



Multi-Conductor TCU 600V FR-XLPE Laminate CU LCT CPE Jacket Control Cable Color Method 1 Table 1 - Re3™ Rodent-Resistant Power & Control Cables

Control Cable 600 Volt Tinned Copper, Fire Retardant Cross-Linked Polyethylene (FR-XLPE) insulation Laminate CU LCT Thermoplastic CPE Jacket Method 1 Table 1

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Conductor: 19 strands, class C, compressed tinned copper per ASTM B33 and ASTM B8
2. **Insulation:** Flame Retardant Cross Linked Polyethylene (FR-XLPE)
3. **Filler:** Polypropylene filler as needed for round assembly
4. **Binder:** Polyester flat thread binder tape applied over cabled assembly
5. **Tape:** Helically-Applied copper laminate
6. **Shielding:** 5 mils copper Longitudinally-Applied Corrugated Tape (LCT) shield
7. **Rip Cord:** Rip cord for ease of jacket removal
8. **Overall Jacket:** Thermoplastic Chlorinated Polyethylene (CPE-TP)

APPLICATIONS AND FEATURES:

Southwire's 600 Volt 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.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- UL 44 Thermoset-Insulated Wires and Cables
- 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

SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE{R} 10 AWG TIN CU XX/C FR-XLPE CDRS E1 SHIELDED 90{D}C WET OR DRY CPE-TP JKT 600V SUN RES DIRECT BURIAL





Table 1 – Physical and Electrical Data

Cond. Size	Cond. Number	Cond. Strands	Diameter Over Cond.	Insul. Thickness	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance	Min Bending Radius	Allowable Ampacity 75°C	Allowable Ampacity 90°C
AWG	No.	strands	inch	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp
10 AWG														
10	2	19	0.113	30	60	0.591	108	237	0.411	0.495	0.051	7.1	35	40
10	4	19	0.113	30	60	0.660	201	339	0.411	0.495	0.051	7.9	28	32
10	7	19	0.113	30	60	0.764	201	339	0.411	0.495	0.051	9.2	24	28
10	12	19	0.113	30	60	0.764	464	754	0.411	0.495	0.051	12.1	18	20

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

* Ampacities based upon 2023 NEC Table 310.16 and do not take into account the overcurrent protection limitations in NEC 240.4(D) of 15 Amps for 14 AWG CU, 20 Amps for 12 AWG CU, and 30 Amps for 10 AWG CU (independent of the conductor temperature rating and stranding if size is present in table). Also, see NEC sections 310.15 and 110.14(C) for additional requirements.

* Ampacities have been adjusted for more than Three Current-Carrying Conductors.

* Inductive impedance is based on non-ferrous conduit with one diameter spacing.

