

Servo cable according to SIEMENS® standard 6FX 8PLUS

Continuous flex servo cable with PUR jacket; shielded



Servo cables according to SIEMENS® standard 6FX 8PLUS are continuous flexing, oil-resistant, UL, CSA, VDE & CE rated power supply, feedback and signal cables for signal transmission or motor connections. They are designed for dynamic performance in cable chains. Servo cable according to SIEMENS® standard 6FX 8PLUS replaces SIEMENS® standard 6FX 7008 and 8008.

Construction

Conductors: signal cables: tinned copper • power cables: bare copper

Pairs: twisted together; shielded with tinned copper braid and non-woven wrap

Insulation: polypropylene

Shielding: tinned copper braid; non-woven wrap

Jacket: feedback/signal: polyurethane; green • servo/motor: polyurethane; orange

Recommended applications

Power drive systems; sensor leads for signal transmission and motor connections; connections between servo controllers, encoders/resolvers, and motors; assembly lines; all machines utilizing servo motors

Application advantage

- High dynamic performance in cable chains:
 - Acceleration up to 50 m/s²
 - Travel speed up to 5 m/s
 - Travel lengths up to 100 m
- Abrasion-, cut- and oil-resistant; halogen-free, flame-retardant, and flexible at low temperatures

Approvals



Cable attributes		page 648	
OIL	OR-05	FLAME	FR-02
MOTION	CF-04	MECH.	MP-05

Complete the installation	
EPIC® POWER LS1 page 441	EPIC® SIGNAL M23 page 446

ÖLFLEX® CONNECT solution	
ÖLFLEX® CONNECT SERVO page 607	

Technical data

<p> Minimum bend radius:</p> <ul style="list-style-type: none"> - power cable: <ul style="list-style-type: none"> - for continuous flexing: <ul style="list-style-type: none"> - 16 - 6 AWG: 7.5 x cable diameter - 4 - 1 AWG: 10 x cable diameter - for stationary use: 4 x cable diameter - signal cable: <ul style="list-style-type: none"> - for continuous flexing: 8 x cable diameter - for stationary use: 4 x cable diameter 	<p> Conductor stranding: Class 6 super fine wire</p>
<p> Temperature range:</p> <ul style="list-style-type: none"> - for continuous flexing: -20°C to +60°C - for stationary use: -50°C to +80°C 	<p> Color code:</p> <ul style="list-style-type: none"> - feedback/signal cables: see following color chart - motor/servo cables: <ul style="list-style-type: none"> - 16 - 14 AWG: V/L2; U/L1/C/L+; W/L3/D/L- plus green/yellow ground - 12 - 1 AWG: U/L1/C/L+; V/L2; W/L3/D/L- plus green/yellow ground - control pair: black & white
<p> Nominal voltage:</p> <ul style="list-style-type: none"> - signal conductors: 30V - power/control conductors: 1000V 	<p> Approvals:</p> <ul style="list-style-type: none"> UL: AWM 21223 AWM 20236 (sensor leads) Canada: CSA AWM I/II A/B 1kV 80°C FT1 Additional: based on VDE specifications CE & RoHS
<p> Test voltage:</p> <ul style="list-style-type: none"> - signal conductors: 500V - power conductors: 4000V 	

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color code: feedback/signal cable

Part number	Conductor description	Color code
00277101	26 AWG/8pr	white/yellow & white/green white/red & white/orange white/black & white/brown gray & white • blue & violet yellow & green • red & orange • black & brown
00277111	22 AWG/4pr	brown & black • red & orange yellow & green • blue & violet
	20 AWG/4c	white/blue • white/black white/red • white/yellow
00277121	26 AWG/3pr	yellow & green • black & brown • red & orange
	20 AWG/2c	black • red
00277131	26 AWG/3pr	yellow & green • black & brown • red & orange
	26 AWG/4c	gray • blue • white/yellow • white/black
	20 AWG/1pr	brown/red & brown/blue

