

Control cable | TPE | chainflex® CF99.PLUS

36 100,000,000
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	300/300V
 Testing voltage	1,500V

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

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



EU2023












EU2023

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
 UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
 EAC	Certificate No. RU C-DE.ME77.B.00300/19
 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 CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
 CE	Following 2014/35/EU
 UKCA	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	40 million	100 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor 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



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

UL

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]
New CF99.PLUS.01.02	(2x0.14)C	6.0	12	39
New CF99.PLUS.01.04	(4x0.14)C	6.5	16	48
New CF99.PLUS.01.08	(8x0.14)C	8.0	28	76
New CF99.PLUS.02.04	(4x0.25)C	7.0	23	60
New 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 **36** months
igus 36-month 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.



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