

Servo cable | PVC | chainflex® CF210.UL

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

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	+5 °C to +70 °C
		flexible	-5 °C to +70 °C (following DIN EN 60811-504)
		fixed	-15 °C to +70 °C (following DIN EN 50305)
	v max.	unsupported	10 m/s
	a max.	gliding	2 m/s
	Travel distance	Unsupported travel distances and up to 10 m for gliding applications, Class 2	

Cable structure

	Conductor	Stranded conductor in bending-resistant design consisting of bare copper wires (following DIN EN 60228).	
	Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.	
	Core structure	Power cores and control pair elements wound with a short pitch length around a high tensile strength centre element.	
	Core identification	Power cores: Black cores with white numerals, one core green-yellow. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- 1 Control pair: Black cores with white numerals. 1. Control core: 4 2. Control core: 5 2 Control pairs: Black cores with white numerals. 1. Control core: 5 2. Control core: 6 3. Control core: 7 4. Control core: 8	
	Element shield	Bending-resistant braiding made of tinned copper wires.	
	Intermediate layer	Foil taping over the outer layer.	
	Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage approx. 55 % inear, approx. 80 % optical	
	Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Pastel orange (similar to RAL 2003)	

Example image

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	7	≥ 400 m
Oil resistance	none	1	2	3	4	5	6	7	highest
Torsion	none	1	2	3	4	5	6	7	±180°

Class 4.2.2.1

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 10989 and 2570, 1000 V, 80 °C
	NFPA	Following NFPA 79-2012 chapter 12.9.
	EAC	Certificate no. RU C-DE.ME77.B.02324 (TR ZU)
	CTP	Certificate no. C-DE.PB49.B.00420 (Fire safety)
	CEI	Following CEI 20-35.
	Lead-free	Following 2011/65/EU (RoHS-II).
	Cleanroom	According to ISO Class 2. Outer jacket material complies with CF5.10.07, tested by IPA according to standard 14644-1.
	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]
+5/+15	12.5	13.5	14.5
+15/+60	10	11	12
+60/+70	12.5	13.5	14.5

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

Typical mechanical application areas

- For medium duty applications
- Light oil influence
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Unsupported travel distances and up to 10 m for gliding applications
- Wood/stone processing, Packaging industry, supply systems, Handling, adjusting equipment

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Class 4.2.2.1

Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
Travel distance	1	2	3	4	5	6	7	≥ 400 m
Oil resistance	none	1	2	3	4	highest		
Torsion	none	1	2	3	±180°			



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				
CF210.UL.15.15.02.01	(4G1.5+(2x1.5)C)C	12.0	164	263
CF210.UL.25.15.02.01	(4G2.5+(2x1.5)C)C	14.0	233	324
CF210.UL.40.15.02.01	(4G4.0+(2x1.5)C)C	15.0	300	448
CF210.UL.60.15.02.01	(4G6.0+(2x1.5)C)C	16.5	401	557
2 Control pairs shielded				
CF210.UL.15.07.02.02	(4G1.5+2x(2x0.75)C)C	13.5	185	309
CF210.UL.25.15.02.02	(4G2.5+2x(2x1.5)C)C	16.0	286	439
CF210.UL.40.15.02.02	(4G4.0+2x(2x1.5)C)C	17.0	363	543
CF210.UL.60.15.02.02	(4G6.0+2x(2x1.5)C)C	18.5	468	674

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

