ÖLFLEX®

Flexible cable for drives, motors & assemblies

Quick select chart

Product name	AWG range	Jacket material	Nominal voltage	Stationary temperature range	
				low	high
VFD cable					
ÖLFLEX® VFD 2XL	16 - 2 AWG	TPE	600/2000V	-40°C	+105°C
ÖLFLEX® VFD 2XL SYMMETRICAL	1 AWG - 500 KCMIL	TPE	600/2000V	-40°C	+105°C
ÖLFLEX® VFD 2XL with Signal	16 - 2 AWG	TPE	600/2000V	-40°C	+105°C
ÖLFLEX® VFD SLIM	18 - 2 AWG	PVC	600/1000V	-40°C	+105°C
ÖLFLEX® VFD with Signal	16 - 4 AWG	PVC	600/1000V	-40°C	+105°C
ÖLFLEX® FD VFD	14 - 10 AWG	PVC	600/1000V	-40°C cont. flex: -5°C	+105°C cont. flex: +90°C
ÖLFLEX® SDP TC	14 - 1 AWG	TPE	600/1000V	-40°C	+105°C

Product name	AWG range		Application	Jacket	
	power	signal pairs		material	color
Servo & VFD cable					
ÖLFLEX® SERVO 9YSLCY-JB	1 AWG - 450 KCMIL	–	power	PVC	transparent, black
ÖLFLEX® SERVO 2YSLCY-JB	1 AWG - 350 KCMIL	–	power	PVC	transparent, black
Servo cable					
ÖLFLEX® SERVO 719/719 CY	19 - 1 AWG	22 - 16 AWG	power	PVC	orange
ÖLFLEX® SERVO 7TCE	18 - 10 AWG	18 - 16 AWG	power	TPE	orange
ÖLFLEX® SERVO FD 7TCE	18 - 10 AWG	18 - 16 AWG	power	TPE	orange
ÖLFLEX® SERVO FD 796 CP	16 - 1 AWG	19 - 14 AWG	power	PUR	orange
ÖLFLEX® SERVO FD 798 CP	26 - 18 AWG	–	feedback	PUR	green
ÖLFLEX® SERVO FD 7DSL	16 - 12 AWG	22 or 18 AWG	power & feedback	PUR	orange
ÖLFLEX® SERVO 7DSL	16 - 12 AWG	22 or 18 AWG	power & feedback	PVC	orange
Servo cable according to SIEMENS® standard 6FX 8PLUS	16 - 1 AWG	26 - 16 AWG	power & feedback	PUR	orange, green
Servo cable according to SIEMENS® standard 6FX 5008	16 - 1 AWG	16 AWG	power & feedback	PVC	orange, green
Servo cable according to INDRAMAT® standard INK	19 - 4 AWG	19 - 16 AWG	power & feedback	PUR	orange

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	Nominal voltage	Temperature range stationary	flexible	high (IEC)	ÖLFLEX® CONNECT SERVO	Approvals	Page
	1000V	-40°C to +80°C	-5°C to +80°C	+80°C	no		105
	1000V	-40°C to +70°C	-5°C to +70°C	+70°C	no		106
	600/1000V	-40°C to +80°C	-5°C to +80°C	+80°C	yes		107
	600/1000V	-40°C to +105°C	-25°C to +90°C	–	yes		109
	600/1000V	-40°C to +105°C	-25°C to +90°C	–	yes		111
	600/1000V	-50°C to +80°C	-40°C to +80°C (continuous flex)	+90°C	yes		113
	30V	-50°C to +80°C	-40°C to +80°C (continuous flex)	+90°C	yes		115
	600/1000V	-50°C to +80°C	-40°C to +80°C (continuous flex)	+90°C	yes		117
	600/1000V	-40°C to +80°C	-5°C to +80°C	+80°C	yes		118
	power/control:1000V signal: 30V	-50°C to +80°C	-20°C to +60°C (continuous flex)	+80°C/60°C	yes		119
	power/control: 1000V signal: 30V	-20°C to +80°C	0°C to +60°C	+80°C/60°C	yes		121
	power/control: 1000V signal: 300V	-50°C to +80°C	-30°C to +80°C (continuous flex)	+80°C	yes		123

ÖLFLEX® VFD 2XL

Flexible VFD cable; 600V/1000V/2000V; UL & c(UL) TC-ER approval

ÖLFLEX® VFD 2XL is a robust oil- and UV-resistant shielded motor cable for VFD drives. The XLPE (plus) insulation with enhanced electrical properties can withstand twice the dielectric voltage test, provides extended performance, and is suitable for 2kV applications.

Recommended applications

VFD drive and motor connections; pumps; compressors; conveyors; elevators; extruders; presses; HVAC; on/off, slow down/speed up applications

Approvals

Construction

Conductors: finely stranded tinned copper

Insulation: XLPE (plus)

Shielding: barrier tape; triple layer foil tape (100% coverage); tinned copper braid (85% coverage); tinned copper drain wire

Jacket: specially formulated thermoplastic elastomer (TPE); black

Application advantage

- One cable for applications up to 2kV
- Low capacitance design
- Industrial grade phthalate-free jacket designed for harsh environments
- UL TC-ER & c(UL) CIC/TC approved
- Reduces space and weight in tray
- No conduit required due to TC-ER rating

Cable attributes page 648

OIL	OR-03	FLAME	FR-03
MOTION	FL-01	MECH.	MP-03

Complete the installation


SKINTOP® MS-M BRUSH page 524


EPIC® ULTRA HB page 404

Technical data

Minimum bend radius: 7.5 x cable diameter

Temperature range:
- UL/CSA TC: -25°C to +90°C
- for stationary use: -40°C to +105°C
- for flexible use: -25°C to +105°C

Nominal voltage:
- UL TC: 600V/2000V
- UL Flexible Motor Supply: 1000V
- c(UL) CIC/TC: 600V
- cRU AWM: 1000V

Test voltage: 6000V

Conductor stranding:
- 16 - 6 AWG: Class 5 fine wire
- 4 - 2 AWG: Class K fine wire

Color code: black with white numbers, plus green/yellow ground

Approvals:

UL:	TC-ER per UL 1277
Attributes:	UL Oil Res I/II 90°C wet or dry -40°C cold bend; -25°C cold impact sunlight resistant direct burial NFPA 79
NEC:	Class 1 Division 2 per NEC Article 501
Canada:	c(UL) CIC/TC FT4 cRU AWM I/II A/B FT4
Additional:	CE (50V - 1kV) & RoHS

Part number	Number of conductors incl. ground	Nominal outer diameter in	mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-SC PG thread	SKINTOP® MS-M BRUSH metric thread
16 AWG (1.5 mm²)							
700700	4 + drain	0.509	12.9	70	160	53112240	53112676
14 AWG (2.5 mm²)							
700701	4 + drain	0.582	14.8	100	196	53112250	53112676
12 AWG (4 mm²)							
700702	4 + drain	0.656	16.7	144	258	53112250	53112677
10 AWG (6 mm²)							
700703	4 + drain	0.707	18.0	199	320	53112260	53112677

Part number	Number of conductors incl. ground	Nominal outer diameter in	mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-SC PG thread	SKINTOP® MS-M BRUSH metric thread
8 AWG (10 mm²)							
700704	4 + drain	0.887	22.5	298	575	53112260	53112678
6 AWG (16 mm²)							
700705	4	1.022	25.9	518	885	53112270	53112678
4 AWG (21 mm²)							
700706	4	1.158	29.4	642	1055	53112270	53112679
2 AWG (33.7 mm²)							
700707	4	1.332	33.8	980	1460	–	53112679

ÖLFLEX® VFD 2XL SYMMETRICAL

Symmetrical 2kV motor supply cable for large HP VFD drives; UL & c(UL) TC approval

ÖLFLEX® VFD 2XL SYMMETRICAL is a robust oil- & UV-resistant large AWG 2kV VFD cable designed with three symmetrical grounds and a helical copper tape shield. It is resistant to a wide range of disinfecting solutions used in the food, beverage, chemical and related industries.

Recommended applications

VFD drive & motor connections for large HP applications; pumps; compressors; conveyors; elevators; extruders; HVAC; large presses; on/off, slow down/speed up applications

Approvals

Construction

Conductors: bare stranded copper

Insulation: XLPE (plus) + 3 bare stranded copper grounds

Shielding: helical copper tape (100% coverage)

Jacket: specially formulated thermoplastic elastomer (TPE); black

Application advantage

- 100% copper tape shield for EMI & RFI protection
- Low capacitance design
- UL TC-ER & c(UL) CIC/TC approved (CIC/TC approval depending on AWG)
- 3 ground design for optimal electrical performance
- Industrial grade phthalate-free jacket designed for harsh environments
- Flexible for easier routing
- Resistant to a wide range of disinfecting solutions used in the food, beverage, chemical and related industries, according to ECOLAB® PM 40-1 test procedure

Cable attributes				page 648
OIL	OR-03	FLAME	FR-03	
MOTION	FL-01	MECH.	MP-03	

Complete the installation

SKINTOP® MS-M BRUSH
page 524

Technical data

Minimum bend radius: 15 x cable diameter

Temperature range:
- UL/CSA TC: -25°C to +90°C
- for stationary use: -40°C to +105°C
- for flexible use: -25°C to +105°C

Nominal voltage:
- UL TC: 600/2000V
- UL WTTC: 1000V
- UL Flexible Motor Supply: 1000V
- c(UL) CIC/TC: 600V
- cRU AWM: 1000V

Test voltage: 6000V

Conductor stranding: Class B stranded wire

Color code: black with white numbers: 1, 2, 3, plus 3 bare symmetrical grounds

Approvals:
- UL: TC-ER per UL 1277; WTTC per UL 2277
- Attributes: UL Oil Res I/II; 90°C wet or dry; -40°C cold bend; -25°C cold impact; sunlight resistant; direct burial; NFPA 79
- NEC: Class 1 Division 2 per NEC Article 501
- Canada: c(UL) CIC/TC FT4 (1–4/0 AWG only); cRU AWM I/II A/B FT4
- Additional: CE (50V–1kV) & RoHS

Part number	3 symmetrical grounds	Nominal outer diameter in	Nominal outer diameter mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-M BRUSH metric thread
1 AWG (42.4 mm²)						
700720	8 AWG	1.328	33.7	1024	1427	53112679
1/0 AWG (53.7 mm²)						
700721	6 AWG	1.396	35.5	1332	1836	53112680
2/0 AWG (67.5 mm²)						
700722	6 AWG	1.502	38.2	1592	2137	53112680
3/0 AWG (85.1 mm²)						
700723	5 AWG	1.616	41.0	1995	2609	53112680

Part number	3 symmetrical grounds	Nominal outer diameter in	Nominal outer diameter mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-M BRUSH metric thread
4/0 AWG (107.2 mm²)						
700724	4 AWG	1.801	45.7	2485	3254	53112681
250 KCMIL (126.7 mm²)						
700725	2 AWG	1.996	50.7	3099	3988	53112681
350 KCMIL (177.6 mm²)						
700726	2 AWG	2.229	56.6	4051	5106	53112501
500 KCMIL (253.7 mm²)						
700727	1 AWG	2.468	62.7	5641	6886	53112500

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Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section.
If not otherwise specified, all values relating to the product are nominal values. Photographs are not to scale and are not true representations of the products in question.

