

Ampere Time

PRODUCT MANUAL

Lithium Iron Phosphate Battery (LiFePO₄)

12V 300Ah (200A BMS)



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PRODUCT OVERVIEW

Combination: 12.8V300Ah

Dimension: L20.5 * W9.37 * H8.54inch

Plastic Shell Color: Black



GENERAL INFORMATION

Operating Voltage: 12.8V

Charging Voltage: 14.4 ± 0.2V

Max Continuous Load Power: 2560W

Max Continuous Charging Current: 200A

Max Continuous Discharge Current: 200A

Bring You Free & Fruitful Life!



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BATTERY-PACK MAIN PARAMETERS

Item	Parameter
Nominal Capacity	300Ah
Usable Capacity	300Ah
Nominal Voltage	12.8V
Energy	3840Wh
Max. Continuous Load Power	2560W
Charge Voltage	14.4±0.2V
Charge Method	CC/CV
Recommend Charger	14.4±0.2V 60A (0.2C)
Recommend Charge Current	60A (0.2C)
Max. Continuous Charge Current	200A
Max. Continuous Discharge Current	200A
Max. Discharge Current 5Seconds	400A
Cycle Life	4000 times
Internal Impedance	≤40mΩ
Dimension (inch)	L20.5*W9.37*H8.54
Weight	Approx. 68.34lb / 31kg
Working Temperature Range	Charge: 0°C--50°C Discharge: -20°C--60°C
Storage Temperature	-10°C--50°C

ATTENTION

Caution: Risk of Fire, Explosion or Burns

- DO NOT Short circuit
- DO NOT Reverse connections from charger to battery
- DO NOT Disassemble
- DO NOT Throw into fire or incinerate
- DO NOT Heat above 70°C

ADVANTAGE

- Mobile with carry handles makes it easy to lift and move around.
- With battery management system enclosed, need no extra wiring.
- Built with LiFePO4 battery cells that are engineered to deliver superior performance & longevity.
- Battery voltage stays above 12.5V at 90% discharged.
- Maintenance Free; Non spill.
- Perfect replacement or upgrade for a traditional lead-acid battery.

WARRANTY

We provide five-year warranty for all our batteries. And our five-year battery warranty includes the following privileges when used correctly in accordance with the manual instructions:

- We'll assist to analyze customer's problem within 24 hours, and help solve problem, restore battery usage, and introduce the optimal use method;
- If the problem can't be solved, we'll send new battery replacement to the defective battery. And the defective battery needs to be returned to our US warehouse, and will be checked and tested by our technical team.

CHARGING TIPS

► About Charging Voltage

Based on the characteristics of Lithium Iron Phosphate (LiFePO₄) batteries, the voltage measured by all LiFePO₄ batteries during charging is not the real voltage of the battery. Therefore, after charging and disconnecting the battery from the power source, the voltage of the battery will gradually drop to its real voltage. If you need to test the real voltage of the battery, please charge and disconnect the power supply and test its voltage after putting it aside for over 15 mins.

► Charging Methods

Battery Charger

Use 14.6V lithium battery charger to maximize the capacity.

Recommend Charging Voltage: Between 14.2V to 14.6V

Recommend Charging Current:

60A (0.2C) The battery will be fully charged in around 5hrs to 100% capacity.

150A (0.5C) The battery will be fully charged in around 2hrs to around 97% capacity.

Inverter/Controller

- Select “12V (14.6V) LI (LiFePO₄) Mode” or
- Select “User Mode” to enter values according to below parameters:

CHARGING	Charging Limit Voltage	14.6V
	Over Voltage Disconnect Voltage	15V
	Over Voltage Reconnect Voltage	14.2V
	Equalizer Charging Voltage	14V
	Float Charging Voltage	13.8V
	Boost Charging Voltage	13.8V
	Boost Reconnect Charging Voltage	13.2V
	Low Voltage Disconnect Voltage	10.8V
DISCHARGING	Low Voltage Reconnect Voltage	12.4V
	Under Voltage Warning Voltage	11.6V
	Under Voltage Warning Reconnect Voltage	12V
	Discharging Limit Voltage	10.4V
	Over Discharge Disconnect Voltage	10.4V
	Over Discharge Reconnect Voltage	11.6V
OTHERS	Over-Discharge Delay Time	0.8s
	Equalize Duration	120min
	Boost Interval	Not Suitable for Lithium Batteries
	Boost Duration	120min

STATE OF CHARGE (SOC)

The battery capacity could be roughly estimated by its voltage. As there are subtle differences in the voltage of each battery, below parameters are for reference only. The voltage needs to be tested at rest (with zero current) after 15 mins of disconnecting from charger & loads.

