

Multi-Conductor CU 600 V FR-XLPE LCT Shielded 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 Shielded Thermoplastic Chlorinated Polyethylene Chloride (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 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. **Shield:** 5 mils copper Longitudinally-Applied Corrugated Tape (LCT) shield
6. **Rip Cord:** Rip cord for ease of jacket removal
7. **Overall Jacket:** Thermoplastic Chlorinated Polyethylene Chloride (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 construction 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 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





SAMPLE PRINT LEGEND:

UL Listed

SOUTHWIRE E75755 {UL} XX AWG X/C FR-XLPE XHHW-2 TYPE TC-ER CDRS 90C CPE JKT SHIELDED 600V SUN RES YEAR
{SEQUENTIAL FOOTAGE MARKS} SEQ FEET

Non UL Listed

SOUTHWIRE XX AWG X/C FR-XLPE CDRS 90C CPE JKT SHIELDED 600V SUN. RES. DIRECT BURIAL YEAR SEQUENTIAL
FOOTAGE MARKS SEQ FEET





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 Reactance	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																
623219	18	2	7	0.046	25	45	0.387	37	86	6.669	8.676	0.039	4.6	-	14	Black
606669 ^A	18	10	7	0.046	25	60	0.638	95	205	6.669	8.676	0.039	7.7	-	7	Black
14 AWG																
603683	14	7	7	0.070	30	60	0.612	128	256	2.631	3.170	0.058	7.3	14	17	Black
604417	14	19	7	0.070	30	80	0.918	310	587	2.631	3.170	0.058	11.0	10	12	Black
12 AWG																
603689	12	2	7	0.088	30	45	0.456	74	140	1.662	2.002	0.054	5.5	25	30	Black
603691 ^A	12	4	7	0.088	30	45	0.512	114	203	1.662	2.002	0.054	6.1	20	24	Black
603692	12	5	7	0.088	30	60	0.563	143	241	1.662	2.002	0.054	6.8	20	24	Black
627832	12	4	7	0.088	30	60	0.579	114	221	1.662	2.002	0.054	6.9	20	24	Black
603694	12	7	7	0.088	30	60	0.661	187	324	1.662	2.002	0.054	7.9	17	21	Black
603697	12	9	7	0.088	30	60	0.778	233	411	1.662	2.002	0.054	9.3	17	21	Black
603699	12	12	7	0.088	30	80	0.872	299	529	1.662	2.002	0.054	10.5	12	15	Black
618870 ^S	12	8	19	0.090	30	60	0.720	196	351	1.662	2.002	0.054	8.6	17	21	Black
621553 ^S	12	12	19	0.090	30	80	0.888	300	536	1.662	2.002	0.054	10.7	12	15	Black
10 AWG																
621333	10	2	7	0.113	30	45	0.509	64	190	1.040	1.253	0.050	6.1	35	40	Black
603701	10	2	7	0.113	30	60	0.566	103	198	1.040	1.253	0.050	6.8	35	40	Black
603702	10	3	7	0.113	30	60	0.593	135	249	1.040	1.253	0.050	7.1	35	40	Black
618685 ^A	10	4	7	0.113	30	60	0.636	129	312	1.040	1.253	0.050	7.6	28	32	Black
603703 ^A	10	4	7	0.113	30	60	0.636	162	292	1.040	1.253	0.050	7.6	28	32	Black
619436 ^A	10	4	7	0.113	30	60	0.652	173	311	1.040	1.253	0.050	7.8	28	32	Black
662671 ^A	10	5	7	0.113	30	60	0.685	161	353	1.040	1.253	0.050	8.2	28	32	Black
603707	10	7	7	0.113	30	60	0.737	276	444	1.040	1.253	0.050	8.8	24	28	Black
603709 ^A	10	9	7	0.113	30	80	0.880	324	560	1.040	1.253	0.050	10.6	24	28	Black
603711	10	12	7	0.113	30	80	0.974	455	726	1.040	1.253	0.050	11.7	17	20	Black
621305 ^S	10	2	19	0.117	30	60	0.566	98	191	1.040	1.253	0.050	6.8	35	40	Black
604324 ^S	10	4	19	0.117	30	60	0.654	165	272	1.040	1.253	0.050	7.8	28	32	Black
661043! &	10	9	19	0.117	30	80	0.884	346	573	1.040	1.253	0.050	10.6	24	28	Black
604325!	10	12	19	0.117	30	80	0.983	421	691	1.040	1.253	0.050	11.8	17	20	Black
8 AWG																
603714	8	3	7	0.141	45	60	0.730	199	363	0.653	0.786	0.052	8.8	50	55	Black
604320	8	4	7	0.141	45	60	0.790	256	434	0.653	0.786	0.052	9.5	40	44	Black
625635	8	12	7	0.141	45	80	1.229	701	1113	0.653	0.786	0.052	14.7	25	27	Black
6 AWG																
625639	6	2	7	0.177	45	60	0.756	210	363	0.411	0.495	0.051	9.1	65	75	Black
604319	6	3	7	0.177	45	60	0.802	278	452	0.411	0.495	0.051	9.6	65	75	Black
TBA	6	4	7	0.177	45	80	0.908	383	579	0.411	0.495	0.051	10.9	52	60	Black





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 Reactance	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	
4 AWG																
604318	4	3	7	0.225	45	80	0.940	457	713	0.258	0.310	0.048	11.3	85	95	Black
TBA	4	4	7	0.225	45	80	1.024	586	814	0.258	0.310	0.048	12.3	68	76	Black
2 AWG																
604316	2	2	7	0.282	45	80	1.014	447	698	0.162	0.195	0.045	12.2	115	130	Black
604317	2	3	7	0.282	45	80	1.083	692	1023	0.162	0.195	0.045	13.0	115	130	Black
604315\$	1	2	19	0.333	55	80	1.122	596	903	0.128	0.154	0.046	13.5	130	145	Black

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

& 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.

