

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

Control Cable 600 Volt Copper Conductors, Flame Retardant Cross Linked Polyethylene (FR-XLPE) Insulation 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), 30 Mils thick for all cable sizes
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 tape 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 construction 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 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



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## SAMPLE PRINT LEGEND:

### UL Listed

SOUTHWIRE E75755 {UL} XX AWG X/C FR-XLPE CDRS 90C PVC JKT TYPE TC-ER SHIELDED 600V SUN. RES. DIRECT BURIAL YEAR {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

### Non UL Listed

SOUTHWIRE XX AWG X/C FR-XLPE CDRS SHIELDED 90C PVC JACKET SUNLIGHT RESISTANT 600V {YYYYY} {SEQUENTIAL FOOTAGE MARKS} SEQ FEET



**Table 1 – Physical and Electrical Data**

Stock Number	Cond. Size	Cond. Number	Diameter Over Cond.	Insul. Thickness	Jacket Thickness	Approx. OD	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	Ω /1000ft	Ω /1000ft	inch	Amp	Amp	Amp
<b>18 AWG</b>													
673090	18	7	0.046	30	45	0.432	124	6.540	8.340	3.0	4	4	4
672570	18	12	0.046	30	60	0.583	206	6.540	8.340	4.1	3	3	3
<b>14 AWG</b>													
TBA	14	2	0.070	30	45	0.349	68	2.630	3.288	2.4	15	15	15
TBA	14	3	0.070	30	45	0.370	87	2.630	3.288	2.6	15	15	15
619529 <sup>^</sup>	14	4	0.070	30	45	0.430	135	2.630	3.288	3.0	14	15	15
TBA	14	5	0.070	30	45	0.440	132	2.630	3.288	3.1	14	15	15
TBA	14	6	0.070	30	45	0.479	155	2.630	3.288	3.3	14	15	15
TBA	14	7	0.070	30	45	0.479	171	2.630	3.288	3.4	12	15	15
TBA	14	8	0.070	30	45	0.519	195	2.630	3.288	3.6	12	15	15
TBA	14	9	0.070	30	60	0.588	236	2.630	3.288	4.1	12	15	15
TBA	14	10	0.070	30	60	0.638	266	2.630	3.288	4.5	9	11	12
TBA	14	15	0.070	30	60	0.730	371	2.630	3.288	5.1	9	11	12
TBA <sup>^</sup>	14	12	0.070	30	60	0.755	383	2.630	3.288	5.3	9	11	12
TBA	14	19	0.070	30	60	0.768	446	2.630	3.288	5.4	9	11	12
625498	14	20	0.070	30	80	0.876	475	2.630	3.288	6.1	9	11	12
TBA	14	25	0.070	30	80	0.937	619	2.630	3.288	6.5	8	9	11
TBA	14	30	0.070	30	80	0.991	719	2.630	3.288	6.9	8	9	11
TBA	14	37	0.070	30	80	1.067	862	2.630	3.288	7.5	7	8	10
<b>12 AWG</b>													
TBA	12	2	0.087	30	45	0.384	90	1.660	2.075	2.688	20	20	20
TBA	12	3	0.087	30	45	0.408	118	1.660	2.075	2.856	20	20	20
TBA	12	4	0.087	30	45	0.445	148	1.660	2.075	3.115	16	20	20
TBA	12	5	0.087	30	45	0.487	181	1.660	2.075	3.409	16	20	20
TBA	12	6	0.087	30	45	0.532	214	1.660	2.075	3.724	16	20	20
TBA	12	7	0.087	30	45	0.532	237	1.660	2.075	3.724	14	17	20
TBA	12	8	0.087	30	60	0.607	288	1.660	2.075	4.249	14	17	20
673213 <sup>^</sup>	12	9	0.087	30	60	0.687	361	1.660	2.075	8.2	14	17	20
TBA	12	10	0.087	30	60	0.709	365	1.660	2.075	4.963	10	12	15
620308	12	12	0.087	30	60	0.756	455	1.660	2.075	9.1	10	12	15
TBA	12	15	0.087	30	60	0.813	516	1.660	2.075	5.691	10	12	15
TBA	12	19	0.087	30	80	0.896	657	1.660	2.075	6.272	10	12	15
TBA	12	20	0.087	30	80	0.942	699	1.660	2.075	6.6	10	12	15
TBA	12	25	0.087	30	80	1.043	860	1.660	2.075	7.3	9	11	13
TBA	12	30	0.087	30	80	1.104	1005	1.660	2.075	7.7	9	11	13
TBA	12	37	0.087	30	80	1.191	1211	1.660	2.075	8.3	8	10	12
<b>10 AWG</b>													
606758 <sup>^</sup>	10	2	0.111	30	45	0.460	154	1.040	1.300	3.22	30	30	30
572043 <sup>^</sup>	10	2	0.111	30	60	0.574	205	1.040	1.300	4.0	30	30	30



Stock Number	Cond. Size	Cond. Number	Diameter Over Cond.	Insul. Thickness	Jacket Thickness	Approx. OD	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	Ω /1000ft	Ω /1000ft	inch	Amp	Amp	Amp
618931^	10	3	0.111	30	45	0.479	197	1.040	1.300	3.3	30	30	30
628590^	10	4	0.111	30	60	0.561	210	1.040	1.300	3.9	24	28	30
619547^	10	5	0.111	30	60	0.610	304	1.040	1.300	4.27	24	28	30
TBA	10	6	0.111	30	60	0.632	323	1.040	1.300	4.4	24	28	30
628587^	10	7	0.111	30	60	0.661	395	1.040	1.300	4.6	21	24	28
TBA	10	8	0.111	30	60	0.685	410	1.040	1.300	4.795	21	24	28
606760^	10	9	0.111	30	60	0.736	461	1.040	1.300	5.2	21	24	28
TBA	10	10	0.111	30	60	0.803	519	1.040	1.300	5.6	15	17	20
628581^	10	12	0.111	30	80	0.899	670	1.040	1.300	6.3	15	17	20
TBA	10	15	0.111	30	80	0.964	777	1.040	1.300	6.7	15	17	20
TBA	10	19	0.111	30	80	1.014	941	1.040	1.300	7.1	15	17	20
TBA	10	20	0.111	30	80	1.067	1001	1.040	1.300	7.5	15	17	20
TBA	10	25	0.111	30	80	1.184	1236	1.040	1.300	8.3	13	15	18
TBA	10	30	0.111	30	80	1.254	1450	1.040	1.300	8.8	13	15	18
TBA	10	37	0.111	30	80	1.355	1755	1.040	1.300	9.4	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)

^ UL Listed part number

