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

Type TC-ER VFD Power Cable 2000Volt Three Conductor Flexible Copper, Cross Linked Polyethylene (XLPE) insulation RHH/RHW-2 Polyvinyl Chloride (PVC) Jacket with 3 Symmetrical Bare CU Ground 50% Minimum Tape Shield Overlap. Rated 90C Dry or We. Sunlight Resistance, Direct Burial, Silicone Free

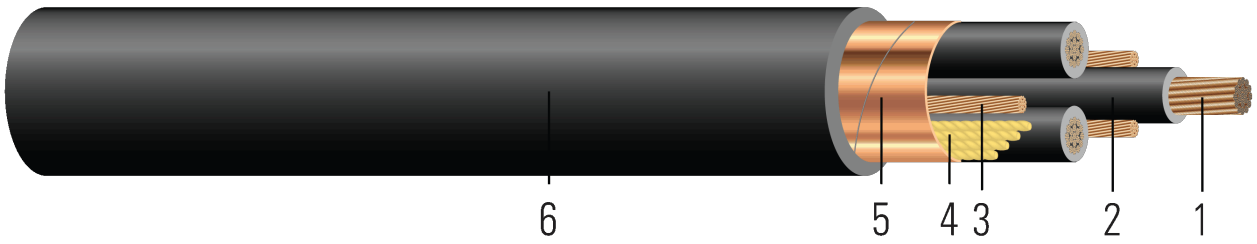


Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Class I flexible ropelay stranded bare copper modified per ASTM B3 and B172
2. **Insulation:** Cross-Linked Polyethylene (XLPE) Type RHH/RHW-2
3. **Grounding Conductor:** : Three Flexible Ropelay Stranded Bare Copper Grounds modified per ASTM B3 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 B172 Standard Specification for Rope-Lay-Stranded Copper Conductors Having Bunch-Stranded Copper Conductors
- 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
- ICEA S-138-738 Power Cables Rated 2000 Volts or Less for use Between Variable Frequency Drives and Motors
- 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:

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

## Table 1 – Weights and Measurements

| 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 |
| 313.3 | 3 | 779 | 0.650 | 110 | 3 x 2 | 1.904 | 140 | 2.184 | 3635 | 4888 |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

## Table 2 – Electrical and Engineering Data

| 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 75°C | Allowable Ampacity At 90°C |
|---|---|---|---|---|---|---|---|---|---|
| AWG/ Kcmil | | inch | lb | Ω/1000ft | Ω/1000ft | MΩ*1000ft | Ω/1000ft | Amp | Amp |
| 313.3 | 3 | 26.2 | 7519 | 0.039 | 0.048 | 0.020 | 0.041 | 298 | 332 |

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

VFD Sizing Calculator


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