



Multi-Conductor CU 600 V FR-XLPE 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 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. **Rip Cord:** Rip cord for ease of jacket removal
6. **Overall Jacket:** Thermoplastic Chlorinated Polyethylene (CPE-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 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 E75755 {UL} XX AWG X/C FR-XLPE XHHW-2 TYPE TC CDRS 90C CPE JKT 600V SUNLIGHT RESISTANT MM/
YYYY{SEQUENTIAL FOOTAGE MARKS} SEQ FEET

Non UL Listed

SOUTHWIRE XX AWG X/C FR-XLPE CDRS 90C CPE JKT 600V SUN. RES. 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 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
14 AWG															
TBA	14	3	7	0.070	30	45	0.372	38	85	2.631	3.170	0.058	1.4	20	25
TBA	14	4	7	0.070	30	45	0.406	51	102	2.631	3.170	0.058	1.6	16	20
TBA	14	5	7	0.070	30	45	0.443	63	122	2.631	3.170	0.058	1.7	16	20
TBA	14	6	7	0.070	30	45	0.482	76	143	2.631	3.170	0.058	1.9	16	20
TBA	14	7	7	0.070	30	45	0.482	89	161	2.631	3.170	0.058	1.9	14	17
TBA	14	8	7	0.070	30	60	0.552	102	199	2.631	3.170	0.058	2.2	14	17
TBA	14	9	7	0.070	30	60	0.591	115	222	2.631	3.170	0.058	2.3	14	17
TBA	14	10	7	0.070	30	60	0.642	127	245	2.631	3.170	0.058	2.5	10	12
604289	14	12	7	0.070	30	60	0.667	153	296	2.631	3.170	0.058	2.6	10	12
TBA	14	15	7	0.070	30	60	0.734	191	343	2.631	3.170	0.058	2.9	10	12
TBA	14	19	7	0.070	30	60	0.772	243	420	2.631	3.170	0.058	3.0	10	12
TBA	14	20	7	0.070	30	60	0.812	255	442	2.631	3.170	0.058	3.2	10	12
TBA	14	25	7	0.070	30	80	0.942	319	577	2.631	3.170	0.058	3.7	9	11
TBA	14	30	7	0.070	30	80	0.995	383	674	2.631	3.170	0.058	3.9	9	11
TBA	14	37	7	0.070	30	80	1.072	473	810	2.631	3.170	0.058	5.3	8	10
619661?	14	2	19	0.072	30	45	0.356	25	65	2.631	3.170	0.058	1.4	20	25
619663?	14	12	19	0.072	30	60	0.669	154	292	2.631	3.170	0.058	2.7	10	12
12 AWG															
606668^	12	2	7	0.088	30	45	0.404	40	89	1.662	2.002	0.054	1.6	25	30
661944	12	3	7	0.088	30	45	0.416	61	116	1.662	2.002	0.054	1.6	25	30
TBA	12	4	7	0.088	30	45	0.450	81	140	1.662	2.002	0.054	1.8	20	24
624834!	12	4	7	0.088	30	45	0.476	81	153	1.662	2.002	0.054	1.9	20	24
TBA	12	5	7	0.088	30	45	0.491	101	168	1.662	2.002	0.054	1.9	20	24
TBA	12	6	7	0.088	30	60	0.566	122	216	1.662	2.002	0.054	2.2	20	24
TBA	12	7	7	0.088	30	60	0.566	142	242	1.662	2.002	0.054	2.2	17	21
604308?	12	7	19	0.088	30	60	0.578	142	250	1.662	2.002	0.054	2.3	17	21
TBA	12	8	7	0.088	30	60	0.611	162	273	1.662	2.002	0.054	2.4	17	21
TBA	12	9	7	0.088	30	60	0.656	183	305	1.662	2.002	0.054	2.6	17	21
TBA	12	10	7	0.088	30	60	0.714	203	337	1.662	2.002	0.054	2.8	12	15
662211	12	12	7	0.088	30	60	0.740	244	401	1.662	2.002	0.054	2.9	12	15
