

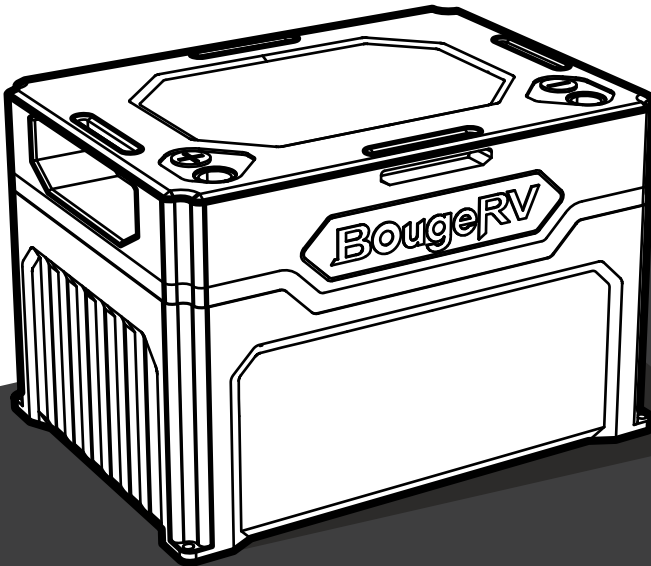
**BougeRV**

# User Manual

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

**Self-Heating Function**

1280Wh/ 12.8V/ 100Ah



 [www.bougeriv.com](http://www.bougeriv.com)

 [service@bougeriv.com](mailto:service@bougeriv.com)

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# Safety Instructions



**Please follow the safety instructions for operation, the damage caused by not following the safety instructions shall be borne by the individual.**

**Please save these instructions**

If you need to use the PDF version of the manual, you can contact us:  
**[service@bougerv.com](mailto:service@bougerv.com)**.

## General Safety Information

1. Read all of the instructions and cautions in the manual before installation.
2. There are no repairable parts for this battery, do not disassemble or attempt to repair the battery.
3. Please keep the battery away from water, heat sources, sparks, and hazardous chemicals.
4. Make sure all connections with the battery are tight.
5. Please read the product installation steps to ensure all connections are correct.
6. Please make sure to set the battery type parameter of your solar charge controller to lithium iron phosphate battery (LiFePO<sub>4</sub>) when charging the battery.
7. Store at 75% capacity and recharge every 6 months.
8. Do not expose the battery to extreme temperatures over 113°F.
9. Do not disassemble, cause a short circuit, crush, mutilate, reverse polarity, or dispose of it in fire.

## Battery Safety

1. DO NOT connect or disconnect terminals from the battery without disconnecting loads first.
2. Please wear proper protective equipment when working on the battery.
3. DO NOT wear jewelry or other metal objects when working on or around the battery.
4. Please use insulated tools when working on the battery.
5. Please keep the battery out of the reach of young children.

# Features



## Self-Heating Function

When the battery is charging, if the battery temperature is  $\leq 33.8^{\circ}\text{F}$ , the battery will automatically turn on self-heating until the battery temperature is  $\geq 46.4^{\circ}\text{F}$  and stop heating to ensure that the battery will not be charged in a low-temperature environment (below  $32^{\circ}\text{F}$ ) that reduces battery life.



## BMS Protection

overcharge protection, overdischarge protection, overcurrent protection, high temperature protection, low temperature protection, short circuit protection.



## Cycle Lifetime

The remaining battery capacity after 4000 cycles is  $\geq 80\%$  of the initial battery capacity.



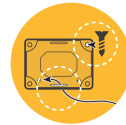
## Charge & Discharge Current

The maximum charge current and discharge current can reach 100A.



## Battery System

Up to 4 batteries can be connected in series to form a 48V battery system, and up to 4 batteries can be connected in parallel to form a 400AH battery system.



## Fixing The Battery

There are 4\* 0.2-inch holes at the bottom, and better secure the battery with 2 threading holes.

# Warranty

BougeRV provides **5-year** warranty service for the battery. Please read and follow the **safety instructions** in the manual carefully. The warranty service takes effect from the date of purchase. Please provide the **order number** of the purchased product and the serial number (**bar code**) attached to the back of the battery when applying for warranty.

## **The following terms are not covered by the warranty service:**

- 1.** Damage caused by improper installation; loose terminal connections, undersized cables, incorrect connections (series and parallel) required for voltage and Ah requirements, or reverse polarity connections.
- 2.** Environmental damage: Inappropriate storage conditions as defined by the manufacturer; exposure to extreme heat or cold temperatures, fire or freezing, or water damage.
- 3.** Damage caused by collision due to personal reasons.
- 4.** Damage caused by improper maintenance, under or over-charging of the product, and dirty terminal connections.
- 5.** Products that have been opened, modified, or tampered with.
- 6.** Failure to properly store the product in accordance with the instructions for safe use, including storing the product in a low-power state.
- 7.** If upon inspection the product is determined to be in normal service life, the warranty claim is rejected, even if Under warranty.
- 8.** Damage to the battery and other accidents caused by failing to operate in accordance with the safety instructions in the manual.

