



ENERGY
STORAGE



Wall-mounted LEP battery user manual

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⚠️ If the models and specifications in this product catalogue change due to product updates, we will not provide prior notification.



VERSION: 20231207-01



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1. Note on This Manual

1.1 Scope of Validity

This manual is an integral part of the battery pack. It describes the assembly, installation, commissioning, maintenance and failure of the product. Please read it carefully before operating.

1.2 Target Group

This manual is for qualified electricians. The tasks described in this manual may only be performed by qualified electricians. cases, death

1.3 Warning Signs

This section gives an explanation of all the symbols in this manual.

"NOTE!" provides tips that are valuable for the optimal operation of this product

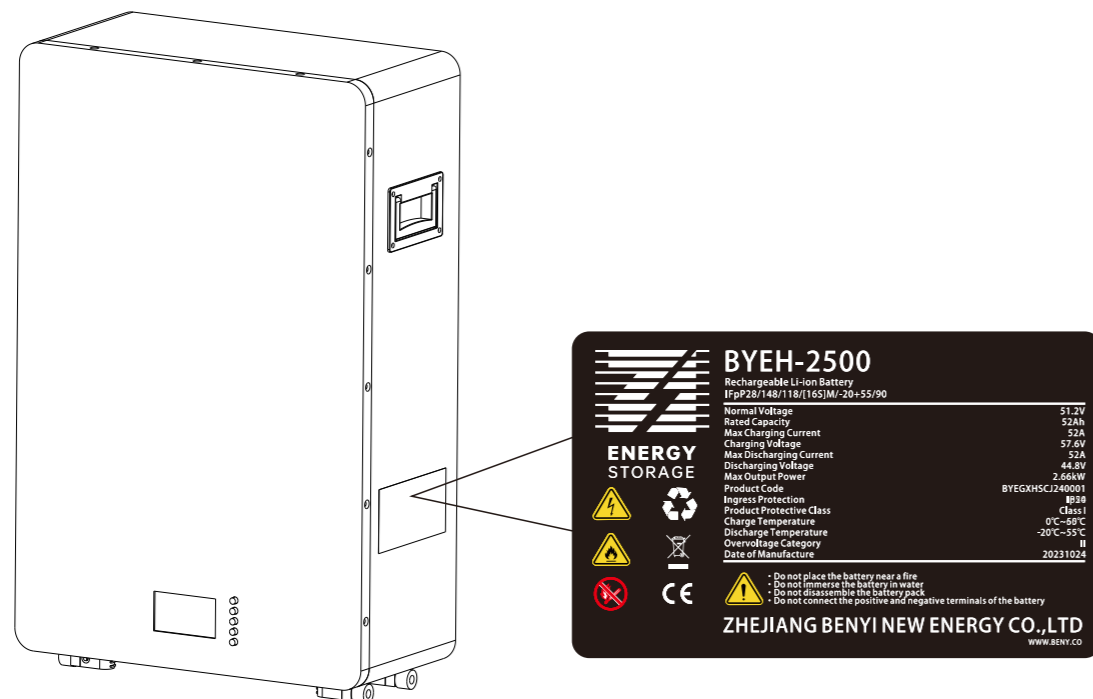
"CAUTION!" indicates a hazardous situation which, if not avoided, could result in injury

"WARNING!" indicates a hazardous situation which, if not avoided, could result in serious injury

"Danger!" means a dangerous situation, which if not avoided, will lead to serious injury and, in a serious situation.

1.4 Some Symbols

This section explains the symbols displayed on the product labels and packaging boxes.



Symbol	Explanation
	This is the logo of Zhejiang Benyi New Energy Co.,Ltd.
	This product has passed CE certification
	This product has passed CB certification
	This product should be disposed of at a proper facility for environmentally safe recycling.
	Those that cannot be placed in the trash can must undergo professional recycling.
	This face up
	No rain and humidity
	Fear of pressure, easy to damage
	Warning electric shock
	Do not go near flammable materials
	Do not reverse the positive and negative
	Do not go near open fire
	Keep out of reach of children and pets
	Please read the product and operating manual before operating the battery system!
	Danger!

2. Safety

2.1 Safety Instructions

For safety reasons, installers are responsible for familiarizing themselves with the contents of this manual and all warnings before performing installation.

