

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 Mills 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 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 {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





Table 1 – Physical and Electrical Data

Stock Number	Cond. Size	Cond. Number	Cond. Strands	Insul. Thickness	Jacket Thickness	Approx. OD	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	mil	mil	inch	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp
14 AWG													
TBA	14	2	7	30	45	0.372	92	2.631	3.170	0.058	4.5	20	25
TBA	14	3	7	30	45	0.392	112	2.631	3.170	0.058	4.7	20	25
TBA	14	4	7	30	45	0.426	130	2.631	3.170	0.058	5.1	16	20
TBA	14	5	7	30	45	0.463	154	2.631	3.170	0.058	5.6	16	20
TBA	14	6	7	30	45	0.502	179	2.631	3.170	0.058	6.0	16	20
TBA	14	7	7	30	45	0.502	197	2.631	3.170	0.058	6.0	14	17
TBA	14	8	7	30	60	0.572	238	2.631	3.170	0.058	6.9	14	17
TBA	14	9	7	30	60	0.611	265	2.631	3.170	0.058	7.3	14	17
TBA	14	10	7	30	60	0.662	292	2.631	3.170	0.058	7.9	10	12
TBA	14	12	7	30	60	0.682	331	2.631	3.170	0.058	8.2	10	12
TBA	14	15	7	30	60	0.754	399	2.631	3.170	0.058	9.0	10	12
TBA	14	19	7	30	60	0.792	478	2.631	3.170	0.058	9.5	10	12
TBA	14	20	7	30	80	0.872	538	2.631	3.170	0.058	10.5	10	12
TBA	14	25	7	30	80	0.962	647	2.631	3.170	0.058	11.5	9	11
TBA	14	30	7	30	80	1.015	749	2.631	3.170	0.058	12.2	9	11
TBA	14	37	7	30	80	1.092	893	2.631	3.170	0.058	13.1	8	10
620673\$	14	12	19	30	60	0.689	337	2.631	3.170	0.058	8.3	10	12
12 AWG													
TBA	12	2	7	30	45	0.408	117	1.662	2.002	0.054	4.9	25	30
TBA	12	3	7	30	45	0.431	147	1.662	2.002	0.054	5.2	25	30
TBA	12	4	7	30	45	0.470	172	1.662	2.002	0.054	5.6	20	24
TBA	12	5	7	30	45	0.511	205	1.662	2.002	0.054	6.1	20	24
TBA	12	6	7	30	60	0.586	256	1.662	2.002	0.054	7.0	20	24
TBA	12	7	7	30	60	0.586	282	1.662	2.002	0.054	7.0	17	21
TBA	12	8	7	30	60	0.631	317	1.662	2.002	0.054	7.6	17	21
TBA	12	10	7	30	60	0.734	390	1.662	2.002	0.054	8.8	12	15
625170!	12	12	7	30	60	0.798	474	1.662	2.002	0.054	9.6	12	15
TBA	12	15	7	30	80	0.879	577	1.662	2.002	0.054	10.5	12	15
TBA	12	19	7	30	80	0.922	693	1.662	2.002	0.054	11.1	12	15
TBA	12	20	7	30	80	0.967	729	1.662	2.002	0.054	11.6	12	15
TBA	12	25	7	30	80	1.070	885	1.662	2.002	0.054	12.8	11	13
TBA	12	30	7	30	80	1.130	1031	1.662	2.002	0.054	13.6	11	13
TBA	12	37	7	30	80	1.218	1235	1.662	2.002	0.054	14.6	10	12
10 AWG													
606612^?	10	2	7	30	45	0.460	164	1.040	1.253	0.050	3.2	35	40
TBA	10	3	7	30	45	0.485	199	1.040	1.253	0.050	3.4	35	40
TBA	10	5	7	30	60	0.609	301	1.040	1.253	0.050	4.3	28	32
TBA	10	6	7	30	60	0.661	352	1.040	1.253	0.050	4.6	28	32
TBA	10	7	7	30	60	0.661	391	1.040	1.253	0.050	4.6	24	28





Stock Number	Cond. Size	Cond. Number	Cond. Strands	Insul. Thickness	Jacket Thickness	Approx. OD	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	mil	mil	inch	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp
TBA	10	8	7	30	60	0.714	440	1.040	1.253	0.050	5.0	24	28
TBA	10	9	7	30	60	0.766	491	1.040	1.253	0.050	5.4	24	28
TBA	10	10	7	30	80	0.874	578	1.040	1.253	0.050	10.5	17	20
606609^?	10	12	7	30	80	0.899	689	1.040	1.253	0.050	10.8	17	20
TBA	10	15	7	30	80	0.996	804	1.040	1.253	0.050	12.0	17	20
TBA	10	19	7	30	80	1.047	975	1.040	1.253	0.050	12.6	17	20
TBA	10	20	7	30	80	1.100	1026	1.040	1.253	0.050	13.2	17	20
TBA	10	25	7	30	80	1.220	1253	1.040	1.253	0.050	14.6	15	18
TBA	10	30	7	30	80	1.290	1467	1.040	1.253	0.050	15.5	15	18
TBA	10	37	7	30	80	1.393	1766	1.040	1.253	0.050	16.7	14	16
619669\$	10	4	19	30	60	0.557	252	1.040	1.253	0.050	3.9	28	32
619870\$	10	12	19	30	80	0.899	671	1.040	1.253	0.050	10.8	17	20
8 AWG													
603609\$	8	12	19	45	80	1.165	1068	0.653	0.786	0.052	13.9	25	27
6 AWG													
664167&	6	4	19	45	60	0.812	563	0.411	0.535	0.031	9.7	52	60

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.

