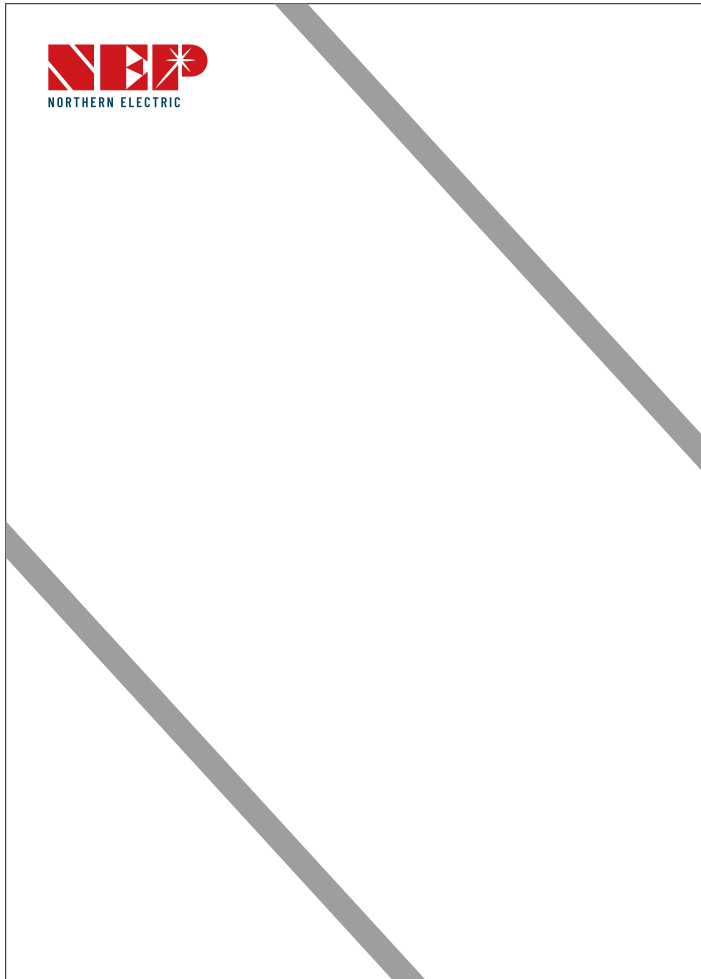


Dear users:  
Thank you very much for choosing our products! Before using this product, please read this manual carefully, which includes the installation, use, and Troubleshooting and other important information and suggestions, and take good care of this manual! Product specifications are subject to upgrading without prior notice.



# USER'S MANUAL

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BDB-2.76L Wall-mounted and floor-mounted  
integrated energy storage user manual

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## 1. Basic information of the manual

**1.1 This manual is applicable to the integrated power supply 51.2V/54Ah series products for home energy storage applications produced by Suzhou Enyipu Technology Co., LTD.**

### 1.2 Target group

This manual is used by the end users. No specific qualification operation can also be handled by the end user itself. However, you need to know the following information:

- (1) Understand the working operation of battery products;
- (2) Understand and comply with this manual and all safety knowledge.

### 1.3 Safety Code

For safety, the installer is responsible to be familiar with the contents of this manual and all warnings prior to installation.

#### Warn

(1) Environmental requirements:

- Do not expose the battery to temperatures above 60°C;
- Do not place the battery near any heat source;
- Do not expose the batteries to damp or liquid;
- Do not expose the battery to corrosive gases or liquids;
- Do not expose the battery to direct sunlight for a long time;
- Place the battery in a safe position away from children and animals;
- The battery is heavy, at least two people operate when handling and installation;
- to avoid battery falling and injuring personnel;
- Do not place items on the battery;

(2) Operation precautions:

- This product is a low-pressure product, which is prohibited to use in series;
- Do not remove the battery without permission;
- Do not use the conductor to contact the battery terminals;
- Do not contact the battery pack with wet hands;
- Do not squeeze, fall, or puncture the battery;
- Handle products according to local safety regulations;
- Store the battery as described in this user manual;
- Do not short circuit the batteries, remove all jewelry items that may cause short circuit before installation and handling; do not use damaged or deformed batteries;
- Disconnect the battery from the power supply / load before installation and maintenance, and then power off the battery;
- Do not stack batteries when storage or handling;

The battery has self-discharge phenomenon, and is not used for a long time, all switches should be placed in a closed state, and the battery should be powered regularly for 6 months.

