# 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 Four Conductor Aluminum, Polyvinyl Chloride (PVC) with nylon layer insulation THHN Polyvinyl Chloride (PVC) Jacket with 1 Bare AL Ground




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 90°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 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 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-58-679 Cable Conductor Identification Method 3 (1-BLACK, 2-RED, 3-BLUE)
- 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} 3/0 AWG AL 4 CDRS TYPE TC-ER THHN OR THWN-2 CDRS AL GW 1 X 4 AWG 90°C JACKET SUNLIGHT RESISTANT DIRECT BURIAL 600 VOLTS {YYYY}


Copyright © 2026 Southwire Company, LLC. All Rights Reserved

## Table 1 – Weights and Measurements

| Stock Number | Cond. Size | Cond. Number | Strand Count | Diameter Over Conductor | Insul. Thickness | Ground | Jacket Thickness | Approx. OD | Aluminum Weight | Approx. Weight | Jacket Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | AWG/ Kcmil | | No. of Strands | inch | mil | No. x AWG | mil | inch | lb/1000ft | lb/1000ft | |
| TBA | 8 | 4 | 7 | 0.134 | 35 | 1 x 8 | 60 | 0.62 | 83 | 185 | BK |
| TBA | 6 | 4 | 7 | 0.169 | 35 | 1 x 8 | 60 | 0.704 | 119 | 240 | BK |
| TBA | 4 | 4 | 7 | 0.213 | 50 | 1 x 6 | 80 | 0.923 | 184 | 398 | BK |
| TBA | 2 | 4 | 7 | 0.268 | 50 | 1 x 6 | 80 | 1.057 | 280 | 533 | BK |
| TBA | 1 | 4 | 19 | 0.299 | 60 | 1 x 4 | 80 | 1.18 | 358 | 669 | BK |
| TBA | 1/0 | 4 | 19 | 0.336 | 60 | 1 x 4 | 80 | 1.27 | 438 | 777 | BK |
| 675633 | 2/0 | 4 | 12 | 0.376 | 50 | 1 x 4 | 80 | 1.357 | 546 | 1014 | BK |
| 675635 | 3/0 | 4 | 15 | 0.423 | 50 | 1 x 4 | 80 | 1.471 | 678 | 1187 | BK |
| TBA | 4/0 | 4 | 19 | 0.475 | 60 | 1 x 2 | 80 | 1.606 | 861 | 1309 | BK |
| TBA | 250 | 4 | 37 | 0.52 | 70 | 1 x 2 | 110 | 1.823 | 1005 | 1636 | BK |
| TBA | 300 | 4 | 35 | 0.57 | 70 | 1 x 2 | 110 | 1.944 | 1193 | 1873 | BK |
| TBA | 350 | 4 | 37 | 0.616 | 70 | 1 x 2 | 110 | 2.056 | 1381 | 2105 | BK |
| TBA | 500 | 4 | 35 | 0.736 | 70 | 1 x 1 | 110 | 2.346 | 1965 | 2806 | BK |
| 668451 | 500 | 4 | 34 | 0.736 | 60 | 1 x 1 | 115 | 2.352 | 1983 | 3038 | BK |
| 673261 | 600 | 4 | 41 | 0.813 | 70 | 1 x 3/0 | 110 | 2.578 | 2443 | 3652 | BK |
| TBA | 750 | 4 | 61 | 0.908 | 80 | 1 x 1/0 | 140 | 2.871 | 2925 | 4169 | BK |
| 597540 | 750 | 4 | 58 | 0.908 | 70 | 1 x 3/0 | 140 | 2.925 | 3014 | 4600 | BK |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ 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.


Copyright © 2026 Southwire Company, LLC. All Rights Reserved

## Table 2 – Electrical and Engineering Data

| Stock Number | 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 |
| TBA | 8 | 4 | 2.5 | 396 | 1.071 | 1.334 | 0.052 | 32 | 36 |
| TBA | 6 | 4 | 2.8 | 629 | 0.674 | 0.84 | 0.051 | 40 | 44 |
| TBA | 4 | 4 | 3.7 | 1001 | 0.424 | 0.528 | 0.048 | 52 | 60 |
| TBA | 2 | 4 | 5.3 | 1592 | 0.266 | 0.331 | 0.045 | 72 | 80 |
| TBA | 1 | 4 | 5.9 | 2008 | 0.211 | 0.263 | 0.046 | 80 | 92 |
| TBA | 1/0 | 4 | 6.4 | 2534 | 0.167 | 0.208 | 0.044 | 96 | 108 |
| 675633 | 2/0 | 4 | 6.8 | 3194 | 0.133 | 0.166 | 0.043 | 108 | 120 |
| 675635 | 3/0 | 4 | 7.4 | 4027 | 0.105 | 0.131 | 0.042 | 124 | 140 |
| TBA | 4/0 | 4 | 8 | 5078 | 0.084 | 0.105 | 0.041 | 144 | 164 |
| TBA | 250 | 4 | 9.1 | 6000 | 0.07 | 0.087 | 0.041 | 164 | 184 |
| TBA | 300 | 4 | 9.7 | 7200 | 0.059 | 0.071 | 0.041 | 184 | 208 |
| TBA | 350 | 4 | 12.3 | 8400 | 0.051 | 0.064 | 0.04 | 200 | 224 |
| TBA | 500 | 4 | 14.1 | 12000 | 0.036 | 0.045 | 0.039 | 248 | 280 |
| 668451 | 500 | 4 | 14.1 | 12000 | 0.036 | 0.045 | 0.039 | 248 | 280 |
| 673261 | 600 | 4 | 15.5 | 14400 | 0.03 | 0.038 | 0.039 | 272 | 308 |
| TBA | 750 | 4 | 17.2 | 18000 | 0.023 | 0.03 | 0.038 | 308 | 348 |
| 597540 | 750 | 4 | 17.5 | 18000 | 0.023 | 0.03 | 0.038 | 308 | 348 |

* Ampacities based upon 2023 NEC Table 310.16. See NEC sections 310.15 and 110.14(C) for additional requirements.
* Ampacities have been adjusted for more than Three Current-Carrying Conductors.


Copyright © 2026 Southwire Company, LLC. All Rights Reserved