

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

Type TC-ER Power Cable 600Volt Three Conductor Aluminum, Polyvinyl Chloride (PVC) with nylon layer insulation THHN Polyvinyl Chloride (PVC) Jacket with 1 Bare AL Ground. Silicone Free



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- 1. Conductor: Class B compact stranded 8000 Series aluminum per ASTM B800 and ASTM B836
- 2. Insulation: Polyvinyl Chloride (PVC) with nylon layer Type THHN/THWN
- 3. Grounding Conductor: Class B compact stranded 8000 Series aluminum per ASTM B800 and ASTM B836
- 4. Filler: Paper filler (cable size 8 & 6 uses Polypropylene filler)
- 5. Binder: Polyester flat thread binder tape for cable sizes larger than 2 AWG
- 6. **Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type TC-ER power 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. Silicone free

SPECIFICATIONS:

- ASTM B801 Concentric-Lay-Stranded Conductors of 8000 Series Aluminum Alloy
- ASTM B836 Compact Rounded Stranded Aluminum 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 4

SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE® {UL} XXX AWG AL 3 CDRS TYPE TC-ER THHN OR THWN-2 CDRS AL GW 1 X X AWG 90°C JACKET SUNLIGHT RESISTANT DIRECT BURIAL 600 VOLTS {YYYY}

Table 1 – Weights and Measurements

1/0	3	10	0.336	50	1 x 4	80	1.132	341	763	Black	
All dimensions are nominal and subject to normal manufacturing tolerances											
Southwire Company, LLC One Southwire Drive, Carrollton, GA 30119 www.southwire.com											



♦ Cable marked with this symbol is a standard stock item

* Strand count meets minimum number per ASTM

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.

Table 2 – Electrical and Engineering Data

Cond. Size	Cond. Number	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
AWG/ Kcmil		inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
1/0	3	5.7	1900	0.168	0.201	0.044	120	135

* Ampacities based upon 2023 NEC Table 310.16. See NEC sections 310.15 and 110.14(C) for additional requirements.

