Multi-Conductor CU 600 V FR-XLPE Thermoset CPE-TS Jacket Control Cable Color Method 1 Table 2

Control Cable 600 Volt Copper Conductors, Flame Retardant Cross Linked Polyethylene (FR-XLPE) Insulation Thermoset Chlorinated Polyethylene (CPE-TS) 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:** Thermoset Chlorinated Polyethylene (CPE-TS) 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

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SAMPLE PRINT LEGEND:

UL Listed
SOUTHWIRE E75755 {UL} XX AWG X/C TYPE TC XHHW-2 CDRS 90C CPE JKT FT4 VW-1 600V SUN RES {MM/DD/YYYY} {SEQUENTIAL FOOTAGE MARKS} SEQ FTG

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 Ampacit 90°C
	AWG	No.	strands	inch	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp	Amp
18 AWG																
622135	18	7	7	0.045	25	45	0.392	35	90	6.669	8.035	0.036	1.5	-	-	9
620620^	18	20	7	0.045	25	60	0.636	100	239	6.669	8.035	0.036	2.5	-	-	7
14 AWG																
625934^	14	2	7	0.070	30	45	0.357	25	69	2.631	3.170	0.058	1.4	15	20	25
625838^	14	3	7	0.070	30	45	0.377	38	87	2.631	3.170	0.058	1.5	15	20	25
625833^	14	4	7	0.070	30	45	0.410	51	109	2.631	3.170	0.058	1.6	12	16	20
607527	14	4	7	0.070	30	45	0.424	51	115	2.631	3.170	0.058	1.6	12	16	20
625828^	14	5	7	0.070	30	45	0.447	64	128	2.631	3.170	0.058	1.7	12	16	20
625824^	14	7	7	0.070	30	45	0.486	89	167	2.631	3.170	0.058	1.9	10	14	17
603776$	14	8	19	0.070	30	60	0.561	102	208	2.631	3.170	0.058	2.2	10	14	17
625819^	14	9	7	0.070	30	60	0.595	115	227	2.631	3.170	0.058	2.3	10	14	17
607528	14	9	7	0.070	30	60	0.601	115	235	2.631	3.170	0.058	2.4	10	14	17
625815^	14	12	7	0.070	30	60	0.667	153	290	2.631	3.170	0.058	2.6	7	10	12
625781^	14	15	7	0.070	30	60	0.738	192	354	2.631	3.170	0.058	2.9	7	10	12
607529	14	15	7	0.070	30	60	0.763	192	370	2.631	3.170	0.058	3.0	7	10	12
625807^	14	19	7	0.070	30	60	0.776	243	432	2.631	3.170	0.058	3.1	7	10	12
607526	14	27	7	0.070	30	80	0.976	345	654	2.631	3.170	0.058	3.9	6	9	11
12 AWG																
607514^	12	2	7	0.088	30	45	0.388	40	87	1.662	2.002	0.054	1.5	20	25	30
607484	12	2	7	0.088	30	45	0.404	40	93	1.662	2.002	0.054	1.6	20	25	30
619933	12	3	7	0.088	30	45	0.412	61	115	1.662	2.002	0.054	1.6	20	25	30
607513	12	4	7	0.088	30	45	0.467	81	151	1.662	2.002	0.054	1.8	16	20	24
607521	12	9	7	0.088	30	60	0.679	183	324	1.662	2.002	0.054	2.7	14	17	21
622186	12	12	7	0.088	30	60	0.759	244	414	1.662	2.002	0.054	3.0	10	12	15
607514^	12	15	7	0.088	30	60	0.869	305	528	1.662	2.002	0.054	3.4	10	12	15
10 AWG																
607518	10	2	7	0.113	30	45	0.452	64	123	1.040	1.253	0.050	1.8	30	35	40
607512	10	4	7	0.113	30	45	0.556	129	227	1.040	1.253	0.050	2.2	24	28	32
662067	10	12	7	0.113	30	80	0.900	388	624	1.040	1.253	0.050	3.6	15	17	20
8 AWG																
622218	8	2	7	0.141	45	60	0.602	102	216	0.653	0.786	0.052	2.4	40	50	55
607519	8	4	7	0.141	45	60	0.703	205	357	0.653	0.786	0.052	2.8	32	40	44
6 AWG																
607516	6	2	7	0.177	45	60	0.678	163	295	0.411	0.495	0.051	2.7	55	65	75

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
^ UL listed part number
% Silicone binder tape
$ 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

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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.