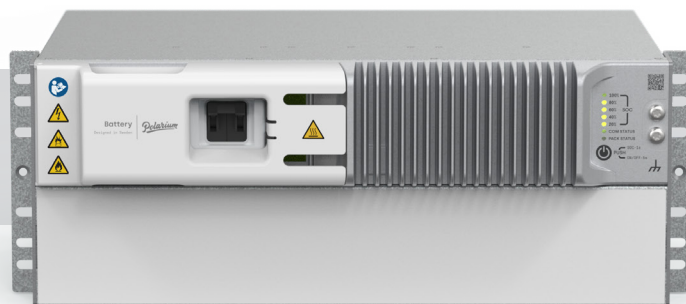




Battery 19" 4U / 230 Ah

SLB48-230-146-5
15s Series. Generation 5

770-00300 Rev 2.1



Polarium Battery is an advanced power backup system. Its rechargeable smart lithium-ion battery provides reliable power backup for hybrid, off-grid and grid-connected sites worldwide.

Safe

All our products are designed with your safety in mind - thoroughly verified and certified for safe operation.

Simple

Advanced technology made super easy to use, easy to install, maintenance free, charge control.

Strong

Works in all conditions and environments. Extra protection against dust and moisture for prolonged life.

Smart

Automatic balancing, automatic reconnect, remote monitoring options and much more.

Secure

Our unique, patented Anti-Theft Device disables function of batteries if removed from site. It's prepared for optional GPS tracker.

Sustainable

The lifetime is extraordinary long. It's small, light, maintenance free and can be remotely controlled.

Technical Specification

Enclosure Size	19" 4U
Lithium Chemistry	Iron based
Rated Voltage	48 V
Rated Capacity (0.2 C. 25 °C to LVBD)	230 Ah
Rated Energy (0.2 C. 25 °C to LVBD)	11040 Wh
Calendar Life @ 80 % SOC	20 years
Cycle life	6000 cycles, 0.2C, 25 °C, DoD 100%, SOH 80%
Peak Discharge Power	6 kW for 60 seconds
Discharge Cutoff Current	100 A
End-of-Discharge Voltage (LVBD)*	37.5 V
Charge Current Limitation (CLD)**	100 A
Charge Voltage for 100 % SOC	54.7 V
Operating Temperature Charging	0 to +55 °C (32 to 131 °F)
Operating Temperature Discharging	-20 to +60 °C (-4 to 140 °F)
Operating Relative Humidity	According to ETSI 300 019-1-3 class 3.2 (0-95 %)
Storage Temperature	-20 to +60 °C (-4 to 140 °F)
Weight	76.5 Kg (168 lbs)
Dimensions	W 440 D 560 H 177.4 mm (W 17.3" D 22.0" H 6.98")
Circuit Breaker	100A, BMS controlled, single pole
IP Class	IP20
Communication Protocols	RS485, RJ45 (2) ports, Modbus
Safety Standards	IEC62619, IEC62368, UN38.3
Management & Monitoring	Software for PC (Studio) included for full local monitoring and management. Remote connection via Modbus.

*Cut off when one cell reaches 2.5 V. 15 cells in series.

**If the charge current is 100 A or higher, the battery will automatically reduce the charge current to 6-12 A temporarily.
Data subject to change without notice



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Battery 19" 4U / 230 Ah

SLB48-230-146-5
15s Series. Generation 5

Constant Current / A @ 25 °C

Duration / Hours

End of Discharge Voltage

	1	2	3	4	5	6	7	8	9	10	12	14	16	20	24
50	N/A	72.2	52.2	40.6	33.2	27.9	24.2	21.2	18.9	17.1	14.3	12.5	10.8	8.8	7.4
49	N/A	79.2	56.3	43.6	35.3	29.8	25.6	22.6	20.1	18.2	15.2	13.2	11.5	9.2	7.8
48	N/A	85.9	60.2	46.4	37.6	31.6	27.2	23.8	21.2	19.2	16.2	13.8	12.0	9.7	8.1
47	N/A	92.1	63.9	48.9	39.5	33.2	28.6	25.2	22.4	20.1	16.8	14.5	12.7	10.2	8.5
46	N/A	97.9	67.2	51.0	41.3	34.6	29.8	26.1	23.3	21.0	17.5	15.0	13.2	10.4	8.8
45	N/A	N/A	69.9	53.1	42.7	35.8	30.7	27.0	24.0	21.7	18.0	15.5	13.6	10.8	9.0
44	N/A	N/A	72.5	54.7	44.1	36.9	31.6	27.7	24.7	22.2	18.5	15.9	13.8	11.1	9.2
43	N/A	N/A	74.3	56.1	45.0	37.6	32.3	28.4	25.2	22.6	18.9	16.2	14.1	11.3	9.2
40	N/A	N/A	75.5	56.8	45.7	38.1	32.8	28.6	25.6	23.1	19.2	16.4	14.3	11.3	9.5

