



Battery 19" 2U / 50Ah

SLB48-050-124-2

14S 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" 2U
Lithium Chemistry	NMC
Rated Voltage	48 V
Rated Capacity Ah (0.2C, 25°C to 42 V)	50 Ah
Rated Energy Wh (0.2C, 25°C to 42 V)	2520 Wh
Calendar Life @ 80% SOC	20 years
Peak Discharge Power	6kW for 60 seconds
Discharge Cutoff Current	100 A
End-of-Discharge Voltage (LVBD)**	42 V
Charge Current Limitation (CLD)*	50 A
Charge Voltage for 100% SOC	58.8 V
Charge Voltage for 80% SOC	56 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. 23.5 Kg (51.8 lbs)
Dimensions mm (in")	W 440 D 382 H 87 (W 17.3" D 15.0" H 3.4")
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

DS0501242-Rev 1.0

*If the charge current is 50A or higher, the battery will automatically reduce the charge current to 6-12A temporarily
** Cut off when one cell reaches 3.0V, 14 cells in series
Data subject to change without notice



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		1	2	3	4	5	6	7	8	9	10	12	14	16	20	24
	50	21.8	12.0	8.3	6.3	5.1	4.3	3.7	3.3	2.9	2.6	2.2	1.9	1.6	1.3	1.1
	49	27.1	14.8	10.2	7.8	6.3	5.3	4.6	4.0	3.6	3.2	2.7	2.3	2.0	1.6	1.3
	48	32.6	17.7	12.1	9.2	7.5	6.3	5.4	4.7	4.2	3.8	3.2	2.7	2.4	1.9	1.6
	47	37.9	20.3	13.9	10.6	8.5	7.1	6.1	5.4	4.8	4.3	3.6	3.1	2.7	2.2	1.8
	46	42.7	22.6	15.4	11.6	9.4	7.8	6.7	5.9	5.2	4.7	4.0	3.4	3.0	2.4	2.0
	45	46.4	24.2	16.4	12.4	9.9	8.3	7.1	6.2	5.6	5.0	4.2	3.6	3.2	2.5	2.1
	44	48.8	25.1	16.9	12.7	10.2	8.5	7.3	6.4	5.7	5.1	4.3	3.7	3.2	2.6	2.2
	43	49.6	25.1	16.9	12.7	10.2	8.5	7.3	6.4	5.7	5.1	4.3	3.7	3.2	2.6	2.2
	42	49.6	25.1	16.9	12.7	10.2	8.5	7.3	6.4	5.7	5.1	4.3	3.7	3.2	2.6	2.2

End of Discharge Voltage		1	2	3	4	5	6	7	8	9	10	12	14	16	20	24
	50	1173	649	452	347	281	236	203	178	158	142	118	101	88	69	57
	49	1432	789	547	419	339	285	245	215	192	173	144	123	107	85	71
	48	1695	927	641	490	396	333	287	252	224	202	169	144	126	101	84
	47	1945	1055	726	554	448	376	323	284	253	228	191	164	143	115	96
	46	2164	1161	795	605	489	410	353	310	276	249	208	179	157	126	105
	45	2334	1237	843	640	516	432	372	326	290	262	219	188	165	133	111
	44	2441	1275	864	654	526	440	378	332	295	266	223	191	168	135	112
	43	2476	1275	864	654	526	440	378	332	295	266	223	191	168	135	112
	42	2476	1275	864	654	526	440	378	332	295	266	223	191	168	135	112

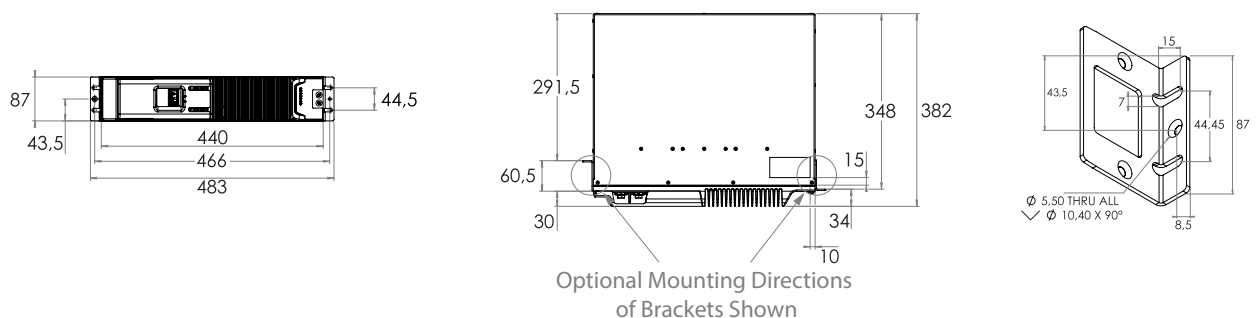
Energy / Wh @ 25°C
Duration (Hours)

End of Discharge Voltage		1	2	3	4	5	10
	50	1173	1299	1355	1386	1404	1425
	49	1432	1578	1641	1676	1697	1726
	48	1695	1854	1922	1959	1982	2020
	47	1945	2109	2178	2215	2238	2281
	46	2164	2322	2386	2421	2443	2488
	45	2334	2473	2529	2559	2578	2620
	44	2441	2550	2593	2616	2630	2663
	43	2476	2550	2593	2616	2630	2663
	42	2476	2550	2593	2616	2630	2663

State of Charge vs Voltage
Voltage (V)

State of Charge		0.2 C	0.5 C	1.0 C
	100%	58.1	58.1	58.1
	90%	56.1	46.0	55.4
	80%	54.6	54.5	53.7
	70%	53.2	53.1	52.3
	60%	51.8	51.7	51.0
	50%	50.8	50.7	50.0
	40%	50.2	50.0	49.3
	30%	49.6	49.4	48.7
	20%	48.9	48.8	48.0
	10%	47.6	47.6	47.1
	0%	42.9	42.8	42.4

Technical Drawings



Authorised, valued-added distributor

Australia & New Zealand



Powerbox Australia Pty Ltd

Sydney Head Office
4 Beaumont Road,
Mt Kuring-Gai, NSW 2080
Australia



1800 251 380



sales@powerbox.com.au



powerbox.com.au

Powerbox Pacific Ltd

New Zealand Sales Office
1a Henry Rose Place,
Albany, Auckland
New Zealand 0632



09 4158 320



sales@powerbox.co.nz



powerbox.co.nz