## 2. Product introduction

This product is 51.2V DC pool system, applied in the field of home energy storage, with inverter and other equipment, constitute a complete System, to meet the daily electricity demand of households.

### 2.1 Functional characteristics

- Using the lithium iron phosphate battery with high safety performance;
- The equipment has a perfect protection function;
- With high-precision voltage and current sampling and SOC estimation ability;

### 2.2 Product overview



## 3. Installation instructions

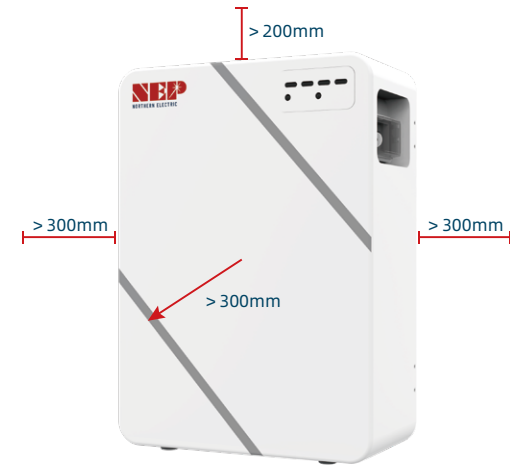
### 3.1 Unpacking inspection constitute a complete

- (1) Open the packaging of the equipment, please check the product accessories: a host, bracket, card, wire harness, screws, etc;
- (2) Check whether the equipment is damaged in transportation. If any damage or accessories are missing, do not start the machine and inform the carrier and dealer.

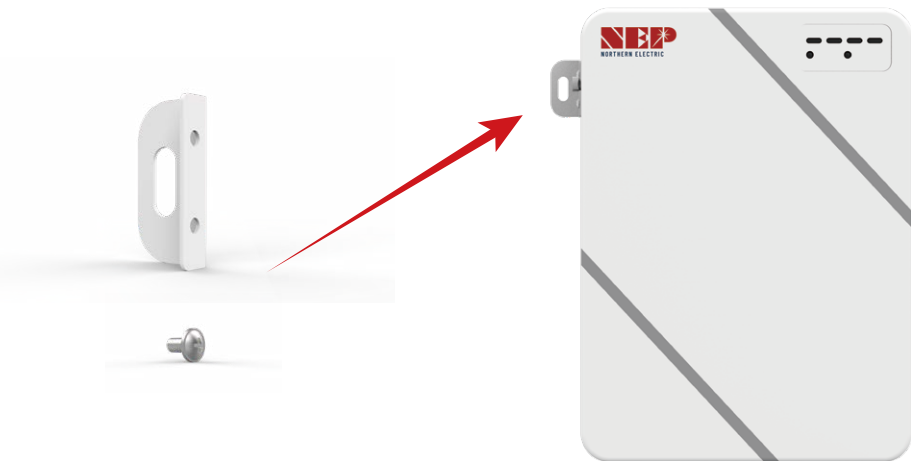
### 3.2 Notes for installation and storage

- (1) The installation equipment can be installed by itself, or operated by professionals;
- (2) The battery can be installed on a solid wall or landed on the ground;
- (3) When transporting equipment, take proper protective measures: When the equipment is moved from a low temperature environment to a high temperature environment, water may appear Beads should be completely dried before use to ensure safety;
- (4) Do not expose the equipment to harsh environments such as damp, flammable and explosive or large accumulation of dust; Do not cover and block Plug the vent, reserve more than 10CM air flow gap around the equipment; In order to have good heat dissipation;
- (5) When the equipment is not used for a long time, all switches of the side panel must be placed in the off state

