

3/C FLEXIBLE CU 2000V XLPE RHH/RHW-2 PVC Power Cable With Ground 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. Silicone Free



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- Conductor:** Class I flexible ropelay stranded bare copper modified per ASTM B172
- Insulation:** Cross-Linked Polyethylene (XLPE); Type RHH/RHW-2
- Grounding Conductor:** : 3 Flexible Ropelay Stranded Bare Copper Grounds modified per ASTM B172
- Filler:** Flame & Moisture Resistant Paper Filler
- Tape Shield:** 5 mil Copper Tape Shield with a minimum of 50% Overlap for 100% Coverage
- 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 (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 | 8 | 0.155 | 70 | 3 x 14 | 60 | 0.749 | 262 | 343 |
| TBD | 4 | 0.255 | 70 | 3 x 12 | 80 | 0.968 | 539 | 684 |
| TBD | 2 | 0.315 | 70 | 3 x 10 | 80 | 1.094 | 817 | 987 |
| TBD | 1 | 0.355 | 90 | 3 x 10 | 80 | 1.264 | 997 | 1234 |
| 674625 | 262.6 | 0.590 | 105 | 3 x 2 | 110 | 1.968 | 3106 | 4125 |
| 653047 | 313.3 | 0.662 | 110 | 3 x 2 | 140 | 2.184 | 3635 | 4888 |
| 674632 | 373.7 | 0.71 | 105 | 3 x 2 | 110 | 2.227 | 4162 | 5388 |
| 668541 | 500 | 0.858 | 110 | 3 x 1 | 115 | 2.578 | 5638 | 6851 |
| 674638 | 535.3 | 0.86 | 120 | 3 x 2 | 110 | 2.616 | 5876 | 7448 |
| 673109 | 777.7 | 1.03 | 125 | 3 x 2/0 | 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

† 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.

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 | 8 | 9.0 | 396 | 50 | 55 |
| TBD | 4 | 12.0 | 1002 | 85 | 95 |
| TBD | 2 | 13.1 | 1593 | 115 | 130 |
| TBD | 1 | 15.2 | 2009 | 130 | 145 |
| 674625 | 262.6 | 23.6 | 6302 | 262 | 297 |
| 653047 | 313.3 | 26.2 | 7519 | 291 | 327 |
| 674632 | 373.7 | 26.7 | 8969 | 321 | 364 |
| 668541 | 500 | 30.9 | 10000 | 380 | 430 |
| 674638 | 535.3 | 31.4 | 12847 | 394 | 445 |
| 673109 | 777.7 | 26.5 | 18665 | 483 | 546 |

† 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

