

Multi-Conductor CU 600V PVC THHN PVC Shielded Control Cable #14, #12, #10

Type TC-ER, PLTC, FPL, and NFPL Control Cable 600 Volt Copper Conductors, Polyvinyl Chloride (PVC) with nylon layer Insulation THWN Polyvinyl Chloride (PVC) Jacket, Shielded 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 bare copper per ASTM B3 and ASTM B8
2. **Insulation:** Polyvinyl Chloride (PVC) with nylon layer TFFN, 19 Mils thick for 18 and 16
3. **Drain Wire:** Tinned copper
4. **Shielding:** 100% coverage aluminum foil
5. **Jacket:** Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's Type TC-ER, PLTC, FPL, and NFPL Control Cable 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 in dry locations and 75°C in wet locations, 130°C for emergency overload, and 250°C For uses in Class I, II, and III per NEC Article 725 and 760. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10. Oil and sunlight resistant

SPECIFICATIONS:

- ASTM B3 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 13 Standard for Power-Limited Circuit Cables
- UL 83 Thermoplastic Insulated Wires and Cables Type THHN
- UL 1277 TC-ER
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test
- 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
- EPA 40 CFR, Part 26, Subpart C heavy metals per Table 1, TCLP method

SAMPLE PRINT LEGEND:

Southwire XXAWG XX/C PVC/Nylon SHLD THWN Type TC-ER E79496 (UL) 600V 90°C Dry Oil Res I PLTC NPLF Sun Res- Sequential mark



Table 1 – Physical and Electrical Data

Cond. Size	Cond. Number	Diameter Over Cond.	Insul. Thickness	Jacket Thickness	Approx. OD	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	mil	inch	lb /1000ft	Ω /1000ft	Ω /1000ft	inch	Amp	Amp	Amp
14 AWG												
14	12	0.0242	19	60	0.593	279	2.63	3.288	7.12	10	10	10

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)