ÖLFLEX® VFD 2XL with Signal

Flexible VFD cable with a control pair; 600V/1000V/2000V; UL & c(UL) TC-ER approval

ÖLFLEX® VFD 2XL with Signal is a robust oil- and UV-resistant shielded motor cable for VFD drives, with a pair for brake or temperature sensor. The XLPE (plus) insulation with enhanced electrical properties can withstand twice the dielectric voltage test, provides extended performance, and is suitable for 2kV applications.

Recommended applications

VFD drive and motor connections; pumps; compressors; conveyors; elevators; extruders; presses; HVAC; on/off, slow down/speed up applications

Approvals

Construction

Conductors: finely stranded tinned copper

Insulation: XLPE (plus)

Shielding: barrier tape; triple layer foil tape (100% coverage); tinned copper braid (85% coverage)

Jacket: specially formulated thermoplastic elastomer (TPE); black

Application Advantage

- One cable for applications up to 2kV
- Low capacitance design
- Industrial grade phthalate-free jacket designed for harsh environments
- UL TC-ER & c(UL) CIC/TC approved
- Reduces space and weight in tray
- No conduit required due to TC-ER rating

Cable attributes			page 648
OIL	OR-03	FLAME	FR-03
MOTION	FL-01	MECH.	MP-03

Complete the installation


SKINTOP® MS-SC page 522


EPIC® ULTRA HB page 404

Technical data

Minimum bend radius: 7.5 x cable diameter

Temperature range:
- UL/CSA TC: -25°C to +90°C
- for stationary use: -40°C to +105°C
- for flexible use: -25°C to +105°C

Nominal voltage:
- UL TC: 600V/2000V
- UL Flexible Motor Supply: 1000V
- c(UL) CIC/TC: 600V
- cRU AWM: 1000V

Test voltage: 6000V

Conductor stranding:
- 16 - 6 AWG: Class 5 fine wire
- 4 - 2 AWG: Class K fine wire

Color code: black with white numbers, plus green/yellow ground and one black pair with white numbers

Approvals:

UL:	TC-ER per UL 1277
Attributes:	UL Oil Res I/II
	90°C wet or dry
	-40°C cold bend; -25°C cold impact
	sunlight resistant
	direct burial
	NFPA 79
NEC:	Class 1 Division 2 per NEC Article 501
Canada:	c(UL) CIC/TC FT4
	cRU AWM I/II A/B FT4
Additional:	CE (50V - 1kV) & RoHS

Part number	Number of conductors incl. ground	Nominal outer diameter in	mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-SC PG thread	SKINTOP® MS-M BRUSH metric thread
16 AWG (1.5 mm²)							
700710	4 + (18 AWG)	0.652	16.6	91	200	53112250	53112677
14 AWG (2.5 mm²)							
700711	4 + (18 AWG)	0.687	17.4	132	252	53112250	53112677
12 AWG (4 mm²)							
700712	4 + (18 AWG)	0.752	19.1	160	294	53112260	53112677
10 AWG (6 mm²)							
700713	4 + (18 AWG)	0.798	20.3	215	354	53112260	53112677

Part number	Number of conductors incl. ground	Nominal outer diameter in	mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-SC PG thread	SKINTOP® MS-M BRUSH metric thread
8 AWG (10 mm²)							
700714	4 + (14 AWG)	0.986	25.0	334	690	53112270	53112678
6 AWG (16 mm²)							
700715	4 + (14 AWG)	1.112	28.2	504	905	53112270	53112679
4 AWG (21 mm²)							
700716	4 + (14 AWG)	1.259	32.0	667	1125	–	53112679
2 AWG (33.7 mm²)							
700717	4 + (14 AWG)	1.403	35.6	1027	1580	–	53112680

( ) = shielded pair

ÖLFLEX® VFD SLIM

Reduced-diameter VFD cable; 600V/1000V; UL & c(UL) TC-ER approval

ÖLFLEX® VFD SLIM is a reduced-diameter shielded motor cable for VFD drives. It is designed with the LAPP Surge Guard insulation system, which includes a semiconductive layer made to withstand nonlinear power distortions associated with VFD drives and to disperse increases in voltage caused by wave reflection, spikes, in-rush current, and harmonics. It is resistant to a wide range of disinfecting solutions used in the food, beverage, chemical and related industries.

Recommended applications

VFD drive and motor applications; web presses; HVAC; conveyors; on/off, slow down/speed up applications

Approvals

c UL us · TÜV · FIRE PROTECTION · CSA · CE · RoHS · U.S. Department of Labor MSHA Mine Safety & Health Administration

Cable attributes			page 648
OIL	OR-03	FLAME	FR-03
MOTION	FL-01	MECH.	MP-03

Construction

Conductors: finely stranded tinned copper

Insulation: LAPP Surge Guard insulation system

Shielding: barrier tape; triple layer foil tape (100% coverage); tinned copper braid (85% coverage)

Jacket: specially formulated thermoplastic polymer; black

Application Advantage

- LAPP Surge Guard insulation protection
- UL TC-ER & c(UL) CIC/TC approved
- Double shielded for extra protection
- Resistant to a wide range of disinfecting solutions used in the food, beverage, chemical and related industries, according to ECOLAB® PM 40-1 test procedure

Complete the installation


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Technical data

Minimum bend radius: 7.5 x cable diameter

Temperature range:
- UL/CSA TC: -25°C to +90°C
- for stationary use: -40°C to +105°C
- for flexible use: -25°C to +105°C

Nominal voltage:
- UL/CSA TC: 600V
- UL WTTC: 1000V
- UL Flexible Motor Supply: 1000V
- UL/CSA AWM: 1000V

Test voltage: 2000V

Peak voltage: 7500V

Conductor stranding:
- 18-6 AWG: Class 5 fine wire*
- 4-2 AWG: Class K fine wire

* 18 AWG meets only Class 5 cross section and DC resistance

Color code: black with white numbers, plus green/yellow ground

Approvals:

UL:	TC-ER per UL 1277 MTW per UL 1063 WTTC per UL 2277 AWM 20886
Attributes:	UL Oil Res I/II 75°C wet; 90°C dry -40°C cold bend; -25° cold impact sunlight resistant Submersible pump (14 AWG & larger) direct burial NFPA 79
NEC:	Class 1 Division 2 per NEC Article 501
Canada:	c(UL) CIC/TC FT4 CSA AWM I/II A/B 1000V FT4
Additional:	MSHA P-07KA050013-MSHA CE & RoHS

Part number	Number of conductors incl. ground	Nominal outer diameter in	mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-SC PG thread	SKINTOP® MS-M BRUSH metric thread
18 AWG (1 mm²)							
761804	4	0.394	10.0	53	112	53112230	–
16 AWG (1.5 mm²)							
761604	4 + drain	0.465	11.8	73	154	53112240	53112676
14 AWG (2.5 mm²)							
761404	4	0.514	13.1	100	194	53112240	53112676
12 AWG (4 mm²)							
761204	4	0.583	14.8	139	254	53112250	53112676
10 AWG (6 mm²)							
761004	4	0.697	17.7	195	346	53112260	53112677

Part number	Number of conductors incl. ground	Nominal outer diameter in	mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-SC PG thread	SKINTOP® MS-M BRUSH metric thread
8 AWG (10 mm²)							
760804	4	0.829	21.1	326	596	53112260	53112678
6 AWG (16 mm²)							
760604	4	1.002	25.5	494	785	53112270	53112678
4 AWG (21 mm²)							
760404	4	1.186	30.1	648	965	53112270	53112679
2 AWG (33.7 mm²)							
760204	4	1.395	35.4	985	1339	–	53112680

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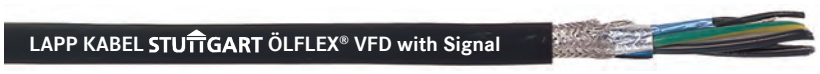
ÖLFLEX® VFD with Signal

Flexible VFD cable with a control pair; 600V/1000V; UL & c(UL) TC-ER approval



ÖLFLEX® VFD with Signal is an extremely oil- and UV-resistant shielded motor power cable for VFD drives, with an additional pair for brake or temperature sensor. It is designed with LAPP Surge Guard insulation, which includes a semiconductive layer made to withstand nonlinear power distortions associated with VFD drives and to disperse increases in voltage. It is resistant to a wide range of disinfecting solutions used in the food, beverage, chemical and related industries.

