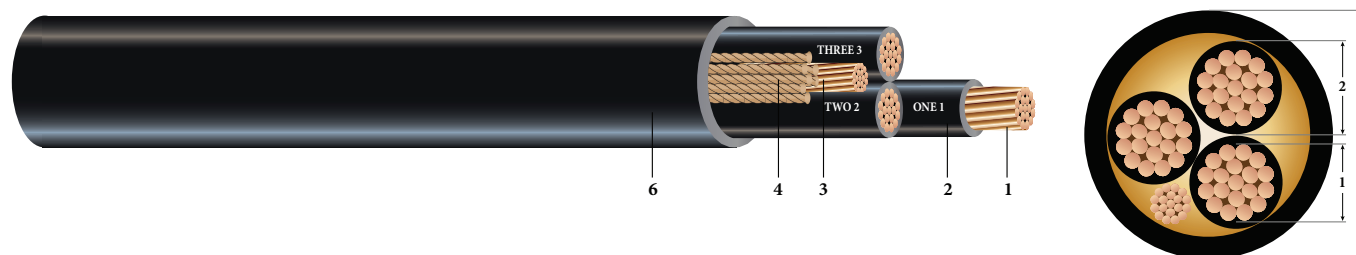


3/C CU 600V PVC THHN PVC Power Cable Type TC-ER

Type TC-ER Power Cable 600Volt Three Conductor Copper, Polyvinyl Chloride (PVC) with nylon layer insulation THHN Polyvinyl Chloride (PVC) Jacket with 1 Bare CU Ground



Images not to scale. See Table 1 for Dimensions

CONSTRUCTION:

- Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- Insulation:** Polyvinyl Chloride (PVC) with nylon layer Type THHN/THWN
- Grounding Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (cable size 8 & 6 has insulated green ground)
- Filler:** Paper filler (cable size 8 & 6 uses Polypropylene filler)
- Binder:** Polyester flat thread binder tape for cable sizes larger than 2 AWG
- 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, 130°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
- ASTM B8 Concentric-lay-standard copper
- UL 83 Thermoplastic Insulated wires And cables
- UL 1277 Electrical Power And Control Cable
- UL 1685 - Flame Test
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- IEEE 1202/FT4 - Vertical Tray Flame Test (70,000 Btu/hr) And ICEA T-29-520 - (210,000 Btu/hr)
- ICEA S-58-679 - Control Cable Conductor Identification Method 4
- ICEA S-95-658 NEMA WC70 - Power cables rated 2000 volts or less for the distribution of electrical energy

SAMPLE PRINT LEGEND:

SOUTHWIRE EXXXXX #P# (UL) [#AWG Or #kcmil] CU THHN PVC/PVC 600V Type TC-ER For CT USE SUN. RES. For DIRECT BURIAL FT4 YEAR (NESC) [SEQUENTIAL FEET MARKS]



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



Southwire[®]

