



SERVO cables in acc. to SIEMENS® Standard 6FX 8PLUS

Motor and resolver/encoder cables - certified



Info

- Servo drives
- PUR outer sheath
- EMC-compliant

Benefits

- Allows much faster speed and accelerations which increases the economic efficiency of the machines
- Multi-standard certification reduces part varieties and saves costs
- Increased durability under harsh conditions thanks to robust PUR outer sheath
- Resistant to contact with many mineral oil-based lubricants, diluted acids, aqueous alkaline solutions and other chemical media

Application range

- Connecting cable between servo controller and encoder/resolver
- Connecting cable between servo controller and motor
- In power chains or moving machine parts
- For use in assembling & pick-and-place machinery
- Particularly in wet areas of machine tools and transfer lines
- Assembly lines, production lines, in all kinds of machines

Product features

- Dynamic power chain performance: Acceleration up to 50 m/s². Travel speeds up to 5 m/s. Travel distances up to 100 m.
- Designed for 10 million alternating bending cycles and horizontal travel distances up to 100 meter
- Abrasion and cut-resistant, halogen-free, oil-resistant
- Flame-retardant according to IEC 60332-1-2 & CSA FT 1

Norm references / Approvals

- Power cable: VDE-registered UL AWM Style 21223 CSA AWM I/II, A/B 1000 V 80° FT 1
- Signal cables: UL/CSA AWM Style 20236
- UL File No. E63634
- For horizontal travel distances up to 100m
- For use in power chains: Please comply with assembly guideline Appendix T3

Product Make-up

- Extra-fine strand made of copper wires:
 - > Signal cables: tinned
 - > Power cables: bare
- Core insulation: polypropylene (PP)
- Tinned-copper braiding
- PUR outer sheath
- Signal cables: green (RAL 6018)
- Servo cable: orange (RAL 2003)
- Refer to data sheet for more details

Technical data

Classification
ETIM 5.0 Class-ID: EC000104
ETIM 5.0 Class-Description: Control cable

Core identification code
Details see datasheet

Conductor stranding
Extra-fine wire according to VDE 0295, class 6/IEC 60228 class 6

Minimum bending radius
Power cable:
Fixed: 4 x Diameter
Dynamic: 1.5 mm² - 16 mm²: 7.5 x Diameter
25 mm² - 50 mm²: 10 x Diameter
Signal cable:
Fixed: 4 x Diameter
Dynamic: 8 x Diameter

Nominal voltage
Signal cables: 30 V AC/DC
Power cable:
- Power cores: U₀/U 600/1000 V (IEC) 1000 V (UL/CSA)
- Control cores: 24 V AC/DC (IEC) 1000 V (UL/CSA)

Test voltage
Power cable: 4 KV
Signal cables: 500 V

Protective conductor
G = with GN-YE protective conductor

Alternating bending cycles
10 mio. cycles

Temperature range
Flexing: -20°C to +60°C
Fixed installation: -50°C to +80°C

Article number	Number of cores and mm ² per conductor	Reference article no.	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
Feedback / signal cables					
00277101	8 x 2 x 0,18	6FX8008-1BD11	7,8	54	85
00277111	4 x 2 x 0,38 + 4 x 0,5	6FX8008-1BD21	8,9	77	120
00277121	3 x (2 x 0,14) + 2 x (0,5)	6FX8008-1BD31	8,9	69	113
00277131	3 x (2 x 0,14) + 4 x 0,14 + 2 x 0,5	6FX8008-1BD41	8,8	66	101
00277141	3 x (2 x 0,14) + 4 x 0,14 + 2 x 0,5 + 4 x 0,22	6FX8008-1BD51	9,4	86	139
00277151	4 x 2 x 0,18	6FX8008-1BD61	6,4	34.25	53
00277161	2 x 2 x 0,18	6FX8008-1BD71	5	23.1	36
00277171	12 x 0,22	6FX8008-1BD81	6,9	48	76
00277992	2 x 2 x 0,15 + 1 x 2 x 0,38	6FX8008-2DC00	7,2	39	67
Motor cables					
0027784	4 G1.5	6FX8008-1BB11-Plus	9,1	90	150
0027785	4 G2.5	6FX8008-1BB21-Plus	10,6	132	220
0027786	4 G4	6FX8008-1BB31-Plus	11,9	204	300
0027787	4 G6	6FX8008-1BB41-Plus	14,5	315	450
0027788	4 G10	6FX8008-1BB51-Plus	17,5	488	660
0027789	4 G16	6FX8008-1BB61-Plus	21,6	769	1010
Servo cables					
0027790	4 G 1,5 + (2 x 1,5)	6FX8008-1BA11-Plus	11,6	146	230
0027791	4 G 2,5 + (2 x 1,5)	6FX8008-1BA21-Plus	13,4	187	300

Article number	Number of cores and mm ² per conductor	Reference article no.	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
0027792	4 G 4 + (2 x 1,5)	6FX8008-1BA31-Plus	14,8	258	380
0027793	4 G 6 + (2 x 1,5)	6FX8008-1BA41-Plus	16,8	365	530
0027794	4 G 10 + (2 x 1,5)	6FX8008-1BA51-Plus	19,4	560	765
0027795	4 G 16 + (2 x 1,5)	6FX8008-1BA61-Plus	23,1	816	1090
0027796	4 G 25 + (2 x 1,5)	6FX8008-1BA25-Plus	26,6	1166	1530
0027797	4 G 35 + (2 x 1,5)	6FX8008-1BA35-Plus	30,9	1554	2040
0027798	4 G 50 + (2 x 1,5)	6FX8008-1BA50-Plus	34	2188	2760

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.

Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.

Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths

Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum

Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).

Siemens part designations (6FX5002/5008, 6FX7002/7008, 6FX8002/8008) are registered trademarks of Siemens AG, and are listed for comparison purposes only

Cables for power chain use should only be handled on drums prior to installation.

Article numbers refer to genuine Lapp products.

Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- ÖLFLEX® SERVO FD 796 CP refer to page 110

Accessories

- Circular connectors
- SKINTOP® EMC/Earthing