Recommended applications

VFD drive and motor connections with temperature sensors or brake mechanisms; web presses; HVAC; on/off, slow down/speed up applications

Approvals

Construction

Conductors: finely stranded tinned copper

Insulation: LAPP Surge Guard insulation system

Shielding: barrier tape; triple layer foil tape (100% coverage); tinned copper braid (85% coverage)

Jacket: specially formulated thermoplastic polymer; black

Application advantage

- LAPP Surge Guard insulation system
- UL TC-ER & c(UL) CIC TC approved
- Double-shielded for extra protection
- Contains pair for brake or temperature sensor
- Resistant to a wide range of disinfecting solutions used in the food, beverage, chemical and related industries, according to ECOLAB® PM 40-1 test procedure

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OIL	OR-03	FLAME	FR-03
MOTION	FL-01	MECH.	MP-03

Complete the installation

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Technical data

Minimum bend radius: 7.5 x cable diameter

Temperature range:
- UL/CSA TC: -25°C to +90°C
- for stationary use: -40°C to +105°C
- for flexible use: -25°C to +105°C

Nominal voltage:
- UL/CSA TC: 600V
- UL WTTC: 1000V
- UL Flexible Motor Supply: 1000V
- UL/CSA AWM: 1000V

Test voltage: 2000V

Peak voltage: 7500V

Conductor stranding:
- 16-6 AWG: Class 5 fine wire
- 4 AWG: Class K fine wire

Color code: black with white numbers, plus green/yellow ground and one black pair with white numbers

Approvals:
UL: TC-ER per UL 1277
MTW per UL 1063
WTTC per UL 2277
AWM 20886
Attributes: UL Oil Res I/II
75°C wet; 90°C dry
-40°C cold bend; -25°C cold impact
sunlight resistant
NFPA 79
NEC: Class 1 Division 2 per NEC Article 501
Canada: c(UL) CIC/TC FT4
CSA AWM I/II A/B 1000V FT4
Additional: MSHA P-07-KA050011-MSHA
CE & RoHS

Part number	Number of conductors incl. ground	Nominal outer diameter in	mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-SC PG thread	SKINTOP® MS-M BRUSH metric thread
16 AWG (1.5 mm²)							
7416048	4 + (18 AWG)	0.519	13.2	88	180	53112240	53112676
14 AWG (2.5 mm²)							
7414048	4 + (18 AWG)	0.573	14.6	118	216	53112250	53112676
7414044	4 + (14 AWG)	0.600	15.2	141	254	53112250	53112676
12 AWG (4 mm²)							
7412048	4 + (18 AWG)	0.632	16.1	162	286	53112250	53112677
7412044	4 + (14 AWG)	0.662	16.8	187	326	53112250	53112677

Part number	Number of conductors incl. ground	Nominal outer diameter in	mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-SC PG thread	SKINTOP® MS-M BRUSH metric thread
10 AWG (6 mm²)							
7410044	4 + (14 AWG)	0.745	18.9	260	406	53112260	53112677
8 AWG (10 mm²)							
7408044	4 + (14 AWG)	0.896	22.8	375	617	53112260	53112678
6 AWG (16 mm²)							
7406044	4 + (14 AWG)	1.026	26.1	472	848	53112270	53112678
4 AWG (21 mm²)							
7404044	4 + (14 AWG)	1.324	33.6	643	1251	–	53112679

( ) = shielded pair

ÖLFLEX® FD VFD

Continuous flex VFD cable; 600V/1000V; UL & c(UL) TC-ER approval

ÖLFLEX® FD VFD is a shielded continuous flex motor supply cable. It is designed with the LAPP Surge Guard insulation system, which includes a semiconductive layer made to withstand nonlinear power distortions associated with VFD drives in industrial applications. It is resistant to a wide range of disinfecting solutions used in the food, beverage, chemical and related industries. For bending cycles and operation parameters, see www.lappusa.com/cf-rating

Recommended applications

VFD drives and motor connections in continuous flex applications; plastic extrusion; on/off, slow down/speed up applications

Approvals

c UL us · FIRE PROTECTION · CSA · CE · RoHS · Continuous Flex Test Method Verified UL VERIFIED verifyUL.com A522492

Cable attributes			page 648
OIL	OR-03	FLAME	FR-03
MOTION	CF-02*	MECH.	MP-03

Construction

Conductors: finely stranded bare copper

Insulation: LAPP Surge Guard insulation system

Shielding: barrier tape; triple layer foil tape (100% coverage); tinned copper braid (85% coverage)

Jacket: specially formulated thermoplastic polymer; black

Application advantage

- Continuous flex rated for cable chain applications
- Double-shielded for extra protection
- UL TC-ER & c(UL) CIC/TC approval
- Resistant to a wide range of disinfecting solutions used in the food, beverage, chemical and related industries, according to ECOLAB® PM 40-1 test procedure

Complete the installation


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Technical data

Minimum bend radius:
- for flexible use: 5 x cable diameter
- for continuous flexing: 7.5 x cable diameter

Temperature range:
- for continuous flexing: -5°C to +90°C
- for stationary use: -40°C to +105°C
- UL/CSA: -25°C to +90°C

Nominal voltage:
- UL/CSA TC: 600V
- UL WTTC: 1000V
- UL Flexible Motor Supply: 1000V
- UL/CSA AWM: 1000V

Test voltage: 2000V

Peak voltage: 7500V

Conductor stranding: Class M fine wire

Color code: black with white numbers, plus green/yellow ground

Approvals:

UL:	TC-ER per UL 1277 MTW per UL 1063 WTTC per UL 2277 AWM 20886
Attributes:	UL Oil Res I/II 75°C wet; 90°C dry -40°C cold bend; -25°C cold impact sunlight resistant direct burial NFPA 79
NEC:	Class 1 Division 2 per NEC Article 501
Canada:	c(UL) CIC/TC FT4 CSA AWM I/II A/B 1000V FT4
Additional:	CE & RoHS
*UL Verified ID A522492:	Continuous Flex Test Method Verified

Part number	Number of conductors incl. ground	Nominal outer diameter in	mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-SC PG thread	SKINTOP® MS-M BRUSH metric thread
14 AWG (2.5 mm²)							
771404	4	0.500	12.7	84	133	53112240	53112676
12 AWG (4 mm²)							
771204	4	0.575	14.6	122	180	53112250	53112676

Part number	Number of conductors incl. ground	Nominal outer diameter in	mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-SC PG thread	SKINTOP® MS-M BRUSH metric thread
10 AWG (6 mm²)							
771004	4	0.690	17.5	180	271	53112260	53112677

ECOLAB® is a registered trademark of Ecolab, Inc.
Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section.
If not otherwise specified, all values relating to the product are nominal values. Photographs are not to scale and are not true representations of the products in question.

ÖLFLEX® SDP TC

Severe duty power cable; bus drop cable; 600V/1000V; UL & c(UL) TC approval

ÖLFLEX® SDP TC is a motor supply cable with Bus Drop approval. It is designed with more flexible stranding and a pressure-extruded jacket, which makes routing easier. ÖLFLEX® SDP TC is also UL TC-ER and c(UL) CIC/TC approved for tray applications.

Construction

Conductors: finely stranded bare copper

Insulation: specially blended PVC/nylon

Jacket: specially formulated thermoplastic elastomer (TPE); orange

Recommended applications

Motor connections in industrial environments; automotive machinery; machine tool; food & beverage industry

Application advantage

- UL TC-ER & c(UL) CIC TC approved
- UL Oil Res I/II
- Bus Drop approval

Approvals

c UL us · FIRE PROTECTION · CSA · CE · RoHS

Cable attributes			page 648
OIL	OR-03	FLAME	FR-03
MOTION	FL-01	MECH.	MP-03

Complete the installation


SKINTOP® strain relief
page 492


EPIC® ULTRA HB
page 404

Technical data

Minimum bend radius: 5 x cable diameter

Temperature range:
- UL/CSA TC: -25°C to +90°C
- for stationary use: -40°C to +105°C
- for flexible use: -25°C to +90°C

Nominal voltage:
- UL/CSA TC: 600V
- UL WTTC: 1000V

Test voltage: 2000V

Conductor stranding:
- 14-6 AWG: Class 5 fine wire
- 4-2 AWG: Class K fine wire

Color code: black with white numbers, plus green/yellow ground

Approvals:

UL:	TC-ER per UL 1277 WTTC per UL 2277 bus drop cable AWM 20626
Attributes:	UL Oil Res I/II 75°C wet; 90°C dry -40°C cold bend; -25°C cold impact sunlight resistant direct burial NFPA 79 bus drop approval
NEC:	Class 1 Division 2 per NEC Article 501
Canada:	c(UL) CIC/TC FT4 CSA AWM I/II A/B FT4
Additional:	CE & RoHS

Part number	Number of conductors incl. ground	Nominal outer diameter in	Nominal outer diameter mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® SL PG thread
14 AWG (2.5 mm²)						
781404	4	0.406	10.3	65	126	S2113
12 AWG (4 mm²)						
781204	4	0.474	12.0	104	171	S2116
10 AWG (6 mm²)						
781004	4	0.584	14.8	156	257	S2121
8 AWG (10 mm²)						
780804	4	0.708	18.0	258	427	S2129

Part number	Number of conductors incl. ground	Nominal outer diameter in	Nominal outer diameter mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® SL PG thread
6 AWG (16 mm²)						
780604	4	0.883	22.4	413	586	S2129
4 AWG (21 mm²)						
780404	4	1.093	27.8	551	871	S2136
2 AWG (33.7 mm²)						
780204	4	1.282	32.6	876	1283	S2248
1 AWG (42.3 mm²)						
780104	4	1.407	35.7	1064	3891	S2142

Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section.
If not otherwise specified, all values relating to the product are nominal values.
Photographs are not to scale and are not true representations of the products in question.

ÖLFLEX® SERVO 9YSLCY-JB

Flexible low capacitance, double-shielded, large-gauge motor cable for servo & VFD applications

ÖLFLEX® SERVO 9YSLCY-JB is a highly flexible power cable for large horsepower motors and VFD drives. It has a double shield with polypropylene-insulated conductors for optimal low-loss power transmission when compared to PVC.

