



**Product:** [29531F](#)

VFD 100% Gnd, 3C #3/0 Str TC XLPE Ins + #3/0 Symm. Seg. Gnd (3 of #4+) Str TC, CTS, Blk TPE Jkt, 600/1000V TC-ER 90C Dry/Wet 1000V Flexible Motor Supply Cable WTTC

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Product Description

Belden 100% Ground Extra Flexible VFD, 3 Conductor 3/0AWG (7x7x31x30) Tinned Copper XLPE Insulation M4 Color Code + 3/0AWG Symmetrical Segmented Ground (3 of 4AWG+) Tinned Copper Stranded, Overall Dual Copper Tapes Helically Applied Shield, Black TPE Outer Jacket, 600/1000V TC-ER 90C Dry/Wet 1000V Flexible Motor Supply Cable 1000V WTTC 600V CIC TC SUN RES OIL RES II DIR BUR

Technical Specifications

Product Overview

Suitable Applications:	Variable Frequency Drives (VFD); AC Motor and Drive Systems, Exposure to high flex, motion, and abrasion, Hard to reach installation areas; Class 1 Division 2 Hazardous Locations
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Construction Details

Conductor

Element	No. of Elements	Size	Stranding	Material	Notes
Conductor(s)	3	3/0 AWG	7x7x31x30	TC - Tinned Copper	
Ground	3	4 AWG	7x60x30	TC - Tinned Copper	Segmented Grounds

Insulation

Element	Material	Nom. Thickness	Color Code
Conductor(s)	XLPE - Cross-Linked Polyethylene (Thermoset)	0.057 in (1.4 mm)	Black and Numbered
Ground	No Insulation		

Outer Shield

Shield Type	Material	Coverage
Helical Tape	Bare Copper (BC)	100%
Helical Tape	Bare Copper (BC)	100%

Outer Jacket

Material	Nom. Thickness	Nom. Diameter	Ripcord
TPE - Thermoplastic Elastomer	0.083 in (2.1 mm)	1.620 in (41.15 mm)	Yes

Overall Cable Diameter (Nominal): 1.620 in (41.15 mm)

Electrical Characteristics

Electricals

Element	Nom. Conductor DCR	Nom. Capacitance Cond-to-Cond	Nom. Capacitance Cond-to-Other (Conds + Shield)	Nom. Characteristic Impedence	Nom. Velocity of Prop.	Max. Current
Conductor(s)	0.067 Ohm/1000ft (0.22 Ohm/km)	23 pF/ft (75 pF/m)	42 pF/ft (140 pF/m)	80 Ohm	55%	225 Amps per Conductor at 30°C (per NEC)

Voltage

UL Voltage Rating
1000 V (TC, WTTC, UL Flexible Motor Supply Cable), 600 V (C(UL) CIC TC)

Mechanical Characteristics

Temperature

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

Bend Radius

Stationary Min.	Installation Min.	Flexing Min.
8.1 in (210 mm)	19.4 in (493 mm)	19.4 in (493 mm)

Max. Pull Tension:	7562 lbs (3430 kg)
Bulk Cable Weight:	2373 lbs/1000ft (3531 kg/km)

Standards and Compliance

Environmental Suitability:	Indoor, Outdoor, Sunlight Resistance, Oil Resistance, Burial
Sustainability:	CA Prop 65
Flammability / Reaction to Fire:	UL1685 UL Loading, FT4, 1202, 383 Vertical Tray Flame Test (70,000 BTU)
NEC / UL Compliance:	Article 336, TC-ER, WTTC, XHHW-2, UL Flexible Motor Supply Cable
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: 0.423 Revision Date: 06-19-2024
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Part Numbers

Variants

Item #	Color	Putup Type	Length	UPC
29531F 0101000	Black	Reel	1,000 ft	612825373490
29531F 0102000	Black	Reel	2,000 ft	612825373506

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