



Product: [29531](#)

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

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Product Description

Belden 100% Ground Flexible VFD, 3 Conductor 3/0AWG (7x19x19) Tinned Copper XLPE Insulation M4 Color Code + 3/0AWG Symmetrical Segmented Ground (3 of 4AWG+) Bare Copper Stranded, Overall Dual Copper Tapes Helically Applied Shield, Black PVC Outer Jacket, 600/1000V TC-ER 90C Dry/Wet 1000V Flexible Motor Supply Cable WTTTC 1000V CSA AWM I/II A/B 600V RW90 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; Recommended Cable Gland BTC200A1741RA
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Construction Details

Conductor

Element	No. of Elements	Size	Stranding	Material	Notes
Conductor(s)	3	3/0 AWG	7x19x19	TC - Tinned Copper	Finely Stranded Tinned Copper Optimized for VFD Use
Segmented Ground Wire	3	4 AWG	7x19x25	BC - Bare Copper	Segmented Grounds (3 Totaling 3/0 AWG)

Insulation

Element	Material	Nom. Thickness	Nom. Insulation Diameter	Color Code
Conductor(s)	XLPO - Crosslink Polyolefin	0.057 in (1.4 mm)	0.604 in (15.3 mm)	ICEA Chart M4
Ground Wire	No Insulation			

Outer Shield

Shield Type	Material	Coverage	Notes
Helical Tape	Bare Copper (BC)	100%	2 mil copper tape for crack resistance and high frequency noise conduction
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Outer Jacket

Material	Nom. Thickness	Nom. Diameter	Ripcord
PVC - Polyvinyl Chloride	0.083 in (2.1 mm)	1.480 in (37.59 mm)	Yes

Overall Cable Diameter (Nominal): 1.480 in (37.59 mm)

Electrical Characteristics

Electricals

Element	Nom. Conductor DCR	Nom. Capacitance Cond-to-Cond	Nom. Capacitance Cond-to-Other (Conds + Shield)	Nom. Characteristic Impedance	Nom. Inductance Cond-Grnd	Nom. Velocity of Prop.	Max. Current
Conductor(s)	0.059 Ohm/1000ft	33 pF/ft (110 pF/m)	60 pF/ft (200 pF/m)	56 Ohm	0.06 µH/ft	55%	225 Amps per Conductor at 30°C
Segmented Ground Wire	0.06 Ohm/1000ft (0.20 Ohm/km)						

Voltage

UL Voltage Rating
1000 V (TC, WTTTC, UL44, 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.
17.8 in (452 mm)	17.8 in (452 mm)

Max. Pull Tension:	7720 lbs (3500 kg)
Bulk Cable Weight:	2439 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Indoor, Outdoor, Sunlight Resistance, Burial
Sustainability:	CA Prop 65
Flammability / Reaction to Fire:	UL 1685 FT4 Loading, FT4, IEEE 1202 FT4
NEC / UL Compliance:	Article 336, TC-ER, WTTTC, XHHW-2, UL Flexible Motor Supply Cable
CEC / C(UL) Compliance:	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: 0.659 Revision Date: 02-03-2025
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Part Numbers

Variants

Item #	Color	Putup Type	Length	UPC	Footnote
29531 0101000	Black	Reel	1,000 ft	612825138167	C 9
29531 0102000	Black	Reel	2,000 ft	612825138174	C Z

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