Recommended applications

Motor connections for large motors and drives; textile; paper; chemical; machine tool; heavy industry; conveying technology

Approvals

c UL us · FIRE PROTECTION · CE · RoHS

Construction

Conductors: finely stranded bare copper

Insulation: polypropylene

Shielding: overall foil and tinned copper braid

Jacket: PVC; transparent or black

Application advantage

- Flexible for easier routing
- UL & CSA AWM approved
- Black-jacketed version: 3 symmetrical grounds for improved EMC performance

Cable attributes			page 648
OIL	OR-01	FLAME	FR-02
MOTION	FL-01	MECH.	MP-02

Complete the installation


SKINTOP® MS-M BRUSH
page 524


EPIC® ULTRA HB
page 404

Technical data

Minimum bend radius: 4 x cable diameter

Temperature range:
- for stationary use (UL/CSA): -40°C to +80°C
- for flexible use (UL/CSA): -5°C to +80°C

Nominal voltage: 1000V

Test voltage: 4000V

Conductor stranding: Class 5 fine wire

Color code: VDE 0293-308: chart 6, page 681
black, brown, gray,
plus 1 or 3 green/yellow ground(s)

Approvals:
UL: AWM 2570
Attributes: VW-1
NFPA 79
Canada: cRU AWM I/II A/B 1000V FT1
Additional: based on VDE 0276, 0250, 0207
CE & RoHS

three power conductors + one ground, transparent jacket

Part number	Size of ground	Nominal outer diameter in	Nominal outer diameter mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-M BRUSH metric thread
1 AWG (50 mm²)						
0037008	1 AWG	1.344	34.1	1482	1982	53112679
2/0 AWG (70 mm²)						
0037009	2/0 AWG	1.611	40.9	2017	2654	53112680
3/0 AWG (95 mm²)						
0037010	3/0 AWG	1.789	45.4	2691	3562	53112681
4/0 AWG (120 mm²)						
0037011	4/0 AWG	1.962	49.8	3433	4435	53112681
250 KCMIL (150 mm²)						
0037012	250 KCMIL	2.210	56.1	4183	4733	53112501
350 KCMIL (185 mm²)						
0037013	350 KCMIL	2.419	61.4	5086	5634	53112501
450 KCMIL (240 mm²)						
0037014	450 KCMIL	2.675	68.0	6680	8165	53112503

three power conductors + three grounds, black jacket

Part number	Size of ground	Nominal outer diameter in	Nominal outer diameter mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-M BRUSH metric thread
1 AWG (50 mm²)						
0037023	8 AWG	1.225	31.1	1449	1612	53112679
2/0 AWG (70 mm²)						
0037024	8 AWG	1.462	37.1	2003	2054	53112680
3/0 AWG (95 mm²)						
0037025	6 AWG	1.576	40.0	2656	2797	53112680
4/0 AWG (120 mm²)						
0037026	6 AWG	1.678	42.6	3250	3410	53112680
250 KCMIL (150 mm²)						
0037027	4 AWG	1.970	50.0	3637	4118	53112681
350 KCMIL (185 mm²)						
0037028	2 AWG	2.191	55.6	4756	5255	53112501

If not otherwise specified, all values relating to the product are nominal values.
Photographs are not to scale and are not true representations of the products in question.

ÖLFLEX® SERVO 2YSLCY-JB

Flexible low capacitance, double-shielded, large-gauge motor cable for servo & VFD applications

ÖLFLEX® SERVO 2YSLCY-JB is a highly flexible power cable for large horsepower motors and VFD drives. It has a double shield with polyethylene-insulated conductors for optimal low-loss power transmission when compared to PVC.

Recommended applications

Motor connections for large motors and drives; textile; paper; chemical; machine tool; heavy industry; conveying technology

Approvals

CE RoHS

Construction

Conductors: finely stranded bare copper

Insulation: polyethylene

Shielding: overall foil and tinned copper braid

Jacket: PVC; transparent or black

Application advantage

- Flexible for easier routing
- For large power drive systems
- Black jacketed version: 3 symmetrical grounds for improved EMC performance

Cable attributes			page 648
OIL	OR-01	FLAME	FR-02
MOTION	FL-01	MECH.	MP-01

Complete the installation


SKINTOP® MS-M BRUSH
page 524


EPIC® ULTRA HB
page 404

Technical data

Minimum bend radius:	4 x cable diameter	**Conductor stranding:**	Class 5 fine wire
Temperature range:		**Color code:**	VDE 0293-308: chart 6, page 681
- for stationary use:	-40°C to +70°C		black, brown, gray,
- for flexible use:	-5°C to +70°C		plus 1 or 3 green/yellow ground(s)
Nominal voltage:	1000V	**Approvals:**	CE & RoHS
Test voltage:	4000V		

three conductors + one ground, transparent jacket

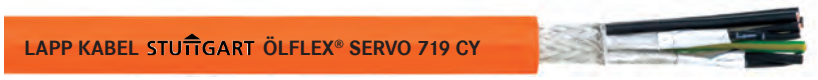
Part number	Size of ground	Nominal outer diameter in	Nominal outer diameter mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-M BRUSH metric thread
1 AWG (50 mm²)						
0036433	1 AWG	1.411	35.8	1576	1982	53112680
2/0 AWG (70 mm²)						
0036434	2/0 AWG	1.588	40.3	2148	2654	53112680
3/0 AWG (95 mm²)						
0036435	3/0 AWG	1.832	46.5	2900	3562	53112681
4/0 AWG (120 mm²)						
0036436	4/0 AWG	2.096	53.2	3652	4435	53112681
250 KCMIL (150 mm²)						
0036437	250 KCMIL	2.258	57.3	4296	4733	53112501
350 KCMIL (185 mm²)						
0036438	350 KCMIL	2.455	62.3	5132	5634	53112500

three conductors + three grounds, black jacket

Part number	Size of ground	Nominal outer diameter in	Nominal outer diameter mm	Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-M BRUSH metric thread
1 AWG (50 mm²)						
0036447	8 AWG	1.284	32.6	1449	1612	53112679
2/0 AWG (70 mm²)						
0036448	6 AWG	1.434	36.4	1929	2054	53112680
3/0 AWG (95 mm²)						
0036449	6 AWG	1.655	42.0	2656	2797	53112680
4/0 AWG (120 mm²)						
0036450	6 AWG	1.883	47.8	3250	3410	53442681
250 KCMIL (150 mm²)						
0036451	4 AWG	2.033	51.6	3636	4118	53112681

ÖLFLEX® SERVO 719/719 CY

Flexible servo cable for stationary applications; unshielded & shielded



ÖLFLEX® SERVO 719/719 CY is a flexible, low-capacitance, oil resistant servo cable which is suitable for servo motor systems of well-known drive manufacturers. It is available with signal pairs for brake and temperature monitoring requirements. ÖLFLEX® SERVO 719 CY is a shielded version for EMI and RFI protection.

Unshielded construction

Conductors: finely stranded bare copper

Insulation: polypropylene

Pairs: individually shielded control pairs, twisted together

Jacket: specially formulated PVC; black

Shielded construction

Conductors: finely stranded bare copper

Insulation: polypropylene

Pairs: individually shielded control pairs, twisted together

Shielding: tinned copper braid (85% coverage)

Jacket: specially formulated PVC; orange

Recommended applications

Power drive systems in automation engineering; connecting cable between servo controller and motor assemblies; pick & place machinery; machine tools; transfer lines; fixed or stationary applications

Application advantage

- Replaces ÖLFLEX® SERVO 700 CY and 709 CY servo cables
- Multi-standard approval reduces part numbers and cost
- Longer cable installation lengths due to low capacitance design

Approvals

c UL us | FIRE PROTECTION | CE | RoHS

Cable attributes			page 648
OIL	OR-02	FLAME	FR-02
MOTION	FL-02	MECH.	MP-02

Complete the installation

EPIC® POWER LS1
page 441

Technical data

Minimum bend radius:
- for flexible use: 15 x cable diameter
- for stationary use: 6 x cable diameter

Temperature range:
- for flexible use: -5°C to +80°C
- for stationary use: -40°C to +80°C

Nominal voltage:
- UL/CSA: 1000V
- IEC U_0/U: 600/1000V

Test voltage: 4000V

Conductor stranding: Class 5 fine wire

Color code:
- power conductors: black with white letters: U/L1/C/L+; V/L2; W/L3/D/L- plus green/yellow ground
- 1 pair: black & white
- 2 pair: black with white numbers: 5, 6, 7, 8
- 22 AWG pairs: white/brown, green/yellow

Approvals:
UL: AWM 2570
Attributes: NFPA 79
Canada: cRU AWM I/II A/B FT1
Additional: CE & RoHS

If not otherwise specified, all values relating to the product are nominal values.
Photographs are not to scale and are not true representations of the products in question.

ÖLFLEX® SERVO 719

Part number	Conductor description: power conductors + control pairs			Nominal outer diameter: in	Nominal outer diameter: mm	Copper weight: lbs/mft	Approx. weight: lbs/mft	EPIC® POWER LS1* configuration
Power conductors + 1 control pair								
1020060	16 AWG/4c	+	(19 AWG/1pr)	0.378	9.7	56	119	3+PE+4
1020065	16 AWG/4c	+	(16 AWG/1pr)	0.421	10.8	73	144	3+PE+4
1020061	16 AWG/5c	+	(19 AWG/1pr)	0.413	10.6	66	136	3+PE+4
1020062	16 AWG/7c	+	(19 AWG/1pr)	0.449	11.5	85	162	3+PE+4
1020063	14 AWG/4c	+	(19 AWG/1pr)	0.433	11.1	82	160	3+PE+4
1020066	14 AWG/4c	+	(16 AWG/1pr)	0.476	12.2	99	185	3+PE+4
1020064	14 AWG/7c	+	(19 AWG/1pr)	0.495	12.7	130	218	3+PE+4
1020067	12 AWG/4c	+	(16 AWG/1pr)	0.542	13.9	137	242	3+PE+4
1020068	10 AWG/4c	+	(16 AWG/1pr)	0.628	16.1	189	321	–
1020069	8 AWG/4c	+	(16 AWG/1pr)	0.710	18.2	292	439	–
Power conductors + 2 control pairs								
1020071	19 AWG/4c	+	2 x (22 AWG/1pr)	0.351	9.0	42	81	3+PE+4
1020072	16 AWG/4c	+	2 x (19 AWG/1pr)	0.452	11.6	75	136	3+PE+4
1020073	14 AWG/4c	+	2 x (18 AWG/1pr)	0.530	13.6	108	192	3+PE+4
1020074	12 AWG/4c	+	2 x (18 AWG/1pr)	0.597	15.3	146	253	3+PE+4
1020075	12 AWG/4c	+	(18 AWG/1pr) + (16 AWG/1pr)	0.605	15.5	160	266	3+PE+4
1020076	10 AWG/4c	+	(18 AWG/1pr) + (16 AWG/1pr)	0.679	17.4	211	344	–

( ) = shielded
* Check connection on motor prior to selecting EPIC® POWER LS1 connector type

