

AL 600/1000V XLPE Insulation PVC Jacket XHHW-2. CT Rated - Sunlight Resistant - For Direct Burial - Silicone Free

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



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compact stranded 8000 Series aluminum per ASTM B800 and ASTM B836
2. **Insulation:** Cross Linked Polyethylene (XLPE) Type XHHW-2
3. **Grounding Conductor:** Class B compact stranded 8000 Series aluminum per ASTM B800 and ASTM B836
4. **Filler:** Paper filler (cable size 8 & 6 uses Polypropylene filler)
5. **Binder:** Polyester flat thread binder tape for cable sizes larger than 2 AWG
6. **Overall Jacket:** Sunlight resistant 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 B800 8000 Series Aluminum Alloy Wire
- ASTM B836 Compact Rounded Stranded Aluminum Conductors
- 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 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 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test

SAMPLE PRINT LEGEND:

SOUTHWIRE® {UL} XXX AWG AL 3/C TYPE TC-ER XHHW-2 CDRS GW 1 X X AWG AL 90°C JACKET SUNLIGHT RESISTANT DIRECT BURIAL 600V or 1000V {YYYYY} PC09-FLRBLGN {SEQUENTIAL FOOTAGE MARKS} SEQ FEET



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Table 1 – Weights and Measurements

Stock Number	Cond. Size	Cond. Number	Strand Count	Diameter Over Conductor	Insul. Thickness	Ground	Jacket Thickness	Approx. OD	Aluminum Weight	Approx. Weight
	AWG/Kcmil		No. of Strands	inch	mil	No. x AWG	mil	inch	lb/1000ft	lb/1000ft
582238	8	3	7	0.134	45	1 x 8	60	0.666	62	189
TBA	6	3	7	0.169	45	1 x 8	60	0.681	89	227
671633	4	3	7	0.212	45	1 x 6	60	0.886	144	394
TBA	2	3	7	0.268	45	1 x 6	80	0.935	213	449
670971	2	3	6	0.268	45	1 x 6	80	0.983	214	523
675018	1	3	8	0.298	55	1 x 4	80	1.109	278	610
TBA	1/0	3	19	0.336	55	1 x 4	80	1.125	338	658
670963	1/0	3	10	0.336	55	1 x 4	80	1.173	341	755
646672	2/0	3	12	0.376	55	1 x 4	80	1.209	419	782
599619	3/0	3	15	0.422	55	1 x 4	80	1.324	518	918
672057	4/0	3	19	0.474	55	1 x 2	80	1.423	667	1105
646667	250	3	22	0.520	65	1 x 1	80	1.564	793	1323
672257	300	3	21	0.569	65	1 x 2	110	1.753	919	1602
137880	350	3	35	0.615	65	1 x 1	110	1.844	1078	1788
582220	400	3	35	0.659	65	1 x 3/0	110	1.960	1301	2060
563211	500	3	35	0.735	65	1 x 1	110	2.090	1506	2298
582223	500	3	35	0.735	65	1 x 2/0	110	2.103	1553	2438
672259	500	3	35	0.735	65	1 x 4/0	110	2.200	1628	2540
671494	500	3	35	0.735	65	1 x 250	110	2.213	1665	2635
582129	600	3	58	0.812	80	1 x 1/0	110	2.304	1813	2881
679401	600	3	58	0.812	80	1 x 350	110	2.549	2045	3166
587573	750	3	58	0.908	80	1 x 1/0	110	2.526	2241	3430
580013	750	3	58	0.908	80	1 x 3/0	110	2.526	2300	3392
579924	750	3	58	0.908	80	3 x 2/0	110	2.526	2520	3963
671392	750	3	58	0.908	80	1 x 400	110	2.585	2521	3756
TBA	1000	3	61	1.060	80	1 x 1/0	140	2.917	2945	4528

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

* Strand count meets minimum number per ASTM



Table 2 – Electrical and Engineering Data

Stock Number	Cond. Size	Cond. Number	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°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
582238	8	3	2.7	297	1.072	1.290	0.052	35	40	45
TBA	6	3	2.7	472	0.674	0.812	0.051	40	50	55
671633	4	3	3.5	751	0.424	0.510	0.048	55	65	75
TBA	2	3	3.7	1194	0.267	0.321	0.045	75	90	100
670971	2	3	3.9	1194	0.267	0.321	0.045	75	90	100
675018	1	3	5.5	1506	0.211	0.254	0.046	85	100	115
TBA	1/0	3	5.6	1900	0.168	0.201	0.044	100	120	135
670963	1/0	3	5.9	1900	0.168	0.201	0.044	100	120	135
646672	2/0	3	6.0	2395	0.133	0.160	0.043	115	135	150
599619	3/0	3	6.6	3020	0.105	0.126	0.042	130	155	175
672057	4/0	3	7.1	3808	0.084	0.100	0.041	150	180	205
646667	250	3	7.8	4500	0.071	0.086	0.041	170	205	230
672257	300	3	8.8	5400	0.059	0.071	0.041	195	230	260
137880	350	3	9.2	6300	0.050	0.062	0.040	210	250	280
582220	400	3	9.8	7200	0.044	0.054	0.040	225	270	305
563211	500	3	12.5	9000	0.035	0.044	0.039	260	310	350
582223	500	3	12.6	9000	0.035	0.044	0.039	260	310	350
672259	500	3	13.2	9000	0.035	0.044	0.039	260	310	350
671494	500	3	13.3	9000	0.035	0.044	0.039	260	310	350
582129	600	3	13.8	10800	0.029	0.037	0.039	285	340	385
679401	600	3	15.3	10800	0.029	0.037	0.039	285	340	385
587573	750	3	15.2	13500	0.024	0.031	0.038	320	385	435
580013	750	3	15.2	13500	0.024	0.031	0.038	320	385	435
579924	750	3	15.2	13500	0.024	0.031	0.038	320	385	435
671392	750	3	15.5	13500	0.024	0.031	0.038	320	385	435
TBA	1000	3	17.5	18000	0.018	0.025	0.037	375	445	500

* Ampacities based upon 2023 NEC Table 310.16. See NEC sections 310.15 and 110.14(C) for additional requirements.

Method 4 Color Code. (1-ONE, 2-TWO, 3-THREE)

Stock Code	Size
671633	4
670971	2
670963	1/0

