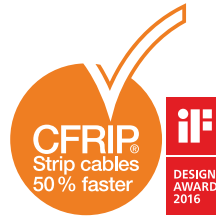


Measuring system cable | PUR | chainflex® CF113.D



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

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	-25 °C to +80 °C -40 °C to +80 °C (following DIN EN 60811-504) -50 °C to +80 °C (following DIN EN 50305)
v max.	unsupported gliding	10 m/s 5 m/s
a max.		50 m/s ²
Travel distance		Unsupported travel distances and up to 100 m for gliding applications, Class 5

Cable structure

Conductor		Stranded conductor in especially bending-resistant design consisting of tinned copper wires (following DIN EN 60228).
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 braiding made of tinned copper wires. Coverage approx. 70 % inear, approx. 90 % optical
Inner jacket		TPE mixture, adapted to suit the requirements in e-chains®.
Overall shield		Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % inear, approx. 90 % optical
Outer jacket		Low-adhesion, 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)
CFRIP®		Strip cables faster: a tear strip is moulded into the inner jacket Video ▶ www.igus.eu/CFRIP

Electrical information

Nominal voltage	50 V
Testing voltage	500 V

Class 6.5.3.1

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 2009.
Flame retardant	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992).
Halogen-free	Following DIN EN 60754.
UL/CSA	Style 1589 and 20236, 30 V, 80 °C
NFPA	Following NFPA 79-2012 chapter 12.9.
DNV-GL	Certified according to GL type testing – Certificate no.: 61 936-14 HH
EAC	Certificate no. RU C-DE.ME77.B.01559 (TR ZU)
CTP	Certificate no. C-DE.PB49.B.00416 (Fire safety)
CEI	Following CEI 20-35.
Lead-free	Following 2011/65/EU (RoHS-II).
Cleanroom	According to ISO Class 1. Outer jacket material complies with CF27.07.05.02.01.D, tested by IPA according to standard 14644-1.
DESINA	According to VDW, DESINA standardisation.
CE	Following 2014/35/EU.

Guaranteed lifetime according to guarantee conditions (Page 22-23)

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	10	11	12
-15/+70	7.5	8.5	9.5
+70/+80	10	11	12

* Higher number of double strokes? Online lifetime calculation: www.igus.eu/chainflexlife

Typical mechanical application areas

- For extremely heavy duty applications
- Almost unlimited resistance to oil
- Indoor and outdoor applications without direct solar radiation
- Unsupported travel distances and up to 100 m for gliding applications
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling equipment, Clean room, semiconductor handling, indoor cranes, low temperature applications

Strip cables 50% faster

igus® chainflex® CF113.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]	Part No.	Core group	Colour code
CF113.001.D	(3x(2x0.14)C)+(4x0.14)+(2x0.5)C	10.5	80	180	CF113.001.D	3x(2x0.14)C (4x0.14) (2x0.5)	green/yellow, black/brown, red/orange grey/blue/white-yellow/white-black brown-red/brown-blue
CF113.002.D	(3x(2x0.14)C)+2x(0.5)C	10.5	82	193	CF113.002.D	3x(2x0.14)C 2x(0.5)C	green/yellow, black/brown, red/orange black, red
CF113.003.D	(3x(2x0.14))+2x1.0)C	8.5	61	130	CF113.003.D	3x(2x0.14) 2x1.0	white/brown, green/yellow, grey/pink blue, red
CF113.004.D	(2x(2x(2x0.14)))+(4x0.14)C+(4x0.5)C	11.5	91	204	CF113.004.D	2x(2x(2x0.14)) (4x0.14)C (4x0.5)	(brown/green)/(yellow/violet), (grey/pink)/(red/black) yellow-black/red-black/green-black/blue-black brown-green/white-green/blue/white
CF113.005.D	(4x(2x0.14))+4x0.5)C	9.5	68	151	CF113.005.D	4x(2x0.14) 4x0.5	white/brown, green/yellow, grey/pink, blue/red black, violet, grey-pink, red-blue
CF113.006.D	(3x(2x0.14)C)+(4x0.14)+(4x0.25)+(2x0.5)C	11.0	93	206	CF113.006.D	3x(2x0.14)C (4x0.14) (4x0.25) (2x0.5)	green/yellow, black/brown, red/orange grey/blue/white-yellow/white-black brown-yellow/brown-grey/green-black/green-red brown-red/brown-blue
CF113.007.D ²⁾	(4x0.34)C	6.0	32	67	CF113.007.D ²⁾	4x0.34	white, green, brown, yellow(star-quad stranding)
CF113.008.D	(3x(2x0.25))C	7.5	37	85	CF113.008.D	3x(2x0.25)	white/brown, green/yellow, grey/pink
CF113.009.D	(4x(2x0.25))+2x0.5)C	9.5	66	143	CF113.009.D	4x(2x0.25) 2x0.5	brown/green, blue/violet, grey/pink, red/black white, brown
CF113.010.D	(4x(2x0.25))+2x1.0)C	9.5	80	167	CF113.010.D	4x(2x0.25) 2x1.0	brown/green, blue/violet, grey/pink, red/black white, brown
CF113.011.D	(4x(2x0.34))+4x0.5)C	10.5	96	208	CF113.011.D	4x(2x0.34) 4x0.5	black/brown, red/orange, green/yellow, blue/violet black-white, red-white, yellow-white, blue-white
CF113.012.D ¹¹⁾	(3x(2x0.14)C)+(3x0.14)C+(4x0.14)+(2x0.14+2x0.5)C	11.5	99	229	CF113.012.D ¹¹⁾	3x(2x0.14)C (3x0.14)C (4x0.14) (2x0.14+2x0.5)	green/yellow, white/grey, blue/red red/green/brown grey/yellow/pink/violet blue/brown-blue/grey/brown-red
CF113.013.D	(3x(2x0.14)C)+2x0.5)C	9.5	70	160	CF113.013.D	3x(2x0.14)C 2x0.5	white/brown, green/yellow, grey/pink blue, red
CF113.014.D ¹¹⁾	(4x(2x0.25)C)+(2x0.5)C	11.5	95	219	CF113.014.D ¹¹⁾	4x(2x0.25)C (2x0.5)	white/brown, green/yellow, grey/pink, blue/red black no.1/black no.2
CF113.015.D	(4x(2x0.14))+4x0.5)C	9.5	68	147	CF113.015.D	4x(2x0.14) 4x0.5	brown/green, yellow/violet, grey/pink, red/black blue, white, brown-green, white-green
CF113.016.D	(3x(2x0.25)C)C	9.5	65	147	CF113.016.D	3x(2x0.25)C	white/brown, green/yellow, grey/pink
CF113.017.D ⁴⁾	(4x(2x0.14)+(4x0.14)C)+4x1.0)C	11.0	116	252	CF113.017.D ⁴⁾	4x(2x0.14) (4x0.14)C 4x1.0	red/black, brown/green, yellow/violet, grey/pink blue-black/yellow-black/red-black/green-black white-green, brown-green, blue, white