ÖLFLEX® SERVO 719 CY

Part number	Conductor description: power conductors + control pairs			Nominal outer diameter: in	Nominal outer diameter: mm	Copper weight: lbs/mft	Approx. weight: lbs/mft	EPIC® POWER LS1* configuration
4 power conductors + 0 control pairs								
1020010	16 AWG/4c		–	0.331	8.4	56	87	5+PE
1020011	14 AWG/4c		–	0.390	9.9	84	128	5+PE
1020012	12 AWG/4c		–	0.461	11.7	128	183	5+PE
1020013	10 AWG/4c		–	0.540	13.7	195	265	–
1020014	8 AWG/4c		–	0.658	16.7	304	390	–
1020015	6 AWG/4c		–	0.792	20.1	485	594	–
1020016	4 AWG/4c		–	0.957	24.3	739	906	–
1020017	2 AWG/4c		–	1.091	27.7	1040	1236	–
1020018	1 AWG/4c		–	1.328	33.7	1445	1777	–
4 power conductors + 1 control pair								
1020019	16 AWG/4c	+	(16 AWG/1pr)	0.453	11.5	98	163	3+PE+4
1020020	14 AWG/4c	+	(16 AWG/1pr)	0.508	12.9	127	206	3+PE+4
1020021	12 AWG/4c	+	(16 AWG/1pr)	0.591	15.0	182	282	3+PE+4
1020022	10 AWG/4c	+	(16 AWG/1pr)	0.670	17.0	236	355	–
1020023	8 AWG/4c	+	(16 AWG/1pr)	0.768	19.5	363	505	–
4 power conductors + 2 control pairs								
1020024	19 AWG/4c	+	2 x (22 AWG/1pr)	0.382	9.7	67	110	3+PE+4
1020025	16 AWG/4c	+	2 x (19 AWG/1pr)	0.485	12.3	101	165	3+PE+4
1020026	14 AWG/4c	+	2 x (18 AWG/1pr)	0.579	14.7	150	240	3+PE+4
1020027	12 AWG/4c	+	2 x (18 AWG/1pr)	0.646	16.4	194	304	3+PE+4
1020028	12 AWG/4c	+	(18 AWG/1pr) + (16 AWG/1pr)	0.654	16.6	206	315	3+PE+4
1020029	10 AWG/4c	+	(18 AWG/1pr) + (16 AWG/1pr)	0.729	18.5	283	415	–
1020030	8 AWG/4c	+	(18 AWG/1pr) + (16 AWG/1pr)	0.871	22.1	395	573	–
1020031	6 AWG/4c	+	2 x (16 AWG/1pr)	0.985	25.0	589	781	–
1020032	4 AWG/4c	+	2 x (16 AWG/1pr)	1.131	28.7	825	1068	–

( ) = shielded
* Check connection on motor prior to selecting EPIC® POWER LS1 connector type

Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section.
If not otherwise specified, all values relating to the product are nominal values.

ÖLFLEX® SERVO 7TCE

Flexible tray-rated servo cable; 600/1000V; UL TC-ER approval

ÖLFLEX® SERVO 7TCE is a highly flexible and oil resistant servo cable suitable for mounting either in equipment or in cable tray, eliminating the need for two different types of cable in a single run. A longer cable connection is possible between the drive and the motor due to its low-capacitance design. This one cable solution is ideal for installing power to servo motor systems.

Construction

Conductors: finely stranded bare copper

Insulation: XLPE

Pairs: one pair: shielded with foil & tinned copper braid (85% coverage) • two Pairs: individually shielded with foil, drain wire, tinned copper braid (85% coverage); twisted together

Shielding: overall tinned copper braid (85% coverage)

Jacket: specially formulated thermoplastic elastomer (TPE); orange

Recommended applications

Motor connections between servo controller and motors on industrial machinery; in tray applications and moving machine parts; assembly handling and production lines with North American and European approvals

Application Advantage

- Tray rated cable for servo applications
- Low capacitance design
- UL TC-ER & c(UL) CIC approvals
- Oil & UV resistant; flame retardant
- Resistant to a wide range of disinfecting solutions used in the food, beverage, chemical and related industries, according to ECOLAB® PM 40-1 test procedure

Approvals

c UL us c RU CE RoHS

Cable attributes			page 648
OIL	OR-03	FLAME	FR-03
MOTION	FL-02	MECH.	MP-03

Complete the installation

EPIC® POWER LS1
page 441

ÖLFLEX® CONNECT solution

ÖLFLEX® CONNECT SERVO
page 607

Technical data

Minimum bend radius:	6 x cable diameter
Temperature range:	
- for stationary use:	-40°C to +105°C
- UL TC:	-25°C to +90°C
Nominal voltage:	
- UL TC-ER:	600V
- UL Flexible Motor Supply:	1000V
- VDE U_0/U:	600/1000V
Test voltage:	2000V
Conductor stranding:	Class 5 fine wire
Color code:	
- power conductors:	black conductors with white letters: U/L1/C/L+; V/L2; W/L3/D/L- plus green/yellow ground
- 1 pair:	black & white
- 2 pair:	black with white numbers: 5, 6, 7, 8

Approvals:	UL:	TC-ER per UL 1277 Flexible Motor Supply 1000V
	Attributes:	UL Oil Res I/II -40°C cold bend; -25°C cold impact UV resistant direct burial NFPA 79
	NEC:	Class 1 Division 2 per NEC Article 501
	Canada:	c(UL) CIC FT4 (18 - 14 AWG) cRU AWM II A/B FT4
	Additional:	CE & RoHS

If not otherwise specified, all values relating to the product are nominal values.
Photographs are not to scale and are not true representations of the products in question.

ÖLFLEX® SERVO 7TCE

Part number	Conductor description power conductors + control pairs			Nominal outer diameter in	mm	Copper weight lbs/mft	Approx. weight lbs/mft	EPIC® POWER LS1* configuration
4 power conductors								
700730	16 AWG/4c		–	0.385	9.78	59	96	5+PE
700731	14 AWG/4c		–	0.433	11.00	89	134	5+PE
700732	12 AWG/4c		–	0.504	12.80	134	192	5+PE
700733	10 AWG/4c		–	0.555	14.10	189	251	–
4 power conductors + 1 control pair								
700734	16 AWG/4c	+	(16 AWG/1pr)	0.494	12.55	99	161	3+PE+4
700735	14 AWG/4c	+	(16 AWG/1pr)	0.524	13.31	128	202	3+PE+4
700736	12 AWG/4c	+	(16 AWG/1pr)	0.620	15.75	174	290	3+PE+4
700737	10 AWG/4c	+	(16 AWG/1pr)	0.669	17.00	238	333	–
4 power conductors + 2 control pairs								
700738	18 AWG/4c	+	2 x (18 AWG/1pr)	0.520	13.21	112	186	3+PE+4
700739	16 AWG/4c	+	2 x (18 AWG/1pr)	0.547	13.89	126	211	3+PE+4
700740	14 AWG/4c	+	2 x (18 AWG/1pr)	0.610	15.49	154	260	3+PE+4
700741	12 AWG/4c	+	(18 AWG/1pr) + (16 AWG/1pr)	0.669	17.00	219	327	3+PE+4
700742	10 AWG/4c	+	(18 AWG/1pr) + (16 AWG/1pr)	0.712	18.08	275	386	–

( ) = shielded
* Check connection on motor prior to selecting EPIC® POWER LS1 connector type

Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section.
If not otherwise specified, all values relating to the product are nominal values.

ÖLFLEX® SERVO FD 7TCE

Continuous flex tray-rated servo cable; 600/1000V; UL TC-ER approval

ÖLFLEX® SERVO FD 7TCE is a continuous flex and oil resistant servo cable suitable for mounting either in equipment or in cable tray, eliminating the need for two different types of cable in a single run. A longer cable connection is possible between the drive and the motor due to its low-capacitance design. This one cable solution is ideal for installing power to servo motor systems.

Construction

Conductors: finely stranded bare copper

Insulation: EPR

Pairs: one pair: shielded with foil & tinned copper braid (85% coverage) • two pairs: individually shielded with foil, drain wire, tinned copper braid (85% coverage)

Shielding: overall wrapping; overall tinned copper braid (85% coverage)

Jacket: specially formulated thermoplastic elastomer (TPE); orange

Recommended applications

Motor connections between servo controller and motors on industrial machinery; in tray applications and cable tracks or moving machine parts; assembly handling; production lines and robotic systems with North American and European approvals

Application advantage

- Tray rated cable for servo applications
- Low capacitance design
- UL TC-ER & c(UL) CIC approvals
- Oil & UV resistant; flame retardant

Approvals

Continuous Flex Test Method Verified UL VERIFIED verifyULcom A522492

Cable attributes				page 648
OIL	OR-03	FLAME	FR-03	
MOTION	CF-02*	MECH.	MP-03	

Complete the installation

EPIC® POWER LS1
page 441

ÖLFLEX® CONNECT solution

ÖLFLEX® CONNECT SERVO
page 607

Technical data

Minimum bend radius:
- for continuous flexing: 7.5 x cable diameter
- for stationary use: 5 x cable diameter

Temperature range:
- for continuous flexing: -5°C to +90°C
- for stationary use: -40°C to +105°C
- UL TC: -25°C to +90°C

Nominal voltage:
- UL TC-ER: 600V
- UL Flexible Motor Supply: 1000V
- VDE U_0/U: 600/1000V

Test voltage: 4000V

Conductor stranding: Class 6 super fine wire

Color code:
- power: black conductors with white letters: U/L1/C/L+; V/L2; W/L3/D/L- plus green/yellow ground
- 1 pair: black & white
- 2 pair: black with white numbers: 5, 6, 7, 8

Approvals:

UL:	TC-ER per UL 1277 Flexible Motor Supply 1000V
Attributes:	UL Oil Res I/II -40°C cold bend; -25°C cold impact UV resistant direct burial NFPA 79
NEC:	Class 1 Division 2 per NEC Article 501
Canada:	c(UL) CIC FT4 (18 - 14 AWG) cRU AWM II A/B FT4
Additional:	CE & RoHS
UL Verified ID A522492:	Continuous Flex Test Method Verified

If not otherwise specified, all values relating to the product are nominal values.
Photographs are not to scale and are not true representations of the products in question.

