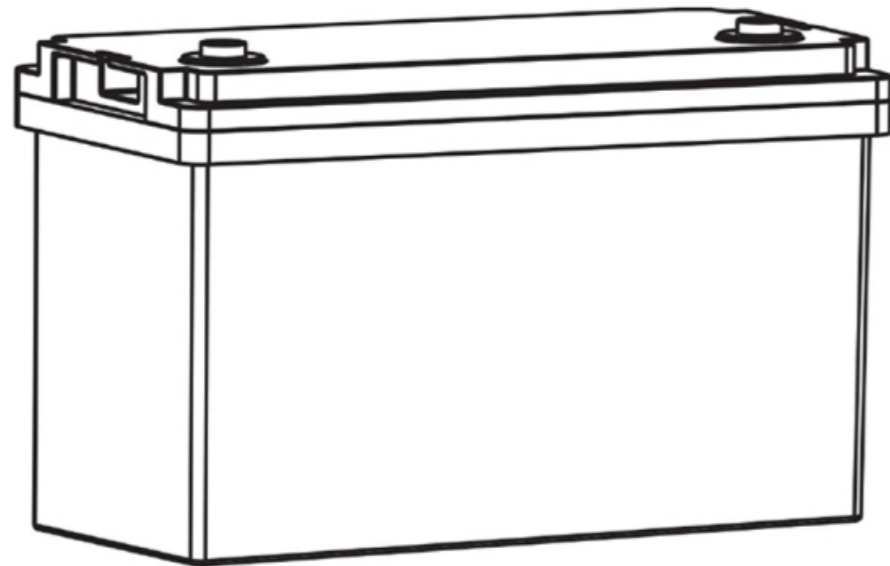


# LiFePO4

## LITHIUM IRON PHOSPHATE



This user manual offers a brief walkthrough of the unit's features. Please keep the user manual in hand for future reference. Still need help? Feel free to send us an email at [1106912234@qq.com](mailto:1106912234@qq.com).

**User Guide** »

### IMPORTANT SAFETY INSTRUCTIONS

- ◆ Please read through all the labels on the battery and this user guide before the first use.
- ◆ When connecting batteries in series or parallel, read all the precautions about how to connect first, or you may damage the batteries.
- ◆ Keep the battery away from rain, splashes, and any wet locations.
- ◆ DO NOT short circuit the battery.
- ◆ DO NOT reverse polarity connection.
- ◆ DO NOT expose the battery to fire, heat sources, or direct sunlight.
- ◆ DO NOT dismantle or modify the battery yourself.
- ◆ DO NOT drop, crush, shake, strike, or penetrate the battery.
- ◆ Please use the specified charger to charge batteries.
- ◆ Our batteries are assembled using waterproof glue. If you want to disassemble the batteries yourself, please ask the customer service team for directions on how to disassemble the batteries. But keep in mind that once the battery is disassembled, it cannot be restored to its original state of being.

## SPECIFICATIONS

Model	12V100Ah	12V200Ah	12V300Ah	24V100Ah	48V100Ah
Size (length x width x height)	330*175*220mm	525*240*220mm	525*270*220mm	525*270*220mm	525*270*220mm
Energy	1280Wh	2560Wh	3840Wh	2560Wh	5120Wh
Internal resistance	≤ 50mQ@50% SOC	≤ 40mQ@50% SOC	≤ 30mQ@50% SOC	≤ 45mQ@50% SOC	≤ 45mQ@50% SOC
Self discharge	<3% Monthly	<3% Monthly	<3% Monthly	<3% Monthly	<3% Monthly
Case material	ABS plastics	ABS plastics	ABS plastics	ABS plastics	ABS plastics
Classification of waterproof	IP55	IP55	IP55	IP55	IP55
Standard charging current	20A	40A	60A	20A	20A
Maximum charging current	100A	200A	200A	100A	100A
Charging temperature	0°C~45°C	0°C~45°C	0°C~45°C	0°C~45°C	0°C~45°C
Charging voltage	14.4+0.2V	14.4+0.2V	14.4+0.2V	29+0.2V	58.2+0.2V
Storage temperature	-5°C~45°C	-5°C~45°C	-5°C~45°C	-5°C~45°C	-5°C~45°C
Maximum discharge current	120A	200A	235A	100A	100A
Discharge temperature	-20°C~65°C	-20°C~65°C	-20°C~65°C	-20°C~65°C	-20°C~65°C
Overcurrent protection	130A	210A	250A	130A	130A
Bluetooth function	Apolegamy	Apolegamy	Apolegamy	Apolegamy	Apolegamy
Protection plate specifications	120A	200A	200A	120A	120A
Series connection mode	Defdefault battery BMS system is not supported, and customized BMS system requires series use				

