

CF27

igus®

CLASS
6.3.3

Price Index

**Conductor**

Highly flexible special conductor

Core

Power conductors with signal pair elements stranded around high-tensile strength core

Pair shield

Extremely highly flexible braided pair copper shield

Inner jacket

gusset filled, pressure extruded

Overall shield

Highly flexible braided copper shield

Outer jacket

Pressure extruded, halogen-free PUR blend



10.140

PUR Servo Cable

Chainflex® CF27

PUR Energy Chain® cable, shielded, oil and coolant-resistant, cut-resistant, flame-retardant, hydrolysis-resistant, microbe-resistant, PVC-free/halogen-free

Construction

Power conductor: Finely stranded bare copper wires according to EN 60228

Conductor insulation: Mechanically high quality TPE blend

Conductor twisting: Power conductors with signal pairs twisted with short pitch around a high-tensile-strength center core.

Power conductor color/numbering: Black with white numbers, one conductor green-yellow.

1. U / L1 / C / L+ 2. V / L2 3. W / L3 / D / L- 4. green / yellow

Conductor identification 1 signal pair: black with white numerals

1. #4 2. #5

Conductor identification 2 signal pairs: black with white numerals

1. #5 2. #6 3. #7 4. #8

Signal pair shield: Tinned copper braid, 90% optical coverage, over aluminum/polyester film.

Intermediate jacket: TPE-based blend, adapted to the requirements of the Energy Chain®.

Overall shielding: Tinned copper braid, 90% optical coverage,

Outer jacket Low-adhesion PUR blend, adapted to the requirements of the Energy Chain®. Silicon-free in compliance with PV 3.10.7 - status 1992. **Color:** orange (RAL 2003).

Technical Data

Minimum bending radius, moving: 7.5 x outer cable diameter

Minimum bending radius, fixed: 4 x outer cable diameter

Permissible temperature, moving: -4°F to +176°F (-20°C to +80°C)

Permissible temperature, fixed: -40°F to +176°F (-40°C to +80°C)

Voltage: 1000V

Testing voltage: 4000V

Oil resistance: High

UV resistance: Medium

Regulations: cRUUs: UL AWM style for USA & Canada: 20234 80°C 1000V **Flame Resistance:** FT1, DESINA, CE, RoHS: 2002/95/EC; Please reference the Design Section (Chapter 1) for more information.

Cleanroom: According to ISO class 1. Tested by IPA according to standard 14644-1.

Typical Applications

- for maximum mechanical load requirements
- indoor and outdoor applications, UV-resistant
- designed for AC motors with variable frequency drive (VFD)
- especially for unsupported travel distances and gliding travel up to 328 ft (100m)
- storage and retrieval units for high-bay warehouses, machine tools, quick handling, cleanroom, semiconductor in-section, outdoor cranes, low temperature applications

Part No.	Power AWG	Signal AWG	No. of Conductors and Rated Cross- Section in mm²	Outer Diameter (approx.) in. (mm)	Copper Index lbs/mft (kg/km)	Weight lbs/mft (kg/km)
1 Control Pair Shielded						
CF27-07-05-02-01-D	18		4 C x 0.75			
		20	1 STP x 0.5	.45 (11.5)	64.6 (95)	116.3 (171)
CF27-15-10-02-01-D	16		4 C x 1.5			
		17	1 STP x 1.0	.49 (12.5)	92.5 (136)	149.6 (220)
CF27-15-15-02-01-D	16		4C x .5			
		16	1 STP x 1.5	.49 (12.5)	95.2 (140)	176.9 (260)
CF27-25-10-02-01-D	14		4 C x 2.5			
		17	1 STP x 1.0	.53 (13.5)	120.0 (177)	195.0 (286)
CF27-25-15-02-01-D	14		4C x 2.5			
		16	1 STP x 1.5	.55 (14.0)	123.8 (182)	204.1 (300)
CF27-40-10-02-01-D	12		4 C x 4.0			
		17	1 STP x 1.0	.63 (16.0)	158.0 (232)	242.0 (356)