ÖLFLEX® SERVO FD 7TCE

Part number	Conductor description power conductors + control pairs			Nominal outer diameter in	mm	Copper weight lbs/mft	Approx. weight lbs/mft	EPIC® POWER LS1* configuration
4 power conductors								
700750	16 AWG/4c		–	0.400	10.2	61	117	5+PE
700751	14 AWG/4c		–	0.448	11.4	95	154	5+PE
700752	12 AWG/4c		–	0.514	13.1	135	214	5+PE
700753	10 AWG/4c		–	0.590	15.0	190	289	–
4 power conductors + 1 control pair								
700754	16 AWG/4c	+	(16 AWG/1pr)	0.500	12.7	97	174	3+PE+4
700755	14 AWG/4c	+	(16 AWG/1pr)	0.543	13.8	134	239	3+PE+4
700756	12 AWG/4c	+	(16 AWG/1pr)	0.635	16.1	184	300	3+PE+4
700757	10 AWG/4c	+	(16 AWG/1pr)	0.674	17.1	232	360	–
4 power conductors + 2 control pairs								
700758	18 AWG/4c	+	2 x (18 AWG/1pr)	0.523	13.3	102	188	3+PE+4
700759	16 AWG/4c	+	2 x (18 AWG/1pr)	0.584	14.8	128	238	3+PE+4
700760	14 AWG/4c	+	2 x (18 AWG/1pr)	0.625	15.9	153	275	3+PE+4
700761	12 AWG/4c	+	(18 AWG/1pr) + (16 AWG/1pr)	0.705	17.9	214	352	–
700762	10 AWG/4c	+	(18 AWG/1pr) + (16 AWG/1pr)	0.741	18.8	262	411	–

( ) = shielded
* Check connection on motor prior to selecting EPIC® POWER LS1 connector type

Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section.
If not otherwise specified, all values relating to the product are nominal values.

ÖLFLEX® SERVO FD 796 CP

High-acceleration continuous flex servo cable with PUR jacket; shielded

ÖLFLEX® SERVO FD 796 CP is specially designed, manufactured, and tested by LAPP for usage in modern high-acceleration cable chain applications as well as over long travel lengths. It replaces seven ÖLFLEX® SERVO FD cables: 755 CP, 755 CP DESINA, 781 CP, 785 CP, 785 CP DESINA, 790 CP & 795 CP. For bending cycles and operation parameters, see www.lappusa.com/cf-rating

Construction

Conductors: extra fine bare copper

Pairs: one pair: shielded with tinned copper braid; non-woven wrapping • two pairs: shielded with foil, drain wire, tinned copper braid; non-woven wrapping twisted together

Insulation: polypropylene

Shielding: overall non woven wrapping; tinned copper braid (85% coverage)

Jacket: polyurethane; orange

Recommended applications

Motor connections between servo controllers and motors on industrial machinery; in cable chains or moving machine parts; assembly handling; production lines and robotic systems with North American and European approvals

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

c UL us · FIRE PROTECTION · VDE · CE · RoHS

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

Complete the installation

EPIC® POWER LS1
page 441

ÖLFLEX® CONNECT solution

ÖLFLEX® CONNECT SERVO
page 607

Technical data

Minimum bend radius:		**Conductor stranding:**	Class 6 super fine wire
- for continuous flexing:			
- 16-6 AWG:	7.5 x cable diameter	**Color code:**	
- 4-1 AWG:	10 x cable diameter	- power conductors:	black conductors with white letters: U/L1/C/L+; V/L2; W/L3/D/L- plus green/yellow ground
- for stationary use:	4 x cable diameter		
Temperature range:		- 1 pair:	black & white
- for continuous flexing:	-40°C to +80°C	- 2 pair:	black with white numbers: 5, 6, 7, 8
- for stationary use:	-50°C to +80°C		
Nominal voltage:		**Approvals:**	UL: AWM 20234
- UL/CSA:	1000V		Attributes: NFPA 79
- IEC U_0/U:	600/1000V		Canada: cRU AWM I/II A/B FT1
Test voltage:	4000V		Additional: VDE Reg. no 8591 CE & RoHS

If not otherwise specified, all values relating to the product are nominal values.
Photographs are not to scale and are not true representations of the products in question.

ÖLFLEX® SERVO FD 796 CP

Part number	Conductor description power conductors + control pairs			Nominal outer diameter in	mm	Copper weight lbs/mft	Approx. weight lbs/mft	EPIC® POWER LS1* configuration
4 power conductors								
0027950	16 AWG/4c		–	0.362	9.2	53	94	5+PE
0027951	14 AWG/4c		–	0.418	10.6	87	132	5+PE
0027952	12 AWG/4c		–	0.469	11.9	125	180	5+PE
0027953	10 AWG/4c		–	0.567	14.4	199	267	–
0027954	8 AWG/4c		–	0.693	17.6	302	397	–
0027955	6 AWG/4c		–	0.867	22.0	481	642	–
0027956	4 AWG/4c		–	0.993	25.2	721	898	–
0027957	2 AWG/4c		–	1.131	28.7	995	1189	–
0027958	1 AWG/4c		–	1.316	33.4	1421	1658	–
4 power conductors + 1 control pair								
0027959	16 AWG/4c	+	(16 AWG/1pr)	0.473	12.0	91	175	3+PE+4
0027960	14 AWG/4c	+	(16 AWG/1pr)	0.544	13.8	126	214	3+PE+4
0027961	12 AWG/4c	+	(16 AWG/1pr)	0.587	14.9	158	259	3+PE+4
0027962	10 AWG/4c	+	(16 AWG/1pr)	0.670	17.0	221	327	–
0027963	8 AWG/4c	+	(16 AWG/1pr)	0.764	19.4	346	471	–
0027964	6 AWG/4c	+	(16 AWG/1pr)	0.938	23.8	509	704	–
0027965	4 AWG/4c	+	(16 AWG/1pr)	1.064	27.0	771	1030	–
0027966	2 AWG/4c	+	(16 AWG/1pr)	1.229	31.2	1034	1409	–
0027967	1 AWG/4c	+	(16 AWG/1pr)	1.367	34.7	1466	1829	–
4 power conductors + 2 control pairs								
0027969	16 AWG/4c	+	2 x (19 AWG/1pr)	0.481	12.2	107	210	3+PE+4
0027970	14 AWG/4c	+	2 x (18 AWG/1pr)	0.575	14.6	139	265	3+PE+4
0027971	12 AWG/4c	+	(18 AWG/1pr) + (16 AWG/1pr)	0.642	16.3	231	326	3+PE+4
0027972	10 AWG/4c	+	(18 AWG/1pr) + (16 AWG/1pr)	0.713	18.1	293	395	–
0027973	8 AWG/4c	+	(18 AWG/1pr) + (16 AWG/1pr)	0.859	21.8	410	550	–
0027974	6 AWG/4c	+	2 x (16 AWG/1pr)	1.005	25.5	538	763	–
0027975	4 AWG/4c	+	2 x (16 AWG/1pr)	1.139	28.9	798	1048	–
0027976	2 AWG/4c	+	2 x (16 AWG/1pr)	1.237	31.4	1067	1406	–
0027977	1 AWG/4c	+	2 x (14 AWG/1pr)	1.450	36.8	1718	1962	–

( ) = shielded
* Check connection on motor prior to selecting EPIC® POWER LS1 connector type

Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section.
If not otherwise specified, all values relating to the product are nominal values.

ÖLFLEX® SERVO FD 798 CP

High-acceleration continuous flex encoder & resolver cable

ÖLFLEX® SERVO FD 798 CP is specially designed, manufactured, and tested by LAPP for usage in modern high-acceleration cable chain applications as well as over long travel lengths. It replaces four ÖLFLEX® SERVO FD encoder/resolver cables: 760 CP/CP DESINA & 770 CP/CP DESINA. For bending cycles and operation parameters, see www.lappusa.com/cf-rating

Recommended applications

Connecting cable between servo controller and encoder/resolver; connecting cable between servo controller and speed generators, cable chains, and machine parts; transfer lines and production lines

Approvals

Construction

Conductors: extra fine tinned copper

Pairs: twisted and bundled; shielded (see chart)

Insulation: polypropylene

Shielding: tinned copper braid (85% coverage)

Jacket: polyurethane; green

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; abrasion-resistant, halogen-free, flame retardant, flexes at low temperatures

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

Complete the installation

EPIC® SIGNAL M23
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ÖLFLEX® CONNECT solution

ÖLFLEX® CONNECT SERVO
page 607

Technical data

Minimum bend radius:
- for continuous flexing: 7.5 x cable diameter
- for installation: 4 x cable diameter

Temperature range:
- for stationary use: -50°C to +80°C
- for continuous flexing: -40°C to +80°C

Nominal voltage: 30V

Test voltage:
- conductor/conductor: 1500V
- conductor/shield: 750V

Conductor stranding: extra fine wire

Color code: see following color chart

Approvals:
UL: AWM 20236
Attributes: VW-1
Canada: CSA AWM I/II A/B FT1
Additional: RoHS
MUD acc. to IEC 61892-4 Annex D

Part number	Conductor description power conductors	+	control pairs	Nominal outer diameter in	mm	Copper weight lbs/mft	Approx. weight lbs/mft	EPIC® SIGNAL M23 # of contacts
Power conductors + control pairs								
0036910	20 AWG/4c	+	22 AWG/4pr	0.350	8.9	53	84	12
0036911	2 x (20 AWG/1c)	+	3 x (26 AWG/1pr)	0.350	8.9	47	81	8+1
0036912	26 AWG/4c	+	3 x (26 AWG/1pr) + 20 AWG/1pr	0.346	8.8	46	74	12
0036913	26 AWG/4c + 24 AWG/4c	+	3 x (26 AWG/1pr) + 20 AWG/1pr	0.370	9.4	54	87	16
0036914	20 AWG/9c		–	0.346	8.8	48	74	9
0036915	18 AWG/2c	+	24 AWG/4pr	0.346	8.8	42	73	12
0036916	20 AWG/2c	+	24 AWG/6pr	0.406	10.3	45	81	16
0036917	26 AWG/10c	+	20 AWG/1pr	0.303	7.7	28	55	12
0036918	26 AWG/10c + 20 AWG/4c		–	0.319	8.1	36	66	16
0036920	20 AWG/4c	+	26 AWG/4pr	0.323	8.2	34	64	12
0036921	–		24 AWG/4pr	0.299	7.6	26	50	9
0036923	–		26 AWG/8pr	0.307	7.8	34	57	16
0036924	–		26 AWG/4pr	0.252	6.4	20	35	8+1
0036926	24 AWG/12c		–	0.272	6.9	30	49	12
0036927	20 AWG/2c	+	24 AWG/4pr	0.335	8.5	42	66	12
0036928	20 AWG/4c + (26 AWG/4c)	+	26 AWG/2pr + 2 x (26 AWG/1pr)	0.358	9.1	53	91	16
0036929	20 AWG/2c	+	2 x (24 AWG/1pr)	0.343	8.7	31	66	6
0036930	20 AWG/2c	+	24 AWG/2pr	0.287	7.3	26	48	6

( ) = shielded

Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section.
If not otherwise specified, all values relating to the product are nominal values.
Photographs are not to scale and are not true representations of the products in question.

