

Servo cable | PVC | chainflex® CF21.UL

- 36** 10 million Guaranteed double strokes
- 7.5 x d** Bend radius e-chain®
- 100 m** Travel distance, e-chain®

- For heavy duty applications
- PVC outer jacket
- Shielded
- Oil-resistant
- Flame retardant

New pair shielding for 30% faster harnessing

Dynamic information

Bend radius	e-chain® linear flexible	min. 7.5 x d min. 6 x d
	fixed	min. 4 x d
Temperature	e-chain® linear flexible	+5 °C up to +70 °C -5 °C up to +70 °C (following DIN EN 60811-504)
	fixed	-15 °C up to +70 °C (following DIN EN 50305)
v max.	unsupported	10 m/s
	gliding	5 m/s
a max.		80 m/s ²
Travel distance		Unsupported travels and up to 100 m for gliding applications, Class 5

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Power cores with control pair elements wound with elements for high tensile stresses.
Core identification	Power cores: Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- 1 Control pair: Black cores with white numbers. 1. Control core: 4 2. Control core: 5 2 Control pairs: Black cores with white numbers. 1. Control core: 5 2. Control core: 6 3. Control core: 7 4. Control core: 8
Element shield	Extremely bending-resistant braiding made of tinned copper wires.
Inner jacket	PVC mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage linear approx. 70 %, optical approx. 90 %
Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Moss green (similar to RAL 6005)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ► www.igus.eu/CFRIP

Example image

igus® chainflex® CF21.UL

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	≥ 400 m	
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	4	±360°			

Class 5.5.2.1

Electrical information

Nominal voltage	600/1000 V (following DIN VDE 0298-3)
Testing voltage	4000 V (following DIN EN 50395)

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2
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)
UL/CSA	Style 10492 and 2570, 1000 V, 80 °C
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.02324 (TR ZU)
CTP	Certificate No. C-DE.PB49.B.00420 (Fire protection)
CEI	Following CEI 20-35
Lead-free	Following 2011/65/EC (RoHS-II)
Cleanroom	According to ISO Class 2. The outer jacket material of this series complies with CF5.10.07 - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Guaranteed service life (details see 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]
+5/+15	10	11	12
+15/+60	7.5	8.5	9.5
+60/+70	10	11	12

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

Typical mechanical application areas

- For heavy duty applications, Class 5
- Unsupported travels and up to 100 m for gliding applications, Class 5
- Light oil influence, Class 2
- No torsion, Class 1
- 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



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Strip cables 50 % faster

igus® chainflex® CF21.UL

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]
1 Control pair shielded				
CF21.07.05.02.01.UL	(4G0.75+(2x0.5)C)C	11.5	83	185
CF21.15.15.02.01.UL	(4G1.5+(2x1.5)C)C	13.0	149	271
CF21.25.15.02.01.UL	(4G2.5+(2x1.5)C)C	14.5	203	334
CF21.40.15.02.01.UL	(4G4.0+(2x1.5)C)C	16.0	264	422
CF21.60.15.02.01.UL	(4G6.0+(2x1.5)C)C	18.0	345	558
CF21.100.15.02.01.UL	(4G10+(2x1.5)C)C	22.5	543	872
2 Control pairs shielded				
CF21.07.03.02.02.UL	(4G0.75+2x(2x0.34)C)C	12.5	109	223
CF21.10.07.02.02.UL	(4G1.0+2x(2x0.75)C)C	13.5	157	282
CF21.15.07.02.02.UL	(4G1.5+2x(2x0.75)C)C	14.5	180	328
CF21.25.15.02.02.UL	(4G2.5+2x(2x1.5)C)C	17.0	267	458
CF21.40.15.02.02.UL	(4G4.0+2x(2x1.5)C)C	18.5	324	538
CF21.60.15.02.02.UL	(4G6.0+2x(2x1.5)C)C	21.5	422	726
CF21.100.15.02.02.UL	(4G10+2x(2x1.5)C)C	24.0	606	968
CF21.160.15.02.02.UL	(4G16+2x(2x1.5)C)C	27.5	889	1323

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


Basic requirements
Travel distance
Oil resistance
Torsion

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

Class 5.5.2.1

 **Order example: CF21.40.15.02.01.UL** – to your desired length (0.5 m steps)
CF21.UL chainflex® series .40 Code nominal cross section .15 Code nominal cross section signal pairs
.02 Identification pairs .01 Number of pairs

 Online order ► www.chainflex.eu/CF21.UL

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



chainflex® CF21.UL: cables for energy supply systems in spinneret production. e-chain®: E2/000

