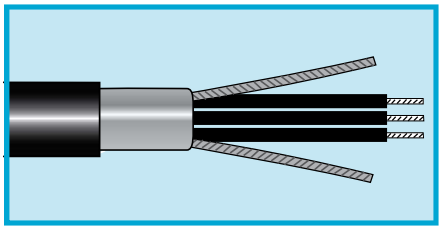
Series V VFD Cable

Enhanced Design for Superior Performance in Variable-Frequency Drives
600/1000 V Shielded, 3 Conductor

INDUSTRIAL™ SERIES From AlphaWire



Series V cables for variable-frequency drives (VFD) set the standard in high-performance and reliable connectivity. Their specially formulated cross-linked polyethylene insulation provides superior corona resistance, low capacitance for longer runs, and excellent low-temperature properties.

A symmetrical design places the ground wires in the interstices of the conductors for uniform conductor-to-ground capacitance and impedance.

Smaller gauge cable feature a combination foil + braid shield to offer exceptional EMI/RFI protection in noisy environments. On larger gauge cable, a double copper tape is used to provide the same noise-free operation.

This uniformity reduces the probability of motor damage from common-mode current.

Alpha Series V VFD cables are compatible with drives from all major manufacturers.

UL RHW-2 (16 – 2 AWG)
UL XHHW-2
UL TC-ER
UL 1000V Flexible Motor Supply Cable
CSA AWM I/II A/B FT4
CE LVD 2006/95/EC
Pennsylvania MSHA

Operating Temperature

- -40°C to +90°C

Conductor Color Coding

- Black, numbered

Materials

- Stranded tinned copper conductors
- Stranded tinned copper ground wires
- Cross-linked polyethylene insulation (XLPE)
- Shielding
  16 – 4 AWG:
  Aluminum/polyester/aluminum foil and tinned copper braid with 85% coverage
  2 – 4/0 AWG:
  Double-layer copper tape
- Black premium PVC jacket

Voltage

- 600 V (UL TC-ER)
- 1000 V (UL Motor Supply)

Features

- UL Direct Burial
- UL Sunlight Resistant
- 10x bend radius
- Suitable for use in Class I, Division 2 locations per Article 501 of the National Electric Code

Availability

Bulk, made to order

FIT® Tubing Recommendations

- FIT-221: General-purpose cross-linked polyolefin
- FIT-321V: Low-shrink-temperature, flame-retardant cross-linked polyolefin

Three-Conductor VFD Cables

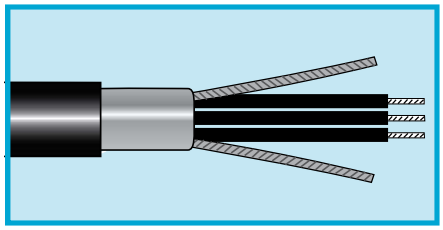
Part No.	Wire Size		Stranding		Shielding	Insulation Thickness		Jacket Thickness		Nominal Diameter	
	AWG	mm²	AWG	mm		Inch	mm	Inch	mm	Inch	mm
V16316	16	1.32	26/30	26 x 0.25	Foil + Braid	0.046	1.17	0.050	1.27	0.468	11.89
V16314	14	2.09	41/30	41 x 0.25	Foil + Braid	0.046	1.17	0.065	1.65	0.538	13.67
V16312	12	3.31	65/30	65 x 0.25	Foil + Braid	0.046	1.17	0.065	1.65	0.578	14.68
V16310	10	5.37	105/30	105 x 0.25	Foil + Braid	0.047	1.19	0.065	1.65	0.642	16.31
V16308	8	8.53	133/29	133 x 0.28	Foil + Braid	0.061	1.55	0.065	1.65	0.798	20.27
V16306	6	13.57	133/27	133 x 0.36	Foil + Braid	0.061	1.55	0.085	2.15	0.924	23.47
V16304	4	21.58	133/25	133 x 0.45	Foil + Braid	0.061	1.55	0.085	2.15	1.050	26.67
V16302	2	34.32	133/23	133 x 0.57	Tape	0.061	1.55	0.085	2.15	1.157	29.39
V16001	1	43.28	133/22	133 x 0.64	Tape	0.056	1.42	0.085	2.15	1.197	30.48
V16000	1/0	54.58	133/21	133 x 0.72	Tape	0.056	1.42	0.085	2.15	1.294	32.77
V16020	2/0	68.85	133/20	133 x 0.81	Tape	0.056	1.42	0.085	2.15	1.399	35.56
V16030	3/0	86.9	133/19	133 x 0.91	Tape	0.056	1.42	0.085	2.15	1.517	38.53
V16040	4/0	109	133/18	133 x 1.02	Tape	0.056	1.42	0.085	2.15	1.653	41.98

UL LISTED CSA CE RoHS Compliant

Series V VFD Cable

Enhanced Design for Superior Performance in Variable-Frequency Drives
600/1000 V Shielded, 4 Conductor

INDUSTRIAL™ SERIES From AlphaWire



Series V cables for variable-frequency drives (VFD) set the standard in high-performance and reliable connectivity. Their specially formulated cross-linked polyethylene insulation provides superior corona resistance, low capacitance for longer runs, and excellent low-temperature properties.

