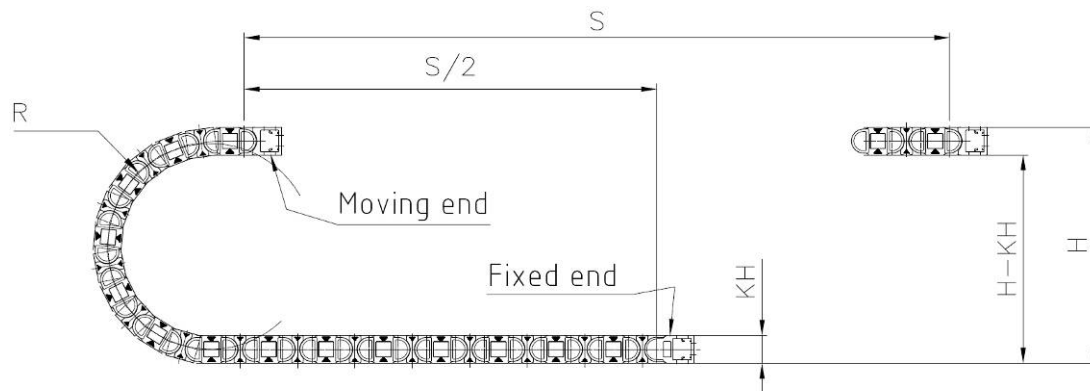
**Max. speed for e-chain<sup>®</sup> use:\*\*\***                      **Unsupported:**  $v = 3 \text{ m / s}$     **Gliding (up to 50 m):**  $v = 2 \text{ m / s}$

**Max. acceleration for e-chain<sup>®</sup> use:\*\*\***                       $a = 20 \text{ m / s}^2$

\*\*\* These values are based on specific applications or tests.  
They do not represent the limit of what is technically feasible.

### Typical lab test setup for this cable group:

**Test bending radius R:**                      approx. 38 - 200 mm  
**Test travel S:**                                 approx. 1 - 15 m  
**Test period:**                                 min. 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>



### e-chain<sup>®</sup> - control cable for medium load requirements:

- for areas of application without influence of oil
- for unsupported travel distances and up to 50 m in gliding applications
- CE, RoHS-II, cULus, NFPA, EAC & TR (CTP)

### Typical application areas:

Preferably indoor applications.  
Wood/stone processing, packaging industry, supply system, handling, adjusting equipment.



PVC - e-chain<sup>®</sup> - control cable for medium load requirements (class 4.4.1):  
flame-retardant.

### Technical tables:

#### Mechanical values:

① Part no.	② Number of cores & nominal cross section [mm <sup>2</sup> ] <sup>****</sup>	External diameter (d) <sup>*****</sup> [max. mm]	Copper index [kg / km]	Weight [kg / km]
CF130.02.03.UL	3x0,25	5,0	9	25
CF130.02.04.UL	4x0,25	5,5	11	29
CF130.02.06.UL	6x0,25	6,0	17	49
CF130.02.07.UL	7x0,25	6,5	20	47
CF130.02.12.UL	12x0,25	8,5	35	98
CF130.02.20.UL	20x0,25	10,5	54	148
CF130.02.25.UL	25x0,25	11,5	70	158
CF130.02.30.UL	30x0,25	12,5	80	189
CF130.03.02.UL	2x0,34	5,0	8	26
CF130.03.05.UL	5x0,34	6,0	19	41
CF130.05.02.UL	2x0,5	5,5	11	38
CF130.05.03.UL	3G0,5	5,5	17	40
CF130.05.04.UL	4G0,5	6,0	22	48
CF130.05.05.UL	5G0,5	6,5	28	57
CF130.05.07.UL	7G0,5	7,5	39	78
CF130.05.12.UL	12G0,5	10,0	66	143
CF130.05.18.UL	18G0,5	12,0	99	188
CF130.05.25.UL	25G0,5	13,5	138	268
CF130.07.02.UL	2x0,75	6,0	16	42
CF130.07.03.UL	3G0,75	6,0	24	51
CF130.07.04.UL	4G0,75	6,5	32	59
CF130.07.05.UL	5G0,75	7,0	40	71
CF130.07.07.UL	7G0,75	8,0	56	98
CF130.07.12.UL	12G0,75	11,0	96	158
CF130.07.18.UL	18G0,75	13,5	143	235
CF130.07.25.UL	25G0,75	16,0	198	355
CF130.07.36.UL	36G0,75	19,0	313	550
CF130.07.42.UL	42G0,75	21,0	365	632
CF130.10.02.UL	2x1,0	6,0	22	52
CF130.10.03.UL	3G1,0	6,5	32	62
CF130.10.04.UL	4G1,0	7,0	43	76
CF130.10.05.UL	5G1,0	7,5	53	92
CF130.10.07.UL	7G1,0	9,0	74	125
CF130.10.12.UL	12G1,0	12,5	127	206
CF130.10.18.UL	18G1,0	15,0	191	290
CF130.10.25.UL	25G1,0	17,5	264	411

↪ (Table continuous on next page)

\*\*\*\* G ⇒ Cable contains a greenyellow core.

\*\*\*\*\* External diameters are maximum values and may tend toward lower tolerance limits.

Subject to misprints and errors. Technical modifications are possible at any time.  
Maybe older batches do not have all or other features.

Please refer regarding the availability of the items especially the information in the latest chainflex<sup>®</sup> catalogue.

