

# Multi-Conductor CU 600 V FR-XLPE Drain Wire LCT Shielded Thermoplastic CPE-TP Jacket Power Cable Color Method 1 Table 1

Power Cable 600 Volt Copper Conductors, Cross Linked Polyethylene (XLPE) Insulation XHHW-2 Shielded with Drain Wire Thermoplastic Chlorinated Polyethylene (CPE-TP) Jacket, Control Cable Conductor Identification Method 1 Table 1. Silicone Free

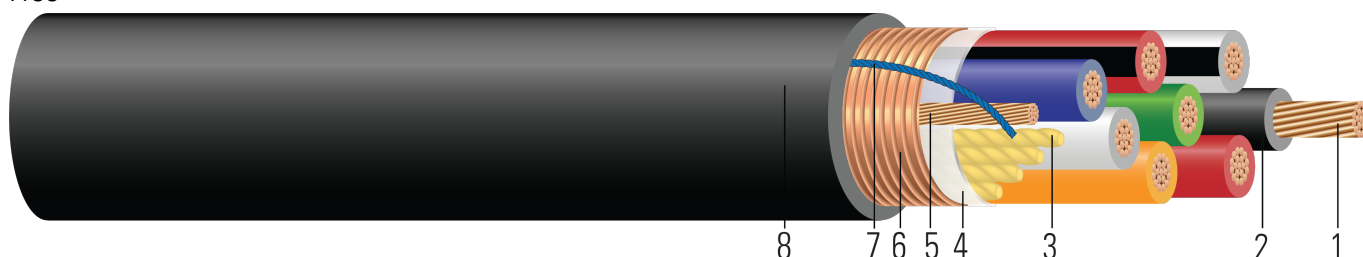


Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

- Conductor:** 7 strands class B compressed bare copper per ASTM B3 and ASTM B8. Tinned copper available upon request.
- Insulation:** Cross Linked Polyethylene (XLPE) XHHW-2
- Filler:** Polypropylene filler on cables with 5 or less conductors
- Binder:** Polyester flat thread binder tape applied for cables with more than 5 conductors
- Drain Wire:** Bare copper drain wire. Tinned copper drain wire available upon request.
- Shield:** 5 mils copper Longitudinally-Applied Corrugated Tape (LCT) shield
- Rip Cord:** Rip cord for ease of jacket removal
- 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.

## 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 1
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- IEEE 1202 FT4 Vertical Tray Flame Test (70,000 Btu/hr) and ICEA T-29-520 - (210,000 Btu/hr)
- VW-1 (Vertical-Wire) Flame Test



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | [www.southwire.com](http://www.southwire.com)



Southwire

**CABLETECH  
SUPPORT™**

Services

**SAMPLE PRINT LEGEND:**

SOUTHWIRE MASTER-DESIGN XX AWG XX/C FR-XLPE CDRS 90C CPE JKT SHIELDED 600V SUN. RES. DIRECT BURIAL YEAR  
{SEQUENTIAL FOOTAGE MARKS} SEQ FEET



**Table 1 – Physical and Electrical Data**

| Stock Number | Cond. Size | Cond. Number | Diameter Over Cond. | Insul. Thickness | Jacket Thickness | Approx. OD | Copper Weight | Approx. Weight | DC Resistance @ 25°C | AC Resistance @ 90°C | Min Bending Radius | Allowable Ampacity At 60°C * | Allowable Ampacity 75°C * | Allowable Ampacity 90°C * |
|--------------|------------|--------------|---------------------|------------------|------------------|------------|---------------|----------------|----------------------|----------------------|--------------------|------------------------------|---------------------------|---------------------------|
|              | AWG        | No.          | inch                | mil              | mil              | inch       | lb /1000ft    | lb /1000ft     | Ω /1000ft            | Ω /1000ft            | inch               | Amp                          | Amp                       | Amp                       |
| 14 AWG       |            |              |                     |                  |                  |            |               |                |                      |                      |                    |                              |                           |                           |
| 622094       | 14         | 7            | 0.070               | 30               | 60               | 0.609      | 137           | 259            | 1.662                | 2.162                | 7.3                | 11                           | 14                        | 18                        |
| 12 AWG       |            |              |                     |                  |                  |            |               |                |                      |                      |                    |                              |                           |                           |
| 627829       | 12         | 7            | 0.087               | 30               | 60               | 0.665      | 194           | 332            | 1.662                | 2.162                | 8.0                | 14                           | 18                        | 21                        |
| 627845       | 12         | 12           | 0.087               | 30               | 80               | 0.876      | 310           | 540            | 1.662                | 2.162                | 10.5               | 10                           | 13                        | 15                        |
| 10 AWG       |            |              |                     |                  |                  |            |               |                |                      |                      |                    |                              |                           |                           |
| 622685       | 10         | 4            | 0.111               | 30               | 60               | 0.637      | 187           | 308            | 1.020                | 1.040                | 7.6                | 24                           | 28                        | 32                        |
| 622096       | 10         | 7            | 0.111               | 30               | 60               | 0.737      | 297           | 459            | 1.020                | 1.040                | 8.8                | 210                          | 25                        | 28                        |
| 622503       | 6          | 4            | 0.178               | 45               | 80               | 0.653      | 403           | 653            | 0.411                | 0.535                | 7.8                | 44                           | 52                        | 60                        |

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

