

Measuring system cable | PUR | chainflex® CF111.D

- 36** 10 million Double strokes guaranteed
- 10 x d** Bend radius, e-chain®
- 10m** Travel distance, e-chain®

- For medium duty applications
- PUR outer jacket
- Shielded
- Oil-resistant and coolant-resistant
- Flame-retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

	Bend radius	e-chain® linear	minimum 10 x d
		flexible	minimum 8 x d
		fixed	minimum 5 x d
	Temperature	e-chain® linear	-25°C up to +80°C
		flexible	-40°C up to +80°C (following DIN EN 60811-504)
		fixed	-50°C up to +80°C (following DIN EN 50305)
	v max.	unsupported	5m/s
		gliding	3m/s
	a max.		30m/s ²
	Travel distance	Unsupported travels and up to 10m for gliding applications, Class 2	

Cable structure

	Conductor	Very finely stranded special conductors of particularly bending resistant design made of tinned copper wires.
	Core insulation	Mechanically high-quality TPE mixture.
	Core structure	According to measuring system specification.
	Core identification	According to measuring system specification. ► Product range table
	Element shield	Extremely bending-resistant, tinned copper cover. Coverage approx. 90% optical
	Element shield	TPE mixture on pair shielding adapted to suit the requirements in e-chains®.
	Intermediate layer	Foil taping over the outer layer.
	Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage linear approx. 55%, optical approx. 80%
	Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2) Colour: Yellow-green (similar to RAL 6018)

Electrical information

	Nominal voltage	50V 300V (following UL)
	Testing voltage	500V

Example image

igus® chainflex® CF111.D

36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



EU2023

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Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 400m	
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Class 4.2.3.1

Properties and approvals

	UV resistance	Medium
	Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
	Offshore	MUD-resistant following NEK 606 - status 2016
	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)
	Halogen-free	Following DIN EN 60754
	UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
	UL/CSA AWM	See data sheet for details ► www.igus.eu/CF111D
	NFPA	Following NFPA 79-2018, chapter 12.9
	DNV	Type Approval Certificate TAE00003X4
	EAC	Certificate No. RU C-DE.ME77.B.00295/19
	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. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
	DESINA	According to VDW, DESINA standardisation
	CE	Following 2014/35/EU
	UK CA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

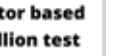
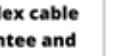
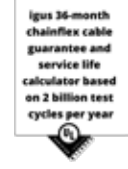
Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	12.5	13.5	14.5
-15/+70	10	11	12
+70/+80	12.5	13.5	14.5

* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travels and up to 10m for gliding applications, Class 2
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct sun radiation
- Machining units/machine tools, low temperature applications



UL-verified chainflex® guarantee ... www.igus.eu/ul-verified

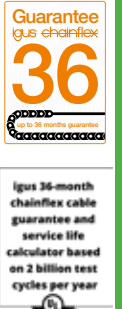
igus® chainflex® CF111.D

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]
CF111.001.D	(3x(2x0.14)C)+(4x0.14)+(2x0.5)C	9.5	64	104
CF111.002.D	(3x(2x0.14)C)+2x(0.5)C	9.5	66	109
CF111.004.D	(2x(2x(2x0.14)))+(4x0.14)C+(4x0.5)C	10.5	70	116
CF111.006.D	(3x(2x0.14)C)+(4x0.14)+(4x0.25)+(2x0.5)C	10.0	76	122
CF111.009.D	(4x(2x0.25)+2x0.5)C	8.0	49	79
CF111.010.D	(4x(2x0.25)+2x1.0)C	8.5	61	94
CF111.011.D	(4x(2x0.34)+4x0.5)C	9.5	72	115
CF111.014.D	(4x(2x0.25)C)+(2x0.5)C	10.5	77	124
CF111.015.D	(4x(2x0.14)+4x0.5)C	8.5	54	87
CF111.020.D	(3x(2x0.14)+2x(4x0.14)+(2x0.5)C	8.5	52	87
CF111.021.D	((4x0.25)+3x(2x0.25+2x0.5)C	9.5	80	117
CF111.022.D	((2x0.25)+5x0.5)C	7.0	46	75
CF111.024.D	((4x0.14)+2x(2x0.34))C	7.0	36	61
CF111.026.D	(6x(2x0.25)+(2x0.34)C)+(2x0.5)C	10.5	74	119

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.	Core group	Colour code
CF111.001.D	3x(2x0.14)C	green/yellow, black/brown, red/orange
	(4x0.14)	grey/blue/white-yellow/white-black
	(2x0.5)	brown-red/brown-blue
CF111.002.D	3x(2x0.14)C	green/yellow, black/brown, red/orange
	2x(0.5)C	black, red
CF111.004.D	2x(2x(2x0.14))	(brown/green)/(yellow/violet), (grey/pink)/(red/black)
	(4x0.14)C	yellow-black/red-black/green-black/blue-black
	(4x0.5)	brown-green/white-green/blue/white
CF111.006.D	3x(2x0.14)C	green/yellow, black/brown, red/orange
	(4x0.14)	grey/blue/white-yellow/white-black
	(4x0.25)	yellow-brown/grey-brown/green-black/green-red
CF111.009.D	(2x0.5)	brown-red/brown-blue
	4x(2x0.25)	brown/green, blue/violet, grey/pink, red/black
CF111.010.D	2x0.5	white, brown
	4x(2x0.25)	brown/green, blue/violet, grey/pink, red/black
CF111.011.D	2x1.0	white, brown
	4x(2x0.34)	black/brown, red/orange, green/yellow, blue/violet
CF111.014.D	4x0.5	black-white, red-white, yellow-white, blue-white
	4x(2x0.25)C	white/brown, green/yellow, grey/pink, blue/red
CF111.015.D	(2x0.5)	black no. 1/black no. 2
	4x(2x0.14)	brown/green, yellow/violet, grey/pink, red/black
CF111.020.D	4x0.5	blue, white, brown-green, white-green
	3x(2x0.14)	blue/red, black/violet, grey-pink/red-blue
	2x(4x0.14)	green/grey/yellow/pink, white-green/white-yellow/brown-green/yellow-brown
CF111.021.D	(2x0.5)	white/brown
	3x2x0.5	black no. 1/black no. 2, black no. 3/black no. 4, black no. 5/black no. 6
	(4x0.25)	white/brown/grey/black
CF111.022.D	3x2x0.25	white/yellow, white/grey, black/orange
	(2x0.25)	white/brown
CF111.024.D	5x0.5	green, yellow, grey, pink, blue
	(4x0.14)	yellow/grey/violet/pink
CF111.026.D	2x(2x0.34)	white-green/white, brown-green/blue
	6x(2x0.25)	green/yellow, grey/pink, blue/red, black/violet, grey-pink/red-blue, white-green/brown-green
	(2x0.34)C	white/brown
	(2x0.5)	blue/red





