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

Control Cable 600 Volt Copper Conductors, Flame Retardant Cross Linked Polyethylene (FR-XLPE) Insulation Shielded Thermoplastic Chlorinated Polyethylene (CPE-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. **Shield:** 5 mils copper Longitudinally-Applied Corrugated Tape (LCT) shield
6. **Rip Cord:** Rip cord for ease of jacket removal
7. **Overall Jacket:** Thermoplastic Chlorinated Polyethylene (CPE-TP)

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

SAMPLE PRINT LEGEND:

UL Listed

SOUTHWIRE {UL} E75755 XX AWG CU X/C FR-XLPE E2 CDRS SHIELDED TYPE TC CPE JACKET 600V YEAR {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

Non UL Listed

SOUTHWIRE XX AWG CU X/C FR-XLPE E2 CDRS SHIELDED CPE JACKET 600V SUN RES DIR BUR 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	Min Bending Radius	Allowable Ampacity 90°C
	AWG	No.	strands	inch	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	inch	Amp
18 AWG													
606981	18	20	7	0.036	25	60	0.733	84	292	6.669	8.035	2.9	8
14 AWG													
TBA	14	2	7	0.070	30	45	0.452	48	107	2.631	3.170	5.4	25
TBA	14	3	7	0.070	30	45	0.472	62	128	2.631	3.170	5.7	25
TBA	14	4	7	0.070	30	45	0.506	78	138	2.631	3.170	6.1	20
626270^	14	4	7	0.070	30	45	0.514	84	174	2.631	3.170	6.2	20
TBA	14	5	7	0.070	30	60	0.573	93	177	2.631	3.170	6.9	20
TBA	14	6	7	0.070	30	60	0.612	110	204	2.631	3.170	7.3	20
TBA	14	7	7	0.070	30	60	0.612	123	222	2.631	3.170	7.3	17
TBA	14	8	7	0.070	30	60	0.652	139	248	2.631	3.170	7.8	17
TBA	14	9	7	0.070	30	60	0.691	156	274	2.631	3.170	8.3	17
TBA	14	10	7	0.070	30	60	0.742	172	301	2.631	3.170	8.9	12
TBA	14	12	7	0.070	30	60	0.762	200	341	2.631	3.170	9.1	12
TBA	14	15	7	0.070	30	80	0.874	244	442	2.631	3.170	10.5	12
TBA	14	19	7	0.070	30	80	0.912	299	523	2.631	3.170	10.9	12
TBA	14	20	7	0.070	30	80	0.952	315	550	2.631	3.170	11.4	12
TBA	14	25	7	0.070	30	80	1.042	386	660	2.631	3.170	12.5	11
TBA	14	30	7	0.070	30	80	1.095	455	762	2.631	3.170	13.1	11
TBA	14	37	7	0.070	30	80	1.172	552	905	2.631	3.170	14.1	10
12 AWG													
661864	12	2	7	0.088	30	45	0.488	74	143	1.662	2.002	5.9	30
TBA	12	3	7	0.088	30	45	0.511	89	163	1.662	2.002	6.1	30
622950^	12	4	7	0.088	30	60	0.575	120	225	1.662	2.002	6.9	24
TBA	12	5	7	0.088	30	60	0.621	136	230	1.662	2.002	7.5	24
622948^	12	7	7	0.088	30	60	0.661	187	324	1.662	2.002	7.9	21
TBA	12	6	7	0.088	30	60	0.666	160	265	1.662	2.002	8.0	24
TBA	12	8	7	0.088	30	60	0.711	204	327	1.662	2.002	8.5	21
TBA	12	9	7	0.088	30	60	0.756	229	363	1.662	2.002	9.1	21
TBA	12	10	7	0.088	30	60	0.814	254	400	1.662	2.002	9.8	15
622953^	12	12	7	0.088	30	80	0.872	299	529	1.662	2.002	10.5	15
TBA	12	15	7	0.088	30	80	0.959	365	590	1.662	2.002	11.5	15
TBA	12	19	7	0.088	30	80	1.002	450	705	1.662	2.002	12.0	15
TBA	12	20	7	0.088	30	80	1.047	474	742	1.662	2.002	12.6	15
TBA	12	25	7	0.088	30	80	1.150	585	898	1.662	2.002	13.8	13
TBA	12	30	7	0.088	30	80	1.210	692	1043	1.662	2.002	14.5	13
TBA	12	37	7	0.088	30	80	1.298	841	1247	1.662	2.002	15.6	12
10 AWG													
622946^	10	2	7	0.113	30	60	0.566	103	198	1.040	1.253	6.8	40
TBA	10	3	7	0.113	30	60	0.595	129	233	1.040	1.253	7.1	40

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	Min Bending Radius	Allowable Ampacity 90°C
	AWG	No.	strands	inch	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	inch	Amp
622943^	10	4	7	0.113	30	60	0.632	173	293	1.040	1.253	7.6	32
606859^	10	4	7	0.113	30	60	0.652	162	300	1.040	1.253	7.8	32
662216	10	5	7	0.113	30	60	0.685	206	344	1.040	1.253	8.2	32
TBA	10	6	7	0.113	30	60	0.741	239	361	1.040	1.253	8.9	32
622209	10	7	7	0.113	30	60	0.751	276	446	1.040	1.253	9.0	28
TBA	10	8	7	0.113	30	60	0.794	307	450	1.040	1.253	9.5	28
TBA	10	9	7	0.113	30	80	0.886	345	535	1.040	1.253	10.6	28
TBA	10	10	7	0.113	30	80	0.954	383	591	1.040	1.253	11.4	20
662217	10	12	7	0.113	30	80	0.971	455	722	1.040	1.253	11.7	20
TBA	10	15	7	0.113	30	80	1.076	555	817	1.040	1.253	12.9	20
TBA	10	19	7	0.113	30	80	1.127	689	987	1.040	1.253	13.5	20
TBA	10	20	7	0.113	30	80	1.180	725	1039	1.040	1.253	14.2	20
TBA	10	25	7	0.113	30	80	1.300	898	1266	1.040	1.253	15.6	18
TBA	10	30	7	0.113	30	80	1.370	1066	1480	1.040	1.253	16.4	18
TBA	10	37	7	0.113	30	80	1.473	1300	1779	1.040	1.253	17.7	16
8 AWG													
TBA	8	2	7	0.141	45	60	0.684	142	274	0.653	0.786	8.2	55
622984	8	12	7	0.141	45	80	1.225	701	1111	0.653	0.786	14.7	27
6 AWG													
622994^	6	2	7	0.177	45	60	0.756	213	365	0.411	0.495	9.1	75
661863	6	4	7	0.177	45	80	0.911	377	627	0.411	0.495	10.9	60
4 AWG													
622996^	4	2	7	0.225	45	80	0.894	315	524	0.258	0.310	10.7	95

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.