Date	Author
04 Feb. 2015	D. Borsberg

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+++ chainflex<sup>®</sup> cable works +++

igus<sup>®</sup> chainflex<sup>®</sup> CF130.UL

Image  
exemplary



igus<sup>®</sup>

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PVC - e-chain<sup>®</sup> - control cable for medium load requirements (class 4.4.1):  
flame-retardant.

① Part no.	② Number of cores & nominal cross section [mm <sup>2</sup> ] <sup>****</sup>	External diameter (d) <sup>*****</sup> [max. mm]	Copper index [kg / km]	Weight [kg / km]
CF130.15.02.UL	2x1,5	7,0	32	64
CF130.15.03.UL	3G1,5	7,0	48	79
CF130.15.04.UL	4G1,5	8,0	64	100
CF130.15.05.UL	5G1,5	8,5	80	120
<b>CF130.15.07.UL<sup>*****</sup></b>	<b>7G1,5</b>	<b>9,5</b>	<b>111</b>	<b>160</b>
CF130.15.12.UL	12G1,5	13,0	191	287
CF130.15.18.UL	18G1,5	17,5	286	484
CF130.15.25.UL	25G1,5	19,5	396	617
CF130.15.36.UL	36G1,5	23,5	624	932
CF130.15.42.UL	42G1,5	26,5	729	1084
CF130.25.03.UL	3G2,5	8,5	80	123
CF130.25.04.UL	4G2,5	9,5	106	153
<b>CF130.25.07.UL<sup>*****</sup></b>	<b>7G2,5</b>	<b>12,0</b>	<b>185</b>	<b>261</b>
CF130.25.12.UL	12G2,5	17,5	317	530
CF130.40.03.UL	3G4,0	10,0	127	196
CF130.60.04.UL	4G6,0	13,5	254	387
CF130.60.05.UL	5G6,0	14,5	319	491

\*\*\*\* G ⇒ Cable contains a greenyellow core.

\*\*\*\*\* External diameters are maximum values and may tend toward lower tolerance limits.

\*\*\*\*\* Using the cables with "7G1,5 mm<sup>2</sup>" and "7G2,5 mm<sup>2</sup>" it is essential: Travel distance ≥ 5m ⇒ bending radius ≥ 17 x d

#### Electrical values:

Nominal cross section [mm <sup>2</sup> ] (following)	Conductor resistance [approx. Ω / km] at 20 °C		Max. current rating [A] at 30 °C*	
	DIN IEC 60344		DIN VDE 0298-4	
0,25		79		5
0,34		57		7
0,5		39		10
0,75		26		14
1,0		19,5		17
1,5		13,3		21
2,5		8		30
4,0		4,45		41
6,0		3,3		53

\* The max. current rating depends on factors such as the individual environmental conditions and the type of installation.






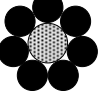
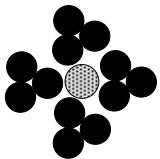
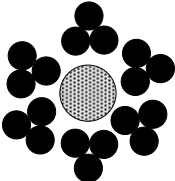
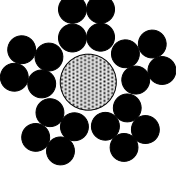
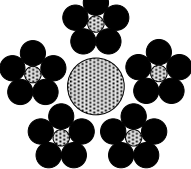
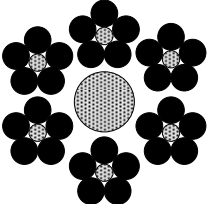
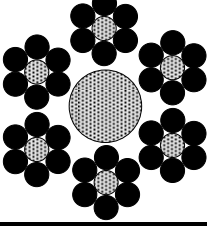
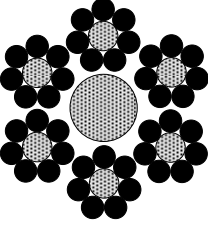
#### DIN 47100 colour code:

No.	Colour	No.	Colour	No.	Colour
01	white	13	whitegreen	25	whiteblack
02	brown	14	browngreen	26	brownblack
03	green	15	whiteyellow	27	greycolor
04	yellow	16	yellowbrown	28	yellowgrey
05	grey	17	whitegrey	29	pinkgreen
06	pink	18	greybrown	30	yellowpink
07	blue	19	whitepink	31	greenblue
08	red	20	pinkbrown	32	yellowblue
09	black	21	whiteblue	33	greenred
10	violet	22	brownblue	34	yellowred
11	greypink	23	whitered	35	greenblack
12	redblue	24	brownred	36	yellowblack



PVC - e-chain<sup>®</sup> - control cable for medium load requirements (class 4.4.1):  
flame-retardant.

Construction table:

Part no.	Core stranding	Part no.	Core stranding
No. of cores		No. of cores	
CF130.XX.02.UL		CF130.XX.03.UL	
2		3	
CF130.XX.04.UL		CF130.XX.05.UL	
4		5	
CF130.XX.06.UL		CF130.XX.07.UL	
6		7	
CF130.XX.12.UL		CF130.XX.18.UL	
4x3		6x3	
CF130.XX.20.UL		CF130.XX.25.UL	
5x4		5x5	
CF130.XX.30.UL		CF130.XX.36.UL	
6x5		6x6	
CF130.XX.42.UL			
6x7			



+++ chainflex<sup>®</sup> cable works +++

igus<sup>®</sup> chainflex<sup>®</sup> CF130.UL

Image exemplary



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Subject to misprints and errors. Technical modifications are possible at any time.  
Maybe older batches do not have all or other features.

Please refer regarding the availability of the items especially the information in the latest chainflex<sup>®</sup> ...

