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 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. **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 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 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

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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																
623219	18	2	7	0.046	25	45	0.387	38	86	6.669	8.277	0.036	2.7	-	14	BK
606669^	18	12	7	0.046	25	60	0.638	95	206	6.669	8.277	0.036	4.5	-	7	BK
14 AWG																
603683	14	7	7	0.071	30		0.613	129	257	2.631	3.265	0.058	4.3	14	18	BK
604417	14	19	7	0.071	30		0.918	310	587	2.631	3.265	0.058	6.4	10	12	BK
12 AWG																
603689	12	2	7	0.089	30	45	0.456	74	141	1.662	2.063	0.054	3.2	25	30	BK
603691^	12	4	7	0.089	30	60	0.596	115	231	1.662	2.063	0.054	4.2	20	24	BK
627832	12	4	7	0.089	30	60	0.596	115	228	1.662	2.063	0.054	4.2	20	24	BK
603692	12	5	7	0.089	30	60	0.64	138	266	1.662	2.063	0.054	4.5	20	24	BK
603694	12	7	7	0.089	30	60	0.685	187	335	1.662	2.063	0.054	4.8	18	21	BK
603697	12	9	7	0.089	30	60	0.779	233	412	1.662	2.063	0.054	5.5	18	21	BK
603699	12	12	7	0.089	30	80	0.905	300	549	1.662	2.063	0.054	6.3	12	15	BK
618870$	12	8	19	0.09	30	60	0.736	204	345	1.662	2.063	0.054	5.2	18	21	BK
621553&	12	12	19	0.09	30	80	0.912	297	550	1.662	2.063	0.054	6.4	12	15	BK
10 AWG																
621333	10	2	7	0.113	30	45	0.513	65	194	1.04	1.291	0.05	3.6	35	40	BK
603701	10	2	7	0.113	30	60	0.58	104	204	1.04	1.291	0.05	4.1	35	40	BK
603702	10	3	7	0.113	30	60	0.609	136	256	1.04	1.291	0.05	4.3	35	40	BK
618685^	10	4	7	0.113	30	60	0.636	129	312	1.04	1.291	0.05	4.5	28	32	BK
603703^	10	4	7	0.113	30	60	0.638	164	277	1.04	1.291	0.05	4.5	28	32	BK
619436^	10	4	7	0.113	30	60	0.658	174	312	1.04	1.291	0.05	4.6	28	32	BK
662671^	10	5	7	0.113	30	60	0.704	162	361	1.04	1.291	0.05	4.9	28	32	BK
603707	10	7	7	0.113	30		0.737	277	444	1.04	1.291	0.05	5.2	24	28	BK
603709^	10	9	7	0.113	30	80	0.885	325	562	1.04	1.291	0.05	6.2	24	28	BK
603711	10	12	7	0.113	30	80	0.982	455	739	1.04	1.291	0.05	6.9	18	20	BK
621305$	10	2	19	0.117	30	60	0.58	98	198	1.04	1.291	0.05	4.1	35	40	BK
604324$	10	4	19	0.117	30	60	0.654	165	272	1.04	1.291	0.05	4.6	28	32	BK
661043!&	10	9	19	0.117	30	80	0.907	347	589	1.04	1.291	0.05	6.3	24	28	BK
604325!	10	12	19	0.117	30	80	1.005	445	698	1.04	1.291	0.05	7	18	20	BK
8 AWG																
603714	8	3	7	0.142	45	80	0.73	199	364	0.653	0.81	0.052	5.1	50	55	BK
604320	8	4	7	0.142	45	80	0.79	256	439	0.653	0.81	0.052	5.5	40	44	BK
625635	8	12	7	0.142	45	80	1.242	701	1127	0.653	0.81	0.052	8.7	25	28	BK
6 AWG																
625639	6	2	7	0.178	45	80	0.764	211	367	0.411	0.51	0.051	5.3	65	75	BK
TBA	6	4	7	0.178	45	60	0.775	432	579	0.411	0.51	0.051	5.4	52	60	BK
604319	6	3	7	0.178	45	80	0.808	292	438	0.411	0.51	0.051	5.7	65	75	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	
4 AWG																
TBA	4	4	7	0.225	45	80	0.928	643	849	0.258	0.32	0.048	6.5	68	76	BK
604318	4	3	7	0.225	45	80	0.941	457	714	0.258	0.32	0.048	6.6	85	95	BK
2 AWG																
604316	2	2	7	0.283	45	80	1.014	472	687	0.162	0.201	0.045	7.1	115	130	BK
604317	2	3	7	0.283	45	80	1.083	692	1023	0.162	0.201	0.045	7.6	115	130	BK
604315$	1	2	19	0.333	55	80	1.134	597	910	0.128	0.159	0.046	7.9	130	145	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
& 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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