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

Type TC-ER Power Cable Flexible 600Volt Four Conductor Copper, Polyvinyl Chloride (PVC) with nylon layer insulation THHN Polyvinyl Chloride (PVC) Jacket with 1 Green Insulated CU Ground. CT Rated - Sunlight Resistant - For Direct Burial - Silicone Free

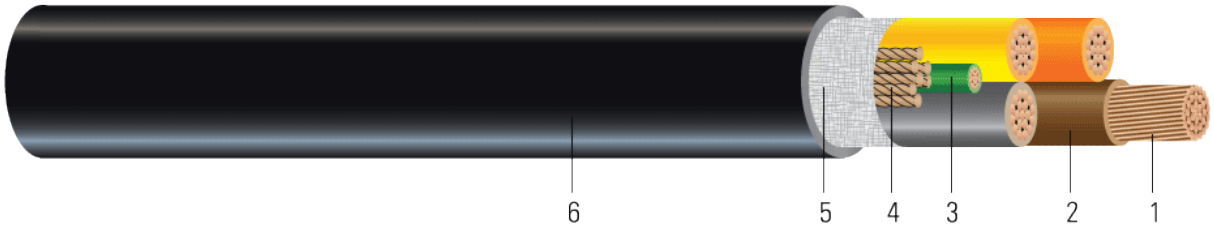



Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Class C compressed stranded bare copper per ASTM B3 and ASTM B8
2. **Insulation:** Polyvinyl Chloride (PVC) with nylon layer Type THHN/THWN. Colors: Gray, Brown, Orange, Yellow.
3. **Grounding Conductor:** Green insulated THHN Class C compressed stranded bare copper per ASTM B3 and ASTM B8
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 flexible power cables are made with class C copper stranding for extra flexibilty 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. Sunlight Resistant - For Direct Burial - Silicone Free

## 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 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- IEEE 1202 FT4 Vertical Tray Flame Test (70,000 Btu/hr) and ICEA T-29-520 - (210,000 Btu/hr)



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## Table 1 – Weights and Measurements

| Stock Number | Cond. Size | Cond. Number | Strand Count | Diameter Over Conductor | Insul. Thickness | Ground | Jacket Thickness | Approx. OD | Copper Weight | Approx. Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| | AWG/ Kcmil | | No. of Strands | inch | mil | No. x AWG | mil | inch | lb/1000ft | lb/1000ft |
| TBA | 8 | 4 | 19 | 0.143 | 35 | 1 x 10 | 60 | 0.637 | 237 | 346 |
| TBA | 6 | 4 | 19 | 0.179 | 35 | 1 x 8 | 60 | 0.725 | 378 | 506 |
| TBA | 4 | 4 | 19 | 0.226 | 50 | 1 x 8 | 80 | 0.951 | 571 | 799 |
| 643697 | 2 | 4 | 19 | 0.286 | 40 | 1 x 6 | 80 | 1.158 | 909 | 1243 |
| TBA | 1 | 4 | 37 | 0.333 | 60 | 1 x 6 | 80 | 1.258 | 1123 | 1463 |
| TBA | 1/0 | 4 | 37 | 0.373 | 60 | 1 x 6 | 80 | 1.355 | 1395 | 1767 |
| TBA | 2/0 | 4 | 37 | 0.420 | 60 | 1 x 6 | 80 | 1.469 | 1739 | 2148 |
| TBA | 3/0 | 4 | 37 | 0.471 | 60 | 1 x 4 | 80 | 1.592 | 2220 | 2668 |
| TBA | 4/0 | 4 | 37 | 0.529 | 60 | 1 x 4 | 110 | 1.793 | 2764 | 3361 |
| TBA | 250 | 4 | 61 | 0.575 | 70 | 1 x 4 | 110 | 1.952 | 3244 | 3941 |
| TBA | 350 | 4 | 61 | 0.681 | 70 | 1 x 3 | 110 | 2.209 | 4525 | 5326 |
| TBA | 500 | 4 | 61 | 0.814 | 70 | 1 x 2 | 110 | 2.531 | 6436 | 7368 |
| TBA | 750 | 4 | 91 | 0.998 | 80 | 1 x 1 | 140 | 3.084 | 9605 | 10985 |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item

## 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 60°C | Allowable Ampacity At 75°C | Allowable Ampacity At 90°C |
|---|---|---|---|---|---|---|---|---|---|---|
| | AWG/ Kcmil | | inch | lb | Ω/1000ft | Ω/1000ft | Ω/1000ft | Amp | Amp | Amp |
| TBA | 8 | 4 | 2.5 | 422 | 0.653 | 0.786 | 0.052 | 32 | 40 | 44 |
| TBA | 6 | 4 | 2.9 | 671 | 0.411 | 0.495 | 0.051 | 44 | 52 | 60 |
| TBA | 4 | 4 | 3.8 | 1068 | 0.258 | 0.310 | 0.048 | 56 | 68 | 76 |
| 643697 | 2 | 4 | 5.8 | 1698 | 0.162 | 0.195 | 0.045 | 76 | 92 | 104 |
| TBA | 1 | 4 | 6.3 | 2142 | 0.128 | 0.154 | 0.046 | 88 | 104 | 116 |
| TBA | 1/0 | 4 | 6.8 | 2703 | 0.102 | 0.122 | 0.044 | 100 | 120 | 136 |
| TBA | 2/0 | 4 | 7.3 | 3407 | 0.081 | 0.097 | 0.043 | 116 | 140 | 156 |
| TBA | 3/0 | 4 | 8.0 | 4295 | 0.064 | 0.078 | 0.042 | 132 | 160 | 180 |
| TBA | 4/0 | 4 | 9.0 | 5416 | 0.051 | 0.062 | 0.041 | 156 | 184 | 208 |
| TBA | 250 | 4 | 9.8 | 6400 | 0.043 | 0.053 | 0.041 | 172 | 204 | 232 |
| TBA | 350 | 4 | 13.3 | 8960 | 0.031 | 0.039 | 0.040 | 208 | 248 | 280 |
| TBA | 500 | 4 | 15.2 | 12800 | 0.022 | 0.029 | 0.039 | 256 | 304 | 344 |
| TBA | 750 | 4 | 18.5 | 19200 | 0.014 | 0.022 | 0.038 | 320 | 380 | 428 |

* 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.