Table 1 – Weights & Measurements

| Stock Code | Cond. Size | Dia Over Cond. (1) | Insul. Thickness | Dia Over Insul. (2) | Ground | Jacket Thickness | Approx. OD (6) | Copper Weight | Approx. Weight |
|---------------------|------------|--------------------|------------------|---------------------|-----------|------------------|----------------|---------------|----------------|
| | AWG | inches | inches | inches | No. x AWG | mils | inches | lbs./MFT | lbs./MFT |
| 443390 [◇] | 8 | 0.139 | 35 | 0.209 | 1 x 10 | 45 | 0.542 | 187 | 283 |
| 443408 [◇] | 6 | 0.174 | 35 | 0.244 | 1 x 8 | 60 | 0.648 | 297 | 436 |
| 443416 [◇] | 4 | 0.221 | 46 | 0.313 | 1 x 8 | 60 | 0.795 | 442 | 626 |
| 443424 [◇] | 2 | 0.277 | 46 | 0.369 | 1 x 6 | 80 | 0.958 | 703 | 964 |
| 443432 [◇] | 1 | 0.321 | 57 | 0.435 | 1 x 6 | 80 | 1.100 | 865 | 1192 |
| 443440 [◇] | 1/0 | 0.360 | 57 | 0.474 | 1 x 6 | 80 | 1.184 | 1069 | 1432 |
| 443457 [◇] | 2/0 | 0.404 | 57 | 0.518 | 1 x 6 | 80 | 1.279 | 1327 | 1732 |
| 443465 [◇] | 3/0 | 0.454 | 57 | 0.568 | 1 x 4 | 80 | 1.387 | 1700 | 2156 |
| 443473 [◇] | 4/0 | 0.510 | 57 | 0.624 | 1 x 4 | 80 | 1.508 | 2110 | 2624 |
| 443481 [◇] | 250 | 0.558 | 68 | 0.694 | 1 x 4 | 80 | 1.659 | 2469 | 3076 |
| 443507 [◇] | 350 | 0.661 | 68 | 0.797 | 1 x 3 | 110 | 1.942 | 3440 | 4272 |
| 443523 [◇] | 500 | 0.789 | 68 | 0.925 | 1 x 2 | 110 | 2.218 | 4885 | 5888 |
| 604777 | 600 | 0.866 | 79 | 1.024 | 1 x 2 | 110 | 2.432 | 5822 | 6994 |
| 602094 [◇] | 750 | 0.968 | 79 | 1.126 | 1 x 1 | 110 | 2.652 | 7278 | 8602 |

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Standard stock item

Table 2 – Electrical and Engineering Data

| Stock Code | Cond. Size AWG | Min. Bending Radius Inches | Max. Pull Tension lbs. | Resistance | | Reactance X _L @ 60Hz Ω/MFT | Ø Short Circuit Current 6 Cycles Amps | Allowable Ampacities [†] | | |
|---------------------|-------------------|-------------------------------|---------------------------|-----------------------|-----------------------|--|---|-----------------------------------|---------------|---------------|
| | | | | DC @ 25°C Ω/MFT | AC @ 90°C Ω/MFT | | | 60 °C Amps | 75 °C Amps | 90 °C Amps |
| | | | | | | | | | | |
| 443390 [◇] | 8 | 2.2 | 396 | 0.652 | 0.815 | 0.030 | 3754 | 40 | 50 | 55 |
| 443408 [◇] | 6 | 2.6 | 630 | 0.411 | 0.514 | 0.028 | 5966 | 55 | 65 | 75 |
| 443416 [◇] | 4 | 3.2 | 1002 | 0.258 | 0.323 | 0.029 | 9491 | 70 | 85 | 95 |
| 443424 [◇] | 2 | 3.8 | 1593 | 0.162 | 0.203 | 0.028 | 15089 | 95 | 115 | 130 |
| 443432 [◇] | 1 | 5.5 | 2009 | 0.129 | 0.162 | 0.028 | 19029 | 110 | 130 | 145 |
| 443440 [◇] | 1/0 | 5.9 | 2534 | 0.102 | 0.128 | 0.027 | 24011 | 125 | 150 | 170 |
| 443457 [◇] | 2/0 | 6.4 | 3194 | 0.081 | 0.102 | 0.027 | 30264 | 145 | 175 | 195 |
| 443465 [◇] | 3/0 | 6.9 | 4027 | 0.064 | 0.081 | 0.026 | 38154 | 165 | 200 | 225 |
| 443473 [◇] | 4/0 | 7.5 | 5078 | 0.051 | 0.064 | 0.026 | 48114 | 195 | 230 | 260 |
| 443481 [◇] | 250 | 8.3 | 6000 | 0.043 | 0.055 | 0.026 | 56845 | 215 | 255 | 290 |
| 443507 [◇] | 350 | 9.7 | 8400 | 0.031 | 0.040 | 0.026 | 79583 | 260 | 310 | 350 |
| 443523 [◇] | 500 | 13.3 | 12000 | 0.022 | 0.029 | 0.025 | 113690 | 320 | 380 | 430 |
| 604777 | 600 | 14.6 | 14400 | 0.018 | 0.025 | 0.025 | 136428 | 350 | 420 | 475 |
| 602094 [◇] | 750 | 15.9 | 18000 | 0.014 | 0.020 | 0.025 | 170535 | 400 | 475 | 535 |

[†] Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)