### Controller Setting ( for reference )

System voltage	12.0V(x N)*	12.0V(x N)*	12.0V(x N)*	24.0V(x N)*	48.0V(x N)*
Boost charge voltage	14.2V(x N)*	14.2V(x N)*	14.2V(x N)*	28.4V(x N)*	56.8V(x N)*
Over-discharge recover voltage	12.6V(x N)*	12.6V(x N)*	12.6V(x N)*	25.2V(x N)*	50.4V(x N)*
Over-discharge voltage	11.1V(x N)*	11.1V(x N)*	11.1V(x N)*	22.2V(x N)*	44.4V(x N)*

Note:

(xN)\* : When it comes to a 24V(N=2)or 48V(N=4)system, the voltage should multiply by the number of series batteries.

\* When the battery is fully discharged at a continuous, it cannot be recharged at half immediately, which will trigger high temperature charging protection.

## TIPS FOR BETTER PERFORMANCE

### How to Connect Battery

1. Please make sure all batteries that are connected meet the following criteria:

- ◆ Batteries have the Same Voltage (V), Same Capacity (Ah), and are the Same Type (Lithium iron phosphate (LiFePO4)).
- ◆ As the built-in battery management system (BMS) may vary between brands, we advise you to choose batteries from the Same Brand for connection.

2. For optimal performance, we kindly advise you to follow the requirements listed below:

- ◆ Fully charge all ready-to-connect batteries.

- ◆ All battery interconnect cables should be the same wire gauge (AWG) and length, and come from the same brand. Otherwise, the impedance will be inconsistent, resulting in unbalanced charge and discharge performance.
- ◆ Connect your batteries one by one in series (up to 4 batteries) or in parallel (up to 4 batteries). Secure all cable connections between the cable lugs and terminals.

3. When determining the cable size (AWG) for your system, there are two factors to consider:

- ◆ The size of the electrical load you want to power.
  - ◆ The distance between the electrical load and your batteries.
- For reference, see the following chart:  
—Cables for Controller to Battery

Solar Input Current	5A	10A	20A	30A	40A	60A
Wire Cross Section Area (mm <sup>2</sup> )	1.5	2.5	5	8	10	12
Wire AWG	15	13	10	8	7	6

—Cables for Inverter to Battery

Cable Size	Copper Conductor Diameter (inches)	Maximum Amperage
6 AWG	0.20	115
4 AWG	0.23	150
2 AWG	0.30	205
1/0 AWG	0.37	285
2/0 AWG	0.43	325
4/0 AWG	0.56	440

