



USER MANUAL

LITHIUM BATTERY

Deep Cycle



PRODUCT PRESENTATION

Lithium Iron Battery is a battery that uses lithium iron phosphate (LiFePO_4) as the positive electrode material and lithium carbonate as the negative electrode material. The battery has the advantages of high energy density, long cycle life, good safety performance, and low self-discharge rate. We use brand new A-grade LiFePO_4 battery cell with high battery consistency and a standard cycle life with more than 6,000 times, while the cycle life of traditional lead-acid batteries is only about 350 times. The product is equipped with an intelligent BMS and has multiple safety guarantees. The appearance is equipped with a stud output terminal design for easy connection. Maximum 300A large current continuous input and output.

Lithium Batteries VS Lead-Acid Batteries

Attribute	Lithium Battery	Lead-Acid Batteries
Supplier	EVE Battery: Brand New A Level LiFePO4 Cell	Tianneng power, ChilWee power. etc
Cycle Life Performance	More than 6000 times(after 6000 times cycle,still remain 80%capacity)	300-350 times
Safety Performance	Safe and stable, high temperature resistance,fire & explosion proof	poor safety and explosive
Depth Of Discharge	95%	70%
Energy Density	120Wh/kg-200wh/kg	around 40wh/kg
Weight & volume	with same capacity, 1/3 weight, and 2/3volume	heavier and bigger
Environmental Protection	Environmentally-friendly battery, no toxic pollution.	lead inside cause pollution

SAFETY RULES

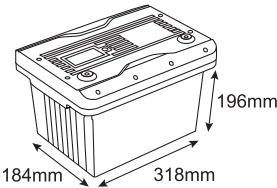
- Handle with care to avoid severe vibration. Make sure the voltage and power are sufficient before use.
- Use the correct spec cables, ensure good contact and tightness, ensure correct wiring, and prevent reverse polarity to avoid short circuits.
- Match the power range of the load according to the product parameters,and use it within the maximum allowable power range.
- Dedicated charger for lithium batteries must be used. A 14.4V charger is recommended for 12.8V LiFePO4 batteries; a 28.8V charger is recommended for 25.6V LiFePO4 batteries.
- Do not use in high temperature (above 55°C), humid (humidity greater than 90%), or places with danger of gas or dust explosion.
- Do not short-circuit the positive and negative poles or install them in reverse.
- Do not open the battery.
- If the battery pack is damaged or malfunctions, stop using it immediately
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- Do not open the battery.
- If the battery pack is damaged or malfunctions, stop using it immediately.

PRODUCT PARAMETER

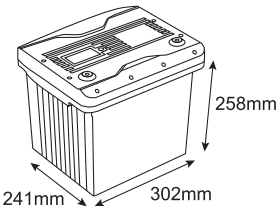
Model	12.8V 100AH	12.8V 200AH	12.8V 300AH
Nominal Voltage	12.8V	12.8V	12.8V
Rated Capacity	1280Wh (100Ah)	2560Wh (200Ah)	3840Wh (300Ah)
Cell Combination Structure	4S1P	4S2P	4S1P
Discharge Current	100A	150A	150A
Battery Type	LiFePO4	LiFePO4	LiFePO4
Discharge End Voltage	10V	10V	10V
Standard Charge Voltage	14.4V	14.4V	14.4V
Float Voltage	13.8V	13.8V	13.8V
Standard Charge Current	50A	100A	100A
Maximum Continuous Charge Current	100A	150A	150A
Standard Discharge Current	50A	100A	150A
Maximum Continuous Discharge Current	100A	150A	150A
Peak Current	110A, 10Sec	165A, 10Sec	165A, 10Sec
Charge Operating Temperature	0°C -45°C	0°C -45°C	0°C -45°C
Discharge Operating Temperature	-20°C 60°C	-20°C 60°C	-20°C 60°C
Dimension	318*184*196mm	302*241*258mm	379*218*262mm