BougeRV provides **1-on-1 Solar Solution.**

If you have any questions during use, please feel free to contact us:

 [service@bouge rv.com](mailto:service@bouge rv.com)

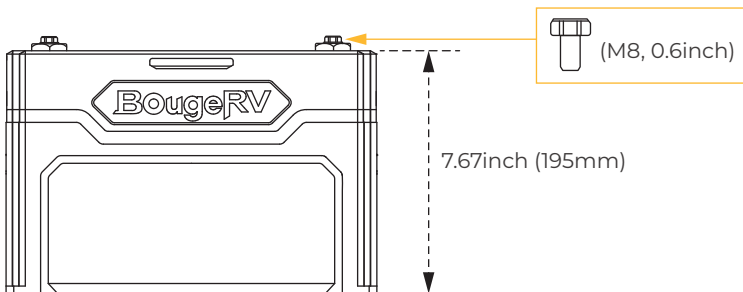
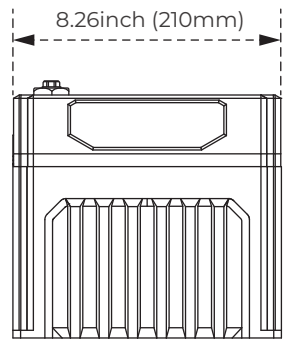
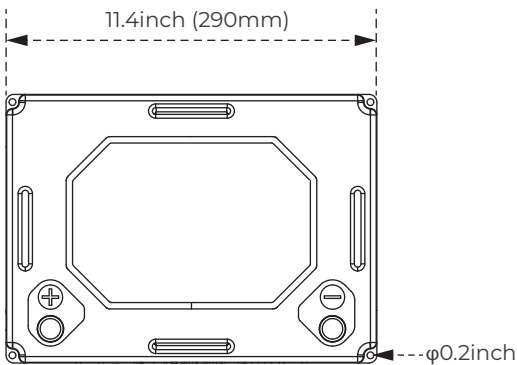
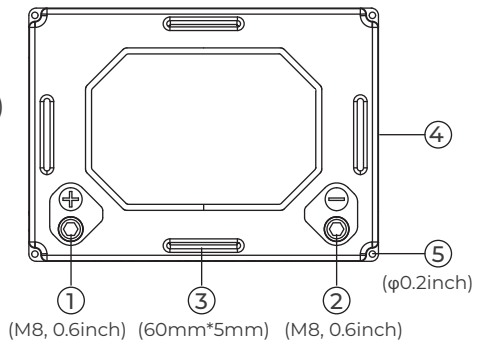
 **1-669-232-7427**

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# Product Appearance

- ① Positive Terminal (M8, 0.6inch)
- ② Negative Terminal (M8, 0.6inch)
- ③ Threading Holes (60mm\*5mm)
- ④ Handle
- ⑤ Mounting Holes ( $\varphi 0.2$ inch)



# Specification

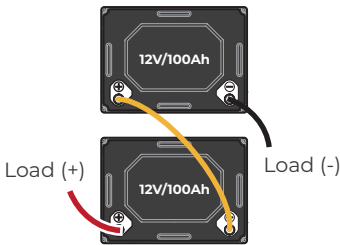
Item	Parameter
Nominal Voltage	12.8V
Nominal Capacity	100Ah
Energy	1280Wh
Charge Voltage	14.1V
<b>Charge current:</b>	
Standard charge	50A(0.5C)
Rapid charge	100A (1.0C)
<b>Automatically Self-Heating Function:</b>	<b>Only charging is on</b>
Self-Heating Starts	≤33.8°F (only charging is on)
Self-Heating Stops	≥46.4°F
Heating Rated Power	60W
Maximum Continuous Charge Current	100A (77°F)
Maximum Continuous Discharge Current	100A (77°F)
Maximum Continuous Discharge Current 3s	300A (3C)
Cycle Life	4000 times (The remaining battery capacity after 4000 cycles is ≥ 80% of the initial battery capacity).
Discharge Cut-off Voltage	10V
Over-Charging Protection Voltage	≥14.8V (Adjust the charging voltage below 14.8V to resume charging)
Over-Discharging Protection Voltage	9.40±0.32V
<b>Storage Temperature :</b>	
Short term	-4°F~113°F
Long term	32°F~95°F
Charge Temperature Range	32°F~131°F
Discharge Temperature Range	-4°F~131°F
Maximum Series Voltage Of Battery Pack	48V
Maximum Parallel Current Of Battery Pack	400Ah
Charge Method	CC/CV
Internal resistance	≤30mΩ
Self-discharge	3%
Protection Rating	IP65
Demension/inch	L11.4*W8.26*H7.67
Weight	27lb

