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. 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. **Rip Cord:** Rip cord for ease of jacket removal
6. **Overall Jacket:** Thermoset Chlorinated Polyethylene (CPE-TS) Jacket

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 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

SAMPLE PRINT LEGEND:

Non UL:
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:
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

Table 1 – Physical and Electrical Data

Stock Number	Cond. Size	Cond. Metal	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
	AWG		No.	strands	inch	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp
18 AWG																
622124	18	CU	4	7	0.045	25	45	0.334	20	59	6.669	8.035	0.036	1.3	-	11
16 AWG																
628795^	16	CU	2	7	0.056	25	45	0.311	16	49	4.181	5.037	0.033	1.2	-	18
14 AWG																
620339^!	14	TCU	3	7	0.070	30	45	0.395	38	95	2.631	3.170	0.058	1.5	20	25
620341^!	14	TCU	4	7	0.070	30	45	0.421	51	110	2.631	3.170	0.058	1.6	16	20
620361^!	14	TCU	7	7	0.070	30	45	0.498	89	173	2.631	3.170	0.058	1.9	14	17
12 AWG																
622177	12	CU	2	7	0.088	30	45	0.392	40	86	1.662	2.002	0.054	1.5	25	30
607191^!	12	TCU	2	7	0.088	30	45	0.404	40	92	1.662	2.002	0.054	1.6	25	30
669327	12	CU	3	7	0.088	30	45	0.424	61	119	1.662	2.002	0.054	1.6	25	30
618423	12	CU	4	7	0.088	30	45	0.445	81	143	1.662	2.002	0.054	1.7	20	24
622179	12	CU	4	7	0.088	30	45	0.463	81	149	1.662	2.002	0.054	1.8	20	24
607193^!	12	TCU	4	7	0.088	30	45	0.472	81	159	1.662	2.002	0.054	1.8	20	24
669323	12	CU	7	7	0.088	30	60	0.583	142	255	1.662	2.002	0.054	2.3	17	21
620733&	12	CU	7	19	0.088	30	60	0.588	189	298	1.662	2.002	0.054	2.3	17	21
669319	12	CU	12	7	0.088	30	60	0.759	244	414	1.662	2.002	0.054	3.0	12	15
620280	12	CU	16	7	0.088	30	60	0.861	325	551	1.662	2.002	0.054	3.4	12	15
662521^!	12	TCU	19	7	0.088	30	80	0.923	386	648	1.662	2.002	0.054	3.6	12	15
10 AWG																
622195	10	CU	2	7	0.113	30	45	0.448	64	120	1.040	1.253	0.050	1.7	35	40
620353^!	10	TCU	3	7	0.113	30	45	0.479	97	170	1.040	1.253	0.050	1.9	35	40
622199	10	CU	4	7	0.113	30	45	0.552	129	228	1.040	1.253	0.050	2.2	28	32
607188^!	10	TCU	4	7	0.113	30	45	0.560	129	224	1.040	1.253	0.050	2.2	28	32
620359^!	10	TCU	9	7	0.113	30	60	0.760	291	449	1.040	1.253	0.050	3.0	24	28
626480^!	10	TCU	12	7	0.113	30	80	0.895	388	615	1.040	1.253	0.050	3.5	17	20
6 AWG																
620388^!	6	TCU	4	7	0.177	45	60	0.783	327	507	0.411	0.495	0.051	3.1	52	60
4 AWG																
620390^!	4	TCU	3	7	0.225	45	60	0.816	390	577	0.258	0.310	0.048	3.2	85	95
620392^!	4	TCU	4	7	0.225	45	80	0.936	520	805	0.258	0.310	0.048	3.7	68	76
2 AWG																
620395^!	2	TCU	3	7	0.283	45	80	0.983	621	854	0.162	0.211	0.028	3.9	115	130

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 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.