The chainflex® types marked with ²⁾ are cables designed as a star-quad.
⁴⁾ manufactured without inner jacket
¹¹⁾ Phase-out model
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

Other types ► page 236



Measuring system cable | PUR | chainflex® CF113.D

Class 6.5.3.1

Strip cables 50% faster

igus® chainflex® CF113.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]	Part No.	Core group	Colour code
CF113.018.D ⁴⁾	(2x(2x0.25)+2x0.5)C	7.0	40	81	CF113.018.D ⁴⁾	2x(2x0.25) 2x0.5	red/blackgreen, grey/pink white, brown
CF113.019.D ⁴⁾	(3x(2x0.25)C+(3x0.25)+2x1.0)C	10.5	106	235	CF113.019.D ⁴⁾	3x(2x0.25)C (3x0.25) 2x1.0	brown/green, grey/pink, red/black blue/violet/yellow white, brown
CF113.022.D	((2x0.25)+5x0.5)C	8.5	55	126	CF113.022.D	(2x0.25) 5x0.5	white/brown green, yellow, grey, pink, blue
CF113.025.D	(3x(2x0.14)C+(2x0.5)C)C	11.0	81	188	CF113.025.D	3x(2x0.14)C (2x0.5)C	green/yellow, blue/red, grey/pink white/brown
CF113.027.D	(5x(2x0.14)+2x0.5)C	9.0	58	127	CF113.027.D	5x(2x0.14) 2x0.5	brown/green, yellow/grey, white/violet, red-black, pink/blue white-green, white-red
CF113.028.D ⁴⁾	(2x(2x0.20)+(2x0.38))C	7.5	47	74	CF113.028.D ⁴⁾	2x(2x0.20) (2x0.38)	green/yellow, pink/blue red/black
CF113.029.D	(5x(2x0.25)C+(2x0.25+2x0.5)C)	13.0	119	278	CF113.029.D	5x(2x0.25)C (2x0.25+2x0.5)	white/brown, green/yellow, grey/pink, blue/red, black/violet grey-pink/brown-green/white-green/red-blue
CF113.031.D	(2x(2x0.25)C+2x1.0)C	9.0	76	161	CF113.031.D	2x(2x0.25)C 2x1.0	white/brown, green/yellow black no.1, black no.2
CF113.032.D ⁵⁾	3x(2x0.14)C+(3x0.14)C	8.0	68	155	CF113.032.D ⁵⁾	3x(2x0.14)C (3x0.14)C	yellow/black, red/black grey/pink/black
CF113.033.D ⁵⁾	4x(2x0.14)C+2x(1.0)C	10.0	107	247	CF113.033.D ⁵⁾	4x(2x0.14)C 2x(1.0)C	yellow/black, red/black, blue/black, green/black white, brown
CF113.034.D ^{5) 11)}	3x(2x0.14)C+(4x0.14)C+2x(2x0.5)C	11.5	116	201	CF113.034.D ^{5) 11)}	3x(2x0.14)C (4x0.14)C 2x(2x0.5)C	green/black, violet/black, blue/black red/yellow/black-red/black-yellow black/white, black/brown
CF113.035.D	(4x(2x0.25)C+2x(2x0.5)C)	12.5	114	261	CF113.035.D	4x(2x0.25)C 2x(2x0.5)	white/brown, green/yellow, grey/pink, blue/red black no.1/black no.2, black no.3/black no.4
CF113.036.D	(5x(2x0.25)C)	9.5	58	108	CF113.036.D	5x(2x0.25)	white/brown, green/yellow, grey/pink, blue/red, black/violet
CF113.037.D	(6x(2x0.25)C)	10.0	69	120	CF113.037.D	6x(2x0.25)	white/brown, green/yellow, grey/pink, blue/ red, black/violet, grey-pink/red-blue
CF113.038.D	(3x(2x0.14)+(2x0.34)C)	8.0	36	77	CF113.038.D	3x(2x0.14) (2x0.34)	white/brown, green/yellow, grey/pink blue/red
CF113.040.D	(3x(4x0.14)+(2x0.14+2x0.34)+2x1.5)C	10.5	101	165	CF113.040.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/white-violet/white-orange white-grey, grey

⁴⁾ manufactured without inner jacket

⁵⁾ manufactured without overall shield

¹¹⁾ Phase-out model

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



Other types ► page 234