

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

Control Cable 600 Volt Copper Conductors, Flame Retardant Cross Linked Polyethylene (FR-XLPE) Insulation XHHW-2 Shielded Polyvinyl Chloride (PVC) Jacket, Control Cable Conductor Identification Method 1 Table 1. 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)
3. **Filler:** Polypropylene filler on cables with 5 or less conductors
4. **Binder:** Polyester flat thread binder tape applied for cables with more than 5 conductors
5. **Shielding:** 5 mils copper Longitudinally-Applied Corrugated Tape (LCT) shield
6. **Rip Cord:** Rip cord for ease of jacket removal
7. **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 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
- ICEA S-58-679 Control Cable Conductor Identification Method 1 Table 1
- 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



## SAMPLE PRINT LEGEND:

UL Listed

SOUTHWIRE E75755 {UL} XX AWG X/C FRXLP SHIELDED TYPE TC-ER 600V PVC SUN. RES. YEAR {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

Non UL Listed

SOUTHWIRE XX AWG X/C FR-XLPE CDRS 90C PVC JACKET SUNLIGHT RESISTANT DIRECT BURIAL 600V {MM/DD/YYYY} {SEQUENTIAL FOOTAGE MARKS} SEQ FEET



**Table 1 – Physical and Electrical Data**

Stock Number	Cond. Size	Cond. Number	Cond. Strands	Diameter Over Cond.	Insul. Thickness	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance	Min Bending Radius	Allowable Ampacity At 60°C	Allowable Ampacity 75°C	Allowable Ampacity 90°C
	AWG	No.	strands	inch	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp	Amp
<b>14 AWG</b>																
618807 <sup>^</sup>	14	2	7	0.070	30	45	0.445	56	119	2.631	3.170	0.058	5.3	15	20	25
618808 <sup>^</sup>	14	4	7	0.070	30	45	0.498	84	168	2.631	3.170	0.058	6.0	12	16	20
618809 <sup>^</sup>	14	7	7	0.070	30	60	0.604	123	249	2.631	3.170	0.058	7.2	10	14	17
618810 <sup>^</sup>	14	12	7	0.070	30	60	0.755	187	365	2.631	3.170	0.058	9.1	7	10	12
618811 <sup>^</sup>	14	19	7	0.070	30	80	0.910	276	549	2.631	3.170	0.058	10.9	7	10	12
<b>12 AWG</b>																
619096 <sup>^</sup>	12	2	7	0.088	30	45	0.480	74	143	1.662	2.002	0.054	5.8	20	25	30
664170	12	3	7	0.088	30	60	0.552	91	179	1.662	2.002	0.054	6.6	20	25	30
618813 <sup>^</sup>	12	4	7	0.088	30	60	0.571	81	192	1.662	2.002	0.054	6.9	16	20	24
618814 <sup>^</sup>	12	7	7	0.088	30	60	0.657	175	317	1.662	2.002	0.054	7.9	14	17	21
619611 <sup>^</sup>	12	12	7	0.088	30	80	0.880	299	543	1.662	2.002	0.054	10.6	10	12	15
<b>10 AWG</b>																
618815 <sup>^</sup>	10	2	7	0.113	30	60	0.558	98	195	1.040	1.253	0.050	6.7	30	35	40
618816 <sup>^</sup>	10	4	7	0.113	30	60	0.634	167	279	1.040	1.253	0.050	7.6	24	28	32
661705 <sup>ⓓ</sup>	10	4	7	0.113	30	60	0.654	187	320	1.040	1.253	0.050	7.7	24	28	32
619613 <sup>^</sup>	10	5	7	0.113	30	60	0.687	195	341	1.040	1.253	0.050	8.2	24	28	32
618817 <sup>^</sup>	10	7	7	0.113	30	60	0.728	259	424	1.040	1.253	0.050	8.7	21	24	28
661717 <sup>ⓓ</sup>	10	7	7	0.113	30	60	0.757	289	466	1.040	1.253	0.050	9.1	21	24	28
619616 <sup>^</sup>	10	9	7	0.113	30	80	0.885	346	585	1.040	1.253	0.050	10.6	21	24	28
619618 <sup>^</sup>	10	12	7	0.113	30	80	0.982	421	708	1.040	1.253	0.050	11.8	15	17	20
<b>4 AWG</b>																
662547 <sup>^ⓓa</sup>	4	4	7	0.232	45	80	1.054	592	885	0.258	0.336	.037	12.6	56	68	76
<b>2 AWG</b>																
619631 <sup>^</sup>	2	3	7	0.283	45	80	1.073	692	1019	0.162	0.211	.028	12.9	95	115	130

All dimensions are nominal and subject to normal manufacturing tolerances

ⓓ Cable marked with this symbol is a standard stock item

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

ⓓ Drain wire under shield

<sup>a</sup> M4 color code instead of M1T1/E1

\* 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 310.15 and 110.14(C) for additional requirements. Ampacities have been adjusted for stock numbers containing more than Three Current-Carrying Conductors.

