

# LiFePO4 Lithium Battery User Manual



## 1 Preface and Technical Support

So glad that you choose LiFePO4 Lithium Battery, Please read the following instructions carefully about the use and function of the product. If you have any questions, please feel free to contact us. We will solve the problem for you with the best service within 24 hours!

## 2 Product introduction

48V series designed for different types of applications, such as small UPS, home energy storage, portable mobile power supply and Recreational Vehicle, which is the best choice of small capacity, long time standby or cyclic use.

BMS is built into the battery system, which is responsible for collecting and analyzing the voltage, temperature and current of the single cell. It has the functions of over-voltage protection, under-voltage protection, high temperature protection, low temperature protection, short circuit protection and cell balance.

## 3 Model parameters

Model	51.2V 100Ah
Nominal Voltage	51.2V
Charge Voltage	58.4V
Discharge Cut-off Voltage	35.0V
Nominal Capacity	100Ah
Watt Hour	5120Wh
Charge Method	CC → CV
Charger	58.4V20A
Standard Charging Current	20A
Max.Charge Current	50A
Standard Discharge Current	50A
Max.Discharge Current	100A
Dimension	L20.5 × W10.6 × H8.7 inch, 86 lbs / 39.05kg
Working Temperature Range	Charge:32°F to 113°F Discharge: -4°F to 122°F
Storage Temperature	14°F to 122°F

## 4 Performance

- ◎ High acquisition of voltage data collection(10mv)
- ◎ Customized BMS function and parameter
- ◎ Intelligent equalization management
- ◎ Over Charging, Over Discharging, Over Temperature, Short Circuit Protection

## 5 Installation Guide

### 5.1 Preparation

Before installation, please read all safety information provided in this document. If you have any questions about operation and safe use of the battery system, please contact the technical support engineer immediately for a free consultation.

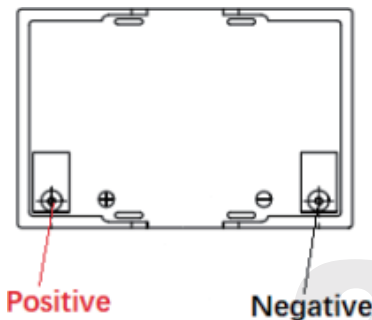
#### Before Operation:

- Qualified electric worker Qualification is mandatory
- Remove all metal items, such as jewelry, watch, pen
- To ensure the safety of construction personnel and equipment, disconnect the battery pack from the operating equipment during wiring
- Pay attention to the terminal voltage polarity of the battery module
- Make sure installation tools insulating and use tools correctly
- Follow the connection port description and system connection diagram
- It is absolutely forbidden to plug and unplug when the battery is working. Necessary operation should be done after the power supply is disconnected
- Before the formal operation, ensure whether the power terminals are properly connected and tighten the terminals; When it is necessary to measure, be careful to use instruments and tools, to avoid short circuit and other accidents
- It is strictly prohibited to disassemble the battery without permission of the professional technician from manufacture

### 5.2 Installation Tools

Torque Wrench	
Cross Screwdriver	
Insulating Gloves	
Multimeter	

### 5.3 Appearance



## 6 Attention

- Charging current shall be less than the maximum charging current specified in the data sheet. Charging current exceeding the recommended current may damage the battery;
- The discharge current shall be less than the maximum discharge current specified in the product specifications; Discharge current bigger than the recommended current may damage the battery;
- Non-professional personnel is not allowed to disassemble the battery; Reverse charging the battery is strictly prohibited;
- Battery pack should not be used or placed at high temperature. It will cause overheat, function failure or shorter life;
- Battery pack should be placed in dry and cool environment when it is not in use. Immersing into water is prohibited;
- It is strictly prohibited to install and disassemble the battery pack when it is live. For optimum performance, you must charge at 58.4V. If you do not, you will not be able to reach the full usable capacity of the battery.
- To ensure the best performance of the battery when stored for a long time, the battery should be charged and discharged every three months.
- After the battery discharge protection, it can be removed by the following ways:
  - 1.Let the battery stand for 15-20 min  
The battery will be automatically unprotected after standing for 15-20 min.
  - 2.Use the charger with OV charging function  
(It can charge the battery starting from 0V) to charge the battery. After fully charged, the battery can be used normally.
  - 3.Use another 48V lithium battery with same capacity to connect in parallel with the battery and put them aside for over 12 hrs. After that, fully charge the battery and it can be used normally.
- If solar charging is used, please set the regulator to the charging mode of B04 lithium battery.

When charged with controller, and the controller output is used to connect load: It is recommended that the controller is set as below parameters to avoid the battery fail to recover when the BMS cut off the battery for protection after a continuous small current discharge.

Overcharge Protection Voltage : 58.4V

Overcharge Recovery Voltage: 56.8V

Over-discharge Protection Voltage: 35.2V

Over-discharge Recovery Voltage: 43.2V

The above settings can ensure that the controller triggers the protection first instead of the battery BMS, which can prolong the service life of the battery.