

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

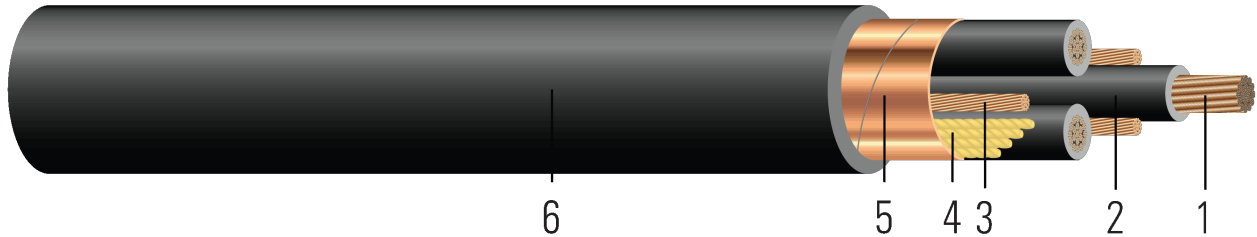


Image not to scale. See Table 1 for dimensions.

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
- 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





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% 90°C PVC JACKET SUN RES DIRECT BURIAL 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 |
| TBA | 8 | 3 | 41 | 0.145 | 70 | 3 x 14 | 0.629 | 60 | 0.749 | 262 | 343 |
| TBA | 4 | 3 | 105 | 0.235 | 70 | 3 x 12 | 0.808 | 80 | 0.968 | 539 | 684 |
| TBA | 2 | 3 | 133 | 0.290 | 70 | 3 x 10 | 0.934 | 80 | 1.094 | 817 | 987 |
| TBA | 1 | 3 | 161 | 0.300 | 90 | 3 x 10 | 1.104 | 80 | 1.264 | 997 | 1234 |
| 674625 | 262.6 | 3 | 646 | 0.565 | 105 | 3 x 2 | 1.748 | 110 | 1.968 | 3106 | 4125 |
| 653047 | 313.3 | 3 | 779 | 0.650 | 110 | 3 x 2 | 1.904 | 140 | 2.184 | 3635 | 4888 |
| 674632 | 373.7 | 3 | 931 | 0.701 | 105 | 3 x 2 | 2.007 | 110 | 2.227 | 4162 | 5388 |
| TBA | 444.4 | 3 | 1121 | 0.782 | 105 | 3 x 1 | 2.420 | 110 | 2.640 | 5187 | 6680 |
| 668541 | 500 | 3 | 1225 | 0.858 | 110 | 3 x 1 | 2.348 | 115 | 2.578 | 5638 | 6851 |
| 674638 | 535.3 | 3 | 1349 | 0.859 | 120 | 3 x 2 | 2.396 | 110 | 2.616 | 5876 | 7448 |
| 673109 | 777.7 | 3 | 1924 | 0.966 | 125 | 3 x 2/0 | 2.763 | 140 | 3.043 | 9082 | 10865 |

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 75°C | Allowable Ampacity At 90°C |
|--------------|---------------|--------------|--------------------|------------------|----------------------|----------------------|-----------------------------|----------------------------|----------------------------|----------------------------|
| | AWG/ Kcmil | | inch | lb | Ω/1000ft | Ω/1000ft | MΩ*1000ft | Ω/1000ft | Amp | Amp |
| TBA | 8 | 3 | 9.0 | 396 | 0.679 | 0.818 | 0.047 | 0.052 | 50 | 55 |
| TBA | 4 | 3 | 11.6 | 1001 | 0.274 | 0.330 | 0.032 | 0.048 | 85 | 95 |
| TBA | 2 | 3 | 13.1 | 1592 | 0.172 | 0.207 | 0.027 | 0.045 | 115 | 130 |
| TBA | 1 | 3 | 15.2 | 2008 | 0.137 | 0.164 | 0.032 | 0.046 | 130 | 145 |
| 674625 | 262.6 | 3 | 23.6 | 6302 | 0.048 | 0.058 | 0.022 | 0.041 | 267 | 304 |
| 653047 | 313.3 | 3 | 26.2 | 7519 | 0.039 | 0.048 | 0.020 | 0.041 | 298 | 332 |
| 674632 | 373.7 | 3 | 26.7 | 8968 | 0.033 | 0.042 | 0.018 | 0.040 | 323 | 365 |
| TBA | 444.4 | 3 | 31.7 | 100000 | 0.026 | 0.033 | 0.016 | 0.040 | 358 | 405 |
| 668541 | 500 | 3 | 30.9 | 100000 | 0.023 | 0.031 | 0.015 | 0.039 | 380 | 430 |
| 674638 | 535.3 | 3 | 31.4 | 100000 | 0.021 | 0.028 | 0.017 | 0.039 | 394 | 446 |
| 673109 | 777.7 | 3 | 36.5 | 100000 | 0.016 | 0.024 | 0.015 | 0.038 | 483 | 543 |

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

