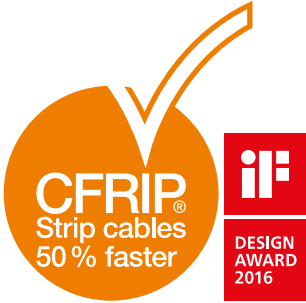


PUR Servo cable | CF27-D

- For very high mechanical load requirements
- PUR outer jacket
- Shielded
- Oil-resistant and coolant-resistant
- Notch-resistant
- Flame-retardant
- Hydrolysis/microbe-resistant
- PVC-free/halogen-free



Dynamic Information

	Bend radius	E-Chain®	min. 7.5 x d
		flexible	min. 6 x d
		fixed	min. 4 x d
	Temperature	E-Chain®	-13 °F to +176 °F (-25 °C to +80 °C)
		flexible	-40 °F to +176 °F (-40 °C to +80 °C)
		fixed	-58 °F to +176 °F (-50 °C to +80 °C)
	v max.	unsupported	32.81 ft/s (10 m/s)
	a max.	gliding	16.41 ft/s (5 m/s)
Travel distance		Unsupported travel distances and for gliding applications up to 328 ft (100 m), Class 5	

Cable structure

Conductors	Conductor consisting of bare copper wires (according to 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 Star-Quad: yellow, black, red, white

Signal Pair shield	Extremely bending-resistant braiding made of tinned copper wires.
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Inner jacket	TPE mixture adapted to suit the requirements in E-Chains®.
Overall shield	Extremely bending-resistant tinned copper braid. 90 % optical coverage
Outer jacket	Low-adhesion, highly abrasion-resistant mixture on the basis of PUR, adapted to suit the requirements in E-Chains® (following DIN VDE 0282 Part 10). Color: Orange (similar to RAL 2003)
CFRIP®	Strip cables 50% faster: The tear strip is in the inner jacket Video ► www.igus.com/CFRIP

Electrical Information

	Nominal voltage	1000 V
	Test voltage	4000 V (following DIN EN 50396)

Requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	1,312 ft +	
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	±180°				

Class 6.5.3.1

Properties and approvals

	UV resistance	Medium
	Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
	Offshore	MUD-resistant following NEK 606 - status 2009
	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)
	Halogen-free	Following EN 50267-2-1
	UL/CSA	Style 10492 and 20234, 1000 V, 80 °C
	NFFPA 79	Complies to NFFPA 79-2015 chapter 12.9
	DNV-GL	Certified according to GL type testing – Certificate no.: 61 938-14 HH
	EAC	Certified according to no. TC RU C-DE.ME77.B.01255
	CTP	Certified according to no. C-DE.PB49.B.00420
	CEI	Following CEI 20-35
	Lead-free	Following 2011/65/EC (RoHS-II)
	Cleanroom	According to ISO Class 1. Outer jacket material complies with CF27-07-05-02-01-D, tested by IPA according to standard 14644-1
	DESINA	According to VDW, DESINA standardisation
	CE	Following 2014/35/EC

Guaranteed lifetime according to guarantee conditions (Page 22-25)

Cycles*		5 million			7.5 million			10 million		
Temperature, from/to [°F]	v max. [ft/s]	a max. [ft/s²]	Travel distance [ft]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-13 / +5				10	11	12				
+5 / +158	32.81	16.41	262.48	≤ 328.1	7.5	8.5	8.5			
+158 / +176				10	11	12				

* Higher number of cycles possible - please ask for your individual calculation.

Typical application areas

- For maximum mechanical load requirements
- Almost unlimited resistance to oil
- Indoor and outdoor applications, UV-resistant
- Unsupported travel distances and for gliding applications up to 328 ft (100 m)
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling, Clean room, semiconductor insertion, outdoor cranes, low temperature applications

36 months guarantee on every chainflex® cable ...
... up to 10 million cycles guaranteed ...



PUR Servo cable | CF27-D

Class 6.5.3.1

Requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	1,312 ft +	
none	1	2	3	4	highest			
none	1	2	3	±180°				

Strip cables 50 % faster!



Image exemplary.