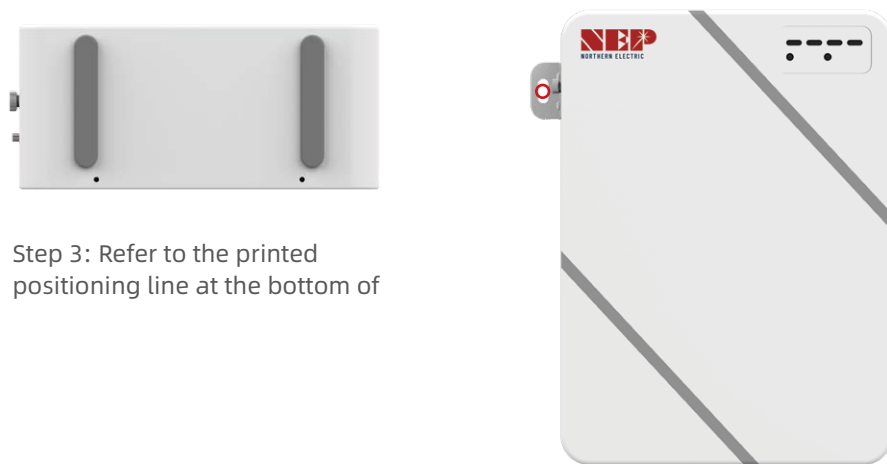
### 3.3 Instructions for floor-type installation



Step 1: The recommended distance of battery pack installation space is shown above, which can reduce the distance on the operational basis.



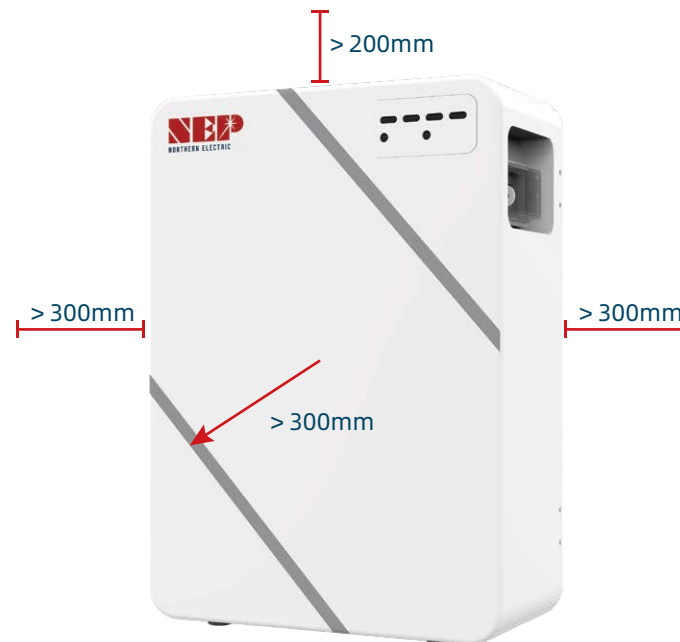
Step 2: Install the bracket to the battery pack using the M5 screw in the accessory, torque 2.5N.m.



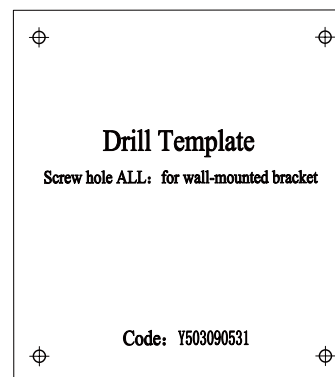
Step 3: Refer to the printed positioning line at the bottom of

Step 4: According to the position of the battery pack, determine the installation point of the expansion screw. The punching specification is recommended (aperture  $\phi$  10mm, depth > 60mm). After the punching, fix the battery pack on the wall with the expansion screw.

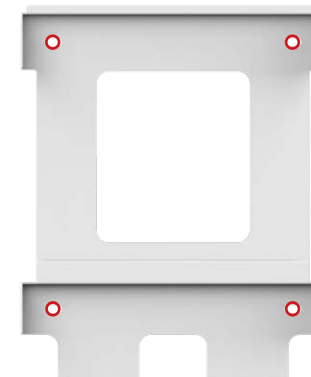
### 3.4 Wall-mounted installation instructions



Step 1: The recommended distance of battery pack installation space is shown above, which can reduce the distance on the operational basis.



Step 2: attach the drilling positioning board to the wall, and drill according to the drilling position on the board. Pating specification recommendations ( $\phi$ 10mm, depth > 60mm).



Step 3: Attach the mounting bracket to the wall with an expansion screw with a torque of 20N.m.



Step 4: Install the battery pack to the bracket using the M5 of 20N.m.

