# 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

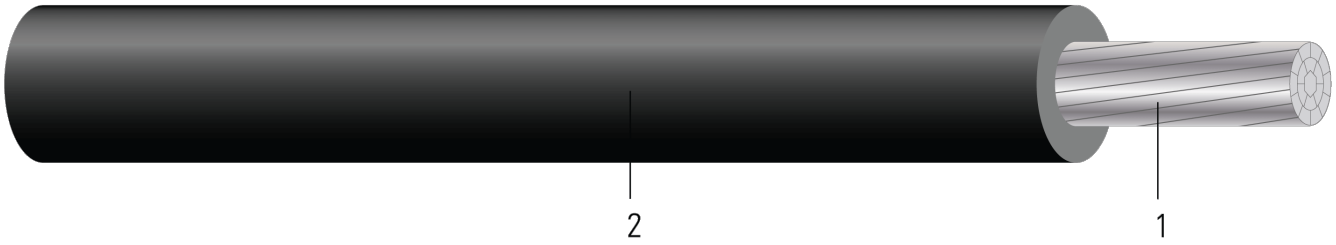


Image not to scale. See Table 1 for dimensions.

## 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

### Table 1 – Weights and Measurements

| Cond. Size | Cond. Number | Strand Count | Diameter Over Conductor | Insul. Thickness | Insulation Color | Approx. OD | Aluminum Weight | Approx. Weight | Jacket Color |
|---|---|---|---|---|---|---|---|---|---|
| AWG/ Kcmil | | No. of Strands | inch | mil | | inch | lb/1000ft | lb/1000ft | |
| 500 | 1 | 34 | 0.736 | 120 | OE | 0.978 | 471 | 615 | OE |

All dimensions are nominal and subject to normal manufacturing tolerances

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◊ 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.

## Table 2 – Electrical and Engineering Data

| 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 |
| 500 | 1 | 3.9 | 3000 | 0.036 | 0.045 | 0.039 | 310 | 350 |

***** 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 (AWG/kcmil) | Black | Brown | Orange | Yellow | White | Red | Green |
|---|---|---|---|---|---|---|---|
| 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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