Southwire® RenewaFLEX™ Power Cables for Battery Energy Storage Systems

Single Conductor, Copper, 2000V, XLPE insulation Type RHH/RHW-2, Flexible Power Cable.



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Sizes 6 - 4/0 AWG: Class K, flexible stranded, bare copper per ASTM B3 and B172.
   Sizes 250 - 1000 kcmil: Class I, flexible stranded, bare copper per ASTM B3 and B172.
2. **Insulation:** Cross Linked Polyethylene (XLPE) Type RHH/RHW-2

APPLICATIONS AND FEATURES:

Southwire's 2000 Volt power cables are suited for use in the internal wiring of Battery Energy Storage Systems (BESS), in wet and dry locations, conduits, ducts, troughs, covered trays, 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, 130°C for emergency overload, and 250°C for short circuit conditions. Gasoline and Oil Resistant. For CT USE sizes 1/0 AWG and larger. Rated 1000 lb/ft maximum sidewall pressure.

Also available in different colors like: black, red, green, brown, yellow, etc.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B172 Standard Specification for Rope-Lay-Stranded Copper Conductors Having Bunch-Stranded Copper Conductors
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test
- RoHS-3 Complies with European Directive 2015/863
- 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

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SAMPLE PRINT LEGEND:

For 8 - 2 AWG:

{SQFTG} SOUTHWIRE E30117 {UL} XX AWG CU TYPE RHH OR RHW-2 XX MILS XLP PRI/II GRI/II 2000 VOLTS

For 1/0 - 4/0 AWG:

{SQFTG} SOUTHWIRE E30117 {UL} XX AWG CU TYPE RHH OR RHW-2 XX MILS XLP FOR CT USE PRI/II GRI/II 2000 VOLTS

For 250 -1000 kcmil:

{SQFTG} SOUTHWIRE E30117 {UL} XX kcmil CU TYPE RHH OR RHW-2 XX MILS XLP FOR CT USE PRI/II GRI/II 2000 VOLTS

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand	Diameter Over Conductor	Insul. Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/Kcmil	No.	inch	mil	inch	lb/1000ft	lb/1000ft
138927	500	1221	0.858	105	1.078	1514	1710

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
• 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	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance @ 60Hz	Allowable Ampacity In Raceway 90°C
AWG/ Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp
500	5.4	4000	0.022	0.029	0.039	430

• Ampacities based upon 2023 NEC Table 310.16 for Raceway, Cable, or Earth and NEC Table 310.17 for single conductors in Air. • Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.
1 linearly interpolated value

Table 3 – Weights and Measurements (Metric)

Stock Number	Cond. Size	Strand	Diameter Over Conductor	Insul. Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/Kcmil	No.	mm	mm	mm	kg/km	kg/km
138927	500	1221	21.79	2.67	27.38	2253	2545

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
• 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 4 – Electrical and Engineering Data (Metric)

Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance @ 60Hz	Allowable Ampacity In Raceway 90°C
AWG/ Kcmil	mm	newton	Ω/km	Ω/km	Ω/km	Amp
500	137.16	17800	0.0722	0.10	0.1280	430

• Ampacities based upon 2023 NEC Table 310.16 for Raceway, Cable, or Earth and NEC Table 310.17 for single conductors in Air. • Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.
1 linearly interpolated value

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