

## TCU 600V NLEPR Insulation Thermoset LSZH-TS Jacket RHH/RHW-2/USE-2. CT Rated - Sunlight Resistant - Silicone Free

Power Cable 600Volt Single Conductor Tinned Copper, No Lead Ethylene Propylene Rubber (NL-EPR) insulation RHH/RHW-2/USE-2 Thermoset SOLONON® Low Smoke Zero Halogen (LSZH-TS) Jacket. CT Rated 1/0 and Larger - Sunlight Resistant - For Direct Burial - Silicone Free



Image not to scale. See Table 1 for dimensions.

### CONSTRUCTION:

1. **Conductor:** Class B compressed stranded tinned copper per ASTM B3 and ASTM B33
2. **Binder Tape:** Mylar Tape
3. **Insulation:** No Lead Ethylene Propylene Rubber (NL-EPR) Type RHH/RHW-2 USE-2
4. **Overall Jacket:** Thermoset SOLONON® Low Smoke Zero Halogen (LSZH-TS) Silicone-Free Jacket

### APPLICATIONS AND FEATURES:

Southwire's 600 Volt 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. Rated for 1000 lbs./FT maximum sidewall pressure.

### SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 and Larger)
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- CT USE Sizes 1/0 AWG and Larger
- NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems (500kcmil & Larger)

### SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE® {UL} XXX KCMIL TINNED CU TYPE RHH OR RHW-2 OR USE-2 XX MILS NL-EPR XX MILS SOLONON® ST1 LS FOR CT USE SUN RES 600V



Table 1 – Weights and Measurements

| Stock Number | Cond. Size | Strand Count   | Diameter Over Conductor | Min. Avg. Insul. Thickness | Jacket Thickness | Approx. OD | Copper Weight | Approx. Weight |
|--------------|------------|----------------|-------------------------|----------------------------|------------------|------------|---------------|----------------|
|              | AWG/Kcmil  | No. of Strands | inch                    | mil                        | mil              | inch       | lb/1000ft     | lb/1000ft      |
| TBA          | 8          | 7              | 0.141                   | 45                         | 15               | 0.347      | 50            | 94             |
| TBA          | 6          | 7              | 0.177                   | 45                         | 30               | 0.423      | 81            | 145            |
| TBA          | 4          | 7              | 0.225                   | 45                         | 30               | 0.471      | 128           | 202            |
| TBA          | 2          | 7              | 0.282                   | 45                         | 30               | 0.558      | 204           | 307            |
| TBA          | 1          | 19             | 0.322                   | 55                         | 45               | 0.648      | 258           | 397            |
| TBA          | 1/0        | 19             | 0.361                   | 55                         | 45               | 0.687      | 325           | 475            |
| TBA          | 2/0        | 19             | 0.405                   | 55                         | 45               | 0.731      | 410           | 572            |
| TBA          | 3/0        | 19             | 0.456                   | 55                         | 45               | 0.782      | 518           | 694            |
| TBA          | 4/0        | 19             | 0.512                   | 55                         | 45               | 0.878      | 653           | 880            |
| TBA          | 250        | 37             | 0.558                   | 65                         | 65               | 0.984      | 771           | 1061           |
| TBA          | 350        | 37             | 0.661                   | 65                         | 65               | 1.087      | 1081          | 1409           |
| 674244       | 500        | 37             | 0.789                   | 75                         | 65               | 1.089      | 1543          | 1798           |
| TBA          | 600        | 61             | 0.865                   | 80                         | 65               | 1.321      | 1853          | 2290           |
| TBA          | 750        | 61             | 0.968                   | 80                         | 65               | 1.424      | 2316          | 2793           |
| TBA          | 1000       | 61             | 1.117                   | 80                         | 65               | 1.573      | 3088          | 3624           |

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 | 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          | 1.3                | 132              | 0.653                | 0.786                | 0.052                      | 40                         | 50                         | 55                         |
| TBA          | 6          | 1.6                | 209              | 0.411                | 0.495                | 0.051                      | 55                         | 65                         | 75                         |
| TBA          | 4          | 1.8                | 333              | 0.258                | 0.310                | 0.048                      | 70                         | 85                         | 95                         |
| TBA          | 2          | 2.2                | 530              | 0.162                | 0.195                | 0.045                      | 95                         | 115                        | 130                        |
| TBA          | 1          | 2.5                | 669              | 0.128                | 0.154                | 0.046                      | 110                        | 130                        | 145                        |
| TBA          | 1/0        | 2.7                | 844              | 0.102                | 0.122                | 0.044                      | 125                        | 150                        | 170                        |
| TBA          | 2/0        | 2.9                | 1064             | 0.081                | 0.097                | 0.043                      | 145                        | 175                        | 195                        |
| TBA          | 3/0        | 3.1                | 1342             | 0.064                | 0.078                | 0.042                      | 165                        | 200                        | 225                        |
| TBA          | 4/0        | 3.5                | 1692             | 0.051                | 0.062                | 0.041                      | 195                        | 230                        | 260                        |
| TBA          | 250        | 3.9                | 2000             | 0.043                | 0.053                | 0.041                      | 215                        | 255                        | 290                        |
| TBA          | 350        | 5.4                | 2800             | 0.031                | 0.039                | 0.040                      | 260                        | 310                        | 350                        |
| 674244       | 500        | 5.4                | 4000             | 0.022                | 0.029                | 0.039                      | 320                        | 380                        | 430                        |
| TBA          | 600        | 6.6                | 4800             | 0.018                | 0.025                | 0.039                      | 350                        | 420                        | 475                        |
| TBA          | 750        | 7.1                | 6000             | 0.014                | 0.022                | 0.038                      | 400                        | 475                        | 535                        |
| TBA          | 1000       | 7.8                | 8000             | 0.011                | 0.018                | 0.037                      | 455                        | 545                        | 615                        |

\* Ampacities based upon 2023 NEC Table 310.16 and do not take into account the overcurrent protection limitations in NEC 240.4(D) of 15 Amps for 14 AWG CU, 20 Amps for 12 AWG CU, and 30 Amps for 10 AWG CU (independent of the conductor temperature rating and stranding if size is present in table). Also, see NEC sections



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310.15 and 110.14(C) for additional requirements.

\* Inductive Reactance is based on non-ferrous conduit with one diameter spacing.