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Part No.	Power AWG	Signal AWG	No. of Conductors and Rated Cross- Section in mm ²	Outer Diameter (approx.) in. (mm)	Copper Index lbs/mft (kg/km)	Weight lbs/mft (kg/km)
1 Control Pair Shielded						
CF27-40-15-02-01-D	12		4 C x 4.0			
		16	1 STP x 1.5	.63 (16.0)	164.0 (241)	255.1 (375)
CF27-60-10-02-01-D	10		4 C x 6.0			
		17	1 STP x 1.0	.69 (17.5)	223.0 (327)	327.0 (481)
CF27-60-15-02-01-D	10		4 C x 6.0			
		16	1 STP x 1.5	.69 (17.5)	242.9 (357)	395.0 (580)
CF27-100-10-02-01-D	8		4 C x 10.0			
		17	1 STP x 1.0	.81 (20.5)	361.0 (530)	503.0 (740)
CF27-100-15-02-01-D	8		4 C x 10.0			
		16	1 STP x 1.5	.85 (21.5)	367.4 (540)	612.2 (900)
CF27-160-10-02-01-D	6		4 C x 16.0			
		17	1 STP x 1.0	.91 (23.0)	476.0 (700)	696.0 (1023)
CF27-160-15-02-01-D	4		4 C x 16.0			
		16	1 STP x 1.5	.97 (24.5)	487.1 (716)	782.3 (1150)
CF27-250-15-02-01-D	4		4 C x 25.0			
		16	1 STP x 1.5	1.12 (28.5)	718.0 (1056)	976.0 (1435)
CF27-350-15-02-01-D	2		4 C x 35.0			
		16	1 STP x 1.5	1.28 (32.5)	1057.0 (1553)	1414.0 (2079)

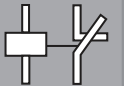
2 Control Pairs Shielded						
CF27-07-03-02-02-D	18		4 C x 0.75			
		22	1 STP x 0.34	.49 (12.5)	69.4 (102)	132.7 (195)
CF27-10-07-02-02-D	17		4 C x 1.0			
		18	2 STP x 0.75	.53 (13.5)	97.2 (143)	170.7 (251)
CF27-15-07-02-02-D	16		4 C x 1.5			
		18	2 STP x 0.75	.57 (14.5)	119.0 (175)	200.6 (295)
CF27-25-15-02-02-D	14		4 C x 2.5			
		16	2 STP x 1.5	.65 (16.5)	180.2 (265)	237.3 (349)
CF27-40-15-02-02-D	12		4 C x 4.0			
		16	2 STP x 1.5	.71 (18)	206.0 (303)	275.4 (405)
CF27-60-15-02-02-D	10		4 C x 6.0			
		16	2 STP x 1.5	.77 (19.5)	270.0 (397)	437.2 (643)
CF27-100-15-02-02-D	8		4 C x 1.0			
		16	2 STP x 1.5	.92 (23.5)	380.8 (560)	680.0 (1000)
CF27-160-15-02-02-D	6		4 C x 16.0			
		16	2 STP x 1.5	1.02 (26)	537.2 (790)	850.0 (1250)
CF27-250-15-02-02-D	4		4 C x 25.0			
		16	2 STP x 1.5	1.18 (30.0)	775.2 (1140)	1285.2 (1890)

1 Star Quad Shielded						
CF27-15-05-04-D	16		4 C x 1.5			
		20	(4 x 0.5)SHLD	.57 (14.5)	95.6 (142)	210.9 (310)
CF27-25-05-04-D	14		4 C x 2.5			
		20	(4 x 0.5)SHLD	.59 (15.0)	135.4 (199)	221.1 (325)
CF27-40-05-04-D	12		4 C x 4.0			
		20	(4 x 0.5)SHLD	.67 (17.0)	174.2 (256)	326.5 (480)

Without Control Pair						
CF27-15-04-D	16		4 C x 1.5	.41 (10.5)	59 (86)	109 (160)
CF27-25-04-D	14		4 C x 2.5	.47 (12.0)	95 (140)	177 (260)
CF27-500-04-D	1		4 C x 50.0	1.48 (37.5)	1517 (2230)	2177 (3200)

NOTE: The mentioned external diameters are maximum values.

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