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

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

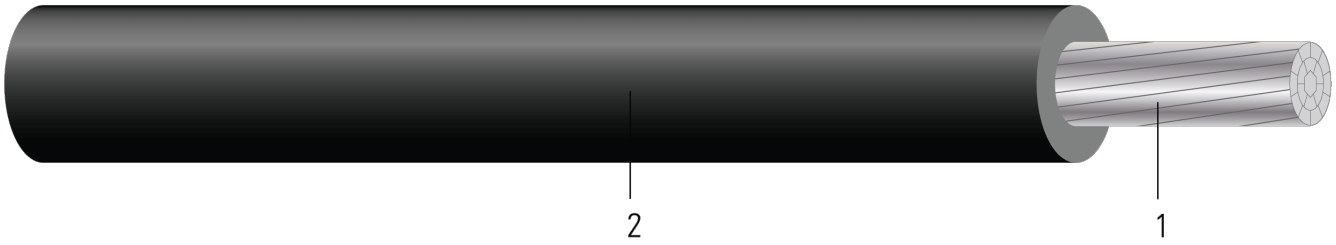



Image not to scale. See Table 1 for dimensions.

## 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. 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.

## SPECIFICATIONS:

- ASTM B836 Compact Rounded Stranded Aluminum Conductors
- UL 44 Thermoset-Insulated Wires and Cables
- 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


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## Table 1 – Weights and Measurements

| Stock Number | Cond. Size | Strand Count | Diameter Over Conductor | Insul. Thickness | Insulation Color | Dia. Over Insulation | Approx. OD | Aluminum Weight | Approx. Weight | Jacket Color |
|---|---|---|---|---|---|---|---|---|---|---|
| | AWG/ Kcmil | No. of Strands | inch | mil | | inch | inch | lb/1000ft | lb/1000ft | |
| 585843 | 6 | 7 | 0.169 | 85 | BK | 0.339 | 0.349 | 25 | 57 | BK |
| 586673 | 4 | 7 | 0.213 | 85 | BK | 0.383 | 0.383 | 39 | 77 | BK |
| 586672 | 2 | 6 | 0.268 | 85 | BK | 0.438 | 0.438 | 63 | 104 | BK |
| 589051 | 1 | 8 | 0.299 | 105 | GN | 0.509 | 0.509 | 79 | 139 | GN |
| 591256 | 1/0 | 10 | 0.336 | 105 | BK | 0.546 | 0.546 | 99 | 164 | BK |
| 583673 | 2/0 | 12 | 0.376 | 105 | BK | 0.586 | 0.586 | 125 | 196 | BK |
| 577100 | 3/0 | 16 | 0.423 | 105 | BK | 0.633 | 0.633 | 158 | 235 | BK |
| 583678 | 4/0 | 19 | 0.475 | 105 | BK | 0.685 | 0.685 | 199 | 284 | BK |
| 577101 | 250 | 22 | 0.52 | 120 | BK | 0.76 | 0.76 | 236 | 343 | BK |
| 584290 | 300 | 21 | 0.57 | 120 | BK | 0.81 | 0.81 | 283 | 398 | BK |
| 582174 | 350 | 35 | 0.616 | 120 | BK | 0.856 | 0.856 | 330 | 454 | BK |
| 584291 | 400 | 35 | 0.659 | 120 | BK | 0.899 | 0.899 | 377 | 518 | BK |
| 582267 | 500 | 34 | 0.736 | 120 | BK | 0.976 | 0.976 | 471 | 616 | BK |
| 585499 | 600 | 37 | 0.813 | 135 | BK | 1.083 | 1.083 | 565 | 745 | BK |
| 591248 | 700 | 58 | 0.877 | 135 | BN | 1.147 | 1.147 | 659 | 851 | BN |
| 586013 | 750 | 53 | 0.908 | 135 | BK | 1.178 | 1.178 | 707 | 905 | BK |
| 641387 | 1000 | 58 | 1.117 | 135 | BK | 1.387 | 1.33 | 942 | 1169 | 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 | 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 | 0.84 | 0.051 | 50 | 55 |
| 586673 | 4 | 1.5 | 250 | 0.424 | 0.528 | 0.048 | 65 | 75 |
| 586672 | 2 | 1.8 | 398 | 0.266 | 0.331 | 0.045 | 90 | 100 |
| 589051 | 1 | 2 | 502 | 0.211 | 0.263 | 0.046 | 100 | 115 |
| 591256 | 1/0 | 2.2 | 633 | 0.167 | 0.208 | 0.044 | 120 | 135 |
| 583673 | 2/0 | 2.3 | 798 | 0.133 | 0.166 | 0.043 | 135 | 150 |
| 577100 | 3/0 | 2.5 | 1006 | 0.105 | 0.131 | 0.042 | 155 | 175 |
| 583678 | 4/0 | 2.7 | 1269 | 0.084 | 0.105 | 0.041 | 180 | 205 |
| 577101 | 250 | 3 | 1500 | 0.07 | 0.087 | 0.041 | 205 | 230 |
| 584290 | 300 | 3.2 | 1800 | 0.059 | 0.071 | 0.041 | 230 | 260 |
| 582174 | 350 | 3.4 | 2100 | 0.051 | 0.064 | 0.04 | 250 | 280 |
| 584291 | 400 | 3.6 | 2400 | 0.044 | 0.055 | 0.04 | 270 | 305 |
| 582267 | 500 | 3.9 | 3000 | 0.036 | 0.045 | 0.039 | 310 | 350 |
| 585499 | 600 | 5.4 | 3600 | 0.03 | 0.038 | 0.039 | 340 | 385 |
| 591248 | 700 | 5.7 | 4200 | 0.026 | 0.034 | 0.038 | 375 | 425 |
| 586013 | 750 | 5.9 | 4500 | 0.023 | 0.03 | 0.038 | 385 | 435 |
| 641387 | 1000 | 6.6 | 6000 | 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.
* 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 | |
| 700 | 607592 | 591248 | 591249 | 591250 | | | |
| 750 | | | | | | 592619 | |
| 1000 | 641387 | | | | 641386 | | |


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