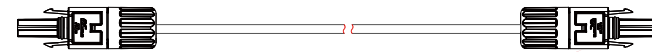
## 4. Description of the use of functions

### 4.1 Wiring sequence

Step 1: Connect the cathode wire harness to the battery BAT- " position



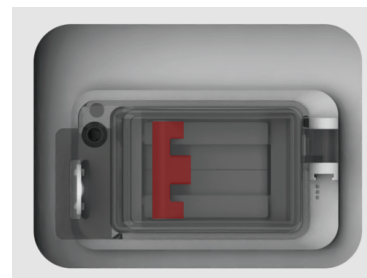
Step 2: Connect the cathode wire



Step 3: Connect the communication



Step 4: Open the blank button from "OFF" to "ON"



Step 5: Click the self-reset button to start the battery and run

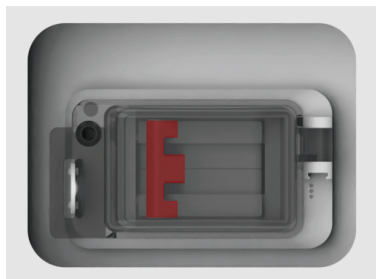


#### 4.2 Power-off sequence

Step 1: Click the self-reset button to turn off the battery power supply



Step 2: Close the open button from "ON" to "OFF"



#### 4.3 LED instructions

With 6 LED indicators, 4 white LED indicators for current battery pack SOC, 1 red LED is for fault indicator during alarm and protection, and 1 white LED is for battery standby, charging and discharge state.

##### 4.3.1 Capacity indication

state		charge				discharge			
Capacity indicator light		L4 ●	L3 ●	L2 ●	L1 ●	L4 ●	L3 ●	L2 ●	L1 ●
residual capacity	0 ~ 25%	go out	go out	go out	twinkle	go out	go out	go out	light
	25 ~ 50%	go out	go out	twinkle	light	go out	go out	light	light
	50 ~ 75%	go out	twinkle	light	light	go out	light	light	light
	≥75%	twinkle	light	light	light	light	light	light	light
Run the indicator light ●		Long bright				twinkle			

##### 4.3.2 State Indication

system mode	running state	RUN	ALM	SOC				explain
		●	●	●	●	●	●	
shut down	dormancy	go out	go out	go out	go out	go out	go out	All out
Standby	normal	flash 1	go out	go out	go out	go out	go out	stand by
charge	normal	light	go out	based on battery indicator				Maximum LED flash of 2
	Overflow alarm	light	flash 2	based on battery indicator				Maximum LED flash of 2
	overvoltage crowbar	flash 1	go out	go out	go out	go out	go out	
	Temperature, overcurrent protection	flash 1	flash 1	go out	go out	go out	go out	
discharge	normal	flash 3	go out	based on battery indicator				According to the power quantity of constant lighting indication
	report an emergency	flash 3	flash 3					
	Temperature, overcurrent, short circuit, etc	go out	light	go out	go out	go out	go out	The discharge was stopped, and the dormancy was forced without action after 48h
	undervoltage protection	go out	go out	go out	go out	go out	go out	Stop discharge

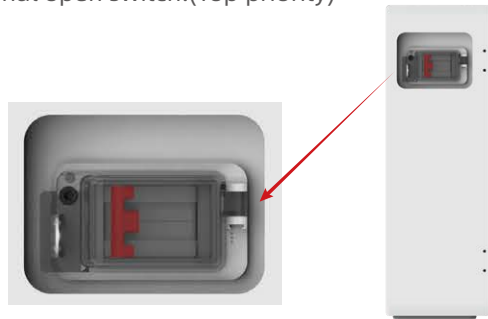
#### 4.4 Dormant wake-up function (external switch and empty open switch)

BMS has manual and automatic dormancy;

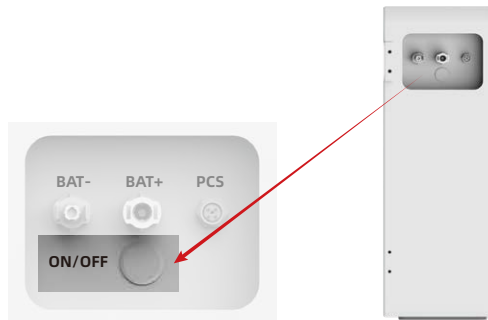
Automatic hibernation function: the battery sleeps automatically for a period of 48 hours without external charging and discharging. When the battery pack is protected, maintain communication for 1 minute, and the BMS becomes dormant.

