



AL 2000V XLPE Insulation. RHH/RHW-2 PV

Single Conductor Photovoltaic (Type PV) Power Cable 2000 Volt Aluminum Conductor XLPE Insulation. Sizes 6AWG through 1000 kcmil. Heat, Moisture, and Sunlight Resistant RoHS. 90°C



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** AlumaFlex® Compact Stranded Aluminum Alloy (AA-8176)
2. **Insulation:** Cross-linked Polyethylene (XLPE)

APPLICATIONS AND FEATURES:

The cable is available in sizes 6 AWG through 1000 kcmil. The product is approved for use in solar power applications per the NEC article 690 and is rated 90°C for exposed or concealed wiring in wet or dry locations. Individual conductors are stranded aluminum alloy covered with a cross-linked polyethylene (XLPE) insulation and is rated for direct burial. The cable is sunlight resistant, oil resistant PRI and PRII, RoHS compliant, passes -40°C cold bend.

SPECIFICATIONS:

- ASTM B836 Compact Rounded Stranded Aluminum Conductors
- UL 44 Thermoset-Insulated Wires and Cables
- UL 854 Service Entrance Cable
- UL 4703 Standard for Photovoltaic Wire
- Made in America: Compliant with both Buy American and Buy America Act (BAA) requirements per 49 U.S.C. § 5323(j) and the Federal Transit Administration Buy America requirements per 49 C.F.R. part 661
- VW-1 Vertical-Wire Flame Test (Optional)
- AA 8176 Stranded Aluminum Alloy Conductors

SAMPLE PRINT LEGEND:

SOUTHWIRE E316464 {UL} PV WIRE XXX KCMIL (XXX.XXX{mm²}) COMPACT AL. --- AlumaFlex® AA8176 2000V 90°C WET OR DRY -40°C SUN RES DIRECT BURIAL OR RHH-RHW-2 2000V --- RoHS {MMM/DD/YYYY} {SEQUENTIAL FOOTAGE MARKS} SEQ FEET





Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Insul. Thickness	Approx. OD	Aluminum Weight	Approx. Weight
	AWG/Kcmil	No. of Strands	inch	mil	inch	lb/1000ft	lb/1000ft
585843	6	7	0.169	85	0.349	24	59
586673	4	7	0.212	85	0.383	39	77
586672	2	6	0.268	85	0.438	62	104
589171	2	6	0.268	85	0.438	62	104
619879	1	8	0.298	105	0.519	78	146
589051	1	8	0.298	105	0.519	78	146
591256	1/0	10	0.336	105	0.546	99	164
591241	1/0	10	0.336	105	0.546	99	164
583673	2/0	12	0.376	105	0.586	125	195
577100	3/0	16	0.422	105	0.633	158	235
669515	3/0	16	0.422	105	0.633	158	235
669518	3/0	16	0.422	105	0.633	158	235
669516	3/0	16	0.422	105	0.633	158	235
577843	3/0	16	0.422	105	0.633	158	235
669517	3/0	16	0.422	105	0.633	158	235
583678	4/0	19	0.474	105	0.685	199	284
591242	4/0	19	0.474	105	0.685	199	284
607400	4/0	19	0.474	105	0.685	199	284
597698	4/0	19	0.474	105	0.685	199	284
577101	250	22	0.520	120	0.760	235	350
668535	250	22	0.520	120	0.760	235	350
577844	250	22	0.520	120	0.760	235	350
584290	300	21	0.569	120	0.810	282	397
675225	300	21	0.569	120	0.810	282	397
589170	300	21	0.569	120	0.810	282	397
582174	350	35	0.615	120	0.856	329	462
592618	350	35	0.615	120	0.856	329	462
597996	350	35	0.615	120	0.856	329	462
584291	400	35	0.659	120	0.899	376	518
652801	400	35	0.659	120	0.899	376	518
596689	400	35	0.659	120	0.899	376	518
582267	500	34	0.735	120	0.978	471	615
591243	500	34	0.735	120	0.978	471	615
591246	500	34	0.735	120	0.978	471	615
591244	500	34	0.735	120	0.978	471	615
588797	500	34	0.735	120	0.978	471	615
586671	500	34	0.735	120	0.978	471	615
591245	500	34	0.735	120	0.978	471	615
585499	600	37	0.812	135	1.083	565	745
588799	600	37	0.812	135	1.083	565	745
591247	600	37	0.812	135	1.083	565	745





Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Insul. Thickness	Approx. OD	Aluminum Weight	Approx. Weight
	AWG/Kcmil	No. of Strands	inch	mil	inch	lb/1000ft	lb/1000ft
586013	750	61	0.908	135	1.178	706	904
592619	750	61	0.908	135	1.178	706	904
589375	750	61	0.908	135	1.178	706	904
641387	1000	58	1.060	135	1.330	942	1168
641386	1000	58	1.060	135	1.330	942	1168

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 75°C	Allowable Ampacity At 90°C
	AWG/Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
585843	6	1.4	157	0.674	0.812	0.051	50	55
586673	4	1.5	250	0.424	0.510	0.048	65	75
586672	2	1.8	398	0.267	0.321	0.045	90	100
589171	2	1.8	398	0.267	0.321	0.045	90	100
619879	1	2.1	502	0.211	0.254	0.046	100	115
589051	1	2.1	502	0.211	0.254	0.046	100	115
591256	1/0	2.2	633	0.168	0.201	0.044	120	135
591241	1/0	2.2	633	0.168	0.201	0.044	120	135
583673	2/0	2.3	798	0.133	0.160	0.043	135	150
577100	3/0	2.5	1006	0.105	0.126	0.042	155	175
669515	3/0	2.5	1006	0.105	0.126	0.042	155	175
669518	3/0	2.5	1006	0.105	0.126	0.042	155	175
669516	3/0	2.5	1006	0.105	0.126	0.042	155	175
577843	3/0	2.5	1006	0.105	0.126	0.042	155	175
669517	3/0	2.5	1006	0.105	0.126	0.042	155	175
583678	4/0	2.7	1269	0.084	0.100	0.041	180	205
591242	4/0	2.7	1269	0.084	0.100	0.041	180	205
607400	4/0	2.7	1269	0.084	0.100	0.041	180	205
597698	4/0	2.7	1269	0.084	0.100	0.041	180	205
577101	250	3.0	1500	0.071	0.086	0.041	205	230
668535	250	3.0	1500	0.071	0.086	0.041	205	230
577844	250	3.0	1500	0.071	0.086	0.041	205	230
584290	300	3.2	1800	0.059	0.071	0.041	230	260
675225	300	3.2	1800	0.059	0.071	0.041	230	260
589170	300	3.2	1800	0.059	0.071	0.041	230	260
582174	350	3.4	2100	0.050	0.062	0.040	250	280
592618	350	3.4	2100	0.050	0.062	0.040	250	280
597996	350	3.4	2100	0.050	0.062	0.040	250	280
584291	400	3.6	2400	0.044	0.054	0.040	270	305
652801	400	3.6	2400	0.044	0.054	0.040	270	305
596689	400	3.6	2400	0.044	0.054	0.040	270	305
582267	500	3.9	3000	0.035	0.044	0.039	310	350
591243	500	3.9	3000	0.035	0.044	0.039	310	350
591246	500	3.9	3000	0.035	0.044	0.039	310	350
591244	500	3.9	3000	0.035	0.044	0.039	310	350
588797	500	3.9	3000	0.035	0.044	0.039	310	350
586671	500	3.9	3000	0.035	0.044	0.039	310	350
591245	500	3.9	3000	0.035	0.044	0.039	310	350
585499	600	5.4	3600	0.029	0.037	0.039	340	385
588799	600	5.4	3600	0.029	0.037	0.039	340	385





Stock Number	Cond. Size	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
591247	600	5.4	3600	0.029	0.037	0.039	340	385
586013	750	5.9	4500	0.024	0.031	0.038	385	435
592619	750	5.9	4500	0.024	0.031	0.038	385	435
589375	750	5.9	4500	0.024	0.031	0.038	385	435
641387	1000	6.7	6000	0.018	0.025	0.037	445	500
641386	1000	6.7	6000	0.018	0.025	0.037	445	500

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

* Inductive Reactance is based on non-ferrous conduit with one diameter spacing center-to-center.

Stock Codes and Colors

Size	Black	Brown	Orange	Yellow	White	Red	Green
AWG/Kcmil							
6	585843						
4	586673						
2	586672						589171
1	619879						589051
1/0	591256				591241		
2/0	583673						
3/0	577100	669515	669516	669517	577843		669518
4/0	583678				597698	607400	591242
250	577101				577844	668535	
300	584290				589170	675225	
350	582174				597996	592618	
400	584291				596689	652801	
500	582267	591243	591244	591245	586671	588797	591246
600	585499				591247	588799	
750	586013				589375	592619	
1000	641387				641386		

