

## Multi-Conductor CU 600 V FR-XLPE Shielded Drain Wire PVC Jacket Control Cable Color Method 1 Table 2

Control Cable 600 Volt Copper Conductors, Flame Retardant Cross Linked Polyethylene (FR-XLPE) Insulation Shielded With Drain Wire Polyvinyl Chloride (PVC) Jacket, Control Cable Conductor Identification Method 1 Table 2. Silicone Free

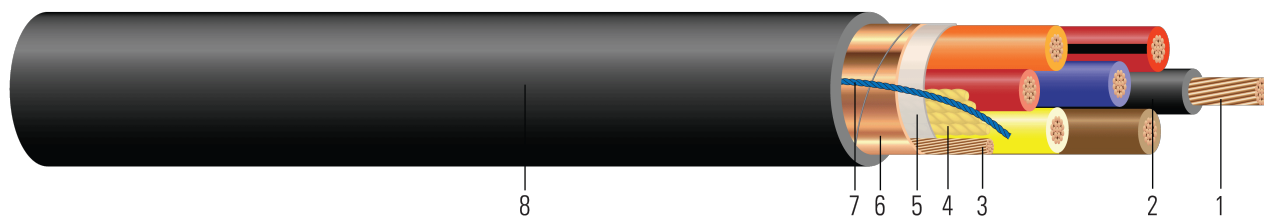


Image not to scale. See Table 1 for dimensions.

### CONSTRUCTION:

1. **Conductor:** 7 strands class B compressed bare copper per ASTM B3 and ASTM B8
2. **Insulation:** Flame Retardant Cross Linked Polyethylene (FR-XLPE), 30 Mils thick for all cable sizes
3. **DrainWire:** Bare copper drain wire
4. **Filler:** Polypropylene filler on cables with 5 or less conductors
5. **Binder:** Polyester flat thread binder tape applied for cables with more than 5 conductors
6. **Shielding:** 5 mils tape shield
7. **Rip Cord:** Rip cord for ease of jacket removal
8. **Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

### APPLICATIONS AND FEATURES:

Southwire's 600 Volt control 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. UL rated constructions can be used in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. UL rated constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10.

### SPECIFICATIONS:

- ASTM B3 Standard Specification for 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 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- CSA *CSA marking is available upon request*
- ICEA S-58-679 Control Cable Conductor Identification Method 1 Table 2
- ICEA S-73-532 Standard for Control, Thermocouple Extension and Instrumentation Cables
- 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)
- VW-1 (Vertical-Wire) Flame Test



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## SAMPLE PRINT LEGEND:

### UL Listed

{SQFTG} SOUTHWIRE E75755 {UL} XX AWG X/C XHHW-2 CDRS 90{D}C PVC JKT TYPE TC-ER SHIELDED 600V SUN. RES. DIRECT BURIAL {YYYY}

