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

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 1



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** 7-strand, class B, compressed, bare copper per ASTM B3 and B8 or 7-strand, class B, compressed, tinned copper per ASTM B33 and B8
2. **Insulation:** Flame Retardant Cross Linked Polyethylene (FR-XLPE)
3. **Filler:** Polypropylene filler on cables with 5 or less conductors
4. **Binder:** Polypropylene binder tape
5. **Rip Cord:** Rip cord for ease of jacket removal
6. **Overall Jacket:** Thermoset Chlorinated Polyethylene (CPE-TS)

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.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1277 Electrical Power and Control Tray Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-58-679 Control Cable Conductor Identification Method 1 Table 1
- ICEA S-73-532 Control, Thermocouple Extension, and Instrumentation Cables (applicable to sizes 20-9 AWG conductors)
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy

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SAMPLE PRINT LEGEND:

Non UL Listed:

SOUTHWIRE XX AWG X/C FR-XLPE CDRS 90°C CPE JKT SUNLIGHT RESISTANT TYPE TC 600V {MM/DD/YYYY} {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

UL Listed:

SOUTHWIRE E75755 {UL} XX AWG 3/C TYPE TC-ER FR-XLPE XHHW-2 CDRS 90°C CPE JKT SUNLIGHT RESISTANT DIRECT BURIAL 600 VOLTS 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 75°C	Allowable Ampacity 90°C	Jacket Color
	AWG	No.	strands	inch	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp	
18 AWG																
622124	18	4	7	0.046	25	45	0.335	20	60	6.669	8.277	0.036	1.3	-	11	BK
16 AWG																
628795^†	16	2	7	0.057	25	45	0.319	9	45	4.181	5.189	0.033	1.3	-	18	BK
14 AWG																
620339^!†	14	3	7	0.071	30	45	0.4	38	97	2.631	3.265	0.058	1.6	20	25	BK
620341^!†	14	4	7	0.071	30	60	0.435	51	115	2.631	3.265	0.058	1.7	16	20	BK
620361^!†	14	7	7	0.071	30	60	0.516	90	179	2.631	3.265	0.058	2.1	14	18	BK
12 AWG																
622177	12	2	7	0.089	30	45	0.392	41	86	1.662	2.063	0.054	1.6	25	30	BK
607191^!†	12	2	7	0.089	30	45	0.413	41	94	1.662	2.063	0.054	1.7	25	30	BK
669327	12	3	7	0.089	30	60	0.425	61	120	1.662	2.063	0.054	1.7	25	30	BK
618423	12	4	7	0.089	30	45	0.463	81	149	1.662	2.063	0.054	1.9	20	24	BK
622179	12	4	7	0.089	30	60	0.463	81	150	1.662	2.063	0.054	1.9	20	24	BK
607193^!†	12	4	7	0.089	30	60	0.477	81	161	1.662	2.063	0.054	1.9	20	24	BK
669323	12	7	7	0.089	30	60	0.589	143	257	1.662	2.063	0.054	2.4	18	21	BK
669319	12	12	7	0.089	30	80	0.767	244	416	1.662	2.063	0.054	3.1	12	15	BK
620280	12	16	7	0.089	30	80	0.861	326	551	1.662	2.063	0.054	3.4	12	15	BK
662521^!	12	19	7	0.089	30	80	0.923	387	649	1.662	2.063	0.054	3.7	12	15	BK
620733&	12	7	19	0.09	30	60	0.589	189	298	1.662	2.063	0.054	2.4	18	21	BK
10 AWG																
622195	10	2	7	0.113	30	60	0.452	65	121	1.04	1.291	0.05	1.8	35	40	BK
622197	10	3	7	0.113	30	60	0.481	97	171	1.04	1.291	0.05	1.9	35	40	BK
620353^!†	10	3	7	0.113	30	60	0.485	97	173	1.04	1.291	0.05	1.9	35	40	BK
622199	10	4	7	0.113	30	60	0.558	129	230	1.04	1.291	0.05	2.2	28	32	BK
607188^!†	10	4	7	0.113	30	60	0.561	129	224	1.04	1.291	0.05	2.2	28	32	BK
620359^!†	10	9	7	0.113	30	80	0.76	291	450	1.04	1.291	0.05	3	24	28	BK
626480^!†	10	12	7	0.113	30	80	0.896	388	615	1.04	1.291	0.05	3.6	18	20	BK
622897	10	12	7	0.113	30	80	0.909	388	607	1.04	1.291	0.05	3.5	18	20	BK
6 AWG																
620388^!†	6	4	7	0.178	45	80	0.783	327	508	0.411	0.51	0.051	3.1	52	60	BK
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	
620390^! †	4	3	7	0.225	45	80	0.817	390	577	0.258	0.32	0.048	3.3	85	95	BK
620392^! †	4	4	7	0.225	45	80	0.936	521	805	0.258	0.32	0.048	3.7	68	76	BK
2 AWG																
620395^! †	2	3	7	0.283	45	80	0.983	621	854	0.162	0.201	0.045	3.9	115	130	BK

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
• 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.
• TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.
^ UL listed part number
! Tinned copper conductor per ASTM B33
& 19 strand Class C compressed conductor per ASTM B8
† Silicone flame-retardant binder tape

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