



48V 100Ah

(100A BMS)

PRODUCT MANUAL

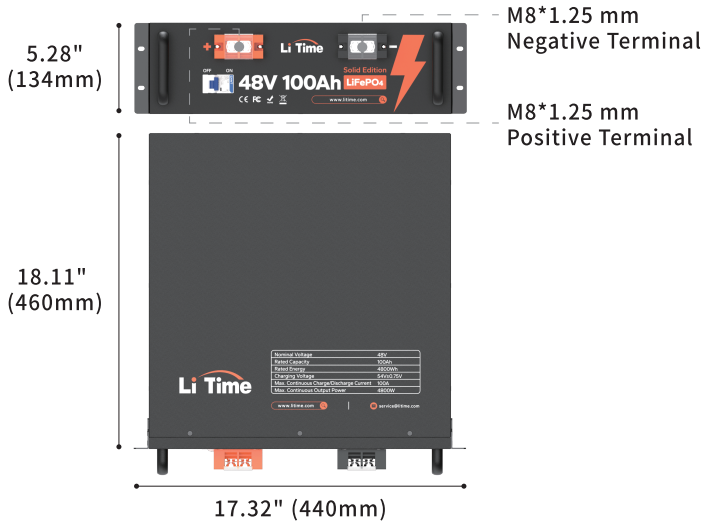
Lithium Iron Phosphate (LiFePO₄) Battery

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48V 100AH BATTERY

Max. Continuous Output Power: 4800W



INSULATING COVERS FOR BOLTS

BATTERY-PACK MAIN PARAMETERS

Cell Type	LiFePO ₄
Nominal Voltage	48V
Rated Capacity	100Ah
Energy	4800Wh
Internal Resistance	≤40mΩ
Cycle Life	≥4000 times
Battery Management System (BMS) Board	100A
Charge Method	CC/CV
Charge Voltage	54±0.75V
Recommend Charge Current	20A (0.2C)
Max. Continuous Charge Current	100A
Max. Continuous Discharge Current	100A
Max. Discharge Current 5 Seconds	280A
Max. Continuous Output Power	4800W

Battery Pack Case	Steel Plate Cold Common (SPCC)
Dimension	Without Handles: L17.32*W18.11*H5.28 inch L440*W460*H134 mm
	With Handles: L17.32*W19.61*H5.28 inch L440*W498*H134 mm
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



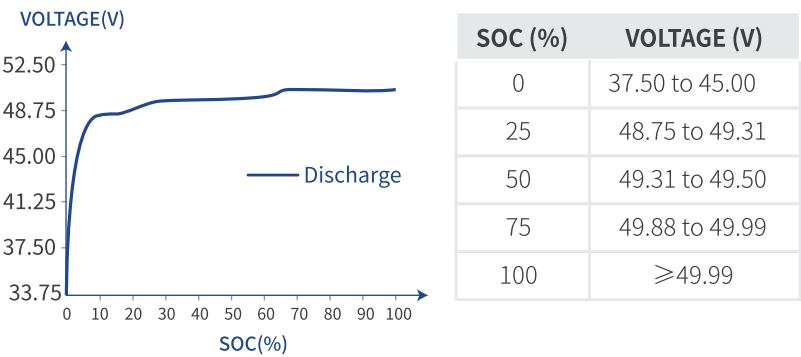
HOW TO ESTIMATE THE BATTERY CAPACITY

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.



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.

PARALLEL CONNECTION

THE PREMISE OF CONNECTION

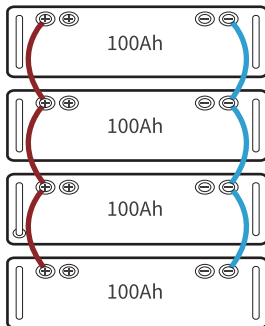
To connect in parallel, batteries should meet the below conditions:

- 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).

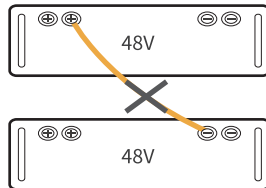
LIMITATION FOR SERIES/PARALLEL CONNECTION

Support connecting up to 4 identical batteries in parallel for up to: 48V 400Ah battery system.

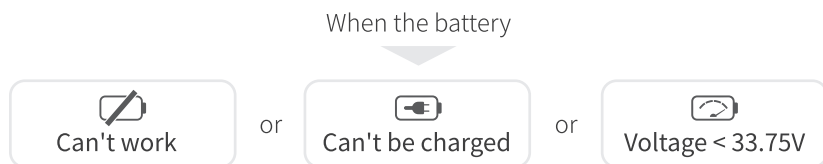
Parallel Connection 48V 400Ah



DO NOT support series connection



WHAT TO DO WHEN THE BATTERY STOPS WORKING?



It has 85% chances that BMS has shut it off for protection, and you could try **one of below ways** to activate the battery.

GENERAL STEPS

If the BMS has cut off the battery for protection, follow the below steps to activate it.

Step
1

Cut off all the connections from the battery.

Step
2

Leave the battery aside for 30mins.

Then the battery will automatically recover itself to normal voltage ($>37.5V$) and can be used after fully charged.

If the battery is unable to recover itself after the above steps, please try activating by **ONE OF BELOW TWO METHODS.**

After activated (voltage $> 37.5V$) and fully charged by the normal charging method, it can be used normally.

Method ①

Use a charger with lithium battery activation function to fully charge the battery.

Method ②

Connect a controller that supports 48V LiFePO₄ battery charging to charge the battery for 3~10s in sunny daytime.

Li Time

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