### Non UL Listed

{SQFTG} SOUTHWIRE XX AWG X/C XHHW-2 CDRS 90{D}C PVC JKT TYPE TC-ER SHIELDED 600V SUN. RES. DIRECT BURIAL {YYYY}



**Table 1 – Physical and Electrical Data**

| Stock Number        | Cond. Size | Cond. Number | Diameter Over Cond. | Insul. Thickness | Jacket Thickness | Approx. OD | Copper Weight | Approx. Weight | DC Resistance @ 25°C | AC Resistance @ 90°C | Min Bending Radius | Allowable Ampacity At 60°C * | Allowable Ampacity 75°C * | Allowable Ampacity 90°C * |
|---------------------|------------|--------------|---------------------|------------------|------------------|------------|---------------|----------------|----------------------|----------------------|--------------------|------------------------------|---------------------------|---------------------------|
|                     | AWG        | No.          | inch                | mil              | mil              | inch       | lb /1000ft    | lb /1000ft     | Ω /1000ft            | Ω /1000ft            | inch               | Amp                          | Amp                       | Amp                       |
| <b>14 AWG</b>       |            |              |                     |                  |                  |            |               |                |                      |                      |                    |                              |                           |                           |
| 890187              | 14         | 2            | 0.070               | 30               | 45               | 0.356      | 37            | 78             | 2.630                | 3.288                | 4.3                | 15                           | 20                        | 25                        |
| TBA                 | 14         | 3            | 0.070               | 30               | 45               | 0.370      | 38            | 87             | 2.630                | 3.288                | 4.4                | 15                           | 15                        | 15                        |
| TBA                 | 14         | 4            | 0.070               | 30               | 45               | 0.403      | 51            | 109            | 2.630                | 3.288                | 4.8                | 14                           | 15                        | 15                        |
| TBA                 | 14         | 5            | 0.070               | 30               | 45               | 0.440      | 64            | 132            | 2.630                | 3.288                | 5.3                | 14                           | 15                        | 15                        |
| TBA                 | 14         | 6            | 0.070               | 30               | 45               | 0.479      | 77            | 155            | 2.630                | 3.288                | 5.7                | 14                           | 15                        | 15                        |
| TBA                 | 14         | 7            | 0.070               | 30               | 45               | 0.479      | 90            | 171            | 2.630                | 3.288                | 5.7                | 12                           | 15                        | 15                        |
| TBA                 | 14         | 8            | 0.070               | 30               | 45               | 0.519      | 102           | 195            | 2.630                | 3.288                | 6.2                | 12                           | 15                        | 15                        |
| TBA                 | 14         | 9            | 0.070               | 30               | 60               | 0.588      | 115           | 236            | 2.630                | 3.288                | 7.1                | 12                           | 15                        | 15                        |
| TBA                 | 14         | 10           | 0.070               | 30               | 60               | 0.638      | 128           | 266            | 2.630                | 3.288                | 7.7                | 9                            | 11                        | 12                        |
| TBA                 | 14         | 12           | 0.070               | 30               | 60               | 0.659      | 154           | 303            | 2.630                | 3.288                | 7.9                | 9                            | 11                        | 12                        |
| TBA                 | 14         | 15           | 0.070               | 30               | 60               | 0.730      | 192           | 371            | 2.630                | 3.288                | 8.8                | 9                            | 11                        | 12                        |
| TBA                 | 14         | 19           | 0.070               | 30               | 60               | 0.768      | 243           | 446            | 2.630                | 3.288                | 9.2                | 9                            | 11                        | 12                        |
| TBA                 | 14         | 20           | 0.070               | 30               | 60               | 0.808      | 256           | 475            | 2.630                | 3.288                | 9.7                | 9                            | 11                        | 12                        |
| TBA                 | 14         | 25           | 0.070               | 30               | 80               | 0.937      | 320           | 619            | 2.630                | 3.288                | 11.2               | 8                            | 9                         | 11                        |
| TBA                 | 14         | 30           | 0.070               | 30               | 80               | 0.991      | 384           | 719            | 2.630                | 3.288                | 11.9               | 8                            | 9                         | 11                        |
| TBA                 | 14         | 37           | 0.070               | 30               | 80               | 1.067      | 474           | 862            | 2.630                | 3.288                | 12.8               | 7                            | 8                         | 10                        |
| <b>12 AWG</b>       |            |              |                     |                  |                  |            |               |                |                      |                      |                    |                              |                           |                           |
| TBA                 | 12         | 2            | 0.087               | 30               | 45               | 0.384      | 41            | 90             | 1.660                | 2.075                | 4.6                | 20                           | 20                        | 20                        |
| 668743 <sup>A</sup> | 12         | 2            | 0.087               | 30               | 45               | 0.408      | 72            | 121            | 1.660                | 2.075                | 4.9                | 20                           | 25                        | 30                        |
| TBA                 | 12         | 3            | 0.087               | 30               | 45               | 0.408      | 61            | 118            | 1.660                | 2.075                | 4.9                | 20                           | 20                        | 20                        |
| TBA                 | 12         | 4            | 0.087               | 30               | 45               | 0.445      | 81            | 148            | 1.660                | 2.075                | 5.3                | 16                           | 20                        | 20                        |
| TBA                 | 12         | 5            | 0.087               | 30               | 45               | 0.487      | 102           | 181            | 1.660                | 2.075                | 5.8                | 16                           | 20                        | 20                        |
| TBA                 | 12         | 6            | 0.087               | 30               | 45               | 0.532      | 122           | 214            | 1.660                | 2.075                | 6.4                | 16                           | 20                        | 20                        |
| TBA                 | 12         | 7            | 0.087               | 30               | 45               | 0.532      | 143           | 237            | 1.660                | 2.075                | 6.4                | 14                           | 17                        | 20                        |
| TBA                 | 12         | 8            | 0.087               | 30               | 60               | 0.607      | 163           | 288            | 1.660                | 2.075                | 7.3                | 14                           | 17                        | 20                        |
| TBA                 | 12         | 9            | 0.087               | 30               | 60               | 0.651      | 183           | 324            | 1.660                | 2.075                | 7.8                | 14                           | 17                        | 20                        |
| TBA                 | 12         | 10           | 0.087               | 30               | 60               | 0.709      | 204           | 365            | 1.660                | 2.075                | 8.5                | 10                           | 12                        | 15                        |
| TBA                 | 12         | 12           | 0.087               | 30               | 60               | 0.732      | 244           | 419            | 1.660                | 2.075                | 8.8                | 10                           | 12                        | 15                        |
| TBA                 | 12         | 15           | 0.087               | 30               | 60               | 0.813      | 305           | 516            | 1.660                | 2.075                | 9.8                | 10                           | 12                        | 15                        |
| TBA                 | 12         | 19           | 0.087               | 30               | 80               | 0.896      | 387           | 657            | 1.660                | 2.075                | 10.8               | 10                           | 12                        | 15                        |
| TBA                 | 12         | 20           | 0.087               | 30               | 80               | 0.942      | 407           | 699            | 1.660                | 2.075                | 11.3               | 10                           | 12                        | 15                        |
| TBA                 | 12         | 25           | 0.087               | 30               | 80               | 1.043      | 509           | 860            | 1.660                | 2.075                | 12.5               | 9                            | 11                        | 13                        |
| TBA                 | 12         | 30           | 0.087               | 30               | 80               | 1.104      | 611           | 1005           | 1.660                | 2.075                | 13.2               | 9                            | 11                        | 13                        |
| TBA                 | 12         | 37           | 0.087               | 30               | 80               | 1.191      | 753           | 1211           | 1.660                | 2.075                | 14.3               | 8                            | 10                        | 12                        |
| <b>10 AWG</b>       |            |              |                     |                  |                  |            |               |                |                      |                      |                    |                              |                           |                           |
| TBA                 | 10         | 2            | 0.111               | 30               | 45               | 0.431      | 65            | 124            | 1.040                | 1.300                | 5.2                | 30                           | 30                        | 30                        |
| TBA                 | 10         | 3            | 0.111               | 30               | 45               | 0.459      | 97            | 165            | 1.040                | 1.300                | 5.5                | 30                           | 30                        | 30                        |
| 662657              | 10         | 4            | 0.111               | 30               | 60               | 0.556      | 170           | 254            | 1.040                | 1.300                | 6.7                | 24                           | 28                        | 30                        |
| 606611 <sup>A</sup> | 10         | 4            | 0.111               | 30               | 60               | 0.560      | 130           | 278            | 1.040                | 1.300                | 6.7                | 24                           | 28                        | 30                        |



