



## 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:

- Conductor:** AlumaFlex® Compact Stranded Aluminum Alloy (AA-8176)
- 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{mm<sup>2</sup>}) 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<br>AWG/Kcmil | Cond. Number | Strand Count<br>No. of Strands | Diameter Over Conductor<br>inch | Insul. Thickness<br>mil | Approx. OD<br>inch | Aluminum Weight<br>lb/1000ft | Approx. Weight<br>lb/1000ft |
|-------------------------|--------------|--------------------------------|---------------------------------|-------------------------|--------------------|------------------------------|-----------------------------|
| 500                     | 1            | 34                             | 0.735                           | 120                     | 0.978              | 471                          | 615                         |

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**

| 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             | 0.035                | 0.044                | 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      | 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 |        |        |

