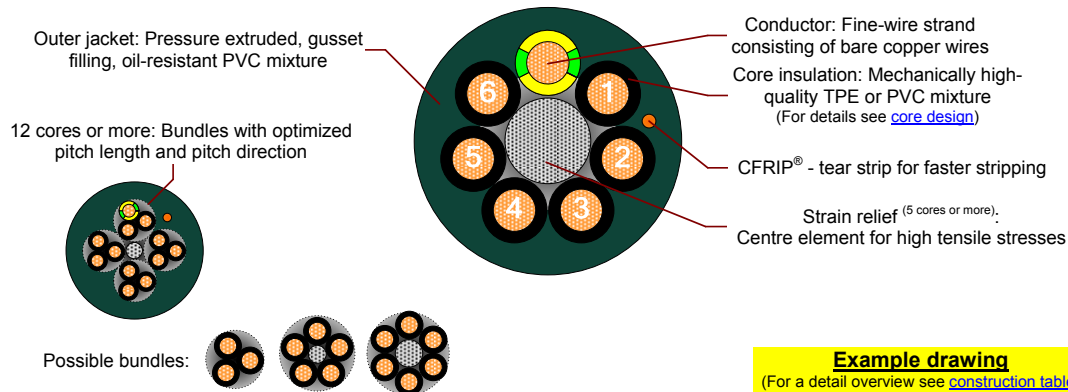


## PVC - e-chain<sup>®</sup> - control cable for high load requirements (class 5.5.2): oil-resistant as well as flame-retardant.



### Core design:

<b>Conductor:</b>	Fine-wire strand consisting of bare copper wires (following DIN EN 60228).
<b>Core insulation:</b>	<p>≤ 0,5 mm<sup>2</sup>: Mechanically high-quality TPE mixture.</p> <p>≥ 0,75 mm<sup>2</sup>: Mechanically high-quality PVC mixture.</p>
<b>Core identification:</b>	<p>≤ 0,34 mm<sup>2</sup>: Colour code in accordance with DIN 47100. (see <a href="#">colour code table</a>)</p> <p>≥ 0,5 mm<sup>2</sup>: Black cores with white numerals &amp; one core greenyellow*.</p> <p>* 3 cores or more.</p>

### Jacket design:

<b>Outer jacket:</b>	<p>Low-adhesion mixture on the basis of PVC (following DIN VDE 0281-13), abrasion- and bending-stable, adapted to suit the requirements in e-chains<sup>®</sup>.</p> <ul style="list-style-type: none"> <li>oil-resistant (following DIN EN 50363-4-1)</li> <li>flame-retardant (according to IEC 60332-1-2, CEI 20-35, VW-1, FT-1)</li> <li>silicon-free (following PV 3.10.7 - status 1992)</li> <li>lead-free (following 2011/65/EU (RoHS-II))</li> <li>clean room ISO class 2 (according to DIN ISO 14644-1 tested by IPA)</li> <li>UV-resistance: Medium</li> </ul>
----------------------	--

### Colour outer jacket:

### Cable marking (White):

Moss green (similar to RAL 6005)

„00000 m“<sup>\*\*\*</sup> igus chainflex CF5...<sup>⊙</sup>...<sup>⊚</sup> 300/500V E310776

cAUs AWM Style 2570 VW-1 AWM I/II A/B 80°C 600V 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).  
 Ex.: CF5.02.36: ⇒ ...igus chainflex CF5.02.36 36x0,25 300/500V...

### 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	≤ 100 m	7,5	10,0	8,5	11,0	9,5	12,0
+15 / +60		6,8	7,5	7,8	8,5	8,8	9,5
+60 / +70		7,5	10,0	8,5	11,0	9,5	12,0

\*: 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	7,5 x d	6,8 x d	4,0 x d	6,8 x d
Torsion (at 1 m cable length)	---	±45 °	±90 °	±45 °

## PVC - e-chain<sup>®</sup> - control cable for high load requirements (class 5.5.2): oil-resistant as well as flame-retardant.

