CU 2000V XLPE Insulation Three Grounds Cu Tape Shield PVC Jacket. RHH/RHW-2 Variable Frequency Drive (VFD)

Type TC-ER VFD Power Cable 2000 Volt Three Conductor Copper, Cross Linked Polyethylene (XLPE) insulation RHH/RHW-2 Polyvinyl Chloride (PVC) Jacket with 3 Symmetrical Bare CU Ground 50% Minimum Tape Shield Overlap. Silicone Free



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
2. **Insulation:** Cross Linked Polyethylene (XLPE) Type RHH/RHW-2
3. **Grounding Conductor:** 3 Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8 (Ground size is 100% for sizes 14 - 10 awg and a minimum of 50% of the phase conductor for larger sizes.)
4. **Filler:** Fillers as needed to make round
5. **Tape Shield:** 5 mil copper tape shield with a minimum of 50% overlap
6. **Overall Jacket:** Polyvinyl Chloride (PVC) Jacket. Available in thermoplastic Chlorinated Polyethylene CPE jacket on #4 AWG and larger upon request

APPLICATIONS AND FEATURES:

Southwire's 2000 Volt Type TC-ER VFD power cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Type (TC-ER) per NEC 336.10.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1277 Electrical Power and Control Tray Cables
- UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-58-679 Control Cable Conductor Identification Method 3 (1-BLACK, 2-RED, 3-BLUE)
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- Made in America: Compliant with both Buy American and Buy America Act (BAA) requirements per 49 U.S.C. § 5323(j) and the Federal Transit Administration Buy America requirements per 49 C.F.R. part 661

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SAMPLE PRINT LEGEND:

SOUTHWIRE® VFD {UL} XX AWG 3/C TYPE TC-ER RHH OR RHW-2 CDRS CU GW 3 X XX AWG CU T/S 50% 90°C PVC JACKET SUN RES DIRECT BURIAL 2000 VOLTS {YYYY} {SEQUENTIAL FOOTAGE MARKS} SEQ FEET FT4/IEEE1202 2000 VOLTS

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Cond. Number	Strand Count	Diameter Over Conductor	Insul. Thickness	Ground	Dia. Over Shield	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/ Kcmil		No. of Strands	inch	mil	No. x AWG	inch	mil	inch	lb/1000ft	lb/1000ft
644341◊	500	3	37	0.789	105	3 x 1	2.149	115	2.379	5706	6767

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item

Table 2 – Electrical and Engineering Data

Stock Number	Cond. Size	Cond. Number	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°C	Capacitive Reactance @ 60Hz	Inductive Reactance @ 60Hz	Allowable Ampacity At 60°C	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
	AWG/ Kcmil		inch	lb	Ω/1000ft	Ω/1000ft	MΩ*1000ft	Ω/1000ft	Amp	Amp	Amp
644341◊	500	3	28.5	100000	0.022	0.029	0.016	0.039	320	380	430

* Ampacities based upon 2023 NEC Table 310.16. See NEC sections 310.15 and 110.14(C) for additional requirements.

Gland Reference

Glands