

Multi-Conductor CU 600 V FR-XLPE Thermoplastic LSZH-TP Jacket Control Cable Color Method 1 Table 2

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

SOUTHWIRE {UL} XX AWG X/C XHHW-2 CDRS 90°C LSZH JKT TYPE TC SUNLIGHT RESISTANT DIRECT BURIAL 600 VOLTS
{MM/DD/YYYY} {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

Non UL Listed

SOUTHWIRE XX AWG X/C FR-XLPE CDRS 90C LSZH JKT 600V SUNLIGHT RESISTANT SUITABLE FOR DIRECT BURIAL YEAR
{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
14 AWG																
619990	14	2	7	0.070	30	45	0.357	25	68	2.631	3.170	0.058	1.4	15	20	25
TBA	14	3	7	0.070	30	45	0.372	38	85	2.631	3.170	0.058	1.4	15	20	25
TBA	14	4	7	0.070	30	45	0.406	51	102	2.631	3.170	0.058	1.6	12	16	20
TBA	14	5	7	0.070	30	45	0.443	63	122	2.631	3.170	0.058	1.7	12	16	20
TBA	14	6	7	0.070	30	45	0.482	76	143	2.631	3.170	0.058	1.9	12	16	20
660991 ^A	14	7	7	0.070	30	45	0.502	89	179	2.631	3.170	0.058	2.0	10	14	17
TBA	14	8	7	0.070	30	60	0.552	102	199	2.631	3.170	0.058	2.2	10	14	17
TBA	14	9	7	0.070	30	60	0.591	115	222	2.631	3.170	0.058	2.3	10	14	17
TBA	14	10	7	0.070	30	60	0.642	127	245	2.631	3.170	0.058	2.5	7	10	12
TBA	14	12	7	0.070	30	60	0.662	153	282	2.631	3.170	0.058	2.6	7	10	12
TBA	14	15	7	0.070	30	60	0.734	191	343	2.631	3.170	0.058	2.9	7	10	12
TBA	14	19	7	0.070	30	60	0.772	243	420	2.631	3.170	0.058	3.0	7	10	12
TBA	14	20	7	0.070	30	60	0.812	255	442	2.631	3.170	0.058	3.2	7	10	12
TBA	14	25	7	0.070	30	80	0.942	319	577	2.631	3.170	0.058	3.7	6	9	11
TBA	14	30	7	0.070	30	80	0.995	383	674	2.631	3.170	0.058	3.9	6	9	11
TBA	14	37	7	0.070	30	80	1.072	473	810	2.631	3.170	0.058	5.3	6	8	10
12 AWG																
TBA	12	2	7	0.088	30	45	0.388	40	87	1.662	2.002	0.054	1.5	20	25	30
TBA	12	3	7	0.088	30	45	0.411	61	115	1.662	2.002	0.054	1.6	20	25	30
TBA	12	4	7	0.088	30	45	0.450	81	140	1.662	2.002	0.054	1.8	16	20	24
TBA	12	5	7	0.088	30	45	0.491	101	168	1.662	2.002	0.054	1.9	16	20	24
TBA	12	6	7	0.088	30	60	0.566	122	216	1.662	2.002	0.054	2.2	16	20	24
TBA	12	7	7	0.088	30	60	0.566	142	242	1.662	2.002	0.054	2.2	14	17	21
TBA	12	8	7	0.088	30	60	0.611	162	273	1.662	2.002	0.054	2.4	14	17	21
TBA	12	9	7	0.088	30	60	0.656	183	305	1.662	2.002	0.054	2.6	14	17	21
TBA	12	10	7	0.088	30	60	0.714	203	337	1.662	2.002	0.054	2.8	10	12	15
TBA	12	12	7	0.088	30	60	0.737	244	393	1.662	2.002	0.054	2.9	10	12	15
TBA	12	15	7	0.088	30	60	0.819	305	481	1.662	2.002	0.054	3.2	10	12	15
TBA	12	19	7	0.088	30	80	0.902	386	626	1.662	2.002	0.054	3.6	10	12	15
TBA	12	20	7	0.088	30	80	0.947	406	658	1.662	2.002	0.054	3.7	10	12	15
TBA	12	25	7	0.088	30	80	1.050	508	805	1.662	2.002	0.054	5.2	9	11	13
TBA	12	30	7	0.088	30	80	1.110	610	945	1.662	2.002	0.054	5.5	9	11	13
TBA	12	37	7	0.088	30	80	1.198	752	1142	1.662	2.002	0.054	5.9	8	10	12
10 AWG																
TBA	10	2	7	0.113	30	45	0.438	64	121	1.040	1.253	0.050	1.7	30	35	40
603616	10	3	7	0.113	30	45	0.476	97	173	1.040	1.253	0.050	1.9	30	35	40
660988 ^A	10	4	7	0.113	30	60	0.556	129	232	1.040	1.253	0.050	2.2	24	28	32
TBA	10	5	7	0.113	30	60	0.589	161	258	1.040	1.253	0.050	2.3	24	28	32
TBA	10	6	7	0.113	30	60	0.641	194	304	1.040	1.253	0.050	2.5	24	28	32



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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	7	7	0.113	30	60	0.641	226	343	1.040	1.253	0.050	2.5	21	24	28
TBA	10	8	7	0.113	30	60	0.694	258	389	1.040	1.253	0.050	2.7	21	24	28
TBA	10	9	7	0.113	30	60	0.746	291	435	1.040	1.253	0.050	2.9	21	24	28
TBA	10	10	7	0.113	30	60	0.814	323	482	1.040	1.253	0.050	3.2	15	17	20
603612	10	12	7	0.113	30	80	0.879	388	621	1.040	1.253	0.050	3.5	15	17	20
TBA	10	15	7	0.113	30	80	0.976	485	731	1.040	1.253	0.050	3.9	15	17	20
TBA	10	19	7	0.113	30	80	1.027	614	896	1.040	1.253	0.050	5.1	15	17	20
TBA	10	20	7	0.113	30	80	1.080	646	944	1.040	1.253	0.050	5.4	15	17	20
TBA	10	25	7	0.113	30	80	1.200	808	1160	1.040	1.253	0.050	6.0	13	15	18
TBA	10	30	7	0.113	30	80	1.270	970	1368	1.040	1.253	0.050	6.3	13	15	18
TBA	10	37	7	0.113	30	80	1.373	1196	1659	1.040	1.253	0.050	6.8	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 stock numbers containing more than Three Current-Carrying Conductors.