2.1.1 General Safety Precautions

WARNING!

Please don't crush or impact the battery pack, and always dispose it according to the safety regulation.

Observe the following precautions:

- **Risks of explosion**
 - Do not subject the battery pack to strong impacts.
 - Do not crush or puncture the battery pack.
 - Do not dispose of the battery pack in fire.
- **Risks of fire**
 - Do not expose the battery pack to temperatures above 55°C for long time.
 - Do not place the battery pack near heat source, such as a fireplace, heater etc.
 - Do not expose the battery pack to direct sunlight for long time, especially in high temperature.
 - Do not allow the battery pack connectors to touch conductive objects, such as wires, wrenches, screwdrivers, etc.
- **Risks of electric shock**
 - Do not disassemble the battery pack.
 - Do not touch the battery pack with wet hands.
 - Do not expose the battery pack to moisture or liquids.
 - Keep the battery pack away from children and animals.
- **Risks of damage to the battery pack**
 - Do not allow the battery pack to get in contact with liquids.
 - Do not subject the battery pack to high pressures.
 - Do not place any objects on top of the battery pack.
 - Unreasonable use, such as overcharge, overdischarge, overload, long-term storage of empty electricity.
 - Only used in the household energy field.

2.2 Response to Emergency Situations

2.2.1 Leaking Battery packs

If the battery pack leaks electrolyte which is corrosive, avoid contact with the leaking liquid or gas. Direct contact may lead to skin irritation or chemical burns. If one is exposed to the leaked substance, do these actions:
 Accidental inhalation of harmful substances: Evacuate people from the contaminated area and seek medical attention immediately.
 Eye contact: Rinse eyes with flowing water for 15 minutes, and seek medical attention immediately.
 Dermal contact: Wash the affected area thoroughly with soap and water, and seek medical attention immediately.
 Ingestion: Induce vomiting, and seek medical attention immediately.

2.2.2 Fire

In case of a fire, make sure fire sand or dry powder extinguisher or carbon dioxide extinguisher is nearby.

- **WARNING!**
The battery pack may catch fire when heated above 85°C
If a fire breaks out at where the battery is installed, do these actions:
1. Extinguish the fire before the battery catches fire;
2. If the battery has caught fire, do not try to extinguish the fire. Evacuate people immediately.
- **WARNING!**
If the battery catches fire, it will produce noxious and poisonous gases. Do not approach.

2.2.3 Wet Batteries and Damaged Batteries

If the battery is wet or submerged in water, do not try to access it.

If the battery seems to be damaged, they are not fit for use and may pose a danger to people or property.

Please pack the battery in its original container, and then return it to BENY or your distributor.

- **CAUTION!**
Damaged batteries may leak electrolyte or produce flammable gas. If you suspect such damage, immediately contact BENY for advice and support.

2.3 Qualified Installer

- **WARNING!**
All operations relating to electrical connection and installation must be carried out by qualified personnel.
A skilled worker is defined as a trained and qualified electrician or installer who has all of the following skills and experience:
 Knowledge of the functional principles and operation of on-grid systems
 Knowledge of the dangers and risks associated with installing and using electrical devices and acceptable mitigation methods
 Knowledge of the installation of electrical devices
 Knowledge of and adherence to this manual and all safety precautions and best practices

