

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.

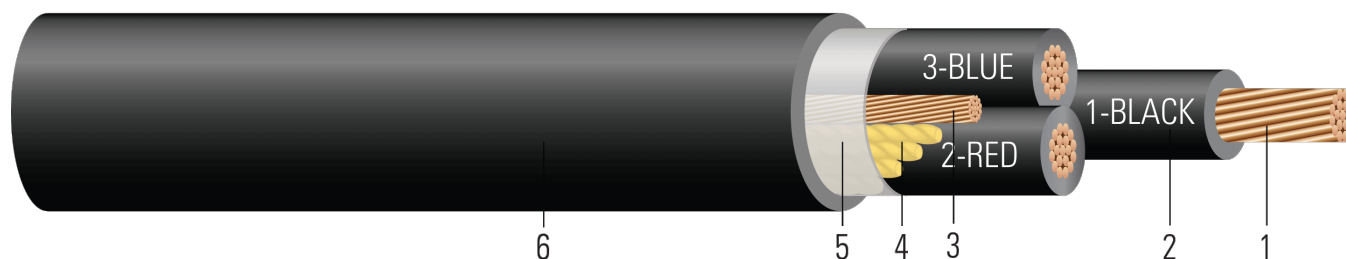


Image not to scale. See Table 1 for dimensions.

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
- UL 1685 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-58-679 Control Cable Conductor Identification Method 4
- 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)



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SAMPLE PRINT LEGEND:

SOUTHWIRE{R} MASTER-DESIGN {UL} XX AWG (X.XX{mm²}) CU 3/C TYPE TC-ER XHHW-2 CDRS GW 1 X XX AWG CU GREEN INSULATED 90{D}C JACKET SUNLIGHT RESISTANT DIRECT BURIAL 600V or 1000V {NOM}-ANCE

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
588013	350	0.641	65	0.777	1 x 3/0	110	2.081	3798	4571
672206	350	0.661	65	0.791	1 x 1	110	1.86	3535	4300
480707◇	350	0.661	65	0.791	1 x 3	110	1.86	3440	4196
480715	400	0.706	65	0.836	1 x 3	110	2.026	3906	4727
480723◇	500	0.789	65	0.896	1 x 2	110	2.155	4885	6064
890148	500	0.789	65	0.896	1 x 1/0	110	2.155	4967	5897
583697	500	0.789	65	0.896	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
TBA	600	0.866	80	1.026	1 x 1/0	110	2.436	6131	7110
890388◇	600	0.866	80	1.026	1 x 2	110	2.436	5822	6911
672210	600	0.866	80	1.034	1 x 250	110	2.567	6393	7544
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

† Ampacities are based on Table 310.16 of the NEC 2020 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts with not more than three current-carrying conductors in raceway, cable or direct buried based on ambient temperature of 30°C (86°F). Ampacities have been adjusted for more than three current-carrying conductors based on Table 310.15(C) 1.



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	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
480590◇	8	2.5	396	0.652	0.815	0.033	40	50	55
555196◇	8	2.5	396	0.652	0.815	0.033	40	50	55
480608◇	6	2.8	630	0.411	0.514	0.031	55	65	75
555195	6	2.8	630	0.411	0.514	0.031	55	65	75
480616◇	4	3.2	1002	0.258	0.323	0.030	70	85	95
480624◇	2	3.8	1593	0.162	0.203	0.028	95	115	130
480632◇	1	5.5	2009	0.129	0.162	0.028	110	130	145
480640◇	1/0	5.9	2534	0.102	0.128	0.028	125	150	170
480657◇	2/0	6.4	3194	0.081	0.102	0.027	145	175	195
480665◇	3/0	6.9	4027	0.064	0.081	0.027	165	200	225
480673◇	4/0	7.5	5078	0.051	0.064	0.026	195	230	260
480681◇	250	8.2	6000	0.043	0.055	0.027	215	255	290
480699	300	9.1	7200	0.036	0.046	0.026	240	285	320
588013	350	12.5	8400	0.031	0.040	0.026	260	310	350
672206	350	9.3	8400	0.031	0.040	0.026	260	310	350
480707◇	350	9.3	8400	0.031	0.040	0.026	260	310	350
480715	400	12.2	9600	0.088	0.035	0.025	280	335	380
480723◇	500	13.2	12000	0.022	0.029	0.025	320	380	430
890148	500	13.5	12000	0.022	0.029	0.025	320	380	430
583697	500	13.5	12000	0.022	0.029	0.025	320	380	430
593173	600	14.6	14400	0.018	0.024	0.026	350	420	475
TBA	600	14.6	14400	0.018	0.024	0.026	350	420	475
890388◇	600	14.6	14400	0.018	0.024	0.026	350	420	475
672210	600	14.6	14400	0.018	0.024	0.026	350	420	475
554410	750	15.9	18000	0.014	0.020	0.025	400	475	535

† Ampacities are based on Table 310.16 of the NEC 2020 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts with not more than three current-carrying conductors in raceway, cable or direct buried based on ambient temperature of 30°C (86°F). Ampacities have been adjusted for more than three current-carrying conductors based on Table 310.15(C) 1.

