Tinned CU 3/C 2000V XLPE RHH/RHW-2 VFD Power Cable

Type TC-ER VFD Power Cable. 2000 Volt Tinned Copper Flexible Stranded Conductors. Cross-Linked Polyethylene (XLPE) Insulation RHH/RHW-2. Polyvinylchloride (PVC) Jacket with 3 Symmetrical Grounds. Rated 90°C Wet or Dry, FT4 Flame.

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class K flexible ropelay stranded tinned copper per ASTM B33 and B172
2. **Insulation:** Cross-Linked Polyethylene (XLPE); Type RHH/RHW-2
3. **Grounding Conductor:** : 3 Flexible Ropelay Stranded Bare Tinned Copper Grounds per ASTM B33 and B172
4. **Filler:** Flame & Moisture Resistant Paper Filler
5. **Tape Shield:** 5 mil Copper Tape Shield with a minimum of 50% Overlap for 100% Coverage
6. **Overall Jacket:** Black Polyvinyl Chloride (PVC) Jacket

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. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC® Article 336.10.

SPECIFICATIONS:

- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- ASTM B172 Standard Specification for Rope-Lay-Stranded Copper Conductors Having Bunch-Stranded Copper Conductors (As Applicable)
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1277 TC-ER
- UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-58-679 Control Cable Conductor Identification Method 4
- 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

SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE{R} VFD {UL} [#AWG or #KCMIL] 3/C TYPE TC-ER RHH OR RHW-2 CDRS CU GW 3 X # AWG CU T/S50% 90{D}C PVC JACKET SUN RES DIRECT BURIAL FT4/IEEE1202 2000 VOLTS

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Diameter Over Conductor	Insul. Thickness	Ground	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/Kcmil	inch	mil	No. x AWG	mil	inch	lb/1000ft	lb/1000ft
TBD	1	0.355	80	3 x 10	80	1.225		1400

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
† Ampacities are based on Table 310.16 of the NEC, 2020 Edition. Allowable ampacities of Insulated Conductors Rated Up to and Including 2000 Volts and Ambient Temperature of 30°C.
! Copper conductors and grounds

Table 2 – Electrical and Engineering Data

Stock Number	Cond. Size	Min Bending Radius	Max Pull Tension	Allowable Ampacity At 75°C†	Allowable Ampacity At 90°C†
	AWG/Kcmil	inch	lb	Amp	Amp
TBD	1	14.7	2009	130	145

† Ampacities are based on Table 310.16 of the NEC, 2020 Edition. Allowable ampacities of Insulated Conductors Rated Up to and Including 2000 Volts and Ambient Temperature of 30°C.
! Copper conductors and grounds