3. Product Introduction

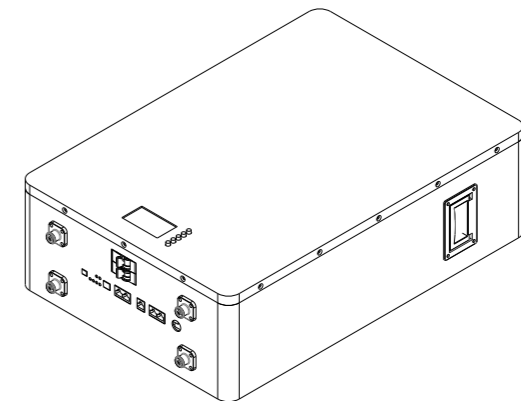
3.1 Product Overview

3.1.1 Dimension and Weight

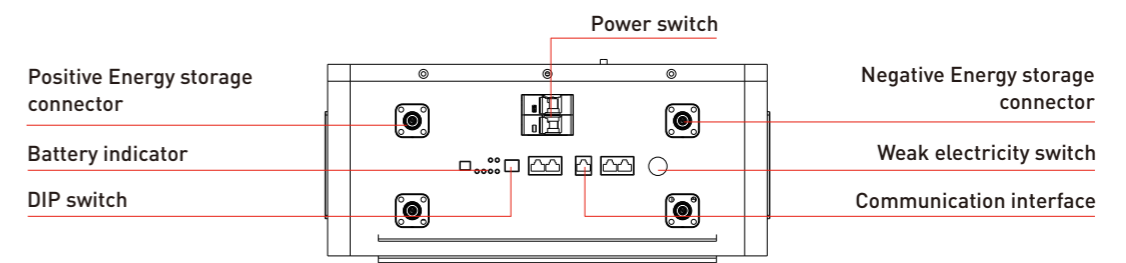
Battery is a type of electrical battery which can be charged, discharged into load.

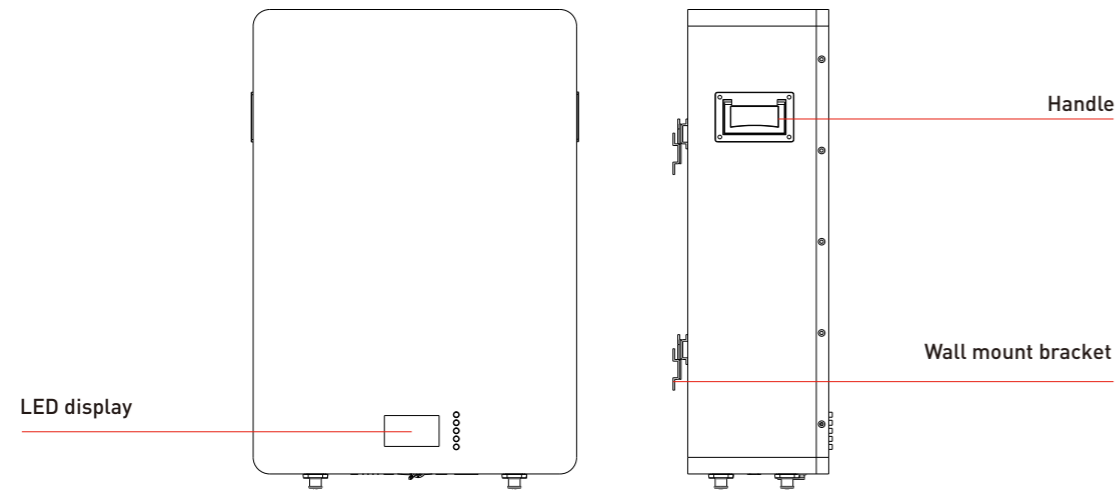
BYEH-2500
L*W*H: 470*340*180mm
Weight: 28kg

BYEH-5000
L*W*H: 640*410*180mm
Weight: 44kg



3.1.2 Product orthographic views and each part name





3.1.3 Appearance



3.2 Basic Features

3.2.1 Features

This product is one of the advanced energy storage systems on the market today, incorporating state-of-the-art technology, high reliability, and convenient control features shown as below:

- 99% Faradic charge efficiency
- 95% Battery roundtrip efficiency
- Cycle life 5000 times
- Secondary Protection by hardware
- IP54 protection level
- Safety Reliability
- Small footprint
- Floor or wall mounting easily

3.3 Performance

Items	Condition	Specification	
Model	/	BYEH-2500	BYEH-5000
Nominal energy	Nominal value	2.66 kWh	5.22 kWh
Nominal capacity	Nominal value	52 Ah	102 Ah
Nominal voltage	Nominal value	51.2 V	51.2 V
Internal impedance	Fresh cell	≤20 mΩ	≤20 mΩ
Size	L*W*H	470 mm*340 mm*180 mm	640 mm*410 mm*180 mm
Weight	/	28 KG	44 KG
Operating voltage	/	43.2 V ~ 58.4 V	
Standard charging and discharging current	/	0.5C/0.5C	
Maximum charging and discharging current	/	1C/1C	0