

Multi-Conductor CU 600 V FR-XLPE Shielded Thermoplastic LSZH-TP Jacket Control Cable Color Method 1 Table 1

Control Cable 600 Volt Copper Conductors, Flame Retardant Cross Linked Polyethylene (FR-XLPE) Insulation Shielded Thermoplastic SOLONON® Low Smoke Zero Halogen (LSZH-TP) 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 tape shield
6. **Rip Cord:** Rip cord for ease of jacket removal
7. **Overall Jacket:** Thermoplastic SOLONON® Low Smoke Zero Halogen (LSZH-TP) 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



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SAMPLE PRINT LEGEND:

UL Listed

SOUTHWIRE E75755 {UL} XX AWG X/C FR-XLPE CDRS SHIELDED 90C LSZH JACKET SUNLIGHT RESISTANT DIRECT BURIAL 600V {MM/DD/YYYY} {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

Non UL Listed

SOUTHWIRE XX AWG X/C FR-XLPE CDRS SHIELDED 90C LSZH 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
16 AWG																
626227	16	12	7	0.056	25	60	0.589	130	241	4.181	5.037	0.033	7.1	-	-	9
14 AWG																
TBA	14	2	7	0.070	30	45	0.349	26	68	2.630	3.288	0.036	1.4	15	15	15
TBA	14	3	7	0.070	30	45	0.370	38	87	2.630	3.288	0.036	1.5	15	15	15
TBA	14	4	7	0.070	30	45	0.403	51	109	2.630	3.288	0.036	1.6	14	15	15
TBA	14	5	7	0.070	30	45	0.440	64	132	2.630	3.288	0.036	1.8	14	15	15
TBA	14	6	7	0.070	30	45	0.479	77	155	2.630	3.288	0.036	1.9	14	15	15
TBA	14	7	7	0.070	30	45	0.479	90	171	2.630	3.288	0.036	1.9	12	15	15
TBA	14	8	7	0.070	30	45	0.519	102	195	2.630	3.288	0.036	2.1	12	15	15
TBA	14	9	7	0.070	30	60	0.588	115	236	2.630	3.288	0.036	2.4	12	15	15
TBA	14	10	7	0.070	30	60	0.638	128	266	2.630	3.288	0.036	2.6	9	11	12
TBA	14	12	7	0.070	30	60	0.659	154	303	2.630	3.288	0.036	2.6	9	11	12
TBA	14	15	7	0.070	30	60	0.730	192	371	2.630	3.288	0.036	2.9	9	11	12
TBA	14	19	7	0.070	30	60	0.768	243	446	2.630	3.288	0.036	3.1	9	11	12
TBA	14	20	7	0.070	30	60	0.808	256	475	2.630	3.288	0.036	3.2	9	11	12
TBA	14	25	7	0.070	30	80	0.937	320	619	2.630	3.288	0.036	3.7	8	9	11
TBA	14	30	7	0.070	30	80	0.991	384	719	2.630	3.288	0.036	4.0	8	9	11
TBA	14	37	7	0.070	30	80	1.067	474	862	2.630	3.288	0.036	5.3	7	8	10
12 AWG																
TBA	12	2	7	0.088	30	45	0.384	41	90	1.662	2.002	0.054	1.5	20	20	20
TBA	12	3	7	0.088	30	45	0.408	61	118	1.662	2.002	0.054	1.6	20	20	20
TBA	12	4	7	0.088	30	45	0.483	109	181	1.662	2.002	0.054	5.8	16	20	24
TBA	12	5	7	0.088	30	45	0.487	102	181	1.662	2.002	0.054	1.9	16	20	20
TBA	12	6	7	0.088	30	45	0.532	122	214	1.662	2.002	0.054	2.1	16	20	20
660935	12	7	7	0.088	30	60	0.603	176	297	1.662	2.002	0.054	7.2	14	17	21
TBA	12	8	7	0.088	30	60	0.607	163	288	1.662	2.002	0.054	2.4	14	17	20
TBA	12	9	7	0.088	30	60	0.651	183	324	1.662	2.002	0.054	2.6	14	17	20
TBA	12	10	7	0.088	30	60	0.709	204	365	1.662	2.002	0.054	2.8	10	12	15
660930	12	12	7	0.088	30	60	0.779	291	472	1.662	2.002	0.054	9.3	10	12	15
TBA	12	15	7	0.088	30	60	0.813	305	516	1.662	2.002	0.054	3.3	10	12	15
TBA	12	19	7	0.088	30	80	0.896	387	657	1.662	2.002	0.054	3.6	10	12	15
TBA	12	20	7	0.088	30	80	0.942	407	699	1.662	2.002	0.054	3.8	10	12	15
TBA	12	25	7	0.088	30	80	1.043	509	860	1.662	2.002	0.054	5.2	9	11	13
TBA	12	30	7	0.088	30	80	1.104	611	1005	1.662	2.002	0.054	5.5	9	11	13
TBA	12	37	7	0.088	30	80	1.191	753	1211	1.662	2.002	0.054	6.0	8	10	12
10 AWG																
626224	10	2	7	0.113	30	45	0.472	90	152	1.040	1.253	0.050	5.7	15	17	20
TBA	10	3	7	0.113	30	45	0.491	129	200	1.040	1.253	0.050	5	30	35	40
626223	10	4	7	0.113	30	60	0.578	159	264	1.040	1.253	0.050	6.9	15	17	20



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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
TBA	10	5	7	0.113	30	60	0.581	162	273	1.040	1.253	0.050	2.3	24	28	30
TBA	10	6	7	0.113	30	60	0.632	194	323	1.040	1.253	0.050	2.5	24	28	30
TBA	10	7	7	0.113	30	60	0.632	227	358	1.040	1.253	0.050	2.5	21	24	28
TBA	10	8	7	0.113	30	60	0.685	259	410	1.040	1.253	0.050	2.7	21	24	28
TBA	10	9	7	0.113	30	60	0.736	291	461	1.040	1.253	0.050	2.9	21	24	28
TBA	10	10	7	0.113	30	80	0.803	384	519	1.040	1.253	0.050	12	15	17	20
626222	10	12	7	0.113	30	80	0.899	438	672	1.040	1.253	0.050	10.8	15	17	20
TBA	10	15	7	0.113	30	80	0.964	486	777	1.040	1.253	0.050	3.9	15	17	20
TBA	10	19	7	0.113	30	80	1.014	615	941	1.040	1.253	0.050	5.1	15	17	20
TBA	10	20	7	0.113	30	80	1.067	648	1001	1.040	1.253	0.050	5.3	15	17	20
TBA	10	25	7	0.113	30	80	1.184	810	1236	1.040	1.253	0.050	5.9	13	15	18
TBA	10	30	7	0.113	30	80	1.254	971	1450	1.040	1.253	0.050	6.3	13	15	18
TBA	10	37	7	0.113	30	80	1.355	1198	1755	1.040	1.253	0.050	6.8	12	14	16
6 AWG																
626238	6	12	7	0.177	45	80	1.324	1077	1564	0.411	0.495	0.051	6.6	27	32	37
2 AWG																
625583	2	2	7	0.282	45	80	0.934	465	698	0.162	0.195	0.045	6.5	95	115	130

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 stock numbers containing more than Three Current-Carrying Conductors.

