

# Servo cable | PVC | chainflex® CF210.UL






**36** 10 million  
Double strokes guaranteed

**10 x d**  
Bend radius, e-chain®









**10m**  
Travel distance, e-chain®

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

## Dynamic information

 <b>Bend radius</b>	<b>e-chain® linear</b>	minimum 10 x d
	<b>flexible</b>	minimum 8 x d
	<b>fixed</b>	minimum 5 x d
 <b>Temperature</b>	<b>e-chain® linear</b>	+5°C up to +70°C
	<b>flexible</b>	-5°C up to +70°C (following DIN EN 60811-504)
	<b>fixed</b>	-15°C up to +70°C (following DIN EN 50305)
 <b>v max.</b>	<b>unsupported</b>	10m/s
	<b>gliding</b>	2m/s
 <b>a max.</b>		50m/s <sup>2</sup>
 <b>Travel distance</b>		Unsupported travels and up to 10m for gliding applications, Class 2

## Cable structure

 <b>Conductor</b>	Stranded conductor in bending-resistant version consisting of bare copper wires (following DIN EN 60228).
 <b>Core insulation</b>	Mechanically high-quality, especially low-capacitance XLPE mixture.
 <b>Core structure</b>	Power cores and control pair elements wound with a short pitch length around a high tensile strength centre element.
 <b>Core identification</b>	<b>Power cores:</b> 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- <b>1 control pair:</b> Black cores with white numbers. 1. Control core: 4 2. Control core: 5 <b>2 control pairs:</b> Black cores with white numbers. 1. Control core: 5 2. Control core: 6 3. Control core: 7 4. Control core: 8
 <b>Element shield</b>	Bending-resistant braiding made of tinned copper wires.
 <b>Intermediate layer</b>	Foil taping over the outer layer.
 <b>Overall shield</b>	Bending-resistant braiding made of tinned copper wires. Coverage linear approx. 55%, optical approx. 80%
 <b>Outer jacket</b>	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

EPLAN download, configurators ► [www.igus.eu/CF210UL](http://www.igus.eu/CF210UL)

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



EU2023

EU2023





Basic requirements  
Travel distance  
Oil resistance  
Torsion














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

## Class 4.2.2.1

### Electrical information

 <b>Nominal voltage</b>	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
 <b>Testing voltage</b>	4,000V (following DIN EN 50395)

### Properties and approvals

 <b>UV resistance</b>	Medium
 <b>Oil resistance</b>	Oil-resistant (following DIN EN 50363-4-1), Class 2
 <b>Flame-retardant</b>	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
 <b>Silicone-free</b>	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
 <b>UL verified</b>	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
 <b>UL/CSA AWM</b>	See data sheet for details ► <a href="http://www.igus.eu/CF210UL">www.igus.eu/CF210UL</a>
 <b>NFPA</b>	Following NFPA 79-2018, chapter 12.9
 <b>EAC</b>	Certificate No. RU C-DE.ME77.B.00863/20
 <b>REACH</b>	In accordance with regulation (EC) No. 1907/2006 (REACH)
 <b>RoHS</b>	Following 2011/65/EC (RoHS-II/RoHS-III)
 <b>Cleanroom</b>	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
 <b>CE</b>	Following 2014/35/EU
 <b>UKCA</b>	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	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? Service life calculation online ► [www.igus.eu/chainflexlife](http://www.igus.eu/chainflexlife)

### Typical application areas

- For medium duty applications, Class 4
- Unsupported travels and up to 10m for gliding applications, Class 2
- Light oil influence, Class 2
- No torsion, Class 1
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Wood/stone processing, packaging industry, feeding, handling, adjusting devices





# Servo cable | PVC | chainflex® CF210.UL

## Class 4.2.2.1

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°			



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]
<b>1 control pair shielded</b>				
CF210.UL.15.15.02.01	(4G1.5+(2x1.5)C)	12.5	154	245
CF210.UL.25.15.02.01	(4G2.5+(2x1.5)C)C	14.0	210	299
CF210.UL.40.15.02.01	(4G4.0+(2x1.5)C)C	15.0	255	383
CF210.UL.60.15.02.01	(4G6.0+(2x1.5)C)C	16.5	343	488
<b>2 control pairs shielded</b>				
CF210.UL.15.07.02.02	(4G1.5+2x(2x0.75)C)C	13.5	161	278
CF210.UL.25.15.02.02	(4G2.5+2x(2x1.5)C)C	16.0	244	381
CF210.UL.40.15.02.02	(4G4.0+2x(2x1.5)C)C	17.0	332	428
CF210.UL.60.15.02.02	(4G6.0+2x(2x1.5)C)C	19.0	403	598
<b>without control pair</b>				
CF210.UL.05.04	(4G0.5)C	7.0	34	63
CF210.UL.15.04	(4G1.5)C	10.0	86	140
CF210.UL.25.04	(4G2.5)C	11.5	146	209
CF210.UL.40.04	(4G4.0)C	13.0	195	288

**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

**Order example: CF210.UL.40.15.02.01 - to your desired length (0.5m steps)**  
CF210.UL chainflex® series .40 Code nominal cross section .15 Code nominal cross section signal pairs  
.02 Identification pairs .01 Number of pairs

Order online ► [www.igus.eu/CF210UL](http://www.igus.eu/CF210UL)

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



### 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](http://www.igus.eu/cf-case)



chainflex® servo cable in a vertical e-chain®



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

- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 



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

EPLAN download, configurators ► [www.igus.eu/CF210UL](http://www.igus.eu/CF210UL)