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 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 {YYYY} {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

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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 Rectance	Min Bending Radius	Allowable Ampacity At 60°C	Allowable Ampacity 75°C	Allowab Ampacit 90°C
	AWG	No.	strands	inch	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp	Amp
18 AWG																
673090	18	7	7	0.045	25	45	0.448	56	126	6.669	8.035	0.036	5.4	-	-	9
672570	18	12	7	0.045	25	60	0.608	89	210	6.669	8.035	0.036	7.3	-	-	7
14 AWG																
TBA	14	2	7	0.070	30	45	0.372	48	92	2.631	3.170	0.058	4.5	15	20	25
TBA	14	3	7	0.070	30	45	0.392	62	112	2.631	3.170	0.058	4.7	15	20	25
619529^	14	4	7	0.070	30	45	0.440	71	134	2.631	3.170	0.058	5.3	12	16	20
TBA	14	5	7	0.070	30	45	0.463	93	154	2.631	3.170	0.058	5.6	12	16	20
TBA	14	6	7	0.070	30	45	0.502	110	179	2.631	3.170	0.058	6.0	12	16	20
606759^	14	7	7	0.070	30	45	0.519	115	202	2.631	3.170	0.058	6.2	10	14	17
TBA	14	8	7	0.070	30	60	0.572	139	238	2.631	3.170	0.058	6.9	10	14	17
TBA	14	9	7	0.070	30	60	0.611	156	265	2.631	3.170	0.058	7.3	10	14	17
TBA	14	10	7	0.070	30	60	0.662	172	292	2.631	3.170	0.058	7.9	7	10	12
TBA	14	12	7	0.070	30	60	0.682	200	331	2.631	3.170	0.058	8.2	7	10	12
TBA	14	15	7	0.070	30	60	0.754	244	399	2.631	3.170	0.058	9.0	7	10	12
TBA	14	19	7	0.070	30	60	0.792	299	478	2.631	3.170	0.058	9.5	7	10	12
625498	14	20	7	0.070	30	80	0.901	300	560	2.631	3.170	0.058	10.8	7	10	12
TBA	14	25	7	0.070	30	80	0.962	386	647	2.631	3.170	0.058	11.5	6	9	11
TBA	14	30	7	0.070	30	80	1.015	455	749	2.631	3.170	0.058	12.2	6	9	11
TBA	14	37	7	0.070	30	80	1.092	552	893	2.631	3.170	0.058	13.1	6	8	10
12 AWG																
TBA	12	2	7	0.088	30	45	0.408	66	117	1.662	2.002	0.054	4.9	20	25	30
TBA	12	3	7	0.088	30	45	0.431	89	147	1.662	2.002	0.054	5.2	20	25	30
TBA	12	4	7	0.088	30	45	0.470	112	172	1.662	2.002	0.054	5.6	16	20	24
TBA	12	5	7	0.088	30	45	0.511	136	205	1.662	2.002	0.054	6.1	16	20	24
TBA	12	6	7	0.088	30	60	0.586	160	256	1.662	2.002	0.054	7.0	16	20	24
TBA	12	7	7	0.088	30	60	0.586	180	282	1.662	2.002	0.054	7.0	14	17	21
TBA	12	8	7	0.088	30	60	0.631	204	317	1.662	2.002	0.054	7.6	14	17	21
673213^	12	9	7	0.088	30	60	0.699	217	365	1.662	2.002	0.054	8.4	14	17	21
TBA	12	10	7	0.088	30	60	0.734	254	390	1.662	2.002	0.054	8.8	10	12	15
620308	12	12	7	0.088	30	60	0.779	283	457	1.662	2.002	0.054	9.3	10	12	15
TBA	12	15	7	0.088	30	80	0.879	365	577	1.662	2.002	0.054	10.5	10	12	15
TBA	12	19	7	0.088	30	80	0.922	450	693	1.662	2.002	0.054	11.1	10	12	15
TBA	12	20	7	0.088	30	80	0.967	474	729	1.662	2.002	0.054	11.6	10	12	15
TBA	12	25	7	0.088	30	80	1.070	585	885	1.662	2.002	0.054	12.8	9	11	13
TBA	12	30	7	0.088	30	80	1.130	692	1031	1.662	2.002	0.054	13.6	9	11	13
TBA	12	37	7	0.088	30	80	1.218	841	1235	1.662	2.002	0.054	14.6	8	10	12
10 AWG																
606758^	10	2	7	0.113	30	45	0.472	87	153	1.040	1.253	0.050	5.7	30	35	40
618931^	10	3	7	0.113	30	45	0.496	121	197	1.040	1.253	0.050	6.0	30	35	40

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	AWG	No.	strands	inch	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp	Amp
628590^	10	4	7	0.113	30	60	0.577	156	259	1.040	1.253	0.050	6.9	24	28	32
572043^	10	2	7	0.113	30	60	0.580	103	209	1.040	1.253	0.050	7.0	30	35	40
619547^	10	5	7	0.113	30	60	0.628	192	308	1.040	1.253	0.050	7.5	24	28	32
TBA	10	6	7	0.113	30	60	0.661	239	352	1.040	1.253	0.050	7.9	24	28	32
628587^	10	7	7	0.113	30	60	0.681	259	400	1.040	1.253	0.050	8.2	21	24	28
TBA	10	8	7	0.113	30	60	0.714	307	440	1.040	1.253	0.050	8.6	21	24	28
606760^	10	9	7	0.113	30	60	0.789	331	502	1.040	1.253	0.050	9.5	21	24	28
TBA	10	10	7	0.113	30	80	0.874	383	578	1.040	1.253	0.050	10.5	15	17	20
628581^	10	12	7	0.113	30	80	0.928	434	682	1.040	1.253	0.050	11.1	15	17	20
TBA	10	15	7	0.113	30	80	0.996	555	804	1.040	1.253	0.050	12.0	15	17	20
TBA	10	19	7	0.113	30	80	1.047	689	975	1.040	1.253	0.050	12.6	15	17	20
TBA	10	20	7	0.113	30	80	1.10	725	1026	1.040	1.253	0.050	13.2	15	17	20
TBA	10	25	7	0.113	30	80	1.220	898	1253	1.040	1.253	0.050	14.6	13	15	18
TBA	10	30	7	0.113	30	80	1.290	1066	1467	1.040	1.253	0.050	15.5	13	15	18
TBA	10	37	7	0.113	30	80	1.393	1300	1766	1.040	1.253	0.050	16.7	12	14	16

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

^ UL listed part number

* 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 part numbers containing more than Three Current-Carrying Conductors.