

Servo cable | PVC | Chainflex® CF21-UL






36 10,000,000
Cycles guaranteed

7.5 x d
Bend radius E-Chain®










328.1 ft
Travel distance E-Chain®

- For high mechanical load requirements
- PVC outer jacket
- Shielded
- Oil-resistant
- Flame retardant
- Variable Frequency Drives

Dynamic Information

	Bend radius	E-Chain® linear	min. 7.5 x d
		flexible	min. 6 x d
		fixed	min. 4 x d
	Temperature	E-Chain® linear	+41 °F to +158 °F (+5 °C to +70 °C)
		flexible	+23 °F to +158 °F (-5 °C to +70 °C)
		fixed	+5 °F to +158 °F (-15 °C to +70 °C)
	v max.	unsupported	32.81 ft/s (10 m/s)
		gliding	16.41 ft/s (5 m/s)
	a max.		262.5 ft/s ² (80 m/s ²)
	Travel distance		Unsupported travel distances and for gliding applications up to 328.1 ft (100 m), Class 5

Cable structure

	Conductors	Conductor consisting of bare copper wires (according to DIN EN 60228).
	Conductor insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
	Conductor construction	Power conductors and Signal Pairs cabled with short pitch.
	Color code	Power conductors: Black with white numbers, one conductor green-yellow. 1. U / L1 / C / L+ 2. V / L2 3. W / L3 / D / L- 1 Control pair: Black with white numbers. Control Pair Printed 4 and 5 2 Control pairs: Black with white numbers. Control Pair 1: Printed 5 and 6 Control Pair 2: Printed 7 and 8
	Signal Pair shield	Aluminium/Polyester tape and tinned copper braid.
	Inner jacket	PVC mixture adapted to suit the requirements in E-Chains®.
	Overall shield	Extremely bending-resistant tinned copper braid. 90 % optical coverage
	Outer jacket	Low-adhesion, oil-resistant mixture on the basis of PVC, adapted to suit the requirements in E-Chains® (following DIN EN 50363-4-1). Color: Green (similar to RAL 6005)
	CFRIP®	Strip 50% faster: a tear strip is molded into the inner jacket Video ► www.igus.com/CFRIP

Example image

Class 5.5.2.1

Basic requirements
 Travel distance
 Oil resistance
 Torsion













low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 1312 ft	
none	1	2	3	4	highest			
none	1	2	3	±180°				

CF21-UL
 PVC
 7.5 x d

Electrical Information

 Nominal voltage	1000 V
 Test 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 resistance	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 79	Complies to 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)
 Clean room	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)

Cycles*	5 million	7.5 million	10 million
Temperature, from/to [°F]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+41/+59	10	11	12
+59/+140	7.5	8.5	9.5
+140/+158	10	11	12

* Higher number of cycles? Online lifetime calculation ► www.chainflex.com/chainflexlife

Typical application areas

- For high mechanical load requirements, Class 5
- Unsupported travel distances and for gliding applications up to 328 ft (100 m), Class 5
- Light oil influence, Class 2
- Preferably indoor applications, can be used in outdoor applications with temperatures > 41°F
- Storage and retrieval units for high-bay warehouses, machining units/ packaging machines, quick handling, indoor cranes



Servo cable | PVC | Chainflex® CF21-UL

Strip cables 50% faster

igus® chainflex® CF21.UL

Example image

Part No.	AWG	Number of Conductors and rated cross section [mm²]	Outer diameter max.		Copper index		Weight	
			[in.]	[mm]	[lbs/mft]	[kg/km]	[lbs/mft]	[kg/km]
1 Control pair shielded								
CF21-07-05-02-01-UL	18	4 G 0.75	0.45	11.5	55.8	83	124.3	185
	20	1 STP x 0.5						
CF21-15-15-02-01-UL	16	4 G 1.5	0.51	13.0	100.1	149	182.1	271
	16	1 STP x 1.5						
CF21-25-15-02-01-UL	14	4 G 2.5	0.57	14.5	136.4	203	224.4	334
	16	1 STP x 1.5						
CF21-40-15-02-01-UL	12	4 G 4.0	0.63	16.0	177.4	264	283.6	422
	16	1 STP x 1.5						
CF21-60-15-02-01-UL	10	4 G 6.0	0.71	18.0	231.8	345	375.0	558
	16	1 STP x 1.5						
CF21-100-15-02-01-UL	8	4 G 10.0	0.89	22.5	364.9	543	586.0	872
	16	1 STP x 1.5						
2 Control pairs shielded								
CF21-07-03-02-02-UL	18	4 G 0.75	0.49	12.5	73.2	109	149.8	223
	22	2 STP x 0.34						
CF21-10-07-02-02-UL	17	4 G 1.0	0.53	13.5	105.5	157	189.5	282
	18	2 STP x 0.75						
CF21-15-07-02-02-UL	16	4 G 1.5	0.57	14.5	121.0	180	220.4	328
	18	2 STP x 0.75						
CF21-25-15-02-02-UL	14	4 G 2.5	0.67	17.0	179.4	267	307.8	458
	16	2 STP x 1.5						
CF21-40-15-02-02-UL	12	4 G 4.0	0.73	18.5	217.7	324	361.5	538
	16	2 STP x 1.5						
CF21-60-15-02-02-UL	10	4 G 6.0	0.85	21.5	283.6	422	487.8	726
	16	2 STP x 1.5						
CF21-100-15-02-02-UL	8	4 G 10.0	0.94	24.0	407.2	606	650.5	968
	16	2 STP x 1.5						
CF21-160-15-02-02-UL	6	4 G 16.0	1.08	27.5	597.4	889	889.0	1323
	16	2 STP x 1.5						
CF21-350-15-02-02-UL ¹¹⁾	2	4 G 35.0	1.34	34.0	1124.2	1673	1552.2	2310
	16	2 STP x 1.5						