Manual sleep function:

(1) The total positive electrode and the BMS can be disconnected and closed through the external open switch.(Top priority)

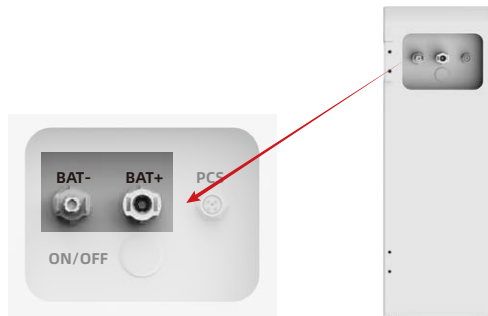


(2) Control the switch through the external switch, start the switch in the closed state and the disconnected state.(When the external open switch is closed, the battery is always connected to the BMS is intact).



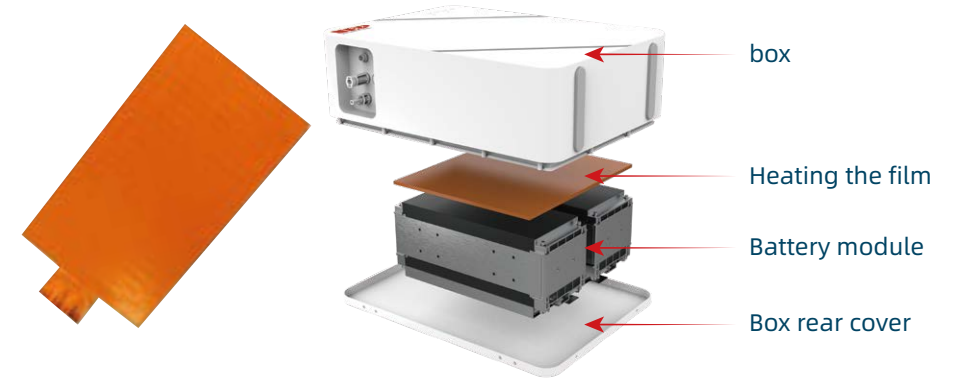
#### 4.5 Power Line Output port (P + / P-)

The output port of the power line can be directly connected with the positive and negative power of the back-end inverter, and the corresponding matching function can be realized after the whole system is connected.



#### 4.6 Heating membrane heating function

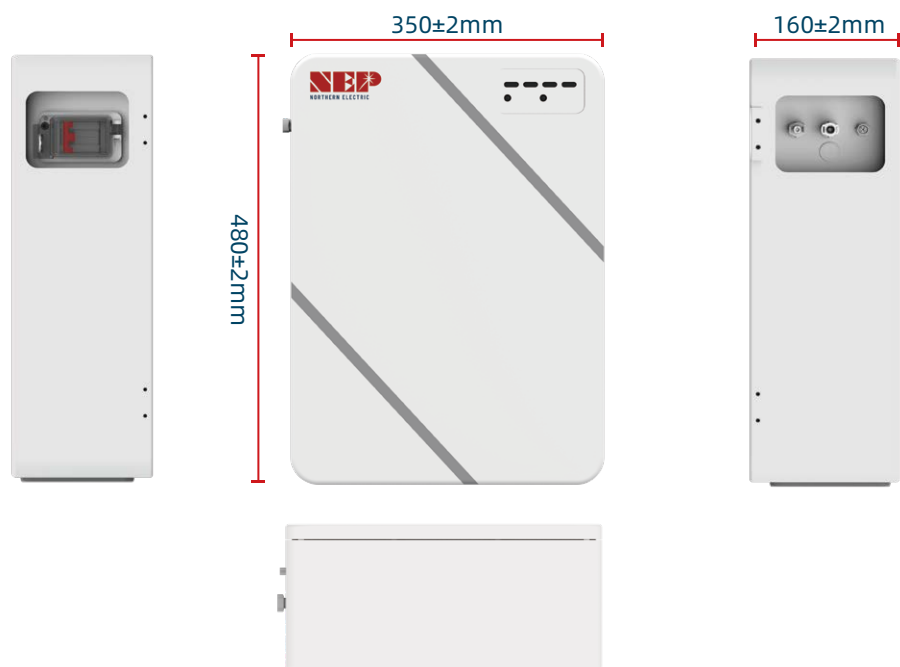
When the temperature of the battery pack cell reaches below 0°C, the battery pack enters the external power supply for charging, and the heating film automatically starts the heating.