Capacity	Voltage
100%	13.5V
99%	13.4V
90%	13.3V
70%	13.2V
40%	13.1V
30%	13.0V
20%	12.9V
10%	12.8V
1%	10.8V (recommend low voltage disconnect voltage)
0%	9.5V

LONG-TERM STORAGE

- The battery can be operated in temperature of -20°C to 60°C, and a temperature between 10°C to 35°C is ideal for long-term storage. Store in a fireproof container and away from children.
- For a longer-lasting product, it is best to store your battery at 100% charge level and recharge every three months if it is not going to be used for a long period of time.

CONNECTION TIPS

Premise of Connection: To connect in series or /and in parallel, batteries should meet below conditions:

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

Two Necessary Steps Before Connecting:

These two steps are necessary in order to reduce the voltage difference between batteries, and through these, the battery system can perform the best of it in series or/ and in parallel.

- Step①** Fully charge your batteries separately.
- Step②** Connect your batteries one by one in parallel, and leave them together for **12~24hrs**.
And then, you can connect your batteries in series or/ and in parallel.

Limitation for Series/Parallel Connection:

Support connecting up to 4 identical batteries for up to:
48V 300Ah battery system (when in series) /
12V 1200Ah battery system (when in parallel).

Parallel Connection

Series Connection

Connection Both in Series & Parallel:

E.g. Connect 4*12V 100Ah batteries for a 24V 200Ah battery system.

Step ① Connect the two batteries separately in parallel for 2*12V 200Ah battery systems.

Step ② Connect the 2*12V 200Ah battery systems in series for a 24V 200Ah battery system.

Please contact us at service@amperetime.com
for more connection suggestions.

HOW TO ACTIVATE THE BATTERY WHEN BMS CUT IT OFF FOR PROTECTION?

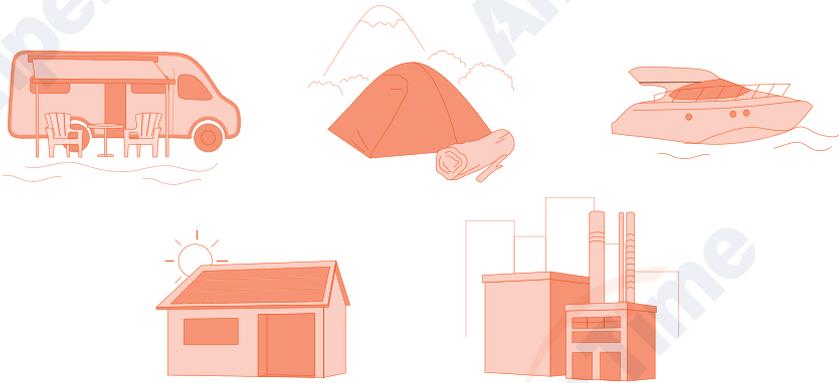
- If the BMS has cut-off the battery for protection, you need to cut off the load of the battery and put the battery aside for 30mins. Then the battery will automatically recover itself to normal voltage and can be used after fully charged.

- If the battery is unable to recover itself and its voltage is too low to hold a charge, you can activate it in below two ways:

① Use the charger with 0V charging function (it can charge the battery starting from 0V) to charge the battery. After fully charged, the battery can be used normally.

② Use another 12V lithium battery to connect in parallel with the battery for a minute to activate the battery (lead-acid battery with voltage more than/equal to 12V and less than/equal to 14.6V will also work). After that, fully charge the battery and it can be used normally.

APPLICATION



RV, Camper, Trailer, Caravan, Camping Truck, Bus etc.

Solar System + Wind Power System

Home Energy System

Boat & Fishing

Wireless Lawn Movers, Vacuum Cleaner & Washing Machine

Portable Video Camera & Portable Personal Computer

Car Audio System

Light Equipment

Emergency Lighting Equipment

Fire Alarm & Security Systems

Electric Equipment & Telemeter Equipment Portable

Toys & Consumer Electronics

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