### General electrical values:

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

<b>Nominal voltage:</b>	300 / 500 V (following DIN VDE 0245)
<b>Test voltage:</b>	2 kV (following VDE 0281-2)
<b>Certifications:</b>	$\leq 0,5 \text{ mm}^2$ : c $\mathcal{R}$ Us: (E310776: Style 10492 & 2570, 600 V / 80 °C) $\geq 0,75 \text{ mm}^2$ : c $\mathcal{R}$ Us: (E310776: Style 11113 & 2570, 600 V / 80 °C)
<b>Guidelines:</b>	CE, NFPA (following 79-2012 chapter 12.9), EAC & TR (CTP)

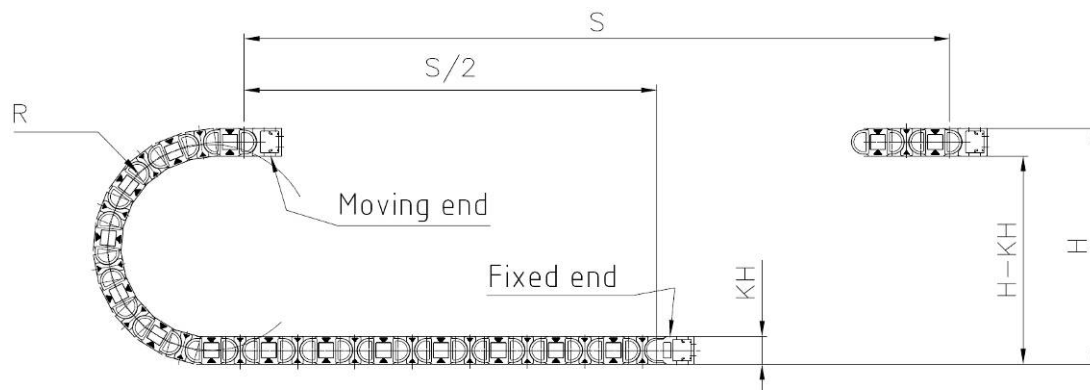
### Dynamic values:

<b>Max. speed in e-chain<sup>®</sup> use:***</b>	<b>Unsupported:</b> v = 10 m / s <b>Gliding (up to 100 m):</b> v = 5 m / s
<b>Max. acceleration in e-chain<sup>®</sup> use:***</b>	a = 80 m / s <sup>2</sup>

\*\*\* 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:

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



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

- for areas of application of low oil influence
- for unsupported travel distances and up to 100 m in gliding applications
- CE, RoHS-II, c $\mathcal{R}$ Us, NFPA, EAC & TR (CTP)

### Typical application areas:

Preferably indoor applications, but also outdoor ones at temperatures > 5 °C.  
Storage and retrieval units for high-bay warehouses, machining units / packaging machines, quick handling, indoor cranes.



**PVC - e-chain<sup>®</sup> - control cable for high load requirements (class 5.5.2):  
oil-resistant as well as flame-retardant.**

**Technical tables:**

**Mechanical values:**

① Part no.	② Number of cores & nominal cross section [mm <sup>2</sup> ]*	External diameter (d)***** [max. mm]	Copper index [kg / km]	Weight [kg / km]
CF5.02.36	36x0,25	15,0	105	215
CF5.03.15	15x0,34	11,0	58	141
CF5.03.18	18x0,34	12,0	71	182
CF5.03.25	25x0,34	14,0	97	244
CF5.05.02	2x0,5	6,0	11	38
CF5.05.03	3G0,5	6,0	16	42
CF5.05.05	5G0,5	7,0	27	71
CF5.05.07	7G0,5	8,0	38	80
CF5.05.12	12G0,5	11,0	64	134
CF5.05.18	18G0,5	13,0	96	195
CF5.05.25	25G0,5	16,0	132	289
CF5.05.30	30G0,5	18,0	159	451
CF5.07.03	3G0,75	6,5	24	56
CF5.07.04	4G0,75	7,0	33	68
CF5.07.05	5G0,75	7,5	41	84
CF5.07.07	7G0,75	9,0	58	118
CF5.07.12	12G0,75	12,5	96	194
CF5.07.18	18G0,75	15,0	143	278
CF5.07.25	25G0,75	17,5	203	397
CF5.07.36	36G0,75	22,0	285	605
CF5.07.42	42G0,75	24,0	333	658
CF5.10.03	3G1,0	6,5	32	57
CF5.10.04	4G1,0	7,0	43	80
CF5.10.05	5G1,0	8,0	53	97
CF5.10.07	7G1,0	9,5	78	135
CF5.10.12	12G1,0	13,0	127	235
CF5.10.18	18G1,0	16,5	191	318
CF5.10.25	25G1,0	19,5	264	503
CF5.15.03	3G1,5	7,5	48	77
CF5.15.04	4G1,5	8,0	64	108
CF5.15.05	5G1,5	9,0	79	132
<b>CF5.15.07*****</b>	<b>7G1,5</b>	<b>10,5</b>	<b>112</b>	<b>187</b>
CF5.15.12	12G1,5	15,0	191	276
CF5.15.18	18G1,5	19,5	285	496
CF5.15.25	25G1,5	21,5	396	670
CF5.15.36	36G1,5	26,5	570	1001
CF5.25.04	4G2,5	10,0	102	176
CF5.25.05	5G2,5	11,0	128	208
<b>CF5.25.07*****</b>	<b>7G2,5</b>	<b>13,0</b>	<b>181</b>	<b>291</b>
CF5.25.12	12G2,5	18,5	303	499
CF5.25.18	18G2,5	23,5	456	794
CF5.25.25	25G2,5	27,5	637	1100

