AL 600/1000V XLPE Insulation PVC Jacket. XHHW-2

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

Table 1 – Weights and Measurements

Stock Number	Cond. Size	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	7	0.134	45	1 x 8	60	0.666	62	189
TBA	6	7	0.169	45	1 x 8	60	0.691	89	231
671633	4	7	0.212	45	1 x 6 GG	80	0.886	142	394
TBA	2	7	0.268	45	1 x 6	80	0.945	213	456
670971	2	6	0.268	45	1 x 6 GG	80	0.983	214	523
675018	1	8	0.298	55	1 x 4	80	1.109	278	610
TBA	1/0	19	0.336	55	1 x 4	80	1.135	338	668
670963	1/0	10	0.336	55	1 x 4 GG	80	1.173	341	755
646672	2/0	12	0.376	55	1 x 4	80	1.209	419	782
599619	3/0	15	0.422	55	1 x 4	80	1.324	518	918
672057	4/0	19	0.474	55	1 x 2	80	1.423	667	1099
646667	250	22	0.520	65	1 x 1	80	1.564	793	1323
672257	300	35	0.569	65	1 x 2	110	1.732	919	1580
137880	350	35	0.615	65	1 x 1	110	1.844	1078	1788
582220	400	35	0.659	65	1 x 3/0	110	1.960	1301	2060
563211	500	35	0.735	65	1 x 1	110	2.090	1506	2298
582223	500	35	0.735	65	1 x 2/0	110	2.103	1553	2438
672259	500	35	0.735	65	1 x 4/0	110	2.200	1628	2540
671494	500	35	0.735	65	1 x 250	110	2.213	1665	2635
582129	600	58	0.812	80	1 x 1/0	110	2.304	1813	2881
679401	600	58	0.812	80	1 x 350	110	2.549	2045	3166
587573	750	58	0.908	80	1 x 1/0	110	2.526	2241	3430
580013	750	58	0.908	80	1 x 3/0	110	2.526	2300	3392
579924	750	58	0.908	80	3 x 2/0	110	2.526	2520	3963
671392	750	58	0.908	80	1 x 400	110	2.585	2521	3756
TBA	1000	61	1.060	80	1 x 1/0	140	2.927	2945	4555

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	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	2.6	297	1.072	1.290	0.052	35	40	45
TBA	6	2.7	472	0.674	0.812	0.051	40	50	55
671633	4	3.5	751	0.424	0.510	0.048	55	65	75
TBA	2	3.7	1194	0.267	0.321	0.045	75	90	100
670971	2	3.9	1194	0.267	0.321	0.045	75	90	100
675018	1	5.5	1506	0.211	0.254	0.046	85	100	115
TBA	1/0	5.6	1900	0.168	0.201	0.044	100	120	135
670963	1/0	5.8	1900	0.168	0.201	0.044	100	120	135
646672	2/0	6.1	2396	0.133	0.160	0.043	115	135	150
599619	3/0	6.5	3020	0.105	0.126	0.042	130	155	175
672057	4/0	7.1	3808	0.084	0.100	0.041	150	180	205
646667	250	7.8	4500	0.071	0.086	0.041	170	205	230
672257	300	8.7	5400	0.059	0.071	0.041	195	230	260
137880	350	9.2	6300	0.050	0.062	0.040	210	250	280
582220	400	9.8	7200	0.044	0.054	0.040	225	270	305
563211	500	12.5	9000	0.035	0.044	0.039	260	310	350
582223	500	12.6	9000	0.035	0.044	0.039	260	310	350
672259	500	13.2	9000	0.035	0.044	0.039	260	310	350
671494	500	13.2	9000	0.035	0.044	0.039	260	310	350
582129	600	13.8	10800	0.029	0.037	0.039	285	340	385
679401	600	15.2	10800	0.029	0.037	0.039	285	340	385
587573	750	15.1	13500	0.024	0.031	0.038	320	385	435
580013	750	15.1	13500	0.024	0.031	0.038	320	385	435
579924	750	15.1	13500	0.024	0.031	0.038	320	385	435
671392	750	15.5	13500	0.024	0.031	0.038	320	385	435
TBA	1000	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