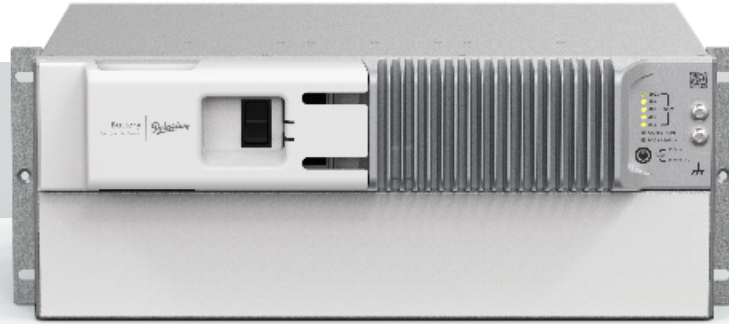




Battery 19" 4U / 50Ah

SLB48-050-143-5
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" 4U
Lithium Chemistry	LFP
Rated Voltage	48 V
Rated Capacity Ah (0.2C, 25°C to 39 V)	50 Ah
Rated Energy Wh (0.2C, 25°C to 39 V)	2400 Wh
Calendar Life @ 80% SOC	15 years
Peak Discharge Power	6kW for 60 seconds
Discharge Cutoff Current	100 A
End-of-Discharge Voltage (LVBD)**	37.5 - 41 V
Charge Current Limitation (CLD)*	50 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)
Storage Temperature	-20 to +60°C (-4 to 140°F)
Weight	Approx. 28 Kg (61.7 lbs)
Dimensions mm (in")	W 440 D 270 H 173 (W 17.3" D 10.6" 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

DS0501435-Rev 1.2

* If the charge current is 50A or higher, the battery will automatically reduce the charge current to 6-12A temporarily
**Low Voltage Battery Disconnect (LVBD) will activate when first cell in battery pack has discharged to 2.5V

Data subject to change without notice



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Battery 19" 4U / 50Ah

SLB48-050-143-5
15S Series, Generation 5

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	35.9	19.6	13.5	10.3	8.3	7.0	6.0	5.3	4.7	4.2	3.5	3.0	2.7	2.1	1.8	
48.5	39.3	21.0	14.3	10.8	8.7	7.3	6.3	5.5	4.9	4.4	3.7	3.1	2.8	2.2	1.8	
47	42.4	22.1	14.9	11.3	9.0	7.6	6.5	5.7	5.0	4.5	3.8	3.3	2.8	2.3	1.9	
45.5	44.8	23.0	15.5	11.6	9.3	7.8	6.7	5.8	5.2	4.7	3.9	3.3	2.9	2.3	2.0	
44	46.6	23.7	15.8	11.9	9.5	7.9	6.8	6.0	5.3	4.8	4.0	3.4	3.0	2.4	2.0	
42.5	47.5	24.0	16.1	12.1	9.7	8.0	6.9	6.0	5.4	4.8	4.0	3.4	3.0	2.4	2.0	
41	47.6	24.1	16.1	12.1	9.7	8.1	6.9	6.1	5.4	4.8	4.0	3.5	3.0	2.4	2.0	
39.5	47.6	24.1	16.1	12.1	9.7	8.1	6.9	6.1	5.4	4.8	4.0	3.5	3.0	2.4	2.0	
38	47.6	24.1	16.1	12.1	9.7	8.1	6.9	6.1	5.4	4.8	4.0	3.5	3.0	2.4	2.0	

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	1744	959	662	505	408	342	294	258	230	207	173	149	130	105	87	
48.5	1904	1020	697	529	426	357	307	269	239	215	180	154	135	108	90	
47	2043	1072	727	550	442	369	317	278	247	222	186	159	139	112	93	
45.5	2156	1114	751	566	454	379	325	285	253	228	190	163	143	114	95	
44	2236	1144	768	578	463	387	332	290	258	232	193	166	145	116	97	
42.5	2279	1161	779	585	469	391	335	293	261	235	196	168	147	117	98	
41	2284	1165	781	588	471	393	337	295	262	236	196	168	147	118	98	
39.5	2284	1165	781	588	471	393	337	295	262	236	196	168	147	118	98	
38	2284	1165	781	588	471	393	337	295	262	236	196	168	147	118	98	

Energy (Wh) @ 25°C
Duration (Hours)

End of Discharge Voltage	Energy (Wh) @ 25°C						
	1	2	3	4	5	10	
50	1744	1919	1986	2020	2039	2073	
48.5	1904	2040	2091	2117	2131	2155	
47	2043	2144	2181	2199	2209	2225	
45.5	2156	2228	2253	2265	2272	2281	
44	2236	2287	2305	2313	2317	2322	
42.5	2279	2322	2336	2342	2345	2347	
41	2284	2329	2344	2351	2354	2357	
39.5	2284	2329	2344	2351	2354	2357	
38	2284	2329	2344	2351	2354	2357	

State of Charge (%) vs Voltage (V)
Discharge Rate

State of Charge	Discharge Rate		
	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

Technical Drawings

