

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

Control Cable 600 Volt Copper Conductors, Flame Retardant Cross Linked Polyethylene (FR-XLPE) Insulation Shielded Thermoplastic Chlorinated Polyethylene Chloride (CPE-TP) Jacket, Power 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
- Insulation:** Flame Retardant Cross Linked Polyethylene (FR-XLPE)
- Filler:** Polypropylene filler on cables with 5 or less conductors
- Binder:** Polyester flat thread binder tape applied for cables with more than 5 conductors
- Shield:** 5 mils copper Longitudinally-Applied Corrugated Tape (LCT) shield
- Rip Cord:** Rip cord for ease of jacket removal
- Overall Jacket:** Thermoplastic Chlorinated Polyethylene Chloride (CPE-TP)

APPLICATIONS AND FEATURES:

Southwire's 600 Volt 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. UL rated construction can be used in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. UL rated 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-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



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SAMPLE PRINT LEGEND:

UL Listed

SOUTHWIRE E75755 {UL} XX AWG X/C FR-XLPE XHHW-2 TYPE TC-ER CDRS 90C CPE JKT SHIELDED 600V SUN RES YEAR {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

Non UL Listed

SOUTHWIRE XX AWG X/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 | Cond. Strands | Diameter Over Cond. | Insul. Thickness | Diameter Over Insulation | Jacket Thickness | Approx. OD | 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. | strands | inch | mil | inch | mil | inch | lb /1000ft | Ω /1000ft | Ω /1000ft | inch | Amp | Amp | Amp |
| 624658! | 8 | 4 | 19 | 0.143 | 45 | 0.233 | 60 | 0.787 | 434 | 0.653 | 0.849 | 9.4 | 32 | 40 | 44 |
| 625639 | 6 | 2 | 7 | 0.178 | 45 | 0.268 | 60 | 0.756 | 363 | 0.412 | 0.535 | 9.1 | 55 | 65 | 75 |
| 604319 | 6 | 3 | 7 | 0.178 | 45 | 0.268 | 60 | 0.803 | 459 | 0.412 | 0.535 | 9.6 | 55 | 65 | 75 |
| TBA | 6 | 4 | 7 | 0.178 | 45 | 0.267 | 80 | 0.906 | 578 | 0.412 | 0.535 | 10.9 | 44 | 52 | 60 |
| 604316 | 2 | 2 | 7 | 0.283 | 47 | 0.377 | 80 | 1.006 | 734 | 0.162 | 0.211 | 12.1 | 95 | 115 | 130 |
| 604315 | 1 | 2 | 19 | 0.321 | 55 | 0.431 | 80 | 1.122 | 903 | 0.126 | 0.167 | 13.5 | 110 | 130 | 145 |

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)

^ UL Listed part number

! Tinned copper 19 strand combination unilay conductor per ASTM B787

