

3/C CU 600 or 1000 V XLPE XHHW-2 PVC Jacket Power Cable With Ground. Silicone Free

Type TC-ER Power Cable 600 or 1000 Volt Three Conductor Copper, Cross Linked Polyethylene (XLPE) insulation XHHW-2 Polyvinyl Chloride (PVC) Jacket with 1 Bare CU Ground. Silicone Free.

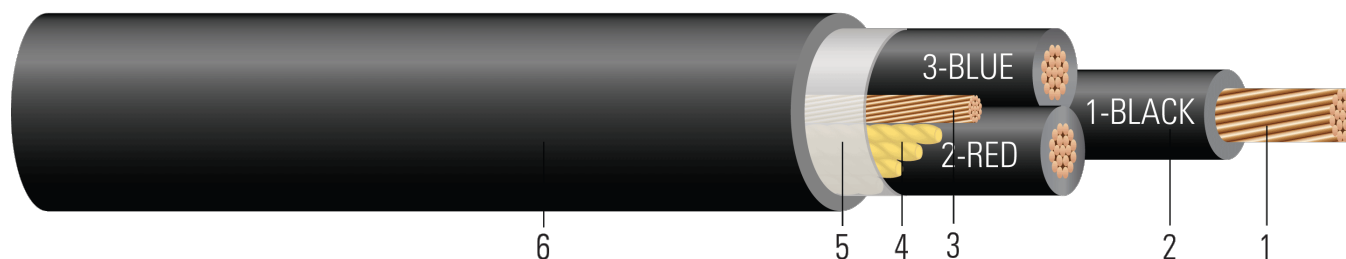


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- Insulation:** Cross Linked Polyethylene (XLPE) Type XHHW-2
- Grounding Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (cable size 8 & 6 has insulated green ground)
- Filler:** Paper filler (cable size 8 & 6 uses Polypropylene filler)
- Binder:** Polyester flat thread binder tape for cable sizes larger than 2 AWG
- Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 or 1000 Volt Type TC-ER power 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. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10. Silicone free.

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
- ICEA S-58-679 Control Cable Conductor Identification Method 3 (1-BLACK, 2-RED, 3-BLUE)
- 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 383 Flame Test (70,000 btu)
- 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 {R} {UL} AWG CU 3 CDRS TYPE TC-ER XHHW-2 CDRS GW 1 X AWG 90{D}C JACKET SUNLIGHT RESISTANT DIRECT BURIAL 600V or 1000V {YYYY} {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Diameter Over Conductor	Insul. Thickness	Diameter Over Insulation	Ground	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/ Kcmil	inch	mil	inch	No. x AWG	mil	inch	lb/1000ft	lb/1000ft
480590◇	8	0.139	45	0.229	1 x 10	60	0.615	187	307
555196◇	8	0.139	45	0.229	x None	60	0.615	155	279
480608◇	6	0.174	45	0.264	1 x 8	60	0.691	297	444
555195	6	0.174	45	0.264	x None	60	0.691	245	382
480616◇	4	0.221	45	0.311	1 x 8	60	0.791	442	607
480624◇	2	0.277	45	0.367	1 x 6	80	0.953	703	941
480632◇	1	0.321	55	0.431	1 x 6	80	1.091	865	1159
480640◇	1/0	0.360	55	0.470	1 x 6	80	1.175	1069	1397
480657◇	2/0	0.404	55	0.514	1 x 6	80	1.270	1327	1693
480665◇	3/0	0.454	55	0.564	1 x 4	80	1.378	1700	2112
480673◇	4/0	0.510	55	0.620	1 x 4	80	1.499	2110	2575
480681◇	250	0.558	65	0.688	1 x 4	80	1.646	2469	3012
480699	300	0.611	65	0.741	1 x 3	110	1.821	2971	3667
480707◇	350	0.661	65	0.791	1 x 3	110	1.929	3440	4196
890148	500	0.789	65	0.919	1 x 1/0	110	2.155	4967	5897
480723◇	500	0.789	65	0.919	1 x 2	110	2.205	4885	5799
583697	500	0.789	65	0.919	1 x 2/0	110	2.262	4967	6065
593173	600	0.866	80	1.026	1 x 3/0	110	2.436	6131	7303
890388◇	600	0.866	80	1.026	1 x 2	110	2.436	5822	6911
554410	750	0.968	80	1.128	1 x 1	110	2.656	7278	8510

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Cable marked with this symbol is a standard stock item



Table 2 – Electrical and Engineering Data

Stock Number	Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance @ 60Hz	Shield Short Circuit Current 6 Cycles	Allowable Ampacity At 60°C†	Allowable Ampacity At 75°C†	Allowable Ampacity At 90°C†
	AWG/Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp	Amp
480590◇	8	2.5	396	0.652	0.815	0.033	3754	40	50	55
555196◇	8	2.5	396	0.652	0.815	0.033	3754	40	50	55
480608◇	6	2.8	630	0.411	0.514	0.031	5966	55	65	75
555195	6	2.8	630	0.411	0.514	0.031	5966	55	65	75
480616◇	4	3.2	1002	0.258	0.323	0.030	9491	70	85	95
480624◇	2	3.8	1593	0.162	0.203	0.028	15089	95	115	130
480632◇	1	5.5	2009	0.129	0.162	0.028	19029	110	130	145
480640◇	1/0	5.9	2534	0.102	0.128	0.028	24011	125	150	170
480657◇	2/0	6.4	3194	0.081	0.102	0.027	30264	145	175	195
480665◇	3/0	6.9	4027	0.064	0.081	0.027	38154	165	200	225
480673◇	4/0	7.5	5078	0.051	0.064	0.026	48114	195	230	260
480681◇	250	8.2	6000	0.043	0.055	0.027	56845	215	255	290
480699	300	9.1	7200	0.036	0.046	0.026	68214	240	285	320
480707◇	350	9.6	8400	0.031	0.040	0.026	79583	260	310	350
890148	500	13.5	12000	0.022	0.029	0.025	113690	320	380	430
480723◇	500	13.2	12000	0.022	0.029	0.025	113690	320	380	430
583697	500	13.5	12000	0.022	0.029	0.025	113690	320	380	430
593173	600	14.6	14400	0.018	0.024	0.026	136428	350	420	475
890388◇	600	14.6	14400	0.018	0.024	0.026	136428	350	420	475
554410	750	15.9	18000	0.014	0.020	0.025	170535	400	475	535

† 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)

