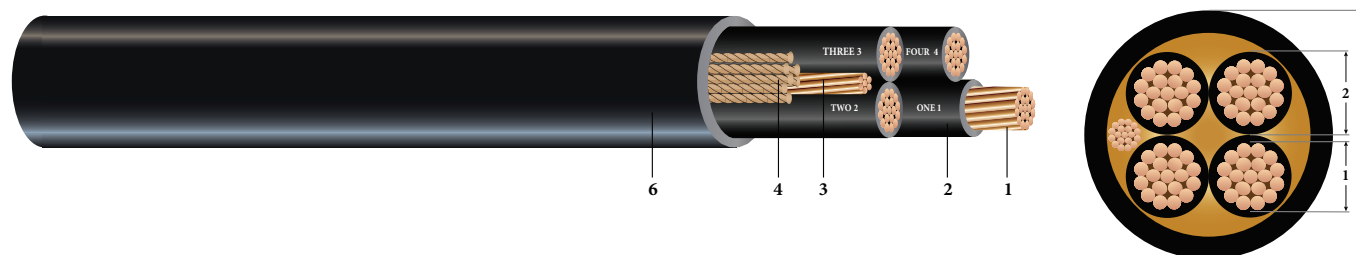


## 4/C CU 600V XLPE XHHW-2 SIMpull® PVC Power Cable Type TC-ER

Type TC-ER Power Cable 600Volt Four Conductor Copper, Cross Linked Polyethylene (XLPE) insulation XHHW-2 SIMpull® Polyvinyl Chloride (PVC) Jacket with 1 Bare CU Ground



Images not to scale. See Table 1 for Dimensions

### CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
2. **Insulation:** Cross Linked Polyethylene (XLPE) Type XHHW-2
3. **Grounding Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (cable size 8 & 6 has insulated green ground)
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 (cable size between 1/0 AWG and 500 kcmil has Simpull technology)

### 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 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. 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 44 Thermoset 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 XHHW-2 XLPE/PVC-SIM 600V Type TC-ER For CT USE SUN. RES. For DIRECT BURIAL FT4 YEAR (NESC) [SEQUENTIAL FEET MARKS]



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SPEC 45258\_PSS DIVISION DATE: 05/04/2018 Rev:2.0.06C

Table 1 – Weights &amp; Measurements

|            | Cond. Size | Dia Over Cond. (1) | Insul. Thickness | Dia Over Insul. (2) | Ground    | Jacket Thickness | Approx. OD (6) | Copper Weight | Approx. Weight |
|------------|------------|--------------------|------------------|---------------------|-----------|------------------|----------------|---------------|----------------|
| Stock Code | AWG        | inches             | inches           | inches              | No. x AWG | mils             | inches         | lbs./MFT      | lbs./MFT       |
| 557009     | 8          | 0.139              | 45               | 0.229               | 1 x 10    | 60               | 0.673          | 238           | 379            |
| 560102     | 6          | 0.174              | 45               | 0.264               | 1 x 8     | 60               | 0.758          | 379           | 551            |
| 556993     | 4          | 0.221              | 45               | 0.311               | 1 x 8     | 80               | 0.910          | 572           | 800            |
| 554303     | 2          | 0.277              | 45               | 0.367               | 1 x 6     | 80               | 1.047          | 910           | 1189           |
| 602011     | 1          | 0.321              | 55               | 0.431               | 1 x 6     | 80               | 1.200          | 1126          | 1472           |
| 554436     | 1/0        | 0.360              | 55               | 0.470               | 1 x 6     | 80               | 1.295          | 1398          | 1784           |
| 556985     | 2/0        | 0.404              | 55               | 0.514               | 1 x 6     | 80               | 1.401          | 1742          | 2173           |
| 602037     | 3/0        | 0.454              | 55               | 0.564               | 1 x 4     | 80               | 1.521          | 2223          | 2708           |
| 554444     | 4/0        | 0.510              | 55               | 0.620               | 1 x 4     | 80               | 1.657          | 2770          | 3317           |
| 602052     | 250        | 0.558              | 65               | 0.688               | 1 x 4     | 110              | 1.881          | 3249          | 3992           |
| 602078     | 350        | 0.661              | 65               | 0.791               | 1 x 3     | 110              | 2.129          | 4531          | 5416           |
| 554469     | 500        | 0.789              | 65               | 0.919               | 1 x 2     | 110              | 2.438          | 6445          | 7512           |
| 649649°    | 600        | 0.866              | 80               | 1.026               | 1 x 4/0   | 110              | 2.903          | 7693          | 9565           |
| 570961     | 750        | 0.968              | 80               | 1.128               | 1 x 1     | 140              | 3.003          | 9618          | 11224          |

All dimensions are nominal and subject to normal manufacturing tolerances

°Oversized ground

Table 2 – Electrical and Engineering Data

| Stock Code | Cond. Size | Min. Bending Radius | Max. Pull Tension | Resistance |           | Reactance $X_L$ @ 60Hz | Ø Short Circuit Current 6 Cycles | Allowable Ampacities † |       |       |
|------------|------------|---------------------|-------------------|------------|-----------|------------------------|----------------------------------|------------------------|-------|-------|
|            |            |                     |                   | DC @ 25°C  | AC @ 90°C |                        |                                  | 60 °C                  | 75 °C | 90 °C |
|            | AWG        | Inches              | Lbs.              | Ω/MFT      | Ω/MFT     | Ω/MFT                  | Amps                             | Amps                   | Amps  | Amps  |
| 557009     | 8          | 2.7                 | 528               | 0.652      | 0.815     | 0.036                  | 3754                             | 32                     | 39    | 44    |
| 560102     | 6          | 3.0                 | 840               | 0.411      | 0.514     | 0.034                  | 5966                             | 44                     | 53    | 60    |
| 556993     | 4          | 3.6                 | 1336              | 0.258      | 0.323     | 0.033                  | 9491                             | 56                     | 67    | 76    |
| 554303     | 2          | 5.2                 | 2124              | 0.162      | 0.203     | 0.031                  | 15089                            | 77                     | 92    | 104   |
| 602011     | 1          | 6.0                 | 2678              | 0.129      | 0.161     | 0.032                  | 19029                            | 86                     | 102   | 116   |
| 554436     | 1/0        | 6.5                 | 3379              | 0.102      | 0.128     | 0.031                  | 24011                            | 100                    | 120   | 136   |
| 556985     | 2/0        | 7.0                 | 4259              | 0.081      | 0.101     | 0.030                  | 30264                            | 115                    | 138   | 156   |
| 602037     | 3/0        | 7.6                 | 5370              | 0.064      | 0.080     | 0.030                  | 38154                            | 133                    | 159   | 180   |
| 554444     | 4/0        | 8.3                 | 6771              | 0.051      | 0.064     | 0.029                  | 48114                            | 154                    | 184   | 208   |
| 602052     | 250        | 9.4                 | 8000              | 0.043      | 0.054     | 0.030                  | 56845                            | 172                    | 205   | 232   |
| 602078     | 350        | 12.8                | 11200             | 0.031      | 0.039     | 0.029                  | 79583                            | 207                    | 248   | 280   |
| 554469     | 500        | 14.6                | 16000             | 0.022      | 0.027     | 0.028                  | 113690                           | 255                    | 305   | 344   |
| 649649°    | 600        | 16.2                | 19200             | 0.018      | 0.023     | 0.029                  | 136428                           | 282                    | 336   | 380   |
| 570961     | 750        | 18.0                | 24000             | 0.014      | 0.019     | 0.028                  | 170535                           | 317                    | 379   | 428   |

† 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)

°Oversized ground

