VFD (Variable-Frequency Drive) / Servo Cable with Signal Pair

Overview

AutomationDirect's VFD-SC series VFD / Servo cable is the same high-quality cable as our VFDC series with one additional feature. The VFD-SC cable has a shielded 16AWG signal pair allowing this cable to be used with motors and drives requiring brake control or feedback from devices like temperature or position sensors. Having the integral signal pair allows this cable to be used with our SureServo Drives and Motors up to 3kW.

Please Note: Our prices on VFD Cable are closely tied to the market price for copper. This allows us to offer the best savings possible if conditions are favorable; however, it also means that our prices may increase if market conditions warrant.

Click on the above thumbnail or go to https://www.automationdirect.com/VID-WD-0016 for a short introduction on our cut to length cable

Features

- Cross-linked Polyethylene (XLPE) conductor insulation
- Class K, flexible stranded tinned annealed copper conductors per ASTM B33, B172 and B174
- Green ground conductor with yellow stripe, cross linked Polyethylene (XLPE) insulation
- 100% coverage aluminum/mylar/aluminum foil shield
- 85% coverage tinned copper braid shield
- Tinned copper drain wire(s)
- 16AWG Shielded Signal Pair for Feedback / Brake Control
- Black Thermoplastic Elastomer (TPE) jacket
- Exceeds Ecolab PM-40-1 Material Resistance Test With 30-day Exposure, UL Verified V747862
- Cut to length in 1 foot increments
- Minimum cut lengths as low as 20 feet
- Made in USA

VFD/Servo Cable 4-Conductor Cable Specifications

Power Conductors Gauge & Stranding	16AWG (26 Strands) to 10AWG (105 Strands), Class K flexible stranded tinned annealed copper per ASTM B33, B172 and B174	***Approvals*****	ASTM B172 - Rope-Lay-Stranded Copper Conductors ASTM B174 - Bunch-Stranded Copper Conductors ASTM B33 - Tinned soft or annealed Copper UL 44 - Thermoset Insulation UL 1277 - Type TC-ER Standard Power and Control Cables UL 2277 - Type WTTC Flexible Motor Supply UL 758 - AWM Style 20886 Standard for Appliance Wiring Material Ecolab PM-40-1 Material Resistance Test With 30-day Exposure, UL Verified V747862 C22.2 No. 230 Type TC CSA 22.2 No. 239 TYPE CIC CSA C22.2 No. 210 - CSA AWM I/II A/B ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy NFPA 79 - Electrical Standard for Industrial Machinery CE RoHS-2
Signal Pair	Foil shielded 16AWG (26 Strands), tinned copper conductor with black and white EPDM insulation		
Voltage Rating	600V UL 90°C TC-ER 1000V WTTC 1000V AWM 1000V Flexible Motor Supply Cable		
Outer Jacket Material	Thermoplastic Elastomer (TPE)		
Outer Jacket Color	Black with white print		
Cold Bend	-40°F (-40°C)		
Min. Cut Length*	20 feet		
Temperature Ratings	-40°F to +194°F (-40°C to +90°C)	***Sample Print Legend***	Southwire XXAWG (XXmm2) XX/C VFD RHH/RHW-2 CDRS PLUS 16 AWG 1 PR TYPE TC-ER EXXXXX (UL) 600V 90°C DRY 90°C WET SUN RES OIL RES I/II DIR BUR -40°C OR WTTC 1000V OR AWM 20886 105°C 1000V OR Flexible Motor Supply Cable 1000V -- LLXXXXXX CSA CIC/TC FT4 OR AWM I/II A/B 1000V 105C FT4 -40°C -- CE RoHS-2 Made in USA
Conductor Insulation	Black cross-linked Polyethylene (XLPE) with green/yellow ground		
Conductor Markings	"1-ONE", "2-TWO", "3-THREE", @ 4.5 inch intervals, ICEA Method 4		

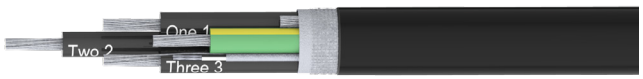
** See web store for maximum cut lengths*
*** To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page at www.AutomationDirect.com*

VFD / Servo Cable - 4 Conductor

VFD/Servo Cable 4-Conductor Cable Specifications Continued

Part Number	Nom. Capacitance Conductor to Shield (pF/ft.)	Nom. Capacitance Conductor to Conductor (pF/ft.)	Nom. Conductor DC Resistance @ 20ºC (Ohm/1000 ft.)	Nominal Outer Shield DC Resistance @ 20ºC (Ohm/1000 ft.)	Impedance (ohms)	Max. Operating Voltage - UL
VFD-SC-16-4B-1P-1	36.34	20.19	4.49	2.40	86.6	600V / 1000V
VFD-SC-14-4B-1P-1	44.10	24.50	2.82	2.31	71.4	600V / 1000V
VFD-SC-12-4B-1P-1	46.93	26.07	1.77	2.48	67.1	600V / 1000V
VFD-SC-10-4B-1P-1	52.52	29.18	1.12	2.63	60.0	600V / 1000V

VFD/Servo Cable 4-Conductor Cable Selection

Part Number	Number of Conductors (includes ground)	AWG	Conductor OD inches	Strand	Power Conductors	Ground (AWG)	Drain Wire (AWG)	Insulaton Thickness (mils)	Jacket Thickness (mils)	Shielded Signal Pair AWG	Nominal OD inches	*Ampacity NEC 310.15 (B) (16) Amps		Min. Bend Radius inches	Approximate Weight (lb/ft)	Price per foot
												75ºC	90ºC			
																
VFD-SC-16-4B-1P-1	4	16AWG (1.31 mm²)	0.054	26	3	1 x (16)	1 x (16)	46	62	16	0.604	10	10	7.25	0.20	$5.28
VFD-SC-14-4B-1P-1	4	14AWG (2.08 mm²)	0.074	41	3	1 x (14)	1 x (14)	46	62	16	0.689	15	15	8.27	0.24	$5.93
VFD-SC-12-4B-1P-1	4	12AWG (3.31 mm²)	0.090	65	3	1 x (12)	1 x (12)	46	62	16	0.719	20	20	8.63	0.31	$6.88
VFD-SC-10-4B-1P-1	4	10AWG (5.26 mm²)	0.112	105	3	1 x (10)	1 x (10)	46	62	16	0.773	30	30	9.28	0.37	$7.96

** Ampacity based on NEC 310.15 (B) (16) up to and including 2000 volts, not more than 3 current-carrying conductors, ambient 86ºF (30ºC)*
All dimensions are nominal and subject to normal manufacturing tolerances.

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