Example image

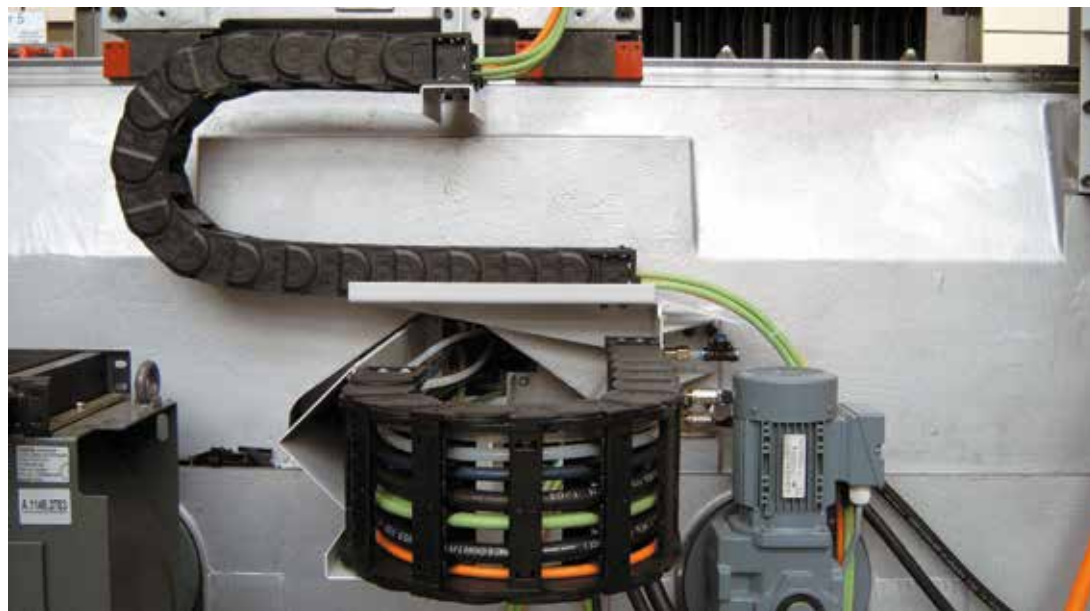
Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF111.027.D	(5x(2x0.14)+2x0.5)C	8.0	45	76
CF111.028.D	(2x(2x0.15)+(2x0.38))C	7.5	40	73
CF111.032.D ⁵⁾	3x(2x0.14)C+(3x0.14)C	8.5	35	82
CF111.040.D	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	9.0	81	118
New CF111.041.D	(2x(2x0.18)+5x0.5)C	7.5	49	80
New CF111.042.D	(3x(2x0.18)+6x0.5)C	8.5	62	99

⁵⁾ Manufactured without overall shield

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
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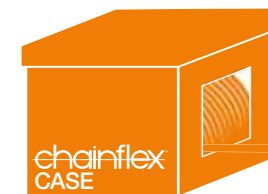
Part No.	Core group	Colour code
CF111.027.D	5x(2x0.14) 2x0.5	brown/green, yellow/grey, white/violet, red/black, pink/blue white-green, white-red
CF111.028.D	2x(2x0.15) (2x0.38)	green/yellow, pink/blue red/black
CF111.032.D ⁵⁾	3x(2x0.14)C (3x0.14)C	green/black, yellow/black, red/black grey/pink/black
CF111.040.D	3x(4x0.14) (2x0.14+2x0.34) 2x1.5	black/red/white-black/white-red, green/blue/white-green/white-blue, yellow/brown/white-yellow/white-brown violet/orange/weißviolet/weißorange white-grey, grey
CF111.041.D	2x(2x0.18) 5x0.5	white/brown, black/violet blue, violet, green, yellow, grey
CF111.042.D	3x(2x0.18) 6x0.5	white/black, red/white, black/red black no. 1, black no. 2, black no. 3, red no. 4, red no. 5, red no. 6

Further cable types ▶ Page 258



readychain® systems from igus® are completely pre-harnessed with chainflex® cables, hoses, metal parts etc.

EPLAN download, configurators ▶ www.igus.eu/CF111D



Cables available in the chainflex® CASE

Simple savings on delivery, storage space and re-ordering with the chainflex® CASE - ship'n store by igus®.

More on this on page 24/25 and online: www.igus.eu/cf-case



cost down...



...life up

Reduce cost, improve technology, now!

Do the chainflex® price check ...
www.igus.eu/cf-price-check

... for example: reduce cost with CF211 ...



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year