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								
CF27-07-05-02-01-D	18	4 G 0.75	0.45	11.5	63.2	94	123.0	183
	20	1 STP x 0.5						
CF27-15-15-02-01-D	16	4 G 1.5	0.51	13.0	106.8	159	177.4	264
	16	1 STP x 1.5						
CF27-25-15-02-01-D	14	4 G 2.5	0.57	14.5	147.2	219	227.8	339
	16	1 STP x 1.5						
CF27-40-15-02-01-D	12	4 G 4.0	0.63	16.0	190.2	283	291.0	433
	16	1 STP x 1.5						
CF27-60-15-02-01-D	10	4 G 6.0	0.71	18.0	246.6	367	372.3	554
	16	1 STP x 1.5						
CF27-100-15-02-01-D	8	4 G 10.0	0.83	21.0	393.1	585	540.9	805
	16	1 STP x 1.5						
CF27-160-15-02-01-D	6	4 G 16.0	0.96	24.5	577.9	860	764.0	1137
	16	1 STP x 1.5						
CF27-250-15-02-01-D	4	4 G 25.0	1.12	28.5	842.6	1254	1095.3	1630
	16	1 STP x 1.5						
CF27-350-15-02-01-D	2	4 G 35.0	1.28	32.5	1153.1	1716	1497.1	2228
	16	1 STP x 1.5						
2 Control pairs shielded								
CF27-07-03-02-02-D	18	4 G 0.75	0.49	12.5	77.9	116	142.5	212
	22	2 STP x 0.34						
CF27-10-07-02-02-D	17	4 G 1.0	0.53	13.5	112.9	168	184.1	274
	18	2 STP x 0.75						
CF27-15-07-02-02-D	16	4 G 1.5	0.55	14.0	127.7	190	207.6	309
	18	2 STP x 0.75						
CF27-25-15-02-02-D	14	4 G 2.5	0.67	17.0	190.8	284	295.0	439
	16	2 STP x 1.5						
CF27-40-15-02-02-D	12	4 G 4.0	0.71	18.0	232.5	346	344.0	512
	16	2 STP x 1.5						
CF27-60-15-02-02-D	10	4 G 6.0	0.79	20.0	301.0	448	444.8	662
	16	2 STP x 1.5						
CF27-100-15-02-02-D	8	4 G 10.0	0.93	23.5	439.5	654	624.9	930
	16	2 STP x 1.5						
CF27-160-15-02-02-D	6	4 G 16.0	1.04	26.5	644.4	959	854.7	1272
	16	2 STP x 1.5						
CF27-250-15-02-02-D	4	4 G 25.0	1.22	31.0	887.0	1320	1207.5	1797
	16	2 STP x 1.5						
CF27-350-15-02-02-D ¹⁾	2	4 G 35.0	1.34	34.0	1219.6	1815	1553.6	2312
	16	2 STP x 1.5						

¹⁾ Delivery time upon request
Note: The mentioned outer diameters are maximum values.
G = with green-yellow earth conductor x = without earth conductor

Part No.	AWG	Number of Conductors and rated cross section [mm ²]	Outer diameter max.		Copper index		Weight	
			in.	mm	lbs/mft	kg/km	lbs/mft	kg/km
1 Star-quad shielded								
CF27-15-05-04-D ¹⁾	16	4 G 1.5	0.51	13.0	98.1	146	168.0	250
	20	4 x 0.5 SHLD						
CF27-25-05-04-D ¹⁾	14	4 G 2.5	0.57	14.5	132.4	197	211.0	314
	20	4 x 0.5 SHLD						
CF27-40-05-04-D	12	4 G 4.0	0.63	16.0	181.4	270	276.9	412
	20	4 x 0.5 SHLD						
CF27-60-05-04-D	10	4 G 6.0	0.69	17.5	237.9	354	356.1	530
	12	4 x 0.5 SHLD						
without control pair								
CF27-07-04-D	18	4 G 0.75	0.35	9.0	39.0	58	76.6	114
CF27-10-04-D	17	4 G 1.0	0.37	9.5	46.4	69	89.4	133
CF27-15-04-D	16	4 G 1.5	0.41	10.5	63.2	94	112.9	168
CF27-25-04-D	14	4 G 2.5	0.49	12.5	95.4	142	158.6	236
CF27-500-04-D	1	4 G 50.0	1.46	37.0	1626.2	2420	2021.3	3008

¹⁾ Delivery time upon request
Note: The mentioned outer diameters are maximum values.
G = with green-yellow earth conductor x = without earth conductor

STP = Individually shielded Twisted Pair PR = Twisted Pair
SC = Individually shielded Conductor SHLD = Shielded Precable



Modular design, easy to retrofit: igus® E4 E-Chain® and Chainflex® cables.