Constant Power / W @ 25 °C

Duration / Hours

End of Discharge Voltage

	1	2	3	4	5	6	7	8	9	10	12	14	16	20	24
50	N/A	3538	2562	1997	1630	1373	1186	1043	930	840	704	607	533	432	365
49	N/A	3862	2754	2133	1736	1461	1260	1108	988	891	746	642	563	455	383
48	N/A	4173	2936	2260	1835	1542	1329	1168	1041	939	785	674	591	475	397
47	N/A	4469	3104	2377	1925	1618	1392	1223	1089	983	822	704	616	494	413
46	N/A	N/A	3257	2484	2008	1683	1450	1272	1133	1023	852	732	639	512	425
45	N/A	N/A	3388	2576	2077	1740	1498	1313	1170	1055	879	755	660	526	436
44	N/A	N/A	3499	2650	2135	1789	1537	1348	1200	1083	902	773	676	538	445
43	N/A	N/A	3582	2707	2179	1823	1567	1376	1223	1101	919	787	688	547	452
40	N/A	N/A	3640	2747	2209	1847	1588	1392	1237	1115	930	796	695	552	457

Energy / Wh @ 25 °C

Duration / Hours

End of Discharge Voltage

	1	2	3	4	5	10
50	N/A	7074	7688	7984	8145	8402
49	N/A	7723	8263	8526	8674	8912
48	N/A	8349	8808	9039	9170	9390
47	N/A	8935	9313	9512	9627	9828
46	N/A	9470	9770	9934	10036	10216
45	N/A	N/A	10167	10301	10389	10548
44	N/A	N/A	10495	10601	10675	10818
43	N/A	N/A	10747	10832	10894	11019
40	N/A	N/A	10918	10987	11040	11151

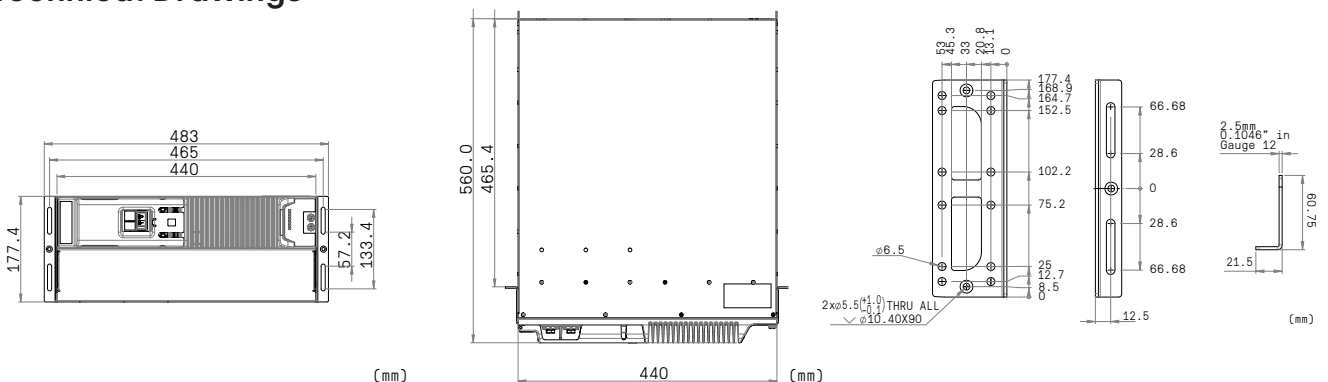
State of Charge vs Discharge Voltage

Current / C-rate

State of Charge

	0.2 C	0.5 C	1.0 C
100 %	52.4	N/A	N/A
90 %	49.4	N/A	N/A
80 %	49.3	N/A	N/A
70 %	49.2	N/A	N/A
60 %	48.9	N/A	N/A
50 %	48.8	N/A	N/A
40 %	48.7	N/A	N/A
30 %	48.5	N/A	N/A
20 %	48.0	N/A	N/A
10 %	47.2	N/A	N/A
0 %	37.5	N/A	N/A

Technical Drawings



Authorised, valued-added distributor

Australia & New Zealand



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