

12.8V 12Ah

(12A BMS)

PRODUCT MANUAL

Lithium Iron Phosphate (LiFePO₄) Battery



BATTERY PARAMETERS

Cell Type	LiFePO ₄
Nominal Voltage	12.8V
Rated Capacity	12Ah
Energy	153.6Wh
Cycle Life	≥4000 times
Battery Management System (BMS) Board	12A
Charge Method	CC/CV
Charge Voltage	14.4±0.2V
Recommended Charge Current	2.4A (0.2C)
Max. Continuous Charge Current	12A
Max. Continuous Discharge Current	12A
Surge Discharge Current	75A@1 second
Max. Continuous Output Power	153.6W

Dimension	L5.95*W3.86*H3.74 inch
	L151*W98*H95 mm
Connector Type	F2
Housing Material	ABS
Protection Class	IP65
Temperature Range	Charge: 0°C to 50°C / 32°F to 122°F
	Discharge: -20°C to 60°C / -4°F to 140°F
	Storage: -10°C to 50°C / 14°F to 122°F

IMPORTANT SAFETY INSTRUCTION

I Please keep the battery away from heat sources, sparks, flames, and hazardous chemicals.

I Maintain Adequate Ventilation and Heat Dissipation

Place the battery in a well-ventilated area with sufficient heat dissipation to prevent overheating and damage.

I DO NOT puncture, drop, crush, burn, penetrate, shake, or strike the battery.

The battery should be securely fastened during handling to prevent impact or dropping.

It should be safely secured to a solid plane and the cables safely tied to a suitable location to avoid arcing and sparking due to friction.

DO NOT press it by placing heavy stuff on top of it for long periods, which may damage it due to an internal short circuit.

I DO NOT immerse the battery in water whether the battery is in use or on standby.

I DO NOT open, dismantle, or modify the battery.

If you have any questions or need any help, please feel free to contact us (and leave your contact phone number) at service@litime.com, we will offer phone or email support in 12hrs.



UNITED STATES

◀  Register Warranty

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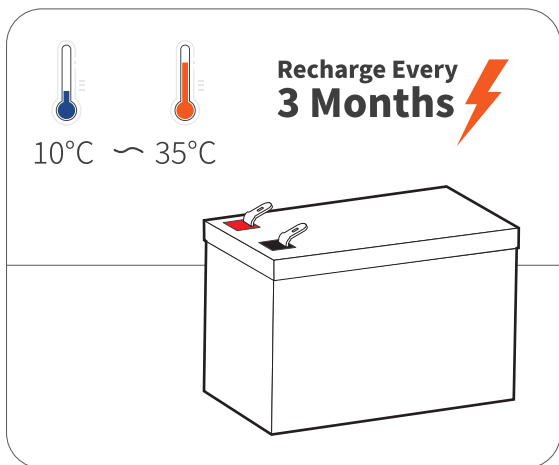
LONG-TERM STORAGE

TEMPERATURE

A temperature between 10°C to 35°C/50°F to 95°F is ideal for long-term storage. Store in a fireproof container and away from children.

CAPACITY

For a longer-lasting product, it is best to store your battery at 50% charge level and recharge every three months if it is not going to be used for a long period of time.



HOW TO ESTIMATE THE BATTERY CAPACITY

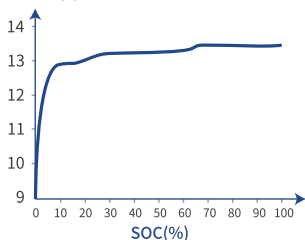
STATE OF CHARGE (SOC)

The battery capacity could be roughly estimated by its resting voltage (not charging/discharging voltage)^①.

Since the voltage of each battery is slightly different, and the voltage measurement is affected by the measuring instrument, ambient temperature, etc., the following parameters are for reference only. The actual SOC of the battery is based on the discharge capacity under load.

Resting Voltage: The voltage is measured after the battery has been disconnected from the charger and loads with zero current, and left alone for 3 hours.

VOLTAGE(V)



SOC (%)	VOLTAGE (V)
0	10 to 12
25	13 to 13.15
50	13.15 to 13.2
75	13.3 to 13.33
100	≥ 13.33

① Based on the characteristics of LiFePO₄ batteries, the voltage measured by all LiFePO₄ batteries during charging/discharging is not the real voltage of the battery. Therefore, after charging/discharging and disconnecting the battery from the power source, the voltage of the battery will gradually drop/increase to its real voltage.

SERIES/PARALLEL CONNECTION

THE PREMISE OF CONNECTION

To connect in series or /and parallel, batteries should meet the below conditions:

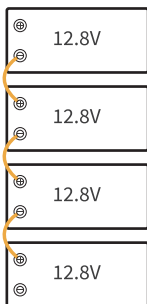
- a. identical batteries with the same battery capacity (Ah) and BMS (A);
- b. from the same brand (as lithium battery from different brands has their special BMS);
- c. purchased in near time (within one month).

LIMITATION FOR SERIES/PARALLEL CONNECTION

Support connecting up to 16 identical batteries for up to:
4 in series as 48V (51.2V) battery system or
4 in parallel as 48Ah battery system.

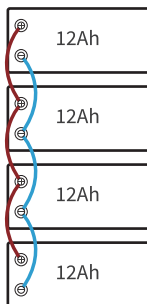
Series Connection

48V(51.2V) 12Ah



Parallel Connection

12V(12.8V) 48Ah



Li Time

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