

3/C or 4/C CU 600V XLPE XHHW-2 LSZH Control Cable With Green Ground

Type TC-ER Control Cable 600Volt Copper Conductors, Cross Linked Polyethylene (XLPE) Insulation XHHW-2 SOLONON® Low Smoke Zero Halogen (LSZH) Jacket with 1 Insulated Green CU Ground, Control Cable Conductor Identification Method 1 Table 2



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** 7 strands class B compressed tinned copper per ASTM B33 and ASTM B8
2. **Insulation:** Cross Linked Polyethylene (XLPE) XHHW-2, 30 Mils thick for all cable sizes
3. **Grounding Conductor:** Class B compressed stranded copper with green insulation
4. **Filler:** Polypropylene filler on cables with 5 or less conductors
5. **Binder:** Polyester flat thread binder tape applied for cables with more than 5 conductors
6. **Overall Jacket:** SOLONON® Low Smoke Zero Halogen (LSZH) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type TC-ER control 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.

SPECIFICATIONS:

- ASTM B3 Standard Specification for 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 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-58-679 Control Cable Conductor Identification Method 1 Table 2
- ICEA S-73-532 Standard for Control, Thermocouple Extension and Instrumentation Cables
- 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
- NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems



Table 1 – Physical and Electrical Data

| Cond. Size | Cond. Number | Diameter Over Cond. | Insul. Thickness | Ground | Jacket Thickness | Approx. OD | Copper Weight | Approx. Weight | DC Resistance | AC Resistance @ 90°C | Min Bending Radius | Allowable Ampacity At 60°C * | Allowable Ampacity 75°C * | Allowable Ampacity 90°C * |
|------------|--------------|---------------------|------------------|-----------|------------------|------------|---------------|----------------|---------------|----------------------|--------------------|------------------------------|---------------------------|---------------------------|
| AWG | No. | inch | mil | No. x AWG | mil | inch | lb /1000ft | lb /1000ft | Ω /1000ft | Ω /1000ft | inch | Amp | Amp | Amp |
| 12 AWG | | | | | | | | | | | | | | |
| 12 | 4 | 0.087 | 30 | 1 x 12 | 45 | 0.487 | 102 | 177 | 1.660 | 2.075 | 1.9 | 16 | 20 | 20 |

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 310.15 (B)(16) of the NEC, 2017 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)