ÖLFLEX® SERVO FD 798 CP

Part number	Conductor description			Nominal outer diameter		Copper weight	Approx. weight	EPIC® SIGNAL M23
	power conductors	+	control pairs	in	mm	lbs/mft	lbs/mft	# of contacts
Power conductors + control pairs								
0036949	2 x (20 AWG/1c)	+	3 x (26 AWG/1pr)	0.378	9.6	47	80	8
0036942		+	(25 AWG/2pr)	0.197	5	16	32	4
0036943	18AWG/4c +(26 AWG/4c)	+	26 AWG/4pr	0.382	9.7	69	117	16
0036944	24 AWG/3c + 18 AWG/2c	+	3 x (24 AWG/1pr)	0.366	9.3	64	109	11
0036946		+	3 x (26 AWG/1pr) + (20 AWG/1pr)	0.394	10	45	95	8
0036941	(26 AWG/3c)	+	3 x (26 AWG/1pr)	0.362	9.2	38	84	9
0036945	18 AWG/2c	+	4 x (26 AWG/1pr)	0.449	11.4	62	77	10
0036947			24 AWG/5pr	0.354	9	34	84	10
0036940			24 AWG/6pr	0.366	9.3	48	96	12
0036948			22 AWG/5pr	0.342	8.7	50	73	10
0036931	2 x (18 AWG/1c)	+	3 x (26 AWG/1pr)	0.358	9.1	50	92	8
0036932	20 AWG/4c + (26 AWG/4c)	+	26 AWG/4pr	0.327	8.3	59	90	16
0036933	20 AWG/2c	+	24 AWG/3pr	0.331	8.4	34	58	8
0036934	20 AWG/2c	+	24 AWG/5pr–	0.374	9.5	46	76	12
0036935			24 AWG/3pr	0.256	6.5	24	47	6
0036936	20 AWG/2c	+	26 AWG/5pr	0.307	7.8	34	68	12
0036937	20 AWG/5c	+	25 AWG/2pr)	0.299	7.6	42	74	9
0036938	20 AWG/6c	+	25 AWG/5pr	0.342	8.7	53	76	16
0036939			28 AWG/10pr	0.244	6.2	27	47	20

ÖLFLEX® SERVO FD 798 CP color code chart on page 744 of LAPP North America digital catalog.

Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section.
If not otherwise specified, all values relating to the product are nominal values.

ÖLFLEX® SERVO FD 7DSL

Continuous flex hybrid cable: one connection between drive, motor & feedback systems

ÖLFLEX® SERVO FD 7DSL is a specially designed continuous flexing hybrid cable suitable for Hiperface DSL® motor-feedback systems. It is EMC compliant. For fixed or stationary applications, ÖLFLEX® SERVO 7DSL is the right cable. For bending cycles and operation parameters, see www.lappusa.com/cf-rating

Recommended applications

Power drive systems in automation engineering, connecting cable between servo controller and motor, assemblies, pick & place machinery, machine tools, transfer lines, cable chain applications

Approvals

c UL us · FIRE PROTECTION · CE · RoHS

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

Construction

Conductors: super fine stranded bare copper • signal pair: tinned copper

Insulation: polypropylene

Pairs: signal pair: shielded with foil tape and tinned copper braid (85% coverage) • control pair: shielded with tinned copper braid (85% coverage)

Shielding: overall non-woven wrapping; tinned copper braid (85% coverage)

Jacket: polyurethane; orange

Application advantage

- Only one cable needed for power and feedback circuits
- Available with or without additional control pair
- Low capacitance design
- Suitable for damp, wet, or dry areas
- Oil resistant and flame retardant
- Halogen-free and UV-resistant jacket

ÖLFLEX® CONNECT solution

ÖLFLEX® CONNECT SERVO
page 607

Technical data

Minimum bend radius:
- for continuous flexing: 7.5 x cable diameter
- for stationary use: 5 x cable diameter

Temperature range:
- for continuous flexing: -40°C to +80°C
- for stationary use: -50°C to +80°C

Conductor stranding:
- signal pair: Class 6 super fine wire
- control pair (optional): 19 strand
- Class 6 super fine wire

Nominal voltage:
- power & control:
  - UL: 1000V
  - IEC U_0/U: 600/1000V
- signal pair: 300V (not for power)

Test voltage:
- power & control: 4000V
- signal pair: 1000V

Color code:
- power conductors: black with white letters: U/L1/C/L+; V/L2; W/L3/D/L- plus green/yellow ground
- signal pair: white & blue
- control pair (optional): black with white numbers: 5, 6

Approvals:
UL: AWM 21223
Attributes: NFPA 79
Canada: cRU AWM I/II A/B FT1
Additional: based on VDE specifications
CE & RoHS

Part number	Conductor description power conductors + control pairs			Nominal outer diameter in	mm	Copper weight lbs/mft	Approx. weight lbs/mft
4 power conductors + 1 control pair							
1023275	16 AWG/4c	+	(22 AWG/1pr)	0.441	11.2	115	128
1023276	14 AWG/4c	+	(22 AWG/1pr)	0.496	12.6	160	263
1023277	12 AWG/4c	+	(22 AWG/1pr)	0.551	14.0	218	313
4 power conductors + 2 control pairs							
1023278	16 AWG/4c	+	(18 AWG/1pr) + (22 AWG/1pr)	0.520	13.2	152	256
1023279	14 AWG/4c	+	(18 AWG/1pr) + (22 AWG/1pr)	0.551	14.0	185	393
1023280	12 AWG/4c	+	(18 AWG/1pr) + (22 AWG/1pr)	0.622	15.8	268	407

( ) = shielded pair

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Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section.
If not otherwise specified, all values relating to the product are nominal values. Photographs are not to scale and are not true representations of the products in question.

ÖLFLEX® SERVO 7DSL

Flexible hybrid cable: one connection between drive, motor & feedback system

ÖLFLEX® SERVO 7DSL is a specially designed hybrid cable suitable for fixed or stationary installations in Hiperface DSL® motor-feedback systems. It is EMC compliant. For continuous flexing installations, ÖLFLEX® SERVO FD 7DSL is the right cable.

Recommended applications

Power drive systems in automation engineering, connecting cable between servo controller and motor, assemblies, pick & place machinery, machine tools, transfer lines, fixed or stationary applications

Approvals

c UL us · FIRE PROTECTION · CE · RoHS

Cable attributes			page 648
OIL	OR-01	FLAME	FR-02
MOTION	FL-01	MECH.	MP-02

Construction

Conductors: finely stranded bare copper • signal pair: tinned copper

Insulation: polypropylene

Pairs: signal pair: shielded with foil tape and tinned copper braid (85% coverage) • control pair: shielded with tinned copper braid (85% coverage)

Shielding: overall non-woven wrapping; tinned copper braid (85% coverage)

Jacket: specially formulated PVC; orange

Application advantage

- Only one cable needed for power and feedback circuits
- Available with or without additional control pair
- Low capacitance design
- Suitable for damp, wet, or dry areas
- Oil and flame resistant

ÖLFLEX® CONNECT solution

ÖLFLEX® CONNECT SERVO
page 607

Technical data

Minimum bend radius: 5 x cable diameter

Temperature range: -40°C to +80°C

Conductor stranding:
- signal pair: 7 strand
- control pair (optional): Class 5 fine wire

Nominal voltage:
- power & control:
  - UL: 1000V
  - IEC U_0/U: 600/1000V
- signal pair: 300V (not for power)

Test voltage:
- power & control: 4000V
- signal pair: 1000V

Color code:
- power conductors: black with white letters: U/L1/C/L+; V/L2; W/L3/D/L- plus green/yellow ground
- signal pair: white & blue
- control pair (optional): black with white numbers: 5, 6

Approvals:
UL: AWM 2570
Attributes: NFPA 79
Canada: cRU AWM I/II A/B FT1
Additional: based on VDE specifications CE & RoHS

Part number	Conductor description power conductors + control pairs			Nominal outer diameter in	Nominal outer diameter mm	Copper weight lbs/mft	Approx. weight lbs/mft
4 power conductors + 1 control pair							
1023290	16 AWG/4c	+	(22 AWG/1pr)	0.441	11.2	74	130
1023291	14 AWG/4c	+	(22 AWG/1pr)	0.496	12.6	99	170
1023292	12 AWG/4c	+	(22 AWG/1pr)	0.551	14.0	140	223
4 power conductors + 2 control pairs							
1023293	16 AWG/4c	+	(18 AWG/1pr) + (22 AWG/1pr)	0.520	13.2	94	168
1023294	14 AWG/4c	+	(18 AWG/1pr) + (22 AWG/1pr)	0.551	14.0	124	191
1023295	12 AWG/4c	+	(18 AWG/1pr) + (22 AWG/1pr)	0.622	15.8	166	262

( ) = shielded pair

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.

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

Approvals

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

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

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

Minimum bend radius:
- power cable:
  - for continuous flexing:
    - 16 - 6 AWG: 7.5 x cable diameter
    - 4 - 1 AWG: 10 x cable diameter
  - for stationary use: 4 x cable diameter
- signal cable:
  - for continuous flexing: 8 x cable diameter
  - for stationary use: 4 x cable diameter

Temperature range:
- for continuous flexing: -20°C to +60°C
- for stationary use: -50°C to +80°C

Nominal voltage:
- signal conductors: 30V
- power/control conductors: 1000V

Test voltage:
- signal conductors: 500V
- power conductors: 4000V

Conductor stranding: Class 6 super fine wire

Color code:
- feedback/signal cables: see following color chart
- motor/servo cables: black with white letters:
  - 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

Approvals:
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

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If not otherwise specified, all values relating to the product are nominal values.
Photographs are not to scale and are not true representations of the products in question.

