



Product: [29502F](#) 

VFD 300% Gnd, 3C+G #12 Str TC, XLPE Ins+PVC Gnd, OS+TC Brd w/#12 TC Drain, Blk TPE Jkt, 600/1000V TC-ER 90C Dry/Wet 1000V Flexible Motor Supply Cable WTTC

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Product Description

Belden 300% Ground Extra Flexible VFD, 3 Conductor 12AWG (7x24x34) Tinned Copper, XLPE Insulation M4 Color Code+PVC Insulated Ground, Overall Beldfoil®+Tinned Copper Braid(85%) Shield w/12AWG TC Drain, 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
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Construction Details

Conductor

Element	No. of Elements	Size	Stranding	Material
Conductor(s)	3	12 AWG	7x24x34	TC - Tinned Copper
Ground	1	12 AWG	7x24x34	TC - Tinned Copper

Insulation

Element	Material	Nom. Thickness	Color Code
Conductor(s)	XLPE - Cross-Linked Polyethylene (Thermoset)	0.046 in (1.2 mm)	Black and Numbered
Ground	PVC - Polyvinyl Chloride	0.046 in (1.2 mm)	Green/Yellow Stripe

Outer Shield

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

Outer Jacket

Material	Nom. Thickness	Nom. Diameter	Ripcord
TPE - Thermoplastic Elastomer	0.073 in (1.9 mm)	0.661 in (16.8 mm)	Yes

Overall Cable Diameter (Nominal):	0.661 in (16.8 mm)
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Electrical Characteristics

Electricals

Element	Nom. Conductor DCR	Nom. Capacitance Cond-to-Cond	Nom. Capacitance Cond-to-Shield	Nom. Capacitance Cond-to-Other (Conds + Shield)	Nom. Characteristic Impedance	Nom. Inductance	Nom. Velocity of Prop.	Max. Current
Conductor(s)	1.546 Ohm/1000ft (5.072 Ohm/km)	29 pF/ft (95 pF/m)	53 pF/ft (170 pF/m)	53 pF/ft (170 pF/m)	63 Ohm	0.197 µH/ft (0.646 µH/m)	55%	30 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.
3.3 in (84 mm)	5.0 in (130 mm)	5.0 in

Max. Pull Tension:	458 lbs (208 kg)
Bulk Cable Weight:	280 lbs/1000ft (420 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, RHW-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)

History

Update and Revision:	Revision Number: 0.405 Revision Date: 09-07-2025
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Part Numbers

Variants

Item #	Color	Putup Type	UPC
29502F 0101000	Black	Reel	612825367208
29502F 0105000	Black	Reel	612825367215

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