



**Product:** [29510](#)

VFD 300% Gnd, 3C+G #16 Str TC, XLPE Ins+PVC Gnd, OS+TC Brd, 1 Pr #16 Str TC XLPE IS, Blk PVC Jkt, 600V TC-ER 90C Dry/Wet 1000V Flexible Motor Supply Cable

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### Product Description

Belden 300% Ground Flexible VFD, 3 Conductor 16AWG (26x30) Tinned Copper, XLPE Insulation M4 Color Code+PVC Insulated Ground, Overall Beldfoil®+Tinned Copper Braid(85%) Shield, 1 Pair 16AWG (26x30) Tinned Copper XLPE Beldfoil, Black PVC Outer Jacket, 600V TC-ER 90C Dry/Wet 1000V Flexible Motor Supply Cable 1000V CSA AWM I/II A/B 600V CIC TC SUN RES DIR BUR Oil Resistant

### Technical Specifications

#### Product Overview

Suitable Applications:	Variable Frequency Drives (VFD); AC Motor and Drive Systems; Class 1 Division 2 Hazardous Locations
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#### Construction Details

##### Conductor

Element	No. of Elements	Size	Stranding	Material	Notes
Conductor(s)	3	16 AWG	26x30	TC - Tinned Copper	
Pair(s)	1	16 AWG	26x30	TC - Tinned Copper	Used as control or brake pair
Ground Wire	1	16 AWG	26x30	TC - Tinned Copper	

##### Insulation

Element	Material	Nom. Thickness	Nom. Insulation Diameter	Color Code
Conductor(s)	XLPO - Crosslink Polyolefin	0.046 in (1.2 mm)	0.153 in (3.89 mm)	ICEA Chart M4
Pair(s)	XLPO - Crosslink Polyolefin	0.032 in (0.81 mm)	0.123 in (3.12 mm)	Black, White
Ground Wire	PVC - Polyvinyl Chloride	0.047 in (1.2 mm)	0.153 in (3.89 mm)	Green/Yellow Stripe

##### Inner Shield

Element	Shield Type	Material	Coverage	Drainwire Type	Notes
Pair(s)	Tape	Bi-Laminate (Alum+Poly)	100%	18 AWG (19x30) TC	Foil-In, Shorting fold

##### Outer Shield

Shield Type	Material	Coverage	Drainwire Type
Tape	Tri-Laminate (Alum+Poly+Alum)	100%	16 AWG (26x30) TC
Braid	Tinned Copper (TC)	85%	

Table Notes:	Foil+braid shield on power conductors & Ground only; extra pair has own foil shield.
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##### Outer Jacket

Separator	Material	Nom. Thickness	Nom. Diameter	Ripcord
Polyester Tape	PVC - Polyvinyl Chloride	0.075 in (1.9 mm)	0.750 in (19.1 mm)	Yes

Overall Cable Diameter (Nominal):	0.750 in (19.1 mm)
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#### Electrical Characteristics

##### Electricals

Element	Nom. Conductor DCR	Nom. Inner Shield DCR	Nom. Capacitance Cond-to-Cond	Nom. Capacitance Cond-to-Shield	Nom. Capacitance Cond-to-Other (Conds + Shield)	Nom. Characteristic Impedance	Nom. Velocity of Prop.	Max. Current
Conductor(s)	3.914 Ohm/1000ft		46 pF/ft (150 pF/m)	38 pF/ft (120 pF/m)	83 pF/ft (270 pF/m)	37 Ohm	55%	14.4 Amps per Conductor at 30°C

Pair(s)	4.0 Ohm/1000ft (13 Ohm/km)	4.99 Ohm/1000ft (16.4 Ohm/km)	34 pF/ft (110 pF/m)				18 Amps per Conductor at 30°C (per NEC)
Ground	4.45 Ohm/1000ft (14.6 Ohm/km)						18 Amps per Conductor at 30°C (per NEC)

#### Voltage

UL Voltage Rating	Voltage Rating
1000 V (UL Flexible Motor Supply Cable), 600 V (TC, C(UL) TC)	1000 V (AWM I/II A/B)

## Mechanical Characteristics

#### Temperature

UL Temperature	Operating
90°C Dry, 90°C Wet	-40°C To +90°C

#### Bend Radius

Stationary Min.	Installation Min.
9.0 in (230 mm)	9.0 in (230 mm)

Max. Pull Tension:	336 lbs (152 kg)
Bulk Cable Weight:	259 lbs/1000ft

## Standards and Compliance

Environmental Suitability:	Indoor, Outdoor, Sunlight Resistance, Burial
Sustainability:	CA Prop 65
Flammability / Reaction to Fire:	UL 1685 UL Loading, FT4, IEEE 1202 FT4
NEC / UL Compliance:	Article 336, TC-ER, UL Flexible Motor Supply Cable
AWM Compliance:	AWM I/II A/B
CEC / C(UL) Compliance:	CIC, TC
ICEA Compliance:	S-95-658
European Directive Compliance:	EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE)
APAC Compliance:	China RoHS II (GB/T 26572-2011)
Other Standard Compliance(s):	P-07-KA070003-MSHA

## History

Update and Revision:	Revision Number: 0.643 Revision Date: 06-19-2024
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## Part Numbers

#### Variants

Item #	Color	Putup Type	Length	UPC	Footnote
29510 010100	Black	Reel	100 ft	612825137443	C
29510 010500	Black	Reel	500 ft	612825137467	C
29510 0101000	Black	Reel	1,000 ft	612825137450	C
29510 0105000	Black	Reel	5,000 ft	612825137474	C

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