



**Product:** [29513](#)

VFD 300% Gnd, 3C+G #10 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 10AWG (105x30) 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
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### Construction Details

#### Conductor

Element	Number of Element	Size	Stranding	Material	Notes
Conductor(s)	3	10 AWG	105x30	TC - Tinned Copper	
Pair(s)	1	16 AWG	26x30	TC - Tinned Copper	Used as control or brake pair
Ground Wire	1	10 AWG	105x30	TC - Tinned Copper	

#### Insulation

Element	Material	Nom. Thickness	Nom. Insulation Diameter	Color Code
Conductor(s)	XLPE - Cross Linked Polyethylene	0.046 in (1.2 mm)	0.212 in (5.38 mm)	ICEA Chart M4
Pair(s)	XLPE - Cross Linked Polyethylene	0.032 in (0.81 mm)	0.123 in (3.12 mm)	Black, White
Ground	PVC - Polyvinyl Chloride	0.046 in (1.2 mm)	0.212 in (5.38 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%	10 AWG (105x30) TC
Braid	Tinned Copper (TC)	85%	

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

#### Outer Jacket

Material	Nom. Thickness	Nom. Diameter	Ripcord
PVC - Polyvinyl Chloride	0.105 in (2.67 mm)	0.985 in (25.0 mm)	Yes

Overall Cable Diameter (Nominal): 0.985 in (25.0 mm)

### 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)	0.969 Ohm/1000ft		46 pF/ft (150 pF/m)	53 pF/ft (170 pF/m)	83 pF/ft (270 pF/m)	37 Ohm	55%	24 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)				40 Amps per Conductor at 30°C (per NEC)
Ground	1.080 Ohm/1000ft (3.543 Ohm/km)						40 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.
11.8 in (300 mm)	11.8 in (300 mm)

Max. Pull Tension:	857 lbs (389 kg)
Bulk Cable Weight:	493 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, FT4, IEEE 1202 FT4
NEC / UL Compliance:	Article 336, Article 310, TC-ER, RHW-2, 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: 0.518 Revision Date: 07-15-2022
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### Part Numbers

#### Variants

Item #	Color	Putup Type	Length	UPC
29513 010100	Black	Reel	100 ft	612825137580
29513 0101000	Black	Reel	1,000 ft	612825137597
29513 0103000	Black	Reel	3,000 ft	612825137603

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