



# CU 600/1000V XLPE Insulation PVC Jacket XHHW-2 with Bare or Green Ground. CT Rated - Sunlight Resistant - For Direct Burial - Silicone Free

Type TC-ER Power Cable 600 or 1000 Volt Three Conductor Copper, Cross Linked Polyethylene (XLPE) insulation XHHW-2 Polyvinyl Chloride (PVC) Jacket with 1 Bare or Green Insulated Ground. Silicone Free.



Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and B8
2. **Insulation:** Cross Linked Polyethylene (XLPE) Type XHHW-2
3. **Grounding Conductor:** Bare or green insulated class B compressed stranded bare copper per ASTM B3 and B8
4. **Filler:** Paper filler as needed
5. **Binder:** Binder tape as needed
6. **Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

## APPLICATIONS AND FEATURES:

Southwire's 600 or 1000 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 for normal operation in wet and 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. Type (TC-ER) per NEC 336.10. Silicone free.

## SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1277 Electrical Power and Control Tray Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- IEEE 383 Flame Test (70,000 btu)
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test





**SAMPLE PRINT LEGEND:**

Bare Ground:

{SQFTG} SOUTHWIRE® {UL} XXX AWG (XX.X{mm2}) CU 2/C TYPE TC-ER XHHW-2 CDRS GW 1 X X AWG CU 90°C JACKET SUNLIGHT RESISTANT DIRECT BURIAL 600V or 1000V {NOM}-ANCE

Green Ground:

{SQFTG} SOUTHWIRE® {UL} XXX AWG (XX.X{mm2}) CU 2/C TYPE TC-ER XHHW-2 CDRS GW 1 X X AWG CU GREEN INSULATED 90°C JACKET SUNLIGHT RESISTANT DIRECT BURIAL 600V or 1000V {NOM}-ANCE

**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 | Jacket Color |
|--------------|------------|--------------|----------------|-------------------------|------------------|-----------|------------------|------------|---------------|----------------|--------------|
|              | AWG/Kcmil  |              | No. of Strands | inch                    | mil              | No. x AWG | mil              | inch       | lb/1000ft     | lb/1000ft      |              |
| 671042       | 8          | 2            | 7              | 0.141                   | 45               | 1 x 10 GG | 60               | 0.592      | 135           | 242            | Black        |
| 570959       | 6          | 2            | 7              | 0.177                   | 45               | 1 x 8 GG  | 60               | 0.691      | 215           | 341            | Black        |
| 596240       | 4          | 2            | 7              | 0.225                   | 45               | 1 x 8     | 60               | 0.748      | 311           | 444            | Black        |
| TBA          | 2          | 2            | 7              | 0.282                   | 45               | 1 x 6     | 80               | 0.906      | 494           | 714            | Black        |
| TBA          | 1          | 2            | 19             | 0.322                   | 55               | 1 x 6     | 80               | 1.026      | 602           | 875            | Black        |
| TBA          | 1/0        | 2            | 19             | 0.361                   | 55               | 1 x 6     | 80               | 1.104      | 738           | 1041           | Black        |
| TBA          | 2/0        | 2            | 19             | 0.405                   | 55               | 1 x 6     | 80               | 1.192      | 910           | 1248           | Black        |
| TBA          | 3/0        | 2            | 19             | 0.456                   | 55               | 1 x 4     | 80               | 1.294      | 1174          | 1553           | Black        |
| TBA          | 4/0        | 2            | 19             | 0.512                   | 55               | 1 x 4     | 80               | 1.406      | 1446          | 1872           | Black        |
| TBA          | 250        | 2            | 37             | 0.558                   | 65               | 1 x 4     | 80               | 1.538      | 1686          | 2190           | Black        |
| TBA          | 350        | 2            | 37             | 0.661                   | 65               | 1 x 3     | 110              | 1.804      | 2344          | 3052           | Black        |
| TBA          | 500        | 2            | 37             | 0.789                   | 65               | 1 x 2     | 110              | 2.060      | 3320          | 4175           | Black        |
| TBA          | 600        | 2            | 61             | 0.865                   | 80               | 1 x 2     | 110              | 2.272      | 3944          | 4971           | Black        |
| TBA          | 750        | 2            | 61             | 0.968                   | 80               | 1 x 1     | 110              | 2.478      | 4931          | 6095           | Black        |
| TBA          | 1000       | 2            | 61             | 1.117                   | 80               | 1 x 1/0   | 140              | 2.836      | 6557          | 8098           | Black        |

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

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.

GG indicates green ground. Others are bare.





**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/<br>Kcmil |              | inch               | lb               | Ω/1000ft             | Ω/1000ft             | Ω/1000ft                   | Amp                        | Amp                        |
| 671042       | 8             | 2            | 2.4                | 264              | 0.653                | 0.786                | 0.052                      | 50                         | 55                         |
| 570959       | 6             | 2            | 2.8                | 419              | 0.411                | 0.495                | 0.051                      | 65                         | 75                         |
| 596240       | 4             | 2            | 3.0                | 667              | 0.258                | 0.310                | 0.048                      | 85                         | 95                         |
| TBA          | 2             | 2            | 3.6                | 1061             | 0.162                | 0.195                | 0.045                      | 115                        | 130                        |
| TBA          | 1             | 2            | 5.1                | 1339             | 0.128                | 0.154                | 0.046                      | 130                        | 145                        |
| TBA          | 1/0           | 2            | 5.5                | 1689             | 0.102                | 0.122                | 0.044                      | 150                        | 170                        |
| TBA          | 2/0           | 2            | 6.0                | 2129             | 0.081                | 0.097                | 0.043                      | 175                        | 195                        |
| TBA          | 3/0           | 2            | 6.5                | 2684             | 0.064                | 0.078                | 0.042                      | 200                        | 225                        |
| TBA          | 4/0           | 2            | 7.0                | 3385             | 0.051                | 0.062                | 0.041                      | 230                        | 260                        |
| TBA          | 250           | 2            | 7.7                | 4000             | 0.043                | 0.053                | 0.041                      | 255                        | 290                        |
| TBA          | 350           | 2            | 9.0                | 5600             | 0.031                | 0.039                | 0.040                      | 310                        | 350                        |
| TBA          | 500           | 2            | 12.4               | 8000             | 0.022                | 0.029                | 0.039                      | 380                        | 430                        |
| TBA          | 600           | 2            | 13.6               | 9600             | 0.018                | 0.025                | 0.039                      | 420                        | 475                        |
| TBA          | 750           | 2            | 14.9               | 12000            | 0.014                | 0.022                | 0.038                      | 475                        | 535                        |
| TBA          | 1000          | 2            | 17.0               | 16000            | 0.011                | 0.018                | 0.037                      | 545                        | 615                        |

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

