Multi-Conductor CU 600 V FR-XLPE 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 Thermoplastic Chlorinated Polyethylene (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. **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 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 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

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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 Rectance	Min Bending Radius	Allowable Ampacity At 60°C	Allowable Ampacity 75°C	Allowab Ampaci 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																
673140	16	2	7	0.056	25	45	0.308	16	48	4.181	5.037	0.033	1.2	-	-	18
619261	16	4	7	0.056	25	45	0.354	32	75	4.181	5.037	0.033	1.4	-	-	14
604310	16	7	7	0.056	25	45	0.429	56	120	4.181	5.037	0.033	1.7	-	-	12
619263	16	8	7	0.056	25	45	0.449	64	132	4.181	5.037	0.033	1.7	-	-	12
14 AWG																
604210	14	2	7	0.070	30	45	0.357	25	64	2.631	3.170	0.058	1.4	15	20	25
619930	14	12	7	0.070	30	60	0.663	153	291	2.631	3.170	0.058	2.6	7	10	12
12 AWG																
606672^	12	2	7	0.088	30	45	0.404	40	89	1.662	2.002	0.054	1.6	20	25	30
616890^	12	4	7	0.088	30	45	0.445	81	141	1.662	2.002	0.054	1.7	16	20	24
604212	12	4	7	0.088	30	45	0.463	81	149	1.662	2.002	0.054	1.9	16	20	24
619308	12	7	7	0.088	30	60	0.561	142	246	1.662	2.002	0.054	2.2	14	17	21
619937	12	7	7	0.088	30	60	0.569	142	251	1.662	2.002	0.054	2.2	14	17	21
619939	12	9	7	0.088	30	60	0.655	183	311	1.662	2.002	0.054	2.6	14	17	21
618414	12	12	7	0.088	30	60	0.732	244	402	1.662	2.002	0.054	2.9	10	12	15
604305&	12	2	19	0.090	30	45	0.394	40	101	1.662	2.002	0.054	1.5	20	25	30
604307&	12	4	19	0.090	30	45	0.460	81	153	1.662	2.002	0.054	1.8	16	20	24
10 AWG																
619943	10	2	7	0.113	30	45	0.440	64	118	1.040	1.253	0.050	1.7	30	35	40
606671^	10	2	7	0.113	30	45	0.452	64	131	1.040	1.253	0.050	1.8	30	35	40
618360	10	3	7	0.113	30	45	0.459	97	165	1.040	1.253	0.050	1.8	30	35	40
619945	10	4	7	0.113	30	45	0.506	129	203	1.040	1.253	0.050	2.0	24	28	32
619240	10	4	7	0.113	30	45	0.506	129	202	1.040	1.253	0.050	2.0	24	28	32
604219	10	7	7	0.113	30	60	0.637	226	349	1.040	1.253	0.050	2.5	21	24	28
619950	10	9	7	0.113	30	60	0.745	291	443	1.040	1.253	0.050	2.9	21	24	28
622897	10	12	7	0.113	30	80	0.875	388	607	1.040	1.253	0.050	3.5	15	17	20
604301$	10	2	19	0.117	30	45	0.440	64	117	1.040	1.253	0.050	1.7	30	35	40
604302$	10	4	19	0.117	30	45	0.515	129	204	1.040	1.253	0.050	2.0	24	28	32
604304$	10	12	19	0.117	30	80	0.887	388	608	1.040	1.253	0.050	3.5	15	17	20
8 AWG																
604224	8	2	7	0.141	45	60	0.588	102	201	0.653	0.786	0.052	2.3	40	50	55
664353	8	6	7	0.141	45	80	0.883	309	542	0.653	0.786	0.052	3.5	32	40	44
6 AWG																
604296	6	2	7	0.177	45	60	0.664	163	280	0.411	0.495	0.051	2.6	55	65	75
618351!	6	3	7	0.177	45	60	0.698	245	390	0.411	0.495	0.051	2.7	55	65	75
604297	6	3	7	0.177	45	60	0.706	245	390	0.411	0.495	0.051	2.8	55	65	75
619238	6	2	7	0.177	45	60	0.712	163	300	0.411	0.495	0.051	2.8	55	65	75
619959	6	4	7	0.177	45	60	0.771	327	496	0.411	0.495	0.051	3.0	44	52	60
4 AWG																

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	AWG	No.	strands	inch	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp	Amp
606604	4	2	7	0.225	45	60	0.750	260	408	0.258	0.310	0.048	3.0	70	85	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
$ 19 strand combination unilay conductor per ASTM B787
& 19 strand Class C compressed conductor per ASTM B8
* 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.