

## Multi-Conductor CU 600V PVC THHN PVC Shielded Control Cable

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

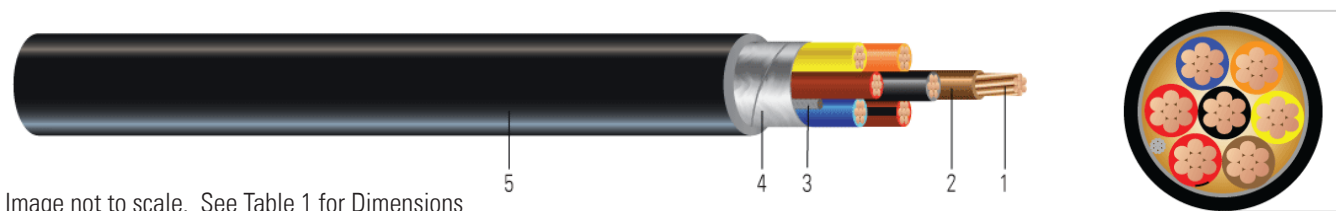


Image not to scale. See Table 1 for Dimensions

### CONSTRUCTION:

- Conductors:** 7 strands class B compressed bare copper per ASTM B3 and ASTM B8
- Insulation:** Polyvinyl Chloride (PVC) with nylon layer 19 Mils thick for #14 and #12 AWG and 24 Mils for #10 AWG.
- Drain Wire:** Tinned copper
- Shielding:** 100% coverage aluminum foil
- Jacket:** Polyvinyl Chloride (PVC).

### 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 - Soft or annealed copper
- ASTM B8 - Concentric-lay-standard copper
- UL 13 - Standard for Power-Limited Circuit Cables
- UL 83 - Thermoplastic Insulated Wires and Cables Type THHN
- UL 1277 - Electrical Power and Control Cable, VW-1
- UL 1424 - Standard for Cables for Power-Limited Fire-Alarm Circuits
- UL 1425 - Standard for Cables for Non-Power-Limited Fire-Alarm Circuits
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr)
- 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:

Southwire XXAWG XX/C PVC/Nylon SHLD THWN Type TC-ER E79496 (UL) 600V 90°C Dry and 75°C in Wet Oil Res I PLTC Sun Res NPLF Sequential mark



**Southwire**<sup>®</sup>

**Table 1 – Measurements and Electrical**

Stock Code	Conductor Size	Cond. OD	Number of Conductors	Insulation Thickness	Outer Jacket Thickness	Nominal OD (5)	Nominal Weight	DC Resis. @ 25°C	AC Resis @ 90°C	+Ampacity NEC 310.15 (B) (16) amps			Min Bend Radius
	AWG (strds)	inches		mils	mils	inches	Lbs/MFT			60°C	75°C	90°C	Inches
581276	14 (7)	0.0242	2	19	45	0.324	68	2.63	3.288	15	15	15	3.89
TBA	14 (7)	0.0242	3	19	45	0.337	86	2.63	3.288	15	15	15	4.04
TBA	14 (7)	0.0242	4	19	45	0.369	106	2.63	3.288	15	15	15	4.43
TBA	14 (7)	0.0242	5	19	45	0.404	125	2.63	3.288	15	15	15	4.85
TBA	14 (7)	0.0242	7	19	45	0.438	164	2.63	3.288	14	14	14	5.26
TBA	14 (7)	0.0242	12	19	60	0.593	279	2.63	3.288	10	10	10	7.12
TBA	12 (7)	0.0305	2	19	45	0.366	94	1.66	2.075	20	20	20	4.39
TBA	12 (7)	0.0305	3	19	45	0.387	122	1.66	2.075	20	20	20	4.64
581600	12 (7)	0.0305	4	19	45	0.422	151	1.66	2.075	20	20	20	5.06
581566	12 (7)	0.0305	5	19	45	0.460	180	1.66	2.075	20	20	20	5.52
TBA	12 (7)	0.0305	7	19	60	0.500	239	1.66	2.075	17	17	17	6.00
581565	12 (7)	0.0305	12	19	60	0.686	404	1.66	2.075	17	17	17	8.23
TBA	10 (7)	0.0385	2	24	45	0.434	137	1.04	1.300	10	10	10	5.21
TBA	10 (7)	0.0385	3	24	45	0.461	180	1.04	1.300	30	30	30	5.53
TBA	10 (7)	0.0385	4	24	60	0.505	223	1.04	1.300	28	28	28	6.06
581567	10 (7)	0.0385	5	24	60	0.584	284	1.04	1.300	28	28	28	7.01
TBA	10 (7)	0.0385	7	24	60	0.634	375	1.04	1.300	24	24	24	7.61

\*Ampacity based on 310.15 (B) (16) up to and including 2000 volts. Ampacities of insulated conductors rated up to and including 2000

All dimensions are nominal and subject to normal manufacturing tolerances

◇Standard stock item