¹¹⁾ Phase-out model

Note: The given outer diameters are maximum values.

G = with green-yellow earth core **x** = without earth core

Class 5.5.2.1

Basic requirements	low	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	≥ 1312 ft
Oil resistance	none	1	2	3	4	highest		
Torsion	none	1	2	3	±180°			

CF21-UL
PVC
7.5 x d



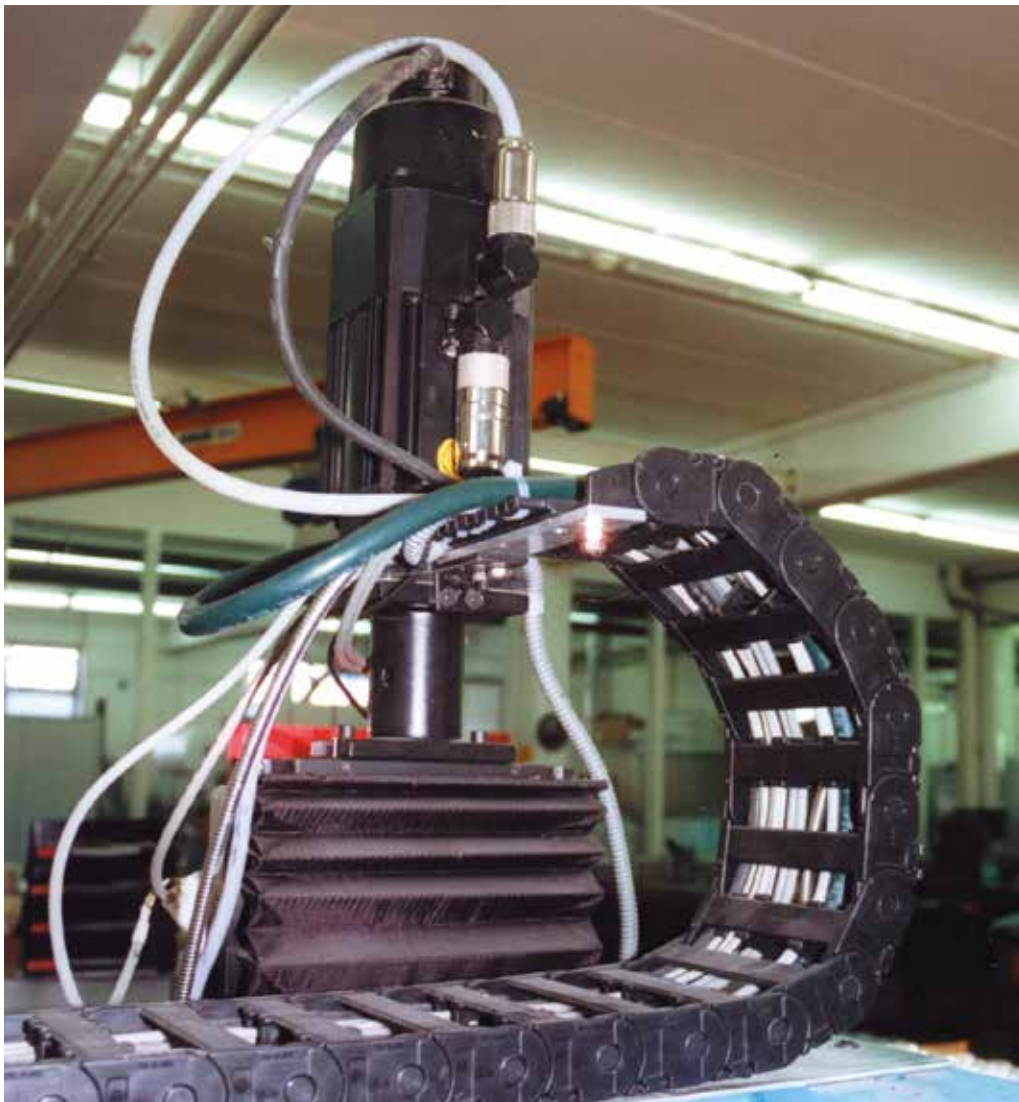
Order example: CF21-40-15-02-01-UL – To your desired length
CF21-UL Chainflex® series -40 Code nominal cross section -15 Code nominal cross section signal pairs
-02 Identification pairs -01 Number of pairs



Online order ► www.chainflex.com/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

