

2/C, 3/C, 4/C CU 600 V FR-XLPE Shielded PVC Jacket Power Cable With Ground. Color Method 1 Table 1

Type TC-ER Power Cable 600 or 1000 Volt Three Conductor Copper, Fire Retardant Cross-Linked Polyethylene (FR-XLPE) insulation Shielded Polyvinyl Chloride (PVC) Jacket with 1 Bare CU Ground. Conductor Identification Method 1 Table 1



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
2. **Insulation:** Fire Retardant Cross Linked Polyethylene (FR-XLPE)
3. **Grounding Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
4. **Filler:** Paper or Polypropylene filler
5. **Binder:** Polyester flat thread binder tape
6. **Shield:** 5 mils tape shield
7. **Rip Cord:** Rip cord for ease of jacket removal
8. **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 Standard Specification for 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 1
- 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)



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SAMPLE PRINT LEGEND:

SOUTHWIRE E75755 {UL} X AWG X/C FR-XLPE CDRS WG 90C PVC JKT TYPE TC-ER 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	Diameter Over Insulation	Jacket Thickness	Approx. OD	Approx. Weight	DC Resistance @ 25°C	AC Resistance @ 90°C	Min Bending Radius	Allowable Ampacity At 60°C *	Allowable Ampacity 75°C *	Allowable Ampacity 90°C *
	AWG	No.	strands	inch	mil	inch	mil	inch	lb /1000ft	Ω /1000ft	Ω /1000ft	inch	Amp	Amp	Amp
606761	8	2	7	0.139	45	0.229	60	0.612	266	0.652	0.815	2.4	40	50	55
618937 [^]	8	3	7	0.139	45	0.229	60	0.615	275	0.652	0.815	2.5	40	50	55
TBA	8	4	7	0.139	45	0.229	60	0.673	347	0.652	0.815	2.7	32	40	44
TBA	6	2	7	0.174	45	0.264	60	0.661	285	0.411	0.514	2.6	55	65	75
672567 [^]	6	2	7	0.174	45	0.268	60	0.684	324	0.411	0.514	8.2	55	65	75
TBA	6	3	7	0.174	45	0.264	60	0.691	394	0.411	0.514	2.8	55	65	75
TBA	6	4	7	0.174	45	0.264	60	0.758	501	0.411	0.514	3.0	44	52	60
TBA	4	2	7	0.221	45	0.311	60	0.753	409	0.258	0.323	3	70	85	95
TBA	4	3	7	0.221	45	0.311	60	0.791	557	0.258	0.323	3.2	70	85	95
TBA	4	4	7	0.221	45	0.311	80	0.910	750	0.258	0.323	3.6	56	68	76
TBA	2	2	7	0.277	45	0.367	80	0.907	630	0.162	0.203	3.6	95	115	130
TBA	2	3	7	0.277	45	0.367	80	0.953	861	0.162	0.203	3.8	95	115	130
TBA	2	4	7	0.277	45	0.367	80	1.047	1109	0.162	0.203	5.2	76	92	104
TBA	1	2	19	0.321	55	0.431	80	1.036	789	0.129	0.161	5.2	110	130	145
TBA	1	3	19	0.321	55	0.431	80	1.091	1079	0.129	0.162	5.5	110	130	145
TBA	1	4	19	0.321	55	0.431	80	1.200	1392	0.129	0.161	6.0	88	104	116
TBA	1/0	2	19	0.36	55	0.47	80	1.116	956	0.102	0.128	5.6	125	150	150
TBA	1/0	3	19	0.360	55	0.470	80	1.175	1317	0.102	0.128	5.9	125	150	170
TBA	1/0	4	19	0.360	55	0.470	80	1.295	1704	0.102	0.128	6.5	100	120	136
TBA	2/0	2	19	0.404	55	0.515	80	1.202	1162	0.081	0.101	6	145	175	195
TBA	2/0	3	19	0.404	55	0.514	80	1.270	1613	0.081	0.102	6.4	145	175	195
TBA	2/0	4	19	0.404	55	0.514	80	1.401	2093	0.081	0.101	7.0	116	140	156
TBA	3/0	2	19	0.454	55	0.564	80	1.304	1422	0.064	0.08	6.5	165	200	225
TBA	3/0	3	19	0.454	55	0.564	80	1.378	1986	0.064	0.081	6.9	165	200	225
TBA	3/0	4	19	0.454	55	0.564	80	1.521	2582	0.064	0.080	7.6	132	160	180
TBA	4/0	2	19	0.51	55	0.62	80	1.416	1744	0.051	0.064	7.1	195	230	260
TBA	4/0	3	19	0.510	55	0.620	80	1.499	2449	0.051	0.064	7.5	195	230	260
TBA	4/0	4	19	0.510	55	0.620	80	1.657	3191	0.051	0.064	8.3	156	184	208

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

† Ampacities are based on Table 310.15 (B)(16) of the NEC, 2017 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)

[^] UL Listed part number

