

Control cable | TPE | chainflex® CF99.PLUS

**100 million**
Double strokes guaranteed






**3 x d**
Bend radius, e-chain®

**100m**
Travel distance, e-chain®








- For heaviest duty applications and very small radii down to 3 x d
- TPE outer jacket
- Shielded
- Oil and bio-oil-resistant
- PVC and halogen-free
- Low-temperature-flexible
- Hydrolysis and microbe-resistant

100 million
double strokes
in e-chains®
guaranteed!



Dynamic information

	Bend radius	e-chain® linear flexible	minimum 3 x d
		fixed	minimum 2 x d
	Temperature	e-chain® linear flexible	-35°C up to +90°C
		fixed	-50°C up to +90°C (following DIN EN 60811-504)
	v max.	unsupported	10m/s
	a max.	gliding	6m/s
	Travel distance	Short, very fast applications with small radii and restricted installation space, Class 5	

Cable structure

	Conductor	Conductor consisting of a highly flexible special alloy.
	Core insulation	Mechanically high-quality TPE mixture.
	Core structure	Cores wound in a layer with especially short pitch length.
	Core identification	Colour code in accordance with DIN 47100.
	Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
	Overall shield	Extremely bending resistant braiding made of alloy wires. Coverage linear approx. 70%, optical approx. 90%
	Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Steel blue (similar to RAL 5011)

Electrical information

	Nominal voltage	300/500 V (following DIN VDE 0298-3)
	Testing voltage	2,000 V (following DIN EN 50395)

EPLAN download, configurators ► www.igus.eu/CF99PLUS

4-years guarantee ... more than 1,350 cable types from stock ... no cutting charges













EU2024

Class 7.5.4.1

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°			

Properties and approvals

	UV resistance	High
	Oil resistance	Oil-resistant (following DIN EN 60811-404), bio-oil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
	Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
	Halogen-free	Following DIN EN 60754
	PFAS-free	Use of PFAS-free materials according to the content of the REACH directive and its rules for the production and processing of chemical substances
	UL verified	Certificate No. V293650: "igus 4-year chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
	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 CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
	CE	Following 2014/35/EU

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	40 million	100 million
Temperature, from/to [°C]	R min. [x d]	R min. [x d]	R min. [x d]
-35/-25	4	6	7
-25/+80	3	5	6
+80/+90	4	6	7

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

Typical application areas

- For heaviest duty applications and very small radii down to 3 x d, Class 7
- Especially for short, very fast applications with small radii and restricted installation space, Class 5
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Pick and place machines, automatic doors, cleanroom, very quick handling



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

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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]
CF99.PLUS.01.02	(2x0.14)C	6.0	12	39
CF99.PLUS.01.04	(4x0.14)C	6.5	16	48
CF99.PLUS.01.08	(8x0.14)C	8.0	28	76
CF99.PLUS.02.04	(4x0.25)C	7.0	23	60
CF99.PLUS.03.08	(8x0.34)C	9.5	45	111

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



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



Order example: **CF99.PLUS.01.02** – to your desired length (0.5m steps)
CF99.PLUS chainflex® series **.01** Code nominal cross section **.02** Number of cores



Order online ► www.igus.eu/CF99PLUS



Delivery time 24hrs or today.
Delivery time means time until goods are shipped.



Guarantee
igus chainflex
4 YEARS
up to 4 years guarantee

igus 4-year chainflex cable guarantee and service life calculator based on 2 billion test cycles per year

Smaller and smaller installation spaces, shorter and shorter cycle times, 99% availability. These are the requirements that innovative automation specialists must meet.

To do this, igus® has been working on an unprecedented innovation for more than ten years.

The new generation of chainflex® **CF98.PLUS** (unshielded) and chainflex® **CF99.PLUS** (shielded) control cables are a consistent development of the well-known, highly successful CF98/CF99 and CF298 and CF299 control cable series.

Systematic research on process technology and insulation and conductor materials supported by a wide variety of test series in the igus® laboratory enabled igus® to develop this new generation of control cables.

The result is cable series that can be used reliably with a minimum **bend radius of just 3 x d** (3 x cable diameter).

The cross-sectional areas range from 0.14mm² to 0.5mm² in both the shielded and unshielded versions.

This makes igus® the first and only manufacturer to offer catalogue goods for use in an e-chain® with a **guaranteed service life of 100 million double strokes!**

This is with acceleration values of up to 100m/s².



igus 4-year chainflex cable guarantee and service life calculator based on 2 billion test cycles per year