# Battery Pack System Connection

## Battery Series And Parallel Considerations

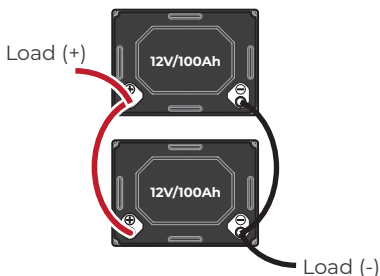
1. First make sure that each battery is fully charged.
2. When using, it is best to ensure that each battery is of the same brand and specification. If you need to use different batteries for connection, please contact us ( ✉ [service@bougerv.com](mailto:service@bougerv.com)) in advance, and our technical team will confirm whether different batteries can be connected together.
3. After connecting the batteries in parallel, you need to wait at least 6 hours before charging and discharging the batteries.

### Battery Pack In Series



1. After the series connection is completed, the battery pack system becomes 24V/ 100Ah, and the series circuit can connect up to 4 batteries in series to reach a system voltage of 48V.

### Battery Pack In Parallel

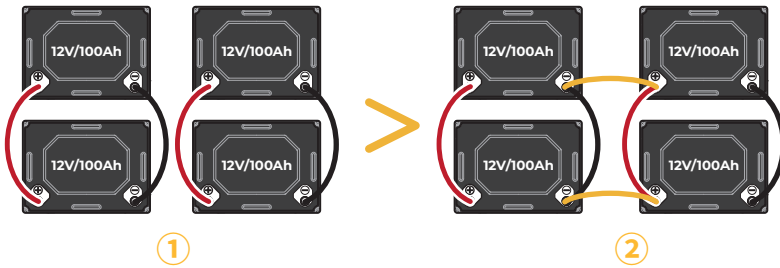


1. After the parallel connection is completed, the battery pack system becomes 12V/ 200Ah, and the parallel circuit can connect up to 4 batteries in parallel to reach a system current of 400Ah.

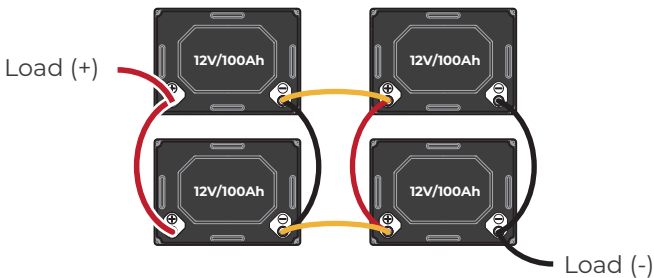


## Battery Pack In Series And Parallel

2. When connecting in series and parallel at the same time, ① the batteries should be connected in parallel first, and ② the battery packs that have been connected in parallel should be connected in series



3. After completing the series and parallel connection, the battery pack system becomes 24V/ 200Ah.



## FAQ

### **Q1: What should I do if my battery finds a problem when I receive it or during use?**

**A1:** If this problem occurs, please provide the relevant information and send it to our email: [service@bougerv.com](mailto:service@bougerv.com), please provide the relevant information to us, and our technical support team will quickly answer your questions as soon as possible.

- 1.** Provide the product order number and the factory barcode attached to the battery.
- 2.** Provide the device information (controller/ charger) for battery charging, preferably the brand name and device picture.
- 3.** The model information of the electrical appliance connected to the battery (inverter/ load electrical appliance).

### **Q2: What kind of equipment can charge this battery?**

**A2: 1.** Solar charge controller (MPPT/ PWM). You need to connect the solar panel to the controller to charge the battery. And you need to ensure that the system voltage of the controller is 12V.

BougeRV sells different kinds of MPPT/PWM controllers to match your solar system.

**2.** Charger. You need to ensure that the selected the charger can support lithium battery/lithium iron phosphate battery charging.

### **Q3: The battery has a self-heating function, will it keep heating and depleting the power of the battery?**

**A3:** No, the battery will only turn on the self-heating battery under the premise of charging ( $\leq 33.8^{\circ}\text{F}$  to turn on the self-heating,  $\geq 46.4^{\circ}\text{F}$  to turn off the self-heating), and the self-heating will be turned on when charging, so it starts self heating with external energy.

#### Q4: How to maintain the battery in the daily process?

**A4: 1.** Do not discharge the battery under 10V to avoid over-discharge shortening the battery life.

**2.** The battery needs to be changed every 3-6 months to prevent the battery from being over-discharged.

#### Q5: What should I do if the battery fails during use and the voltage is too low to charge?

**A5:** You can use a charger with a 0V function, it can charge the battery from 0V, and it can't be used normally after the battery is fully charged.

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If you have any questions during use, please feel free to contact us:



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