\*\*\*\* 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

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

**PVC - e-chain<sup>®</sup> - control cable for high load requirements (class 5.5.2):  
oil-resistant as well as flame-retardant.**

**Electrical values:**

Nominal cross section [mm <sup>2</sup> ]	Conductor resistance [approx. Ω / km] at 20 °C	Max. current rating [A] at 30 °C*
(following)	DIN EN 50289 -1-2	DIN VDE 0298-4
0,25	79	5
0,34	57	7
0,5	39	10
0,75	26	12
1,0	19,5	15
1,5	13,3	18
2,5	8	26

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





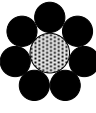
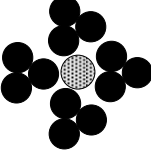
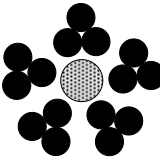
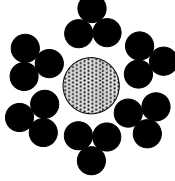
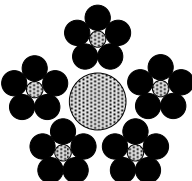
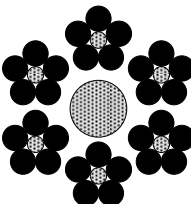
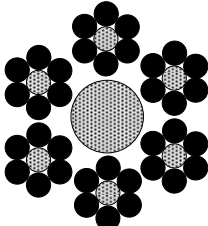
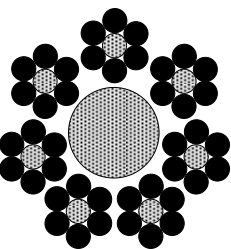
**DIN 47100 colour code:**

No.	Colour	No.	Colour	No.	Colour
01	white	22	brownblue	43	blueblack
02	brown	23	whitered	44	redblack
03	green	24	brownred	45	whitebrownblack
04	yellow	25	whiteblack	46	yellowgreenblack
05	grey	26	brownblack	47	greypinkblack
06	pink	27	greygreen	48	redblueblack
07	blue	28	yellowgrey	49	whitegreenblack
08	red	29	pinkgreen	50	browngreenblack
09	black	30	yellowpink	51	whiteyellowblack
10	violet	31	greenblue	52	yellowbrownblack
11	greypink	32	yellowblue	53	whitegreyblack
12	redblue	33	greenred	54	greybrownblack
13	whitegreen	34	yellowred	55	whitepinkblack
14	browngreen	35	greenblack	56	pinkbrownblack
15	whiteyellow	36	yellowblack	57	whiteblueblack
16	yellowbrown	37	greyblue	58	brownblueblack
17	whitegrey	38	pinkblue	59	whiteredblack
18	greybrown	39	greyred	60	brownredblack
19	whitepink	40	pinkred	61	blackwhite
20	pinkbrown	41	greyblack		
21	whiteblue	42	pinkblack		



**PVC - e-chain<sup>®</sup> - control cable for high load requirements (class 5.5.2):  
oil-resistant as well as flame-retardant.**

**Construction table:**

Part no.	Core stranding	Part no.	Core stranding
No. of cores		No. of cores	
CF5.XX.02		CF5.XX.03	
2		3	
CF5.XX.04		CF5.XX.05	
4		5	
CF5.XX.07		CF5.XX.12	
7		4x3	
CF5.XX.15		CF5.XX.18	
5x3		6x3	
CF5.XX.25		CF5.XX.30	
5x5		6x5	
CF5.XX.36		CF5.XX.42	
6x6		7x6	

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

igus<sup>®</sup> chainflex<sup>®</sup> CF5



www.igus.de

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