Multi-Conductor CU 600 V FR-XLPE Shielded 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 Shielded 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. **Shielding:** 5 mil copper Helically-Applied Tape shield
6. **Rip Cord:** Rip cord for ease of jacket removal
7. **Overall Jacket:** Thermoplastic Chlorinated Polyethylene (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 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 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 2
- 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
- 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 {UL} XX AWG CU X/C FR-XLPE XHHW-2 TYPE TC CDRS 90C CPE JKT SHIELDED 600V SUN RES MM/YYYY {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

Non UL Listed

SOUTHWIRE XX AWG X/C FR-XLPE CDRS 90C PVC JACKET SUNLIGHT RESISTANT DIRECT BURIAL 600V {MM/DD/YYYY} {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	
14 AWG																
TBA	14	2	7	0.071	30	45	0.358	70	106	2.631	3.265	0.058	2.5	20	25	BK
TBA	14	3	7	0.071	30	45	0.379	86	128	2.631	3.265	0.058	2.7	20	25	BK
TBA	14	4	7	0.071	30	45	0.413	105	155	2.631	3.265	0.058	2.9	16	20	BK
TBA	14	5	7	0.071	30	45	0.45	123	182	2.631	3.265	0.058	3.2	16	20	BK
TBA	14	6	7	0.071	30	45	0.489	141	208	2.631	3.265	0.058	3.4	16	20	BK
TBA	14	7	7	0.071	30	45	0.489	154	227	2.631	3.265	0.058	3.4	14	18	BK
TBA	14	8	7	0.071	30	60	0.56	173	269	2.631	3.265	0.058	3.9	14	18	BK
TBA	14	9	7	0.071	30	60	0.599	192	297	2.631	3.265	0.058	4.2	14	18	BK
TBA	14	10	7	0.071	30	60	0.65	212	328	2.631	3.265	0.058	4.6	10	12	BK
TBA	14	12	7	0.071	30	60	0.671	242	371	2.631	3.265	0.058	4.7	10	12	BK
TBA	14	15	7	0.071	30	60	0.743	291	444	2.631	3.265	0.058	5.2	10	12	BK
TBA	14	19	7	0.071	30	60	0.781	348	526	2.631	3.265	0.058	5.5	10	12	BK
TBA	14	20	7	0.071	30	60	0.822	368	556	2.631	3.265	0.058	5.8	10	12	BK
TBA	14	25	7	0.071	30	80	0.952	445	702	2.631	3.265	0.058	6.7	9	11	BK
TBA	14	30	7	0.071	30	80	1.006	519	811	2.631	3.265	0.058	7	9	11	BK
TBA	14	37	7	0.071	30	80	1.083	622	963	2.631	3.265	0.058	7.6	8	10	BK
620673$	14	12	19	0.073	30	60	0.712	194	349	2.631	3.265	0.058	5	10	12	BK
12 AWG																
TBA	12	2	7	0.089	30	45	0.394	89	130	1.662	2.063	0.054	2.8	25	30	BK
TBA	12	3	7	0.089	30	45	0.418	114	163	1.662	2.063	0.054	2.9	25	30	BK
TBA	12	4	7	0.089	30	45	0.457	139	197	1.662	2.063	0.054	3.2	20	24	BK
TBA	12	5	7	0.089	30	45	0.498	165	233	1.662	2.063	0.054	3.5	20	24	BK
TBA	12	6	7	0.089	30	60	0.573	191	283	1.662	2.063	0.054	4	20	24	BK
TBA	12	7	7	0.089	30	60	0.573	211	309	1.662	2.063	0.054	4	18	21	BK
TBA	12	8	7	0.089	30	60	0.619	238	348	1.662	2.063	0.054	4.3	18	21	BK
TBA	12	10	7	0.089	30	60	0.722	293	426	1.662	2.063	0.054	5.1	12	15	BK
625170!	12	12	7	0.089	30	60	0.8	299	479	1.662	2.063	0.054	5.6	12	15	BK
TBA	12	15	7	0.089	30	80	0.868	409	615	1.662	2.063	0.054	6.1	12	15	BK
TBA	12	19	7	0.089	30	80	0.911	496	733	1.662	2.063	0.054	6.4	12	15	BK
TBA	12	20	7	0.089	30	80	0.957	522	773	1.662	2.063	0.054	6.7	12	15	BK
TBA	12	25	7	0.089	30	80	1.06	638	934	1.662	2.063	0.054	7.4	11	14	BK
TBA	12	30	7	0.089	30	80	1.121	747	1084	1.662	2.063	0.054	7.8	11	14	BK
TBA	12	37	7	0.089	30	80	1.209	900	1294	1.662	2.063	0.054	8.5	10	12	BK
10 AWG																
TBA	10	3	7	0.113	30	45	0.47	157	214	1.04	1.291	0.05	3.3	35	40	BK
606612^?	10	2	7	0.113	30	45	0.472	104	167	1.04	1.291	0.05	3.3	35	40	BK
TBA	10	5	7	0.113	30	60	0.593	235	329	1.04	1.291	0.05	4.2	28	32	BK
TBA	10	6	7	0.113	30	60	0.645	274	382	1.04	1.291	0.05	4.5	28	32	BK
TBA	10	7	7	0.113	30	60	0.645	306	421	1.04	1.291	0.05	4.5	24	28	BK

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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	8	7	0.113	30	60	0.699	347	476	1.04	1.291	0.05	4.9	24	28	BK
TBA	10	9	7	0.113	30	60	0.751	386	527	1.04	1.291	0.05	5.3	24	28	BK
TBA	10	10	7	0.113	30	60	0.818	427	583	1.04	1.291	0.05	5.7	18	20	BK
606609^?	10	12	7	0.113	30	80	0.929	453	702	1.04	1.291	0.05	6.5	18	20	BK
TBA	10	15	7	0.113	30	80	0.981	607	848	1.04	1.291	0.05	6.9	18	20	BK
TBA	10	19	7	0.113	30	80	1.031	743	1021	1.04	1.291	0.05	7.2	18	20	BK
TBA	10	20	7	0.113	30	80	1.085	782	1076	1.04	1.291	0.05	7.6	18	20	BK
TBA	10	25	7	0.113	30	80	1.204	961	1310	1.04	1.291	0.05	8.4	16	18	BK
TBA	10	30	7	0.113	30	80	1.275	1133	1530	1.04	1.291	0.05	8.9	16	18	BK
TBA	10	37	7	0.113	30	80	1.377	1373	1837	1.04	1.291	0.05	9.6	14	16	BK
619669$	10	4	19	0.117	30	60	0.573	161	258	1.04	1.291	0.05	4	28	32	BK
619870$	10	12	19	0.117	30	80	0.924	447	685	1.04	1.291	0.05	6.5	18	20	BK
8 AWG																
603609$	8	12	19	0.143	45	80	1.165	708	1068	0.653	0.81	0.052	8.2	25	28	BK
6 AWG																
664167&	6	4	19	0.179	45	60	0.812	376	563	0.411	0.51	0.051	5.7	52	60	BK

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 combination unilay conductor per ASTM B787
? Drain wire
& 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.
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.

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