



Battery 19" 3U / 100Ah

SLB48-100-135-5
15S Series, Generation 5



Polarium Battery is an advanced power backup system for telecom use. Its rechargeable smart lithium-ion battery provides reliable power backup for hybrid, off-grid and grid-connected telecom 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" 3U
Lithium Chemistry	LFP
Rated Voltage	48 V
Rated Capacity Ah (0.2C, 25°C to 39 V)	100 Ah
Rated Energy Wh (0.2C, 25°C to 39 V)	4800 Wh
Calendar Life @ 80% SOC	15 years
Peak Discharge Power	6kW for 60 seconds
Discharge Cutoff Current	100 A
End-of-Discharge Voltage (LVBD)**	39 V
Charge Current Limitation (CLD)*	100 A
Charge Voltage for 100% SOC	54.75 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	Approx. 45 Kg (99.2 lbs)
Dimensions mm (in")	W 440 D 478 H 130 (W 17.3" D 16.5" H 6.9")
Circuit breaker	100 A, 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

*If the charge current is 100A or higher, the battery will automatically reduce the charge current to 6-12A temporarily

Data subject to change without notice

PV_DS1001355-Rev 1.0 PRLM



Polarium Energy Solutions AB

Jan Stenbecks Torg 17 | PO Box 1037 | SE-164 21, Kista, Sweden
Phone: +46 8 5454 4000 | info@polarium.com | www.polarium.com



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Constant Current (A) @ 25°C
Duration (Hours)

End of Discharge Voltage	Constant Current (A) @ 25°C														
	1	2	3	4	5	6	7	8	9	10	12	14	16	20	24
50	71.8	39.3	27.0	20.6	16.6	13.9	12.0	10.5	9.4	8.4	7.0	6.1	5.3	4.3	3.6
48.5	78.7	41.9	28.6	21.6	17.4	14.6	12.5	11.0	9.8	8.8	7.3	6.3	5.5	4.4	3.7
47	84.7	44.2	29.9	22.5	18.1	15.1	13.0	11.4	10.1	9.1	7.6	6.5	5.7	4.6	3.8
45.5	89.6	46.0	30.9	23.3	18.6	15.6	13.3	11.7	10.4	9.3	7.8	6.7	5.8	4.7	3.9
44	93.1	47.3	31.7	23.8	19.1	15.9	13.6	11.9	10.6	9.5	7.9	6.8	6.0	4.8	4.0
42.5	95.0	48.1	32.1	24.1	19.3	16.1	13.8	12.1	10.7	9.6	8.0	6.9	6.0	4.8	4.0
41	95.2	48.2	32.3	24.2	19.4	16.2	13.8	12.1	10.8	9.7	8.1	6.9	6.0	4.8	4.0
39.5	95.2	48.2	32.3	24.2	19.4	16.2	13.8	12.1	10.8	9.7	8.1	6.9	6.0	4.8	4.0
38	95.2	48.2	32.3	24.2	19.4	16.2	13.8	12.1	10.8	9.7	8.1	6.9	6.0	4.8	4.0

Constant Power (W) @ 25°C
Duration (Hours)

End of Discharge Voltage	Constant Power (W) @ 25°C														
	1	2	3	4	5	6	7	8	9	10	12	14	16	20	24
50	3488	1919	1324	1010	816	684	588	516	460	415	346	297	261	209	175
48.5	3808	2040	1394	1058	852	713	613	537	478	431	360	309	270	217	181
47	4087	2144	1454	1099	884	738	634	555	494	445	371	318	279	223	186
45.5	4311	2228	1502	1133	909	758	651	570	507	456	380	326	285	228	190
44	N/A	2287	1537	1157	927	773	663	580	516	464	387	332	290	232	193
42.5	N/A	2322	1557	1171	938	782	671	587	522	469	391	335	293	234	195
41	N/A	2329	1563	1175	942	785	673	589	524	471	393	336	294	235	196
39.5	N/A	2329	1563	1175	942	785	673	589	524	471	393	336	294	235	196
38	N/A	2329	1563	1175	942	785	673	589	524	471	393	336	294	235	196

Energy / Wh @ 25°C
Duration (Hours)

End of Discharge Voltage	Energy / Wh @ 25°C						
	1	2	3	4	5	10	
50	3488	3838	3972	4039	4078	4146	
48.5	3808	4081	4183	4233	4262	4310	
47	4087	4289	4362	4398	4418	4449	
45.5	4311	4455	4506	4530	4543	4561	
44	4471	4575	4610	4626	4634	4643	
42.5	4558	4643	4672	4684	4690	4694	
41	4568	4658	4688	4702	4708	4713	
39.5	4568	4658	4688	4702	4708	4713	
38	4568	4658	4688	4702	4708	4713	

State of Charge vs Voltage
Voltage (V)

State of Charge	State of Charge vs Voltage		
	0.2 C	0.5 C	1.0 C
100%	51.3	51.3	51.3
90%	49.5	48.9	48.6
80%	49.4	48.8	48.6
70%	49.2	48.6	48.4
60%	49.0	48.5	48.3
50%	48.9	48.4	48.2
40%	48.8	48.2	48.1
30%	48.5	48.0	47.9
20%	48.0	47.6	47.5
10%	47.4	46.9	46.9
0%	40.5	40.4	39.0