

MUST[®]

Rechargeable LiFePO₄ Battery
LP1500 Series
User Manual

WARNINGS AND SAFETY PRECAUTIONS

SAFETY PRECAUTIONS



- 1) Before installing or using the battery, it is essential to read the user manual carefully. Failure to do so or to follow any instructions or warnings in this document may result in electric-shock, serious injury or death, or may damage the battery, potentially rendering it inoperable.
- 2) If the battery is stored for a long time, it must be charged every six months, and the SOC (state of charge) should be no less than 30%.
- 3) The battery must be charged within 12 hours, after total discharge.
- 4) Do not install the product outdoors or beyond the operating temperature or humidity range listed in the manual.
- 5) Do not expose the cable to the outside.
- 6) Do not connect the power terminal reversely.
- 7) All battery terminals must be disconnected for maintenance.
- 8) Please contact the supplier within 24 hours if something abnormal happens.
- 9) Do not use detergent to clean the battery.
- 10) Do not expose batteries to flammable or harsh chemicals or vapours.
- 11) Do not paint any part of the battery, including internal or external components.
- 12) Do not connect the battery with PV solar wiring directly.
- 13) Any foreign object is prohibited from being inserted into any battery part.



Li-ion



WARNINGS AND SAFETY PRECAUTIONS(Continued)



1.1 Before connecting the Battery:

- a. After unpacking, please check the product and packing list first please get in touch with Your local dealer if the product is damaged or missing parts.
- b. Before installation,switch the grid power off and ensure the battery is in the turned off mode.
- c. Wiring must be correct, do not mistake the positive and negative cables ,and ensure no short circuit with the external device.
- d. It is forbidden to connect the battery and AC power directly.
- e. Under normal circumstances, lithium battery packs are not recommended to be connected in series or parallel. When parallel connection is required under special circumstances, please ensure that the battery voltage difference is less than 0.5V before parallel connection, and the number of parallel connections does not exceed 4.
Regular model lithium battery packs are strictly prohibited from being used in series!
Customized lithium batteries that support series connection, the lithium battery pack with a nominal voltage of 12.8V supports up to 4 series connections, and the lithium battery pack with a nominal voltage of 25.6V supports up to 2 series connections.
Please make sure the battery capacity is consistent before using in series.
It is prohibited to use different types of lithium battery packs in series or parallel!
It is prohibited to mix old and new batteries in series or parallel!
- f. Please ensure that the electrical parameters of the battery system are compatible with related equipment.
- g. Keep the battery away from water and fire.

1.2 Before using the Battery:

- a. If you need to move or repair the battery system,switch the power supply off and turn the battery off completely.
- b. It is forbidden to connect the battery with different types of batteries.
- c. Connecting the battery with a faulty or in-compatible inverter is forbidden.
- d. It is forbidden to disassemble the battery (the QC label falls off or is damaged).
- e. Please do not open, repair ,or disassemble the battery except for qualified technicians from your seller or authorised by your seller. We do not undertake any consequences or related responsibility which because of violation of safety operation or violating of design, production, and equipment safety standards.

INTRODUCTION

Switched Lithium Iron Phosphate Battery is a new energy storage product which can provide reliable power support for various equipment and systems.

Switched Lithium Iron phosphate battery has a built-in BMS(Battery Management system), which can manage and monitor battery voltage, current, temperature and other information.

HIGHLIGHTS

- High-cycle Life
- Longer service Life
- Built-in circuit protection
- Low discharge rate
- Quick recharge

PACKAGE CONTENTS

- Lithium Iron Phosphate Battery
- Single Battery Pack:
- 1 x Instruction Manual
 - Lithium Iron Phosphate Battery
 - Single Battery Pack
 - 1 x Instruction Manual

TOOLS REQUIRED FOR INSTALLATION

Tools that are required for installation (Tools and consumables are not provided);

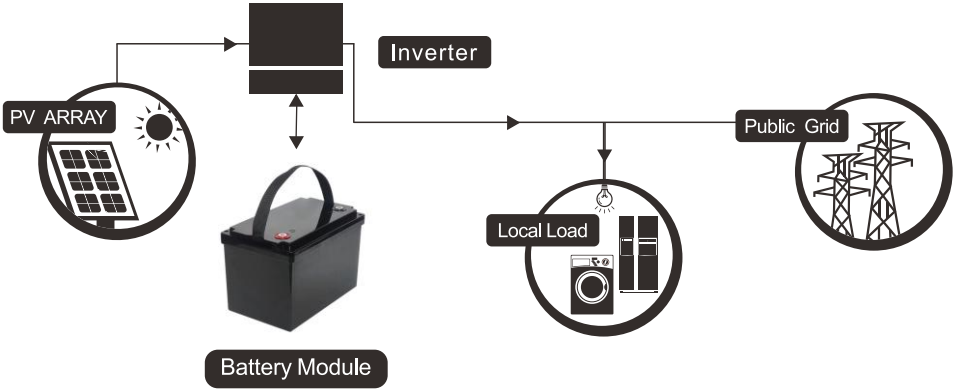
- Wire cutters
- Crimping Modular pliers.
- Screwdriver

SPECIFICATIONS

parameter	Data sheet	
nominal voltage	12.8V	25.6V
Discharge voltage	10.8-14.6V	21.6-29.2V
Charging voltage	14.6V	29.2V
Recommended charging	0.5C	
Max charging current	100A	
Recommended discharging current	0.5C	
Max discharging current	100A	
depth of discharge	95%	
Working Temperature	0°C ~ 45°C Charge	
	-10°C ~ 45°C Discharge	
The shelf temperature	0°C ~ 35°C	
IP degree	IP 21	
Humidity	5 ~ 95%(RH)	
elevation	< 4000m	
Certificates	CE/UN38.3/MSDS	

