

CU 600V PVC-Nylon Insulation PVC Jacket. THHN/THWN-2 With Green Ground

Type TC-ER Control Cable 600Volt Copper Conductors, Polyvinyl Chloride (PVC) with nylon layer Insulation THHN/THWN Polyvinyl Chloride (PVC) Jacket with 1 Insulated Green CU Ground, Control Cable Conductor Identification Method 1 Table 2



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- Conductor:** 7 strands class B compressed bare copper per ASTM B3 and ASTM B8
- Insulation:** Polyvinyl Chloride (PVC) with nylon layer THHN/THWN
- Grounding Conductor:** Class B compressed stranded copper with green insulation
- Filler:** Polypropylene filler
- Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type TC-ER 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 75°C in wet locations and 90°C in dry locations, 105°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10.

SPECIFICATIONS:

- ASTM B3 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 83 Thermoplastic Insulated Wires and Cables
- UL 1277 Electrical Power and Control Tray Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-58-679 Control Cable Conductor Identification Method 1 Table 2
- 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

SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE{R} (UL) XX AWG (XX.Xmm²) CU 3 CDRS TYPE TC-ER THHN OR THWN CDRS GW 1 X XX AWG CU GREEN INSULATED 90{D}C JACKET SUNLIGHT RESISTANT DIRECT BURIAL 600 VOLTS NOM-ANCE



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com



Southwire

**CABLETECH
SUPPORT™**

Services

Table 1 – Physical and Electrical Data

Stock Number	Cond. Size	Cond. Number	Cond. Strands	Diameter Over Cond.	Insul. Thickness	Ground	Jacket Thickness	Approx. OD	Approx. Weight	DC Resistance @ 25°C	AC Resistance @ 90°C	Min Bending Radius	Allowable Ampacity At 60°C *	Allowable Ampacity 75°C *	Allowable Ampacity 90°C *
	AWG	No.	strands	inch	mil	No. x AWG	mil	inch	lb /1000ft	Ω /1000ft	Ω /1000ft	inch	Amp	Amp	Amp
14 AWG															
606806◇	14	3	7	0.070	20	1 x 14	45	0.349	90	2.631	3.170	1.3	15	20	25
606814◇	14	4	7	0.070	20	1 x 14	45	0.384	111	2.631	3.170	1.5	12	16	20
12 AWG															
606723◇	12	3	7	0.088	20	1 x 12	45	0.364	131	1.662	2.002	1.4	20	25	30
606798◇	12	4	7	0.088	20	1 x 12	45	0.406	157	1.662	2.002	1.6	16	20	24
10 AWG															
TBA	10	2	7	0.113	25	1 x 10	45	0.416	149	1.040	1.253	1.6	30	35	40
605543◇	10	3	7	0.113	25	1 x 10	45	0.473	200	1.040	1.253	1.8	30	35	40
606863◇	10	4	7	0.113	25	1 x 10	60	0.549	253	1.040	1.253	2.1	24	28	32
644497	8	3	7	0.153	35	1 x 10	60	0.637	306	0.653	0.786	2.5	40	50	55

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 310.16 of the NEC 2020 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts with not more than three current-carrying conductors in raceway, cable or direct buried based on ambient temperature of 30°C (86°F). Ampacities have been adjusted for more than three current-carrying conductors based on Table 310.15(C) 1.

