Multi-Conductor CU 600 V FR-XLPE LCT Shielded PVC Jacket Control Cable Color Method 1 Table 2

Control Cable 600 Volt Copper Conductors, Flame Retardant Cross Linked Polyethylene (FR-XLPE) Insulation Shielded Polyvinyl Chloride (PVC) 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. **Shield:** 5 mils copper Longitudinally-Applied Corrugated Tape (LCT) shield
6. **Rip Cord:** Rip cord for ease of jacket removal
7. **Overall Jacket:** Polyvinyl Chloride (PVC) 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. 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
- CSA CSA marking is available upon request
- 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

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SAMPLE PRINT LEGEND:

UL Listed
SOUTHWIRE {UL} XX AWG X/C FRXLP SHIELDED TYPE TC 600V PVC SUN. RES. DIRECT BURIAL YEAR{SEQUENTIAL FOOTAGE MARKS} SEQ FEET

Non UL Listed
SOUTHWIRE XX AWG X/C FRXLP SHIELDED TYPE TC 600V PVC 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 At 60°C	Allowable Ampacity 75°C	Allowab Ampacit 90°C
	AWG	No.	strands	inch	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp	Amp
14 AWG																
TBA	14	2	7	0.070	30	45	0.349	26	68	2.630	3.288	0.058	4.2	15	20	25
TBA	14	3	7	0.070	30	45	0.370	38	87	2.630	3.288	0.058	4.4	15	20	25
604059^	14	4	7	0.070	30	45	0.498	84	165	2.631	3.170	0.058	6	12	16	20
TBA	14	5	7	0.070	30	60	0.579	64	132	2.630	3.288	0.058	6.9	12	16	20
604057^	14	7	7	0.070	30	60	0.604	128	249	2.631	3.170	0.058	7.2	10	14	17
TBA	14	6	7	0.070	30	60	0.618	77	155	2.630	3.288	0.058	7.4	12	16	20
TBA	14	8	7	0.070	30	60	0.658	102	195	2.630	3.288	0.058	7.9	10	14	17
TBA	14	9	7	0.070	30	60	0.697	115	236	2.630	3.288	0.058	8.4	10	14	17
TBA	14	10	7	0.070	30	60	0.748	128	266	2.630	3.288	0.058	9	8	10	12
604056^	14	12	7	0.070	30	60	0.760	203	383	2.631	3.170	0.058	9.1	8	10	12
TBA	14	19	7	0.070	30	60	0.768	243	446	2.630	3.288	0.058	9.2	8	10	12
TBA	14	15	7	0.070	30	80	0.880	192	371	2.630	3.288	0.058	10.6	8	10	12
TBA	14	20	7	0.070	30	80	0.958	256	475	2.630	3.288	0.058	11.5	8	10	12
TBA	14	25	7	0.070	30	80	1.048	320	619	2.630	3.288	0.058	12.6	7	9	11
TBA	14	30	7	0.070	30	80	1.101	384	719	2.630	3.288	0.058	13.2	7	9	11
TBA	14	37	7	0.070	30	80	1.178	474	862	2.630	3.288	0.058	14.1	6	8	10
12 AWG																
TBA	12	2	7	0.088	30	45	0.494	41	90	1.660	2.075	0.054	5.9	20	25	30
TBA	12	3	7	0.088	30	60	0.547	61	118	1.660	2.075	0.054	6.6	20	25	30
TBA	12	4	7	0.088	30	60	0.586	81	148	1.660	2.075	0.054	7	16	20	24
TBA	12	5	7	0.088	30	60	0.627	102	181	1.660	2.075	0.054	7.5	16	20	24
TBA	12	6	7	0.088	30	60	0.672	122	214	1.660	2.075	0.054	8.1	16	20	24
TBA	12	7	7	0.088	30	60	0.672	143	237	1.660	2.075	0.054	8.1	14	18	21
TBA	12	8	7	0.088	30	60	0.717	163	288	1.660	2.075	0.054	8.6	14	18	21
TBA	12	9	7	0.088	30	60	0.762	183	324	1.660	2.075	0.054	9.1	14	18	21
TBA	12	10	7	0.088	30	80	0.860	204	365	1.660	2.075	0.054	10.3	10	12	15
624457^	12	12	7	0.088	30	80	0.876	299	543	1.662	2.002	0.054	10.5	10	12	15
TBA	12	15	7	0.088	30	80	0.965	305	516	1.660	2.075	0.054	11.6	10	12	15
TBA	12	19	7	0.088	30	80	1.008	387	657	1.660	2.075	0.054	12.1	10	12	15
TBA	12	20	7	0.088	30	80	1.053	407	699	1.660	2.075	0.054	12.6	10	12	15
TBA	12	25	7	0.088	30	80	1.156	509	860	1.660	2.075	0.054	13.9	9	11	13
TBA	12	30	7	0.088	30	80	1.216	611	1005	1.660	2.075	0.054	14.6	9	11	13
TBA	12	37	7	0.088	30	80	1.304	753	1211	1.660	2.075	0.054	15.6	8	10	12
10 AWG																
629383^	10	2	7	0.113	30	60	0.572	95	192	1.040	1.253	0.050	6.9	30	35	40
620886	10	3	7	0.113	30	60	0.589	135	251	1.040	1.253	0.050	7.1	30	35	40
604091^	10	4	7	0.113	30	60	0.638	173	309	1.040	1.253	0.050	7.7	24	28	32
619380!	10	4	7	0.113	30	60	0.657	173	310	1.040	1.253	0.050	7.9	24	28	32
629381^	10	5	7	0.113	30	60	0.691	200	341	1.040	1.253	0.050	8.3	24	28	32

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	AWG	No.	strands	inch	mil	mil	inch	lb / 1000ft	lb / 1000ft	Ω /1000ft	Ω /1000ft	Ω/1000ft	inch	Amp	Amp	Amp
TBA	10	6	7	0.113	30	60	0.731	194	323	1.040	1.300	0.050	8.8	21	24	28
604096^	10	7	7	0.113	30	60	0.734	259	429	1.040	1.253	0.050	8.8	21	24	28
TBA	10	8	7	0.113	30	60	0.800	259	410	1.040	1.300	0.050	9.6	21	24	28
629379^	10	9	7	0.113	30	80	0.885	341	570	1.040	1.253	0.050	10.6	21	24	28
TBA	10	10	7	0.113	30	60	0.920	324	519	1.040	1.300	0.050	11	15	17	20
604093^	10	12	7	0.113	30	80	0.975	421	701	1.040	1.253	0.050	11.7	15	17	20
TBA	10	15	7	0.113	30	80	1.082	486	777	1.040	1.300	0.050	13	15	17	20
TBA	10	19	7	0.113	30	80	1.133	615	941	1.040	1.300	0.050	13.6	15	17	20
TBA	10	20	7	0.113	30	80	1.186	648	1001	1.040	1.300	0.050	14.2	15	17	20
TBA	10	25	7	0.113	30	80	1.306	810	1236	1.040	1.300	0.050	15.7	13	15	18
TBA	10	30	7	0.113	30	80	1.376	971	1450	1.040	1.300	0.050	16.5	13	15	18
TBA	10	37	7	0.113	30	80	1.479	1198	1755	1.040	1.300	0.050	17.7	12	14	16

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

* 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.