#### 5. Product parameters

order number	project	parameter
1	product model	BDB-2.76L
2	nominal voltage	51.2V
3	nominal capacity	54Ah
4	voltage range	40-57.6V
5	Maximum charging current	30A
6	Maximum discharge current	20A
7	Charging temperature	-20 ~ 55°C
8	Discharge temperature	-20 ~ 60°C
9	Dimensions (H*W*D)	480*350*160mm
10	IP grade	IP 65
11	way to install	Floor wall hanging integrated
12	recommend charge current	0.3C

## 6. Overall dimensions



## 7. Storage and Packaging

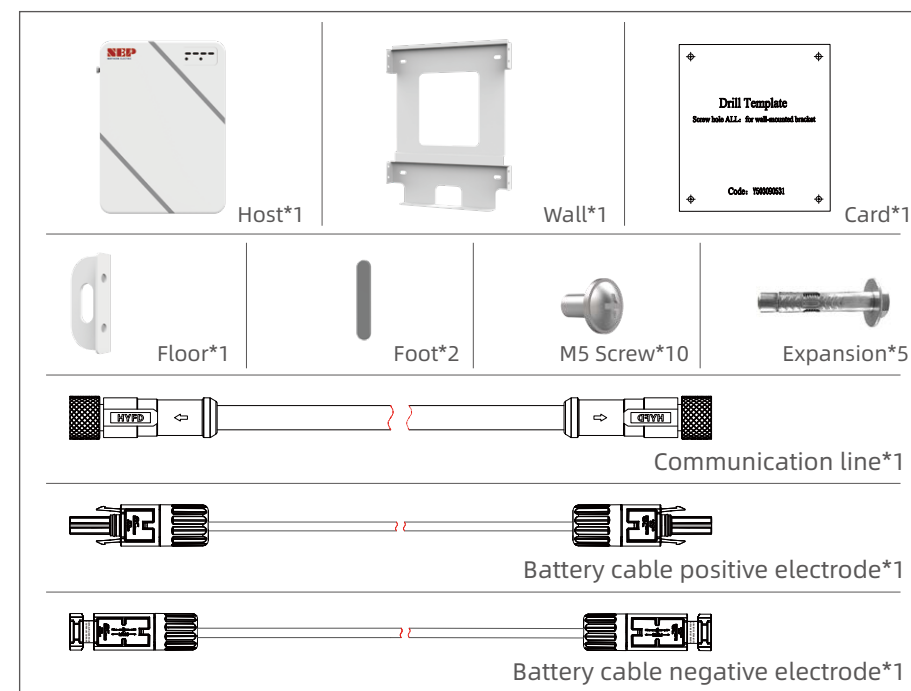
### 7.1 Storage environment

If the device is not immediately installed, confirm that the storage environment meets the following conditions:

- If the installation is not conducted within 3 days after unpacking, it is recommended to put the equipment in the packing box.
- Storage SOC: 25 ~ 50% SOC, with a charge and discharge cycle required for every 6 months of storage.
- Storage temperature range: -20°C ~0°C for no more than 1 month; 0~35°C for no more than 1 year.
- Humidity range: 0~95% without condensation. The battery interface cannot be installed when there is wet condensation phenomenon.
- The equipment shall be stored in a shade to avoid direct sunlight.
- Equipment storage should be far away from flammable, explosive, corrosive and other items.
- Equipment is prohibited from rain.

### 7.2 Packing list

- Before unpacking the battery, check the damage and check the battery model. If there is any Otherwise, do not open the packing box, and contact the after-sales service center as soon as possible.
- After unpacking the battery outer packaging, please check the integrity of the product delivery according to the packaging information. If there are any abnormalities, Please contact the after-sales service center as soon as possible.



## 8. Battery recycling instructions

The company does not do battery recycling, customers need to contact the local recycling agency for self-processing.

### ⚠ Warn

- If you find any problem that may affect the battery or battery and energy storage inverter system, please contact the after-sales personnel and forbid to dismantle it without permission.
- If the internal copper wire is exposed, no touch, high pressure danger, please contact the after-sales personnel, no disassembly without permission.