

LITHIUM-ION BATTERY

48V 100AH | LiFePO₄ Battery

Newmar's 48V Lithium Iron Phosphate battery modules are ideally suited for telecom, OSP, and renewable energy applications with a max charge voltage of 54.5V.

Newmar's LiFePO₄ series offer long cycle life, small size, reduced weight, and simplified installation as 19"/23" rack mountable modules. LiFePO₄ batteries are ideal for telecom growth and as direct replacement for VRLA.



KEY FEATURES

- Simple installation and load/charge system integration (Pos/Neg termination)
- Advanced intelligent lithium-ion battery management technology
- Configuration flexibility, support parallel connection expansion up to 8 units
- SOC Status Indicator
- Modbus communication for active battery monitoring

BATTERY SPECIFICATIONS

	48V100A-LIPO4-3U
Rated Voltage	48 V
Rated Capacity	100 Ah (0.5–40.5 V @ 25°C)
Discharge Current (Max.)	100 A
Discharge End Voltage	40.5 V
Charge Current (Recommended)	20 A
Charge Current (Max.)	100 A
Charge Voltage	54.0 ±0.5 V

BMS - ALARMING

- System monitoring of voltage, current, temperature of cells and module. Built-in protection against; over-current on discharge and recharge, over-temperature, low temperature, low and high voltage, and short circuit
- BMS maintenance and service communication via RS232 or RS485 along with Modbus for simple interface with Inverters and other equipment
- 2 levels of remote alarming through dry contacts

FRONT PANEL SPECIFICATIONS

Status Indicators	SOC/ALM/RUN
Communications Port	RS232/RS485x2
Communications in Parallel	8 battery maximum
Terminal Size	M8
Circuit Breaker	125 A

GENERAL SPECIFICATIONS

Dimensions (W x H x D)	442.5 x 400 x 133.5 mm [17.42 x 15.8 x 5.26 in]
Weight	38.5 kg [84.9 lb]
Rack Units	3U
Terminal	M6



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COMPLIANCES

UL Certification	UL1642, Standard for Lithium Batteries
	UL2054, Standard for Household and Commercial Batteries
	UL1973, Batteries for Use in Light Electric/Rail (LER) and Stationary Applications
EN Certification	EN 61000-6-1:2007, Electromagnetic compatibility (EMC)
	EN 61000-6-3:2007+A1:2011, Electromagnetic compatibility (EMC)
IEC Certification	IEC 62133:2012, Battery Safety Testing
UN Certification	UN 38.3 Transportation Testing for Lithium Batteries and Cells

ENVIRONMENTAL REQUIREMENTS

MAXIMUM RECOMMENDED TEMPERATURE RANGE (°C)

Temperature Range

Discharge	-20–60°C [-4–140°F]
Charge	0–60°C [32–140°F]
Storage	0–40°C [32–104°F]

RECOMMENDED TEMPERATURE (°C)

Temperature Range

Discharge	15–35°C [59–95°F]
Charge	15–35°C [59–95°F]
Storage	15–30°C [59–86°F]

Constant Current Discharge Rates @25°C in Hours (Amps)

Current (A)	10	20	33	50	80	100
46.5 V	9.73	4.85	2.93	1.90	1.15	0.90
45.0 V	9.92	4.96	3.00	1.96	1.20	0.93
43.5 V	10.05	5.03	3.05	2.00	1.23	0.96
42.0 V	10.13	5.07	3.08	2.02	1.25	0.98
42.0 V	10.18	5.10	3.09	2.03	1.26	1.00

Constant Current Discharge Rates @25°C in Hours (Watts)

Power (W)	512	1024	1685	2560	4050	4690
46.5 V	9.83	4.89	2.92	1.85	1.05	0.82
45.0 V	10.02	4.99	3.01	1.91	1.11	0.86
43.5 V	10.13	5.05	3.05	1.95	1.15	0.90
42.0 V	10.21	5.09	3.08	1.98	1.18	0.93
40.5 V	10.25	5.12	3.09	2.00	1.20	0.95

BMS/Battery Operating Parameters

Parameters	Units	Value
Capacity	Ah	100
Rated Voltage	V	48
Charge Voltage	V	54.5 ± 0.5
No Equalization Required	V	NA
Nominal charge current	A	20A
Charge current limitation	A	100A
LVBD (Low voltage battery disconnect)	V	>40.5

Cycles - Temperature vs. Depth of Discharge

Temp (°C)	Depth of Discharge (DoD)				
	100%	80%	60%	40%	20%
25	2500	3100	4200	6300	11500
35	2000	2500	3350	5000	8200
45	1400	1750	2300	3300	5400

