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

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

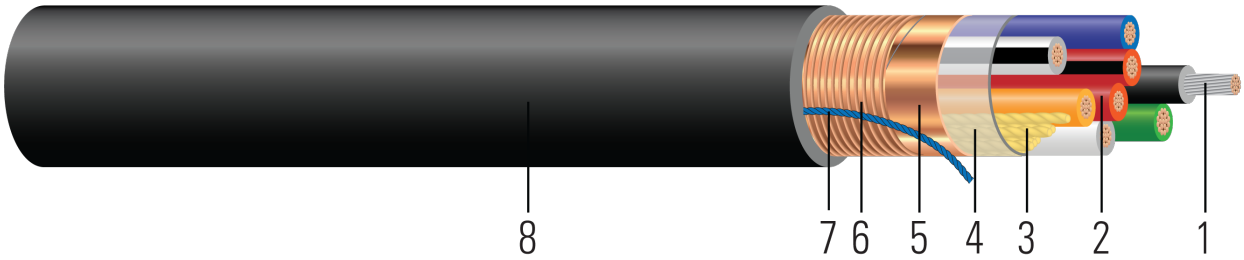


Image not to scale. See Table 1 for dimensions.

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. The double-shielding design prevents wildlife attacks on cables, including but not limited to rats, moles, squirrels, gophers, and termites. Copper is a natural animal deterrent and protects the dielectric insulated phase conductors from chewing damage. The extra layers of copper material also mitigate EMI/EMF due to interferences from the high voltage or extra high voltage equipment at the transmission or distribution substations. This shielded multi-conductor cable is UL-1277 optical and can be deployed for any critical infrastructure applications including data centers, sea ports, airports, and wastewater treatment plants.

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
- UL 1277 Electrical Power and Control Tray Cables (Optional)
- ICEA S-58-679 Control Cable Conductor Identification Method 1 Table 1
- ICEA S-73-532 Control, Thermocouple Extension, and Instrumentation Cables (applicable to sizes 20-9 AWG conductors)
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy

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UPDATED: July 25, 2025, 10:50 p.m.UTC REVISION: 1.000.013

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

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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 Rectance	Min Bending Radius	Allowable Ampacity 75°C	Allowable Ampacity 90°C	Jacket Color
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	0.117	30	45	0.45	126	174	1.082	1.343	0.05	3.2	35	40	BK
10	4	19	0.117	30	60	0.554	201	284	1.082	1.343	0.05	3.9	28	32	BK
10	7	19	0.117	30	60	0.657	314	432	1.082	1.343	0.05	4.6	24	28	BK
10	12	19	0.117	30	80	0.902	506	716	1.082	1.343	0.05	6.3	18	20	BK

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.

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