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 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 {YYYY} 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	Jacket Color
	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	63	189	BK
TBA	6	3	7	0.169	45	1 x 8	60	0.685	93	211	BK
671633	4	3	7	0.213	45	1 x 6	80	0.886	144	379	BK
670971	2	3	6	0.268	45	1 x 6	80	0.983	214	494	BK
675018	1	3	8	0.299	55	1 x 4	80	1.123	279	572	BK
670963	1/0	3	10	0.336	55	1 x 4	80	1.173	341	732	BK
646672	2/0	3	12	0.376	55	1 x 4	80	1.236	420	753	BK
599619	3/0	3	15	0.423	55	1 x 4	80	1.337	519	881	BK
672057	4/0	3	19	0.475	55	1 x 2	80	1.45	667	1069	BK
646667	250	3	22	0.52	65	1 x 1	80	1.586	793	1266	BK
672257	300	3	21	0.57	65	1 x 2	110	1.754	919	1528	BK
137880	350	3	35	0.616	65	1 x 1	110	1.853	1079	1721	BK
582220	400	3	35	0.659	65	1 x 3/0	110	1.96	1301	1995	BK
563211	500	3	34	0.736	65	1 x 1	110	2.112	1507	2246	BK
582223	500	3	34	0.736	65	1 x 2/0	110	2.112	1554	2327	BK
671494	500	3	34	0.736	65	1 x 250	110	2.214	1665	2486	BK
672259	500	3	34	0.736	65	1 x 4/0	110	2.223	1629	2459	BK
582129	600	3	37	0.813	80	1 x 1/0	110	2.348	1813	2790	BK
679401	600	3	37	0.813	80	1 x 350	110	2.598	2046	3076	BK
587573	750	3	58	0.908	80	1 x 1/0	110	2.553	2241	3278	BK
579924	750	3	58	0.908	80	3 x 2/0	110	2.553	2521	3666	BK
580013	750	3	58	0.908	80	1 x 3/0	110	2.553	2301	3324	BK
671392	750	3	58	0.908	80	1 x 400	110	2.585	2521	3620	BK
TBA	1000	3	61	1.117	80	1 x 1/0	140	3.044	2923	4159	BK

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
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

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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 75°C	Allowable Ampacity At 90°C
	AWG/ Kcmil		inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
582238	8	3	2.7	297	1.071	1.334	0.052	40	45
TBA	6	3	2.7	472	0.674	0.84	0.051	50	55
671633	4	3	3.5	751	0.424	0.528	0.048	65	75
670971	2	3	3.9	1194	0.266	0.331	0.045	90	100
675018	1	3	5.6	1506	0.211	0.263	0.046	100	115
670963	1/0	3	5.9	1900	0.167	0.208	0.044	120	135
646672	2/0	3	6.2	2395	0.133	0.166	0.043	135	150
599619	3/0	3	6.7	3020	0.105	0.131	0.042	155	175
672057	4/0	3	7.2	3808	0.084	0.105	0.041	180	205
646667	250	3	7.9	4500	0.07	0.087	0.041	205	230
672257	300	3	8.8	5400	0.059	0.071	0.041	230	260
137880	350	3	9.3	6300	0.051	0.064	0.04	250	280
582220	400	3	9.8	7200	0.044	0.055	0.04	270	305
563211	500	3	12.7	9000	0.036	0.045	0.039	310	350
582223	500	3	12.7	9000	0.036	0.045	0.039	310	350
671494	500	3	13.3	9000	0.036	0.045	0.039	310	350
672259	500	3	13.3	9000	0.036	0.045	0.039	310	350
582129	600	3	14.1	10800	0.03	0.038	0.039	340	385
679401	600	3	15.6	10800	0.03	0.038	0.039	340	385
587573	750	3	15.3	13500	0.023	0.03	0.038	385	435
579924	750	3	15.3	13500	0.023	0.03	0.038	385	435
580013	750	3	15.3	13500	0.023	0.03	0.038	385	435
671392	750	3	15.5	13500	0.023	0.03	0.038	385	435
TBA	1000	3	18.3	18000	0.017	0.023	0.037	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

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