

Multi-Conductor CU 600V PVC TFFN PVC Shielded Control Cable #16 and #18

Type TC-ER, PLTC, FPL, and NFPL Control Cable 600 Volt Copper Conductors, Polyvinyl Chloride (PVC) with nylon layer Insulation TFFN 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 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 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 13 Standard for Power-Limited Circuit Cables
- UL 66 Fixture Wire Type TFFN
- 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
- EPA 40 CFR, Part 26, Subpart C heavy metals per Table 1, TCLP method

SAMPLE PRINT LEGEND:

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



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Table 1 – Physical and Electrical Data

Stock Number	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
18 AWG													
576459	18	2	0.0152	19	45	0.272	40	6.54	8.18	3.3	7	7	7
TBA	18	3	0.0152	19	45	0.285	49	6.54	8.18	3.4	7	7	7
586094	18	4	0.0152	19	45	0.308	59	6.54	8.18	3.7	7	7	7
TBA	18	5	0.0152	19	45	0.332	69	6.54	8.18	4	7	7	7
577888	18	6	0.0152	19	45	0.365	81	6.54	8.18	4.4	7	7	7
TBA	18	7	0.0152	19	45	0.375	88	6.54	8.18	4.3	7	7	7
TBA	18	9	0.0152	19	45	0.412	109	6.54	8.18	4.9	7	7	7
TBA	18	12	0.0152	19	45	0.458	137	6.54	8.18	5.5	7	7	7
16 AWG													
TBA	16	2	0.0192	19	45	0.296	51	4.18	5.226	3.6	10	10	10
577884	16	3	0.0192	19	45	0.312	54	4.18	5.226	3.7	10	10	10
TBA	16	4	0.0192	19	45	0.338	77	4.18	5.226	4.1	10	10	10
646245	16	5	0.0192	19	45	0.365	91	4.18	5.226	4.4	10	10	10
TBA	16	7	0.0192	19	45	0.395	118	4.18	5.226	4.7	10	10	10
TBA	16	9	0.0192	19	45	0.456	146	4.18	5.226	5.5	10	10	10
646247	16	12	0.0192	19	60	0.539	200	4.18	5.226	6.5	9	9	9

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)