Servo cable according to SIEMENS® standard 6FX 8PLUS

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 in	Nominal outer diameter mm	Copper weight lbs/mft	Approx. weight lbs/mft	EPIC® POWER LS1* configuration	EPIC® SIGNAL M23 # of contacts
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

Servo cable according to SIEMENS® standard 6FX 5008

Flexible servo cable for stationary applications

Servo cables according to SIEMENS® standard 6FX 5008 are flexible, oil-resistant, UL, CSA, VDE & CE rated power supply, feedback and signal cables for signal transmission or motor connections.

Construction

Conductors: finely stranded bare copper

Insulation: 16 - 10 AWG: polypropylene • 8 AWG & larger: PVC

Pairs: shielded with tinned copper braid (not all feedback pairs are shielded)

Shielding: overall tinned copper braid

Jacket: feedback/signal: green PVC • servo/motor: orange PVC

Recommended applications

Sensor leads for signal transmission and motor connections; servo and power drive systems for food & beverage, automotive, packaging, and other industries

Application advantage

- Built in accordance with SIEMENS® standard 6FX 5008
- Colored jackets in accordance with DESINA®
- All cables have an overall shield for EMI & RFI protection
- Oil-resistant jacket
- Cables can be provided as a complete assembly: call factory for price and delivery information

Approvals

Cable attributes				page 648
OIL	OR-02	FLAME	FR-02	
MOTION	FL-01	MECH.	MP-02	

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ÖLFLEX® CONNECT solution

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Technical data

Minimum bend radius: 5 x cable diameter

Temperature range:
- for flexible use: 0°C to +60°C
- for stationary use: -20°C to +80°C

Nominal voltage:
- UL/CSA:
  - power conductors: 1000V
  - control conductors: 1000V
  - feedback/signal cond.: 30V

Test voltage:
- power conductors: 4000V
- control conductors: 2000V
- feedback/signal cond.: 500V

Conductor stranding: Class 5 fine wire

Color code:
- feedback/signal cables: see following color chart
- motor/servo cables: black with white letters: U/L1/C/L+; V/L2; W/L3/D/L- plus green/yellow ground

Approvals:
UL: AWM 2570 (motor)
AWM 2502 (signal)
Canada: CSA AWM II A/B FT1
Additional: based on VDE specifications
CE & RoHS

Servo cable according to SIEMENS® standard 6FX 5008

color code: feedback/signal cable

Part number	Conductor description	Color code
0025724	22 AWG/4pr	brown & black • red & orange yellow & green • blue & violet
	20 AWG/4c	blue/white • black/white red/white • yellow/white
0025725	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
0025726	26 AWG/3pr	yellow & green • black & brown • red & orange
	26 AWG/4c	gray • blue • white/yellow • white/black
	24 AWG/4c	brown/yellow • brown/gray green/black • green/red
	20 AWG/1pr	brown/red & brown/blue

Part number	Conductor description	SIEMENS® part number	Nominal outer diameter in	Nominal outer diameter mm	Copper weight lbs/mft	Approx. weight lbs/mft	EPIC® POWER LS1* configuration	EPIC® SIGNAL M23 # of contacts
feedback/signal cables								
0025724	22 AWG/4 pr + 20 AWG/4c	6FX5008-1BD21	0.354	9.0	51	81	–	12
0025725	3 x (26 AWG/1pr) + 26 AWG/4c + 20 AWG/1pr	6FX5008-1BD41	0.350	8.9	42	67	–	12
0025726	3 x (26 AWG/1pr) + 26 AWG/4c + 20 AWG/1pr + 24 AWG/4c	6FX5008-1BD51	0.374	9.5	46	93	–	16
motor cables								
00257001	16 AWG/4c	6FX5008-1BB11LC	0.315	8.0	59	88	5+PE	–
00257011	14 AWG/4c	6FX5008-1BB21LC	0.378	9.6	89	147	5+PE	–
00257021	12 AWG/4c	6FX5008-1BB31LC	0.433	11.0	131	210	5+PE	–
00257031	10 AWG/4c	6FX5008-1BB41LC	0.516	13.1	188	255	–	–
0025704	8 AWG/4c	6FX5008-1BB51	0.760	19.3	299	417	–	–
0025705	6 AWG/4c	6FX5008-1BB61	0.918	23.3	480	712	–	–
0025706	4 AWG/4c	6FX5008-1BB25	1.060	26.9	746	1102	–	–
0025707	2 AWG/4c	6FX5008-1BB35	1.194	30.3	1035	1552	–	–
0025708	1 AWG/4c	6FX5008-1BB50	1.438	36.5	1451	2177	–	–
servo cables								
00257151	16 AWG/4c + (16 AWG/1pr)	6FX5008-1BA11LC	0.410	10.4	101	167	3+PE+4	–
00257161	14 AWG/4c + (16 AWG/1pr)	6FX5008-1BA21LC	0.473	12.0	130	208	3+PE+4	–
00257171	12 AWG/4c + (16 AWG/1pr)	6FX5008-1BA31LC	0.536	13.6	183	299	3+PE+4	–
00257181	10 AWG/4c + (16 AWG/1pr)	6FX5008-1BA41LC	0.615	15.6	236	379	–	–
0025719	8 AWG/4c + (16 AWG/1pr)	6FX5008-1BA51	0.827	21.0	360	542	–	–

( ) = shielded
* Check connection on motor prior to selecting EPIC® POWER LS1 connector type

Servo cable according to INDRAMAT® standard INK

Continuous flex servo cable with PUR jacket; shielded

Servo cables according to INDRAMAT® standard INK are highly flexible, oil-resistant, and are UL, CSA, and CE rated. Power cables with pairs and feedback/signal cables are in accordance to INDRAMAT standards.

Construction

Conductors: finely stranded bare copper

Insulation: pairs & power conductors: TPE

Pairs: shielded with foil and tinned copper (not all feedback pairs are shielded)

Shielding: tinned copper braid

Jacket: polyurethane, orange

Recommended applications

Motor connections for servo motors; machine tools; food & beverage, automotive, and packaging industries for continuous flexing cable chain

Application advantage

- Built in accordance with INDRAMAT® standards
- Overall shield for EMI & RFI protection
- Abrasion-, oil-, and cut-resistant, halogen-free jacket
- Cables can be provided as a complete assembly

Approvals

Continuous Flex Test Method Verified

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

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Technical data

Minimum bend radius:
- feedback/signal cables: 10 x cable diameter
- servo/motor cables: 7.5 x cable diameter

Temperature range:
- for continuous flexing: -30°C to +80°C
- for stationary use: -50°C to +80°C

Nominal voltage:
- feedback/signal cond.: 300V
- power/control conductors: 1000V

Conductor stranding: Class 6 super fine wire

Color code:
- feedback cables: see following color chart
- power conductors: black with white numbers: 1, 2, 3 plus green/yellow ground
- control pairs: black with white numbers: 5/6, 7/8

Approvals:
UL: AWM 20234 (servo/motor)
AWM 20236 (signal)
Canada: CSA AWM I/II A/B FT1
Additional: CE & RoHS
*UL Verified ID A522492: Continuous Flex Test Method Verified

Servo cable according to INDRAMAT® standard INK

color code: feedback/signal cable

Part number	Conductor description	Color code
7072400	24 AWG/4pr	brown & green • gray & pink blue & violet • red & black
	18 AWG/2c	white • brown
7072401	24 AWG/4pr	brown & green • gray & pink blue & violet • red & black
	20 AWG/2c	white • brown
7072402	20 AWG/9c	green • brown • gray yellow • black • blue red • white • pink

Part number	Conductor description	Color code
7072414	26 AWG/4c	yellow/black • blue/black green/black • red/black
	26 AWG/4pr	red & black • brown & green yellow & violet • gray & pink
	18 AWG/4c	white • brown/green white/green • blue
7072415*	2 x (24 AWG/1pr)	white & brown • green & yellow
	20 AWG/2c	pink • gray
7072416	24 AWG/2pr	red & black • gray & pink
	20 AWG/2c	white • brown

Part number	Conductor description	INDRAMAT® part number	Nominal outer diameter in	Nominal outer diameter mm	Copper weight lbs/mft	Approx. weight lbs/mft	EPIC® POWER LS1* configuration	EPIC® SIGNAL M23 # of contacts
Feedback/signal cables								
7072400	24 AWG/4pr + 18 AWG/2c	INK-0209	0.347	8.8	50	81	–	12
7072401	24 AWG/4pr + 20 AWG/2c	INK-0448	0.335	8.5	47	67	–	12
7072402	20 AWG/9c	INK-0208	0.347	8.8	50	85	–	9
7072414	18 AWG/4c + 26 AWG/4pr + (26 AWG/4c)	INK-0532	0.382	9.7	54	94	–	16
7072415	2 x (24 AWG/1pr) + 20 AWG/2c	INK-0234	0.343	8.7	31	60	–	6
7072416	24 AWG/2pr + 20 AWG/2c	INK-0750	0.299	7.6	24	62	–	9
Servo/motor cables								
7072417	19 AWG/4c + 20 AWG/1pr	INK-0670	0.394	10.0	49	89	3+PE+4	–
7072403	18 AWG/4c + 2 x (19 AWG/1pr)	INK-0653	0.453	11.5	114	152	3+PE+4	–
7072404	16 AWG/4c + 2 x (19 AWG/1pr)	INK-0650	0.481	12.2	127	180	3+PE+4	–
7072405	14 AWG/4c + 2 x (18 AWG/1pr)	INK-0602	0.595	15.1	142	215	3+PE+4	–
7072406	12 AWG/4c + (18 AWG/1pr) + (16 AWG/1pr)	INK-0603	0.630	16.0	206	316	3+PE+4	–
7072407	10 AWG/4c + (18 AWG/1pr) + (16 AWG/1pr)	INK-0604	0.741	18.8	246	403	–	–
7072408	8 AWG/4c + (18 AWG/1pr) + (16 AWG/1pr)	INK-0605	0.867	22.0	380	571	–	–
7072409	6 AWG/4c + 2 x (16 AWG/1pr)	INK-0606	0.993	25.2	563	685	–	–
7072410	4 AWG/4c + 2 x (16 AWG/1pr)	INK-0607	1.103	28.0	827	954	–	–

( ) = shielded
* Check connection on motor prior to selecting EPIC® POWER LS1 connector type