CU 600V PVC-Nylon Insulation PVC Jacket TFN Shielded. CT Rated - Sunlight Resistant - For Direct Burial - Silicone Free

Type TC-ER, PLTC, FPL, and NFPL Control Cable 600 Volt Copper Conductors, Polyvinyl Chloride (PVC) with nylon layer Insulation TFN 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 TFN, 19 Mils thick for 18 and 16
3. **Drain Wire:** Tinned copper. Two awg sizes smaller than phase conductor
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 dry and wet areas, troughs, trays, direct burial 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, 105°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 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 13 Power-Limited Circuit Cables
- UL 66 Fixture Wire
- UL 1277 TC-ER
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test
- 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
- EPA 40 CFR, Part 26, Subpart C heavy metals per Table 1, TCLP method

SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE® XX AWG (X.XXmm2) X/C SHIELDED PVCN/PVC TYPE TC-ER PVC/NYLON E75755 (UL) 600V 90°C DRY/75°C WET OIL RES I SUNLIGHT RESISTANT DIRECT BURIAL -- PLTC SUN RES --- FPL SUN RES --- NPLF SUN RES -- NOM-ANCE TFN 600V 90°C

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Table 1 – Physical and Electrical Data

Stock Number	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	
18 AWG																
576459	18	2	7	0.046	15	45	0.268	13	39	6.669	8.277	0.036	1.9	-	14	BK
586094◊	18	4	7	0.046	15	45	0.302	23	57	6.669	8.277	0.036	2.1	-	11	BK
577888	18	6	7	0.046	15	45	0.362	33	80	6.669	8.277	0.036	2.5	-	11	BK
16 AWG																
577883	16	2	7	0.057	15	45	0.298	21	52	4.181	5.189	0.033	2.1	-	18	BK
577884	16	3	7	0.057	15	50	0.317	29	65	4.181	5.189	0.033	2.2	-	18	BK
771614	16	4	7	0.057	20	45	0.331	40	74	4.181	5.189	0.033	2.3	-	14	BK
646279	16	4	7	0.057	15	45	0.334	37	76	4.181	5.189	0.033	2.3	-	14	BK
646247	16	12	7	0.057	15	60	0.54	102	198	4.181	5.189	0.033	3.8	-	9	BK
668251	16	16	7	0.057	20	60	0.583	137	236	4.181	5.189	0.033	4.1	-	9	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.

TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

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