

# Multi-Conductor CU 600 V FR-XLPE LCT Shielded Thermoplastic CPE-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 Chlorinated Polyethylene Chloride (CPE-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), 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 Chloride (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 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
- 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



**SAMPLE PRINT LEGEND:**

**UL Listed**

SOUTHWIRE E75755 {UL} XX AWG X/C FR-XLPE XHHW-2 TYPE TC-ER CDRS 90C CPE JKT SHIELDED 600V SUN RES YEAR  
{SEQUENTIAL FOOTAGE MARKS} SEQ FEET

**Non UL Listed**

SOUTHWIRE XX AWG X/C FR-XLPE CDRS 90C CPE JKT SHIELDED 600V SUN. RES. DIRECT BURIAL YEAR 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	Copper Weight	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	lb /1000ft	Ω /1000ft	Ω /1000ft	inch	Amp	Amp	Amp
<b>14 AWG</b>														
TBA	14	2	0.070	30	45	0.349	26	68	2.630	3.288	4.2	15	15	15
TBA	14	3	0.070	30	45	0.370	38	87	2.630	3.288	4.4	15	15	15
TBA	14	4	0.070	30	45	0.403	51	109	2.630	3.288	4.8	14	15	15
TBA	14	5	0.070	30	45	0.440	64	132	2.630	3.288	5.3	14	15	15
TBA	14	6	0.070	30	45	0.479	77	155	2.630	3.288	5.7	14	15	15
603683	14	7	0.070	30	45	0.479	90	171	2.630	3.288	5.7	12	15	15
TBA	14	8	0.070	30	45	0.519	102	195	2.630	3.288	6.2	12	15	15
TBA	14	9	0.070	30	60	0.588	115	236	2.630	3.288	7.1	12	15	15
TBA	14	10	0.070	30	60	0.638	128	266	2.630	3.288	7.7	9	11	12
TBA	14	12	0.070	30	60	0.659	154	303	2.630	3.288	7.9	9	11	12
TBA	14	14	0.070	30	60	0.717	229	374	2.630	3.288	8.6	9	11	12
TBA	14	15	0.070	30	60	0.730	192	371	2.630	3.288	8.8	9	11	12
604417	14	19	0.070	30	60	0.768	243	446	2.630	3.288	9.2	9	11	12
TBA	14	20	0.070	30	60	0.808	256	475	2.630	3.288	9.7	9	11	12
TBA	14	25	0.070	30	80	0.937	320	619	2.630	3.288	11.2	8	9	11
TBA	14	30	0.070	30	80	0.991	384	719	2.630	3.288	11.9	8	9	11
TBA	14	37	0.070	30	80	1.067	474	862	2.630	3.288	12.8	7	8	10
<b>12 AWG</b>														
603689	12	2	0.087	30	45	0.384	41	90	1.660	2.075	4.6	20	20	20
TBA	12	3	0.087	30	45	0.408	61	118	1.660	2.075	4.9	20	20	20
603691^	12	4	0.087	30	45	0.445	81	148	1.660	2.075	5.3	16	20	20
603692	12	5	0.087	30	45	0.487	102	181	1.660	2.075	5.8	16	20	20
TBA	12	6	0.087	30	45	0.532	122	214	1.660	2.075	6.4	16	20	20
603694	12	7	0.087	30	45	0.532	143	237	1.660	2.075	6.4	14	17	20
627832	12	4	0.087	30	60	0.579	115	221	1.660	2.075	6.9	16	20	20
TBA	12	8	0.087	30	60	0.607	163	288	1.660	2.075	7.3	14	17	20
603697	12	9	0.087	30	60	0.651	183	324	1.660	2.075	7.8	14	17	20
TBA	12	10	0.087	30	60	0.709	204	365	1.660	2.075	8.5	10	12	15
618870!	12	8	0.087	30	60	0.721	196	358	1.660	2.075	7.3	14	17	20
603699	12	12	0.087	30	60	0.732	244	419	1.660	2.075	8.8	10	12	15
TBA	12	15	0.087	30	60	0.813	305	516	1.660	2.075	9.8	10	12	15
621553!	12	12	0.087	30	80	0.888	300	536	1.660	2.075	10.7	10	12	15
TBA	12	19	0.087	30	80	0.896	387	657	1.660	2.075	10.8	10	12	15
TBA	12	20	0.087	30	80	0.942	407	699	1.660	2.075	11.3	10	12	15
TBA	12	25	0.087	30	80	1.043	509	860	1.660	2.075	12.5	9	11	13
TBA	12	30	0.087	30	80	1.104	611	1005	1.660	2.075	13.2	9	11	13
TBA	12	37	0.087	30	80	1.191	753	1211	1.660	2.075	14.3	8	10	12
<b>10 AWG</b>														
603701	10	2	0.111	30	45	0.431	65	124	1.040	1.300	5.2	30	30	30



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	AWG	No.	inch	mil	mil	inch	lb /1000ft	lb /1000ft	Ω /1000ft	Ω /1000ft	inch	Amp	Amp	Amp
603702	10	3	0.111	30	45	0.459	97	165	1.040	1.300	5.5	30	30	30
621333	10	2	0.111	30	45	0.509	65	194	1.040	1.300	6.1	30	30	30
619257	10	4	0.111	45	60	0.633	130	286	1.040	1.300	7.6	24	28	30
661043%	10	9	0.111	30	80	0.885	347	574	1.040	1.300	10.6	21	24	28
621305!	10	2	0.113	30	60	0.570	98	192	1.040	1.300	6.8	30	30	30
618685^	10	4	0.111	30	60	0.636	178	317	1.040	1.300	7.6	24	28	30
603703^	10	4	0.111	30	60	0.636	163	297	1.040	1.300	7.6	24	28	30
604324!	10	4	0.111	30	60	0.638	163	284	1.040	1.300	7.7	24	28	30
619436^	10	4	0.111	30	60	0.645	174	311	1.040	1.300	7.6	24	28	30
662671^	10	5	0.111	30	60	0.581	162	273	1.040	1.300	7	24	28	30
TBA	10	6	0.111	30	60	0.632	194	323	1.040	1.300	7.6	24	28	30
603707	10	7	0.111	30	60	0.632	227	358	1.040	1.300	7.6	21	24	28
TBA	10	8	0.111	30	60	0.685	259	410	1.040	1.300	8.2	21	24	28
603709^	10	9	0.111	30	60	0.736	291	461	1.040	1.300	8.8	21	24	28
TBA	10	10	0.111	30	60	0.803	324	519	1.040	1.300	9.6	15	17	20
604325!	10	12	0.111	30	80	0.984	389	600	1.040	1.300	11.8	15	17	20
TBA	10	15	0.111	30	80	0.964	486	777	1.040	1.300	11.6	15	17	20
TBA	10	19	0.111	30	80	1.014	615	941	1.040	1.300	12.2	15	17	20
TBA	10	20	0.111	30	80	1.067	648	1001	1.040	1.300	12.8	15	17	20
TBA	10	25	0.111	30	80	1.184	810	1236	1.040	1.300	14.2	13	15	18
TBA	10	30	0.111	30	80	1.254	971	1450	1.040	1.300	15	13	15	18
TBA	10	37	0.111	30	80	1.355	1198	1755	1.040	1.300	16.3	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

! 19 strand combination unilay copper conductor based on ASTM B787

% Class C 19 strand compressed tinned copper per ASTM B33 and B8

