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:** 6 - 4/0 AWG: Class K, Flexible stranded bare copper. 250 - 750 kcmil: Class I, Flexible stranded bare copper
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 lbs./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

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 250-750 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

UPDATED: Oct. 24, 2024, 1:25 p.m.UTC REVISION: 1.000.029

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand	Diameter Over Conductor	Insul. Thickness	Approx. OD	Approx. Weight
	AWG/Kcmil	No.	inch	mil	inch	lb/1000ft
TBA	8	168	0.153	70	0.293	77
665777	6	273	0.190	70	0.338	119
665776	4	413	0.235	70	0.383	164
665775	2	665	0.302	70	0.448	252
665422	1/0	1064	0.385	90	0.570	426
138923	2/0	1330	0.410	90	0.620	510
138924	4/0	2109	0.550	90	0.740	788
138925	250	627	0.580	105	0.825	908
138926	350	893	0.670	105	0.890	1242
138927	500	1221	0.858	105	1.078	1709
138950	600	1480	0.963	120	1.215	2112
138951	750	1850	1.094	120	1.346	2650
TBA	1000	2516	1.190	120	1.430	3302

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item

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 Air 90°C	Allowable Ampacity In Raceway 90°C
AWG/ Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
8	2.3	132	0.715	0.903	0.052	80	55
6	2.7	209	0.419	0.524	0.051	105	75
4	3.0	333	0.263	0.329	0.048	140	95
2	3.5	531	0.165	0.207	0.045	190	130
1/0	4.5	845	0.105	0.132	0.044	260	170
2/0	4.7	1065	0.084	0.105	0.043	300	195
4/0	5.8	1693	0.053	0.067	0.041	405	260
250	6.5	2000	0.045	0.056	0.041	455	290
350	7.0	2800	0.032	0.040	0.040	570	350
500	8.5	4000	0.022	0.029	0.039	700	430
600	9.6	4800	0.019	0.024	0.039	780	475
750	10.6	6000	0.015	0.025	0.038	885	535
1000	11.4	8000	0.011	0.021	0.037	1055	615

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

Table 3 – Weights and Measurements (Metric)

Stock Number	Cond. Size	Strand	Diameter Over Conductor	Insul. Thickness	Approx. OD	Approx. Weight
	AWG/Kcmil	No.	mm	mm	mm	kg/km
TBA	8	168	3.89	1.78	7.44	115
665777	6	273	4.83	1.78	8.59	177
665776	4	413	5.97	1.78	9.73	244
665775	2	665	7.67	1.78	11.38	375
665422	1/0	1064	9.78	2.29	14.48	634
138923	2/0	1330	10.41	2.29	15.75	759
138924	4/0	2109	13.97	2.29	18.80	1173
138925	250	627	14.73	2.67	20.96	1351
138926	350	893	17.02	2.67	22.61	1848
138927	500	1221	21.79	2.67	27.38	2543
138950	600	1480	24.46	3.05	30.86	3143
138951	750	1850	27.79	3.05	34.19	3944
TBA	1000	2516	30.23	3.05	36.32	4914

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item

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 Air 90°C	Allowable Ampacity In Raceway 90°C
AWG/ Kcmil	mm	newton	Ω/km	Ω/km	Ω/km	Amp	Amp
8	58.42	587	2.3458	2.96	0.1706	80	55
6	68.58	930	1.3747	1.72	0.1673	105	75
4	76.20	1482	0.8629	1.08	0.1575	140	95
2	88.90	2363	0.5413	0.68	0.1476	190	130
1/0	114.30	3760	0.3445	0.43	0.1444	260	170
2/0	119.38	4739	0.2756	0.34	0.1411	300	195
4/0	147.32	7534	0.1739	0.22	0.1345	405	260
250	165.10	8900	0.1476	0.18	0.1345	455	290
350	177.80	12460	0.1050	0.13	0.1312	570	350
500	215.90	17800	0.0722	0.10	0.1280	700	430
600	243.84	21360	0.0623	0.08	0.1280	780	475
750	269.24	26700	0.0492	0.08	0.1247	885	535
1000	289.56	35600	0.0361	0.07	0.1214	1055	615

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