A symmetrical design places the ground wires in the interstices of the conductors for uniform conductor-to-ground capacitance and impedance.

Smaller gauge cable feature a combination foil + braid shield to offer exceptional EMI/RFI protection in noisy environments. On larger gauge cable, a double copper tape is used to provide the same noise-free operation.

This uniformity reduces the probability of motor damage from common-mode current.

Alpha Series V VFD cables are compatible with drives from all major manufacturers.

UL RHW-2 (16 – 2 AWG)
UL XHHW-2
UL TC-ER
UL 1000V Flexible Motor Supply Cable
CSA AWM I/II A/B FT4
CE LVD 2006/95/EC
Pennsylvania MSHA

Operating Temperature
- -40°C to +90°C

Conductor Color Coding
- Black, numbered

Materials
- Stranded tinned copper conductors
- Stranded tinned copper ground wires
- Cross-linked polyethylene insulation (XLPE)
- Shielding
  16 – 4 AWG:
  Aluminum/polyester/aluminum foil and tinned copper braid with 85% coverage
  2 – 4/0 AWG:
  Double-layer copper tape
- Black premium PVC jacket

Voltage
- 600 V (UL TC-ER)
- 1000 V (UL Motor Supply)

Features
- UL Direct Burial
- UL Sunlight Resistant
- 10x bend radius
- Suitable for use in Class I, Division 2 locations per Article 501 of the National Electric Code

Availability
Bulk, made to order

FIT® Tubing Recommendations
- FIT-221: General-purpose cross-linked polyolefin
- FIT-321V: Low-shrink-temperature, flame-retardant cross-linked polyolefin

Four-Conductor VFD Cable with 14 AWG (2.09) Brake Pair

Part No.	Wire Size		Stranding		Shielding	Insulation Thickness		Jacket Thickness		Nominal Diameter	
	AWG	mm²	AWG	mm		Inch	mm	Inch	mm	Inch	mm
V16116	16	1.32	26/30	26 x 0.25	Foil/Braid	0.047	1.19	0.065	1.65	0.717	18.21
V16114	14	2.09	41/30	41 x 0.25	Foil/Braid	0.047	1.19	0.065	1.65	0.743	18.87
V16112	12	3.31	65/30	65 x 0.25	Foil/Braid	0.047	1.19	0.065	1.65	0.785	19.94
V16110	10	5.37	105/30	105 x 0.25	Foil/Braid	0.047	1.19	0.085	2.15	0.875	22.23
V16108	8	8.53	133/29	133 x 0.28	Foil/Braid	0.061	1.55	0.085	2.15	1.032	26.21

Four-Conductor VFD Cable

Part No.	Wire Size		Stranding		Shielding	Insulation Thickness		Jacket Thickness		Nominal Diameter	
	AWG	mm²	AWG	mm		Inch	mm	Inch	mm	Inch	mm
V16016	16	1.32	26/30	26 x 0.25	Foil + Braid	0.047	1.19	0.065	1.65	0.547	13.89
V16014	14	2.09	41/30	41 x 0.25	Foil + Braid	0.047	1.19	0.065	1.65	0.584	14.83
V16012	12	3.31	65/30	65 x 0.25	Foil + Braid	0.047	1.19	0.065	1.65	0.633	16.08
V16010	10	5.37	105/30	105 x 0.25	Foil + Braid	0.047	1.19	0.085	2.15	0.746	18.95
V16008	8	8.53	133/29	133 x 0.28	Foil + Braid	0.061	1.55	0.086	2.15	0.920	23.37
V16006	6	13.57	133/27	133 x 0.36	Foil + Braid	0.061	1.55	0.086	2.15	1.017	25.83
V16004	4	21.58	133/25	133 x 0.45	Foil + Braid	0.061	1.55	0.086	2.15	1.157	29.39
V16002	2	34.32	133/23	133 x 0.57	Foil + Braid	0.061	1.55	0.088	2.15	1.308	33.22

UL LISTED CSA CE RoHS Compliant