PRODUCT DIMENSION

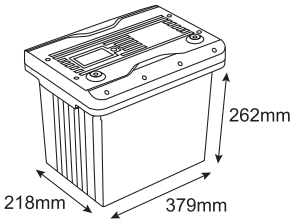
12.8V 100AH



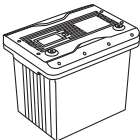
12.8V 200AH



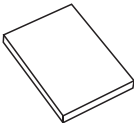
12.8V 300AH



PACKING LIST



Battery*1



User Manual*1



Screw Pack*1

RECOMMEND CABLE TABLE

AWG	Cross-Sectional Area	Adaptation Current
16AWG	1.3mm ²	5-10A
14AWG	2.0mm ²	10-18A
12AWG	3.4mm ²	18-25A
10AWG	5.3mm ²	25--40A
8AWG	8.3mm ²	40-60A
7AWG	12mm ²	60-100A
6AWG	16mm ²	100-150A
4AWG	25mm ²	150-200A
2AWG	35mm ²	200-250A
4AWG*2	25mm ² *2	300A

INSTALLATION STEPS

Step1

Open the package

Step2

Use connecting cables with right specifications (self-provided) to connect the positive and negative poles of the product ,and ensure that they are locked firmly.

Step3

Connect to the load or inverter than you can use it.

Common Fault Diagnosis And Treatment Methods

Battery Failure Conditions	Possible Causes	Solution
Battery Cannot Discharge	Battery has no BMS protection	Check the voltage and recharge
	cable loose	Re-fasten the cable
	Load wiring is reversed	Adjust the positive and negative poles correctly
	Load power toolarge, BMS protected	Adjust to proper power according to the specification
	Load with communication	remove or change to the load without communication
	BMS damage	Change BMS
	Extremely cold weather or overheated environment	Use at suitable temperature
	Internal battery or structure damaged	Return back tofactory for repairing

Battery Failure Conditions	Possible Causes	Solution
Battery cannot charge	battery already fully charged	no need to charge,can be used directly
	cable loose, virtual connection	Re-tighten the cable
	Charger voltage does not match	Use the right charger
	Faulty charger	Use a good charger
	Reverse polarity of charging	Adjust the positive and negative poles correctly
	BMS damage	Change BMS
	Extremely cold weather or overheated environment	Use at suitable temperature
	Internal battery or structure damaged	Return back to factory for repairing

APPLICATION

The battery system can be widely used in solar lighting, electric vehicles, marine, parking power supply, centralized power supply,DC home appliances, inverter, etc.

EMERGENCY RESPONSE PROCEDURE

If the battery system leaks electrolyte, avoid contact with the leaking liquid or gas.

If exposed to the leaking material, take the following measures immediately:

- Eye Contact: flush eyes with running water for 5 minutes, then seek medical attention.
- Skin Contact:wash affected area thoroughly with soap and water and seek medical attention.
- Ingestion: induce vomiting and seek medical attention.

In the event of a fire, please do the following

If the fire is controllable and personnel are safe, please use Novec 1230, FM-200 or dioxin fire extinguisher to put out the fire. If the fire is uncontrollable, do not try to put it out. When the battery is heated to more than 150°C, it may explode. Evacuate personnel immediately to ensure life safety.

DAILY MAINTENANCE

- The battery should be recharged in time after each use. To prevent the battery from being damaged due to empty power, the battery should be charged every 3 months when not in use for a long time.
- Place the product in a clean, dry, ventilated environment and remove dust regularly.

QUALITY ASSURANCE

- If the product failure during warranty, please contact a professional person to repair.
- The product nameplate cannot be torn off; otherwise, warranty service will be void.

The following 7 points are not included in the warranty scope. If the customer requires repairment, should pay for the maintenance service.

- The equipment is damaged during transportation which is not arranged by our company
- The equipment has been improperly installed, reinstalled or used.
- The equipment operated in harsh environments.
- The malfunction or damage was caused by installation, repair, modification or disassembly.
- Repaired by non-professionals
- By using of non-standard accessories
- Damage caused by unexpected natural factors