# CU 600/1000V XLPE Insulation Thermoplastic CPE-TP Jacket XHHW-2. CT Rated - Sunlight Resistant - For Direct Burial - Silicone Free

Type TC-ER Power Cable 600 or 1000 Volt Three Conductor Copper, Cross Linked Polyethylene (XLPE) insulation XHHW-2 Thermoplastic Chlorinated Polyethylene (CPE-TP) Jacket with 1 Bare CU Ground. CT Rated - Sunlight Resistant - For Direct Burial - Silicone Free

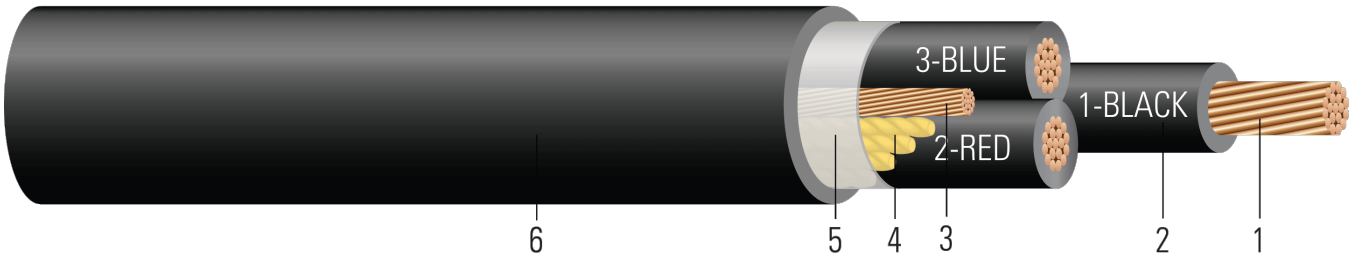



Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
2. **Insulation:** Cross Linked Polyethylene (XLPE) Type XHHW-2
3. **Grounding Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (cable size 8 & 6 has insulated green ground)
4. **Filler:** Paper filler (cable size 8 & 6 uses Polypropylene filler)
5. **Binder:** Polyester flat thread binder tape for cable sizes larger than 2 AWG
6. **Overall Jacket:** Thermoplastic Chlorinated Polyethylene (CPE-TP) Jacket

## APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type TC-ER 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 336.10. Sunlight Resistant - For Direct Burial - Silicone Free

## 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 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-58-679 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


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## SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE® {UL} XXX AWG/KCMIL 3/C TYPE TC-ER XHHW-2 CDRS GW 1 X X AWG CU 90°C CPE JACKET SUN RES OIL RES II FT4/IEEE1202 600 VOLTS

### Table 1 – Weights and Measurements

| Stock Number | Cond. Size | Cond. Number | Strand Count | Diameter Over Conductor | Insul. Thickness | Ground | Jacket Thickness | Approx. OD | Copper Weight | Approx. Weight | Jacket Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | AWG/ Kcmil | | No. of Strands | inch | mil | No. x AWG | mil | inch | lb/1000ft | lb/1000ft | |
| 890670 | 8 | 3 | 7 | 0.142 | 45 | 1 x 10 | 110 | 0.784 | 187 | 404 | BK |
| 890671 | 6 | 3 | 7 | 0.178 | 45 | 1 x 8 | 110 | 0.87 | 297 | 547 | BK |
| 890672 | 4 | 3 | 7 | 0.225 | 45 | 1 x 8 | 110 | 0.917 | 442 | 703 | BK |
| 890673 | 2 | 3 | 7 | 0.283 | 45 | 1 x 6 | 110 | 1.054 | 703 | 1033 | BK |
| 890701 | 1 | 3 | 19 | 0.322 | 55 | 1 x 6 | 80 | 1.177 | 865 | 1272 | BK |
| 890702 | 1/0 | 3 | 19 | 0.362 | 55 | 1 x 6 | 110 | 1.262 | 1070 | 1487 | BK |
| TBA | 2/0 | 3 | 19 | 0.405 | 55 | 1 x 6 | 80 | 1.278 | 1326 | 1629 | BK |
| 890704 | 3/0 | 3 | 19 | 0.456 | 55 | 1 x 4 | 110 | 1.484 | 1700 | 2221 | BK |
| 890705 | 4/0 | 3 | 19 | 0.512 | 55 | 1 x 4 | 110 | 1.579 | 2110 | 2652 | BK |
| 890706 | 250 | 3 | 37 | 0.558 | 65 | 1 x 4 | 110 | 1.713 | 2469 | 3091 | BK |
| 890708 | 350 | 3 | 37 | 0.661 | 65 | 1 x 3 | 110 | 1.927 | 3439 | 4175 | BK |
| 598118 | 600 | 3 | 61 | 0.866 | 80 | 1 x 3/0 | 110 | 2.426 | 6136 | 7069 | BK |
| 671840 | 600 | 3 | 61 | 0.866 | 80 | 1 x 1/0 | 110 | 2.426 | 5942 | 6943 | BK |
| 890712 | 750 | 3 | 61 | 0.968 | 80 | 1 x 1 | 110 | 2.64 | 7277 | 8399 | BK |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
GG: Green Insulated Ground
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.


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## 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 | Inductive Reactance @ 60Hz | Allowable Ampacity At 75°C | Allowable Ampacity At 90°C |
|---|---|---|---|---|---|---|---|---|---|
| | AWG/ Kcmil | | inch | lb | Ω/1000ft | Ω/1000ft | Ω/1000ft | Amp | Amp |
| 890670 | 8 | 3 | 3.1 | 396 | 0.653 | 0.81 | 0.052 | 50 | 55 |
| 890671 | 6 | 3 | 3.5 | 629 | 0.411 | 0.51 | 0.051 | 65 | 75 |
| 890672 | 4 | 3 | 3.7 | 1001 | 0.258 | 0.32 | 0.048 | 85 | 95 |
| 890673 | 2 | 3 | 5.3 | 1592 | 0.162 | 0.201 | 0.045 | 115 | 130 |
| 890701 | 1 | 3 | 5.9 | 2008 | 0.128 | 0.159 | 0.046 | 130 | 145 |
| 890702 | 1/0 | 3 | 6.3 | 2534 | 0.102 | 0.127 | 0.044 | 150 | 170 |
| TBA | 2/0 | 3 | 6.4 | 3194 | 0.082 | 0.102 | 0.043 | 175 | 195 |
| 890704 | 3/0 | 3 | 7.4 | 4027 | 0.064 | 0.079 | 0.042 | 200 | 225 |
| 890705 | 4/0 | 3 | 7.9 | 5078 | 0.051 | 0.063 | 0.041 | 230 | 260 |
| 890706 | 250 | 3 | 8.6 | 6000 | 0.043 | 0.053 | 0.041 | 255 | 290 |
| 890708 | 350 | 3 | 9.6 | 8400 | 0.031 | 0.039 | 0.04 | 310 | 350 |
| 598118 | 600 | 3 | 14.6 | 14400 | 0.018 | 0.024 | 0.039 | 420 | 475 |
| 671840 | 600 | 3 | 14.6 | 14400 | 0.018 | 0.024 | 0.039 | 420 | 475 |
| 890712 | 750 | 3 | 15.8 | 18000 | 0.014 | 0.019 | 0.038 | 475 | 535 |

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


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