Part number	Conductor description	Color code
00277141	26 AWG/3pr	yellow & green • black & brown • red & orange
	26 AWG/4c	gray • blue • white/yellow • white/black
	26 AWG/4c	brown/yellow • brown/gray green/black • green/red
	20 AWG/2c	brown/red • brown/blue
00277151	26 AWG/4pr	black & brown • red & orange yellow & green • blue & violet
00277161	26 AWG/2pr	red & orange • black & brown
00277171	26 AWG/12c	black • brown • red orange • yellow • green • blue violet • gray • white • white/black • white/brown

Part number	Conductor description	SIEMENS® part number	Nominal outer diameter		Copper weight lbs/mft	Approx. weight lbs/mft	EPIC® POWER LS1+ configuration	EPIC® SIGNAL M23 # of contacts
			in	mm				
Feedback/signal cable								
00277101	26 AWG/8pr	6FX8008-1BD11	0.307	7.8	36	57	—	16
00277111	22 AWG/4pr + 20 AWG/4c	6FX8008-1BD21	0.350	8.9	52	81	—	12
00277121	3 x (26 AWG/1pr) + 2 x (20 AWG/1c)	6FX8008-1BD31	0.350	8.9	46	76	—	9
00277131	3 x (26 AWG/1pr) + 26 AWG/4c + 20 AWG/1pr	6FX8008-1BD41	0.346	8.8	44	68	—	12
00277141	3 x (26 AWG/1pr) + 26 AWG/4c + 20 AWG/2c + 26 AWG/4c	6FX8008-1BD51	0.370	9.4	58	93	—	16
00277151	26 AWG/4pr	6FX8008-1BD61	0.252	6.4	23	36	—	8+1
00277161	26 AWG/2pr	6FX8008-1BD71	0.197	5.0	16	24	—	6
00277171	26 AWG/12c	6FX8008-1BD81	0.272	6.9	32	51	—	12
00277992	26 AWG/2pr + 21 AWG/1pr	6FX8008-2DC00	0.283	7.2	26	50	—	6
Motor cable								
0027784	16 AWG/4c	6FX8008-1BB11-Plus	0.359	9.1	61	101	5+PE	—
0027785	14 AWG/4c	6FX8008-1BB21-Plus	0.418	10.6	89	148	5+PE	—
0027786	12 AWG/4c	6FX8008-1BB31-Plus	0.469	11.9	138	202	5+PE	—
0027787	10 AWG/4c	6FX8008-1BB41-Plus	0.571	14.5	212	302	—	—
0027788	8 AWG/4c	6FX8008-1BB51-Plus	0.690	17.5	328	444	—	—
0027789	6 AWG/4c	6FX8008-1BB61-Plus	0.851	21.6	517	679	—	—
Servo cable								
0027790	16 AWG/4c + (16 AWG/1pr)	6FX8008-1BA11-Plus	0.457	11.6	98	155	3+PE+4	—
0027791	14 AWG/4c + (16 AWG/1pr)	6FX8008-1BA21-Plus	0.528	13.4	126	202	3+PE+4	—
0027792	12 AWG/4c + (16 AWG/1pr)	6FX8008-1BA31-Plus	0.583	14.8	174	255	3+PE+4	—
0027793	10 AWG/4c + (16 AWG/1pr)	6FX8008-1BA41-Plus	0.662	16.8	245	356	—	—
0027794	8 AWG/4c + (16 AWG/1pr)	6FX8008-1BA51-Plus	0.764	19.4	376	514	—	—
0027795	6 AWG/4c + (16 AWG/1pr)	6FX8008-1BA61-Plus	0.910	23.1	548	732	—	—
0027796	4 AWG/4c + (16 AWG/1pr)	6FX8008-1BA25-Plus	1.048	26.6	784	1028	—	—
0027797	2 AWG/4c + (16 AWG/1pr)	6FX8008-1BA35-Plus	1.217	30.9	1044	1371	—	—
0027798	1 AWG/4c + (16 AWG/1pr)	6FX8008-1BA50-Plus	1.340	34.0	1470	1855	—	—

() = shielded

* Check connection on motor prior to selecting EPIC® POWER LS1 connector type



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