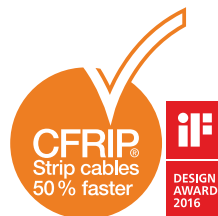


Servo cable | PUR | chainflex® CF27.D

- For extremely heavy duty applications
- PUR outer jacket
- Shielded
- Oil and coolant-resistant
- Notch-resistant
- Flame retardant
- Hydrolysis and microbe-resistant
- PVC and halogen-free



Dynamic information

	Bend radius	e-chain® linear	minimum 7.5 x d
		flexible	minimum 6 x d
		fixed	minimum 4 x d
	Temperature	e-chain® linear	-25 °C to +80 °C
		flexible	-40 °C to +80 °C (following DIN EN 60811-504)
		fixed	-50 °C to +80 °C (following DIN EN 50305)
	v max.	unsupported	10 m/s
	a max.	gliding	5 m/s
	Travel distance	Unsupported travel distances and up to 100 m for gliding applications, Class 5	

Cable structure

	Conductor	Stranded conductor in especially 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 Star quad: yellow, black, red, white	
	Element shield	Extremely bending-resistant braiding made of tinned copper wires.	
	Inner jacket	TPE mixture, adapted to suit the requirements in e-chains®.	
	Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % linear, approx. 90 % optical	
	Outer jacket	Low-adhesion, highly abrasion-resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Pastel orange (similar to RAL 2003)	
	CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ► www.igus.eu/CFRIP	

Class 6.5.3.1

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°

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 50363-10-2), Class 3.
	Offshore	MUD-resistant following NEK 606 - status 2009.
	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).
	Halogen-free	Following DIN EN 60754.
	UL/CSA	Style 10492 and 20234, 1000 V, 80 °C
	NFPA	Following NFPA 79-2012 chapter 12.9.
	DNV-GL	Certified according to GL type testing – Certificate no.: 61 938-14 HH
	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 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/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]
-25/-15	10	11	12
-15/+70	7.5	8.5	9.5
+70/+80	10	11	12

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

Typical mechanical application areas

- For extremely heavy duty applications
- Almost unlimited resistance to oil
- Indoor and outdoor applications, UV resistant
- Unsupported travel distances and up to 100 m for gliding applications
- Storage and retrieval units for high-bay warehouses, Machining units/machine tools, quick handling equipment, Clean room, semiconductor handling, outdoor cranes, low temperature applications



Servo cable | PUR | chainflex® CF27.D

Strip cables 50% faster

igus® chainflex® CF27.D

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				
CF27.07.05.02.01.D	(4G0.75+(2x0.5)C)C	11.5	94	183
CF27.15.15.02.01.D	(4G1.5+(2x1.5)C)C	13.0	159	264
CF27.25.15.02.01.D	(4G2.5+(2x1.5)C)C	14.5	219	339
CF27.40.15.02.01.D	(4G4.0+(2x1.5)C)C	16.0	283	433
CF27.60.15.02.01.D	(4G6.0+(2x1.5)C)C	18.0	367	554
CF27.100.15.02.01.D	(4G10.0+(2x1.5)C)C	21.0	585	805
CF27.160.15.02.01.D	(4G16.0+(2x1.5)C)C	24.5	860	1137
CF27.250.15.02.01.D	(4G25.0+(2x1.5)C)C	28.5	1254	1630
CF27.350.15.02.01.D	(4G35.0+(2x1.5)C)C	32.5	1716	2228
2 Control pairs shielded				
CF27.07.03.02.02.D	(4G0.75+2x(2x0.34)C)C	12.5	116	212
CF27.10.07.02.02.D	(4G1.0+2x(2x0.75)C)C	13.5	168	274
CF27.15.07.02.02.D	(4G1.5+2x(2x0.75)C)C	14.0	190	309
CF27.25.15.02.02.D	(4G2.5+2x(2x1.5)C)C	17.0	284	439
CF27.100.15.02.02.D	(4G10.0+2x(2x1.5)C)C	23.5	654	930
CF27.160.15.02.02.D	(4G16.0+2x(2x1.5)C)C	26.5	959	1272
CF27.250.15.02.02.D	(4G25.0+2x(2x1.5)C)C	31.0	1320	1797
CF27.40.15.02.02.D	(4G4.0+2x(2x1.5)C)C	18.0	346	512
CF27.60.15.02.02.D	(4G6.0+2x(2x1.5)C)C	20.0	448	662
1 Star-quad shielded				
CF27.15.05.04.D	(4G1.5+(4x0.5)C)C	13.0	146	250
CF27.25.05.04.D	(4G2.5+(4x0.5)C)C	14.5	197	314
CF27.40.05.04.D	(4G4.0+(4x0.5)C)C	16.0	270	412
CF27.60.05.04.D ¹¹⁾	(4G6.0+(4x0.5)C)C	17.5	354	530

¹¹⁾ Phase-out model**Note:** The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth coreBasic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	7	≥ 400 m
none	1	2	3	4	5	6	7	highest
none	1	2	3	4	5	6	7	±180°

Class 6.5.3.1

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
without control pair				
CF27.07.04.D ¹¹⁾	(4G0.75)C	9.0	58	114
CF27.15.04.D	(4G1.5)C	10.5	94	168
CF27.25.04.D	(4G2.5)C	12.5	142	236
CF27.500.04.D	(4G50.0)C	37.0	2420	3008

¹¹⁾ Phase-out model**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

Modular design, easy to retrofit: igus® E4 e-chain® and chainflex® cables.