662180^	12	12	7	0.088	30	60	0.759	244	414	1.662	2.002	0.054	3.0	12	15
TBA	12	15	7	0.088	30	60	0.819	305	481	1.662	2.002	0.054	3.2	12	15
606714^	12	19	7	0.088	30	80	0.912	386	654	1.662	2.002	0.054	3.6	12	15
TBA	12	20	7	0.088	30	80	0.947	406	658	1.662	2.002	0.054	3.7	12	15
TBA	12	25	7	0.088	30	80	1.050	508	805	1.662	2.002	0.054	5.2	11	13
TBA	12	30	7	0.088	30	80	1.110	610	945	1.662	2.002	0.054	5.5	11	13
TBA	12	37	7	0.088	30	80	1.198	752	1142	1.662	2.002	0.054	5.9	10	12
10 AWG															
604290^	10	2	7	0.113	30	45	0.440	64	118	1.040	1.253	0.050	1.7	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
TBA	10	3	7	0.113	30	45	0.465	97	162	1.040	1.253	0.050	1.8	35	40
604291	10	4	7	0.113	30	45	0.506	129	204	1.040	1.253	0.050	2.0	28	32
606503 [^]	10	4	7	0.113	30	45	0.540	129	222	1.040	1.253	0.050	2.1	28	32
TBA	10	5	7	0.113	30	60	0.589	161	258	1.040	1.253	0.050	2.3	28	32
TBA	10	6	7	0.113	30	60	0.641	194	304	1.040	1.253	0.050	2.5	28	32
622254	10	7	7	0.113	30	60	0.641	226	352	1.040	1.253	0.050	2.5	24	28
TBA	10	8	7	0.113	30	60	0.694	258	389	1.040	1.253	0.050	2.7	24	28
TBA	10	9	7	0.113	30	60	0.746	291	435	1.040	1.253	0.050	2.9	24	28
TBA	10	10	7	0.113	30	60	0.814	323	482	1.040	1.253	0.050	3.2	17	20
606610 [^]	10	12	7	0.113	30	80	0.875	388	607	1.040	1.253	0.050	3.5	17	20
TBA	10	15	7	0.113	30	80	0.976	485	731	1.040	1.253	0.050	3.9	17	20
TBA	10	19	7	0.113	30	80	1.027	614	896	1.040	1.253	0.050	5.1	17	20
TBA	10	20	7	0.113	30	80	1.080	646	944	1.040	1.253	0.050	5.4	17	20
TBA	10	25	7	0.113	30	80	1.200	808	1160	1.040	1.253	0.050	6.0	15	18
TBA	10	30	7	0.113	30	80	1.270	970	1368	1.040	1.253	0.050	6.3	15	18
TBA	10	37	7	0.113	30	80	1.373	1196	1659	1.040	1.253	0.050	6.8	14	16
619664 [?]	10	2	19	0.117	30	45	0.452	64	121	1.040	1.253	0.050	1.8	35	40
619665 [?]	10	4	19	0.117	30	60	0.558	129	233	1.040	1.253	0.050	2.2	28	32
619666 [?]	10	12	19	0.117	30	80	0.909	388	626	1.040	1.253	0.050	3.6	17	20
8 AWG															
661866	8	2	7	0.141	45	60	0.592	102	210	0.653	0.786	0.052	2.3	50	55
6 AWG															
622991	6	4	7	0.177	45	60	0.775	327	501	0.411	0.495	0.051	3.1	52	60
603629 ^{\$}	6	4	19	0.177	45	60	0.779	327	501	0.411	0.495	0.051	3.1	52	60
4 AWG															
603628 ^{\$}	4	4	19	0.225	45	80	0.930	520	777	0.258	0.310	0.048	3.7	68	76
661946	4	4	7	0.225	45	80	0.933	521	768	0.258	0.310	0.048	3.7	68	76

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Cable marked with this symbol is a standard stock item

[^] UL listed part number

! Tinned copper conductor per ASTM B33

† 19 strand Class C conductor per ASTM B8

^{\$} 19 strand combination unilay conductor per ASTM B787

* 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.