SAFE HANDLING GUIDE OF LITHIUM BATTERIES

Schematic Diagram of Solution:



Danger Label:

DANGER
DANGER LOW DC VOLTAGE INSIDE
DANGER ARC FLASH & SHOCK HAZARD

- Do not disconnect or disassemble by non-professional personnel.
- Do not drop, deform, impact, cut or spearing with a sharp object.
- Do not place at a children or pet touchable area.
- Do not place near open flame or flammable material.
- Do not cover or wrap the product case.
- Do not sit or put heavy things on battery.
- Do not touch the leaking liquid.
- Avoid of direct sunlight.
- Avoid of moisture or liquid.
- The product Ingress Protection (IP) class is IP21.
- Make sure the grounding connection set correctly before operation.
- Follow the product manual to make wiring connection.
- If leaking, fire, wet or damaged, switch off the breaker on DC side and stay away from battery.
- Contact your supplier within 24 hours if anything failure happens.

SAFE HANDLING GUIDE OF LITHIUM BATTERIES (Continued)

Tools:



Note:

Use appropriately insulated tools to prevent accidental electric shock or short circuits. If insulated tools are unavailable, cover the entire exposed metal surfaces of the available tools, except their tips, with electrical tape.

Safety Gear:



It is recommended to wear safety gear, insulated gloves, safety Goggles and safety shoes when dealing with the battery pack.

INSTRUCTIONS FOR USE

Package Items: or SC25-8(100A)

Unpack and check the packing list.

1. Battery Module Package;
 - a. Single Battery Pack;
- 1 x Instruction Manual

2. For Battery system connecting to inverters:

Two long power cables(current capacity 120A, constant 100A).



Installation Location:

Make sure that the installation location meets the following conditions:

1. The area is completely waterproof.
2. The floor is flat and level.
3. There are no flammable or explosive materials.
4. The ambient temperature ranges 0°C to 45°C.
5. The temperature and humidity are maintained a constant level.
6. There is minimal dust and dirt in the area.
7. The distance from the heat source is more than 2 meters
8. The distance from the air outlet of the inverter is more than 0.5 meters.
9. The installation area shall avoid direct sunlight.
10. The battery module has no mandatory ventilation requirement, but please avoid installation in confined areas. The operation shall avoid high salinity, humidity, or temperature.

CAUTION



If the ambient temperature outside is in the operating range, the battery pack will stop operating to protect itself. The optimal temperature range for the battery pack is 15°C to 35°C. Frequent exposure to harsh temperatures may deteriorate the performance and life of the battery pack.

EMERGENCY SITUATIONS

1. Leaking Batteries:

If the battery pack leaks electrolyte, avoid contact with the leaking liquid or gas. If one is exposed to the leaked substance, immediately perform the actions described below

- a. Inhalation: Evacuate the contaminated area and seek medical attention.
- b. Contact with eyes: Rinse eyes with flowing water for 15 minutes and seek medical attention.
- c. Contact with skin: Wash the affected area thoroughly with soap and water and seek medical attention.
- d. Ingestion: Induce vomiting and seek medical attention.

2. Wet Batteries:

If the battery pack is wet or submerged in water, keep people from accessing it, and then contact an authorised dealer for technical support. Cut off all power switches on the inverter.

3. Damaged Batteries:

Damaged batteries are dangerous and must be handled with the utmost care. They are not for use. And may pose a danger to people or property. If the battery pack seems damaged, pack it in its original container and return it to an authorised dealer.

CAUTION



Damaged batteries may leak electrolytes or produce flammable gases.

BATTERY MAINTENANCE

Maintenance while in use and storage:

1. charging the battery at least once every 6 months is required. For the maintenance charge, ensure the SOC is higher than 30%.
2. Every year after installation. The connection of power connectors, grounding points, power cables and screws are to be checked. Ensure there are no loose, broken, or corrosion at connection points. Check the installation environment, such as dust, water, insects etc.
3. If the battery is stored for a long time, it is required to charge every six months, and the SOC should be higher than 30%.

CLEANING INSTRUCTIONS - GENERAL

- Before cleaning: Ensure the product is not hot and has nothing connected to it before cleaning or maintaining it.
- Cleaning:wipe down the product's surface using a soft, dry cloth.
- Do not use harsh or abrasive cleaning chemicals or materials on the product ,as doing so may damage or scratch the finish.
- Do not expose the product to direct sunlight or high temperatures for extended periods.
- Do not store in temperatures over 45°C.

ENVIRONMENTALLY FRIENDLY DISPOSAL

IMPORTANT INFORMATION FOR CORRECT DISPOSAL OF ELECTRICAL AND MECHANICAL COMPONENTS.

At the end of its working life, the product must not be disposed of as urban waste. It must be taken to a particular local authority differentiated waste collection centre or a dealer providing this service. Disposing a household appliance separately avoids possible negative environmental and health consequences from inappropriate disposal. It enables the constituent materials to be recovered to obtain significant savings in energy and resources. As a reminder of the need to dispose of household appliances separately, the product is marked with a crossed-out wheeled dustbin.

- Never dispose of used electrical and mechanical components with ordinary solid waste since they contain toxic substances.
- Always dispose of used electrical and mechanical components following the prevailing community regulations that apply to the disposal of electrical and mechanical components.

