# CU 600/1000V XLPE Insulation Thermoplastic LSZH-TP 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 SOLONON® Low Smoke Zero Halogen (LSZH-TP) Jacket with 1 Bare CU Ground. CT Rated - Sunlight Resistant - For Direct Burial - Silicone Free

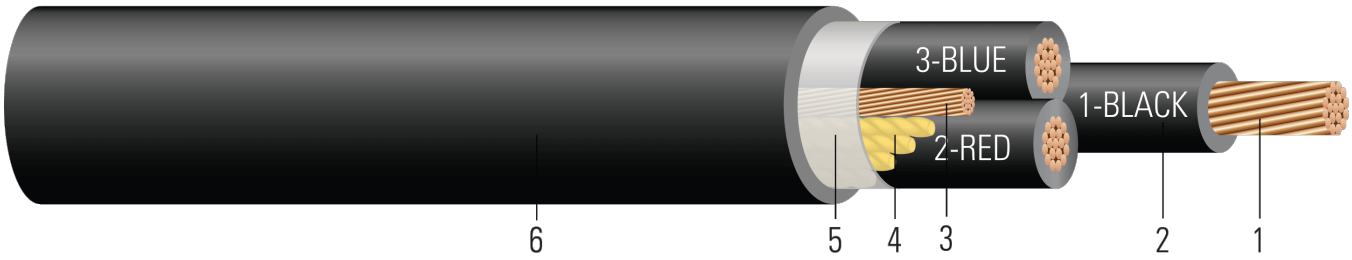



Image not to scale. See Table 1 for dimensions.

## 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 SOLONON® Low Smoke Zero Halogen (LSZH-TP) Jacket

## APPLICATIONS AND FEATURES:

Southwire's 600 or 1000 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
- NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems (500kcmil & Larger)


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## SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE® {UL} XXX AWG CU 3/C TYPE TC-ER XHHW-2 CDRS GW 1 X X AWG CU SOLONON® 90°C JACKET SUN RES OIL RES I FOR DIRECT BURIAL 600V

### Table 1 – Weights and Measurements

| 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 | |
| 8 | 3 | 7 | 0.142 | 45 | 1 x 10 | 60 | 0.71 | 187 | 341 | BK |

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 | 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 |
| 8 | 3 | 2.8 | 396 | 0.653 | 0.81 | 0.052 | 50 | 55 |

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


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