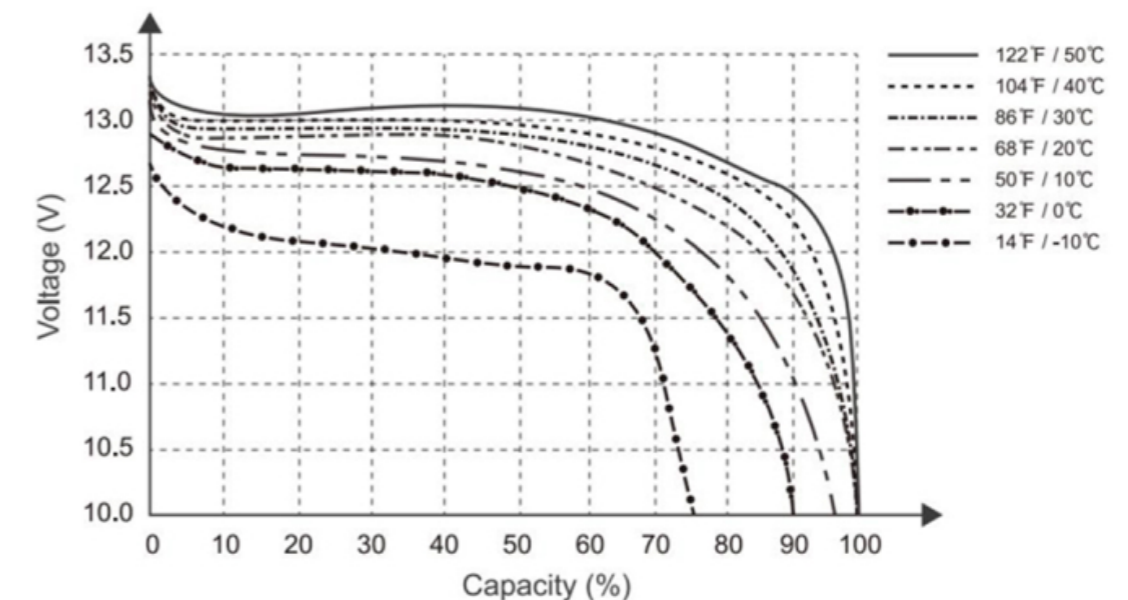
### About Rated Power

- ◆ AS. When connecting 2 batteries in parallel, the theoretical max. power is  $1280W \times 2 = 2560W$ . But this does not mean this battery bank can support all 2000W home appliances working normally via a 2000W inverter.
- ◆ The peak power of an AC motor appliance, such as an AC air conditioner or water pump, is double its rated power. For example, when using a 1500W AC air conditioner or water pump, it requires  $2 \times 1500W = 3000W$  of the battery bank and inverter to support normal working conditions.
- ◆ But please note that the peak power of some home appliances is 3 times the rated power. So you can consult the manufacturer for accurate peak power data.

