



**51.2V 100Ah**

**ComFlex Edition**

(100A BMS)

# **PRODUCT MANUAL**

Lithium Iron Phosphate (LiFePO<sub>4</sub>) Battery

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# PRODUCT OVERVIEW

## 51.2V 100AH BATTERY

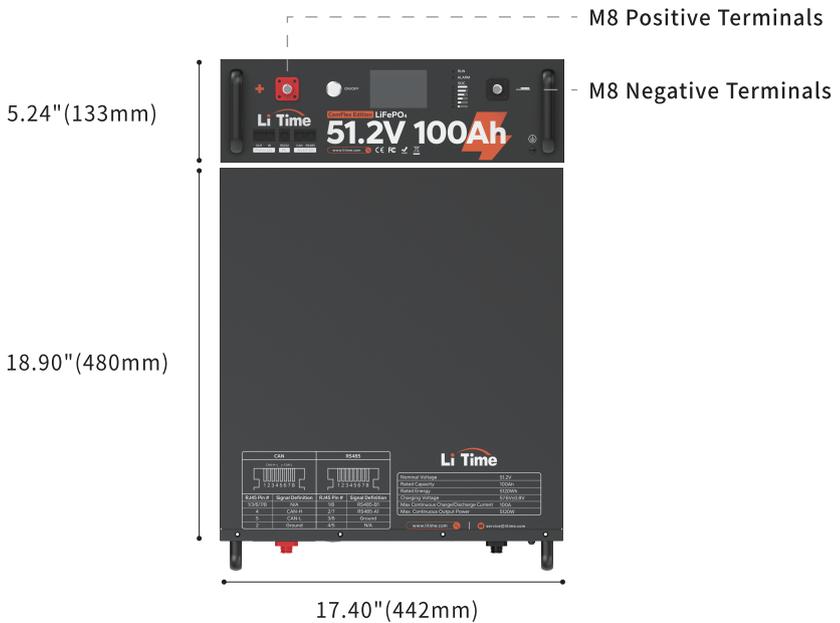
Operating Voltage: 51.2V

Charging Voltage: 57.6V $\pm$ 0.8V

Recommended Charge Current: 20A (0.2C)

Max Continuous Discharge Current: 100A

Max. Continuous Output Power: 5120W



**UNITED STATES**

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# BATTERY PARAMETERS

Cell Type	LiFePO4
Nominal Voltage	51.2V
Rated Capacity	100Ah
Energy	5120Wh
Internal Resistance	$\leq 40\text{m}\Omega$
Cycle Life	$\geq 4000$ times
Battery Management System (BMS) Board	100A
Charge Method	CC/CV
Charge Voltage	$57.6 \pm 0.8\text{V}$
Recommended Charge Current	20A (0.2C)
Max. Continuous Charge Current	100A
Max. Continuous Discharge Current	100A
Surge Discharge Current	110A@1 Second
Max. Continuous Output Power	5120W

Max. Parallel Connection	16 PCS
Parallel Connection Communication	Yes
Inverter Communication Protocol	CAN/RS485

Dimension	L17.40*W18.90*H5.24 inch
	L442*W480*H133 mm
Housing Material	Steel Plate Cold Common (SPCC)
Recommended Terminal Torque	106.2 to 123.9 inch · lbs / 12 to 14 N · m
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

Low Temperature Charging Protection (LTCP) Function <sup>①</sup>	Yes
Resume Charging Temperature Under LTCP	5°C/41°F (Battery Temperature)
Charging Current Limit Function <sup>②</sup>	Yes

① This battery supports Low Temperature Charging Protection (LTCP), where the BMS stops battery charging when the battery temperature falls below 0°C/32°F and resumes charging when the temperature rises above 5°C/41°F.

② To prevent high charging or surge currents from damaging the battery, the battery supports a charging current limit function. When the charging current exceeds 100A, the BMS will automatically limit the charging current within 10A until the battery is fully charged or the charger is removed.

# PARALLEL CONNECTION

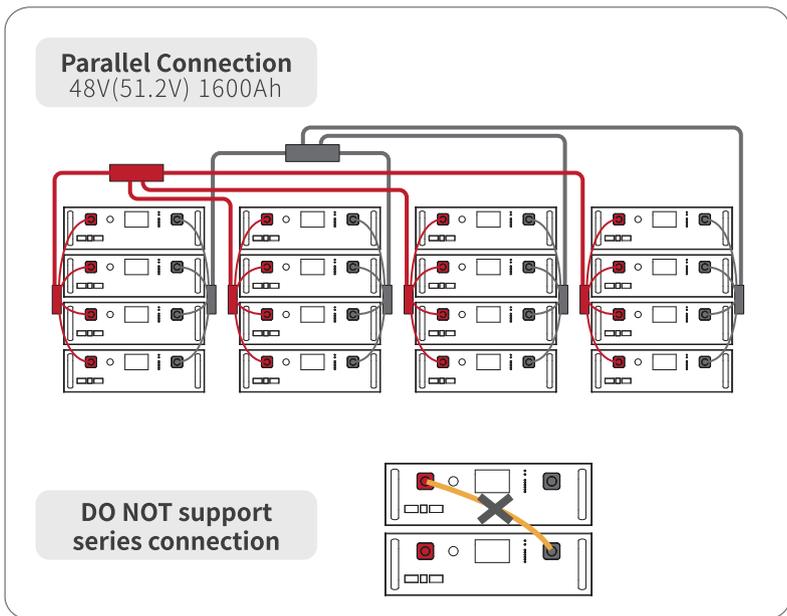
## THE PREMISE OF CONNECTION

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

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

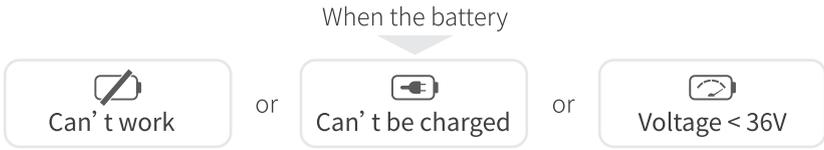
## LIMITATION FOR SERIES/PARALLEL CONNECTION

Support connecting up to 16 identical batteries in parallel for up to: 48V(51.2V) 1600Ah battery system.



It is recommended to use the stacking components and fixing pieces to install the batteries, up to four batteries per stack, and 16 batteries are recommended to install in four stacks.

# 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 (>40V) 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 THE BELOW TWO METHODS**. After activated (voltage > 40V) 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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