CU 600V PVC-Nylon Insulation PVC Jacket THHN/THWN-2 With Green Ground. CT Rated - Sunlight Resistant - For Direct Burial - Silicone Free

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:

1. **Conductor:** 7 strands class B compressed bare copper per ASTM B3 and ASTM B8
2. **Insulation:** Polyvinyl Chloride (PVC) with nylon layer THHN/THWN
3. **Grounding Conductor:** Class B compressed stranded copper with green insulation
4. **Filler:** Polypropylene filler
5. **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 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® (UL) XX AWG (XX.Xmm2) CU 3 CDRS TYPE TC-ER THHN OR THWN CDRS GW 1 X XX AWG CU GREEN INSULATED 90°C JACKET SUNLIGHT RESISTANT DIRECT BURIAL 600 VOLTS NOM-ANCE

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UPDATED: Jan. 24, 2024, 6:08 p.m.UTC REVISION: 1.000.004

Table 1 – Physical and Electrical Data

Stock Number	Cond. Size	Cond. Number	Cond. Strands	Insul. Thickness	Ground	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
	AWG	No.	strands	mil	No. x AWG	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp
14 AWG															
606806◊	14	3	7	15	1 x 14	45	0.349	51	90	2.631	3.170	0.058	1.4	20	25
606814◊	14	4	7	15	1 x 14	45	0.384	64	111	2.631	3.170	0.058	1.5	16	20
12 AWG															
606723◊	12	3	7	15	1 x 12	45	0.364	81	131	1.662	2.002	0.054	1.5	25	30
606798◊	12	4	7	15	1 x 12	45	0.406	101	157	1.662	2.002	0.054	1.6	20	24
10 AWG															
664399	10	2	7	20	1 x 10	45	0.450	97	161	1.040	1.253	0.050	1.8	35	40
605543◊	10	3	7	20	1 x 10	45	0.488	129	204	1.040	1.253	0.050	2.0	35	40
606863◊	10	4	7	20	1 x 10	45	0.565	161	259	1.040	1.253	0.050	2.3	28	32
8 AWG															
644497	8	3	7	30	1 x 10	60	0.647	186	310	0.653	0.786	0.052	2.6	50	55

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.