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| Stock Number        | Cond. Size | Cond. Number | Diameter Over Cond. | Insul. Thickness | Jacket Thickness | Approx. OD | Copper Weight | Approx. Weight | DC Resistance @ 25°C | AC Resistance @ 90°C | Min Bending Radius | Allowable Ampacity At 60°C * | Allowable Ampacity 75°C * | Allowable Ampacity 90°C * |
|---------------------|------------|--------------|---------------------|------------------|------------------|------------|---------------|----------------|----------------------|----------------------|--------------------|------------------------------|---------------------------|---------------------------|
|                     | AWG        | No.          | inch                | mil              | mil              | inch       | lb /1000ft    | lb /1000ft     | Ω /1000ft            | Ω /1000ft            | inch               | Amp                          | Amp                       | Amp                       |
| 616767 <sup>!</sup> | 10         | 4            | 0.111               | 30               | 60               | 0.561      | 170           | 269            | 1.040                | 1.300                | 6.7                | 24                           | 28                        | 30                        |
| TBA                 | 10         | 5            | 0.111               | 30               | 60               | 0.581      | 162           | 273            | 1.040                | 1.300                | 7                  | 24                           | 28                        | 30                        |
| TBA                 | 10         | 6            | 0.111               | 30               | 60               | 0.632      | 194           | 323            | 1.040                | 1.300                | 7.6                | 24                           | 28                        | 30                        |
| TBA                 | 10         | 7            | 0.111               | 30               | 60               | 0.632      | 227           | 358            | 1.040                | 1.300                | 7.6                | 21                           | 24                        | 28                        |
| TBA                 | 10         | 8            | 0.111               | 30               | 60               | 0.685      | 259           | 410            | 1.040                | 1.300                | 8.2                | 21                           | 24                        | 28                        |
| 662655 <sup>^</sup> | 10         | 9            | 0.111               | 30               | 60               | 0.736      | 291           | 461            | 1.040                | 1.300                | 8.8                | 21                           | 24                        | 28                        |
| TBA                 | 10         | 10           | 0.111               | 30               | 60               | 0.803      | 324           | 519            | 1.040                | 1.300                | 9.6                | 15                           | 17                        | 20                        |
| TBA                 | 10         | 12           | 0.111               | 30               | 60               | 0.830      | 389           | 600            | 1.040                | 1.300                | 10                 | 15                           | 17                        | 20                        |
| TBA                 | 10         | 15           | 0.111               | 30               | 80               | 0.964      | 486           | 777            | 1.040                | 1.300                | 11.6               | 15                           | 17                        | 20                        |
| 662652 <sup>^</sup> | 10         | 19           | 0.111               | 30               | 80               | 1.014      | 615           | 941            | 1.040                | 1.300                | 12.2               | 15                           | 17                        | 20                        |
| TBA                 | 10         | 20           | 0.111               | 30               | 80               | 1.067      | 648           | 1001           | 1.040                | 1.300                | 12.8               | 15                           | 17                        | 20                        |
| TBA                 | 10         | 25           | 0.111               | 30               | 80               | 1.184      | 810           | 1236           | 1.040                | 1.300                | 14.2               | 13                           | 15                        | 18                        |
| TBA                 | 10         | 30           | 0.111               | 30               | 80               | 1.254      | 971           | 1450           | 1.040                | 1.300                | 15                 | 13                           | 15                        | 18                        |
| TBA                 | 10         | 37           | 0.111               | 30               | 80               | 1.355      | 1198          | 1755           | 1.040                | 1.300                | 16.3               | 12                           | 14                        | 16                        |

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

\* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2017 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)

<sup>^</sup> UL Listed part number

<sup>!</sup> ICEA S-58-679 Control Cable Conductor Identification Method 4