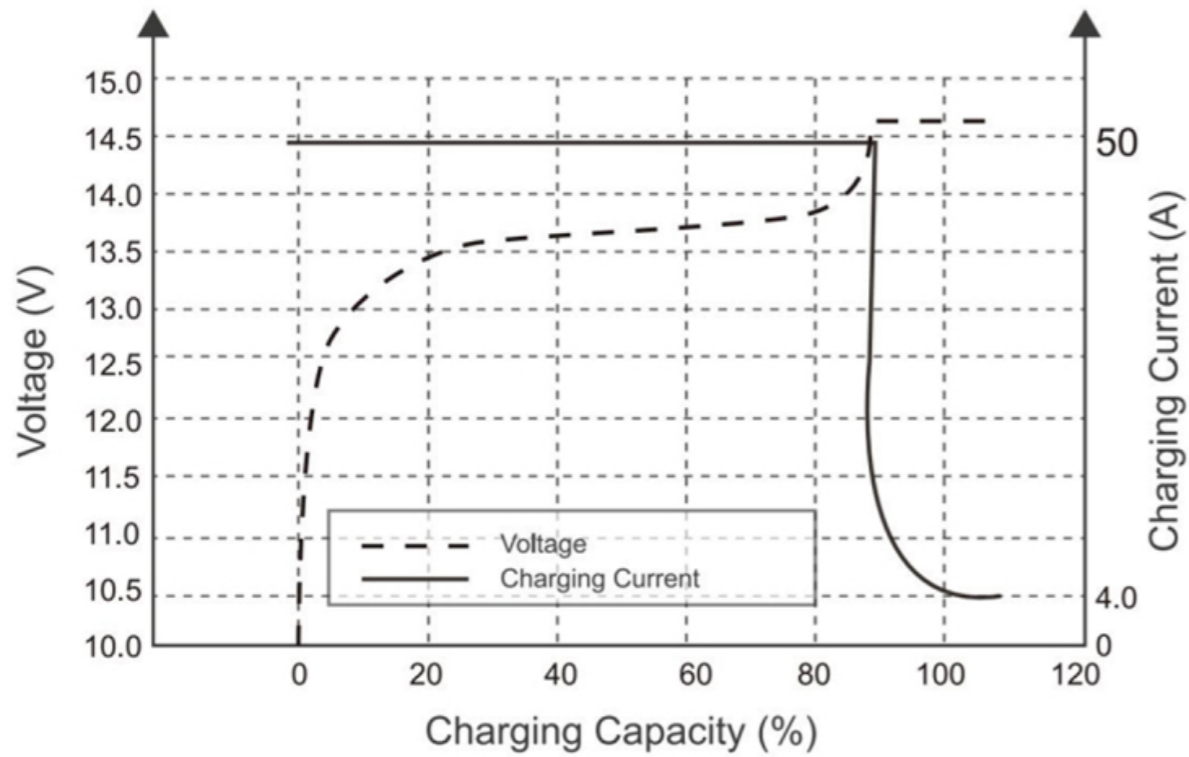
### How to Store Battery

- ◆ To store your battery, keep it at least 30%-50% charged. We recommend that you charge the battery every 6 months when not in use to prevent overdischarge.

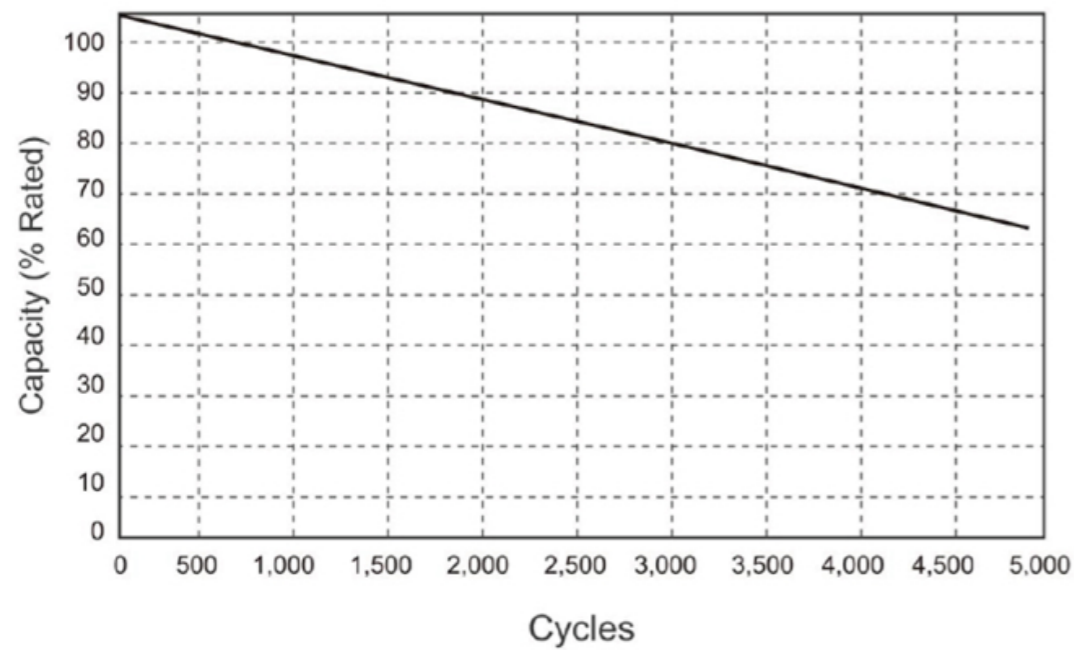
### DISCHARGE CURVE AT DIFFERENT TEMPERATURES (0.5C)



## CHARGING PERFORMANCE(0.5C,77°F/25°C)



## CYCLE LIFE VERSUS DEPTH OF DISCHARGE (0.5C, 77°F/25°C)



Note: The above three charts are based on the example of 12V100AH, and other models can be calculated proportionally for reference.

## WARRANTY

- ◆ LiFePO4 batteries are covered by a 3-year limited warranty from the original purchase date. If you encounter any issues during usage, feel free to contact us at [www.xdatou.com](http://www.xdatou.com)
- ◆ We only provide after-sales service for products sold by us or retailers and distributors authorized by us. If you have purchased your unit through other channels, please contact your seller for more information about the return and warranty.

## SUPPORT INFORMATION

- ◆ Email: [1106912234@qq.com](mailto:1106912234@qq.com)
- ◆ Phone/Wechat/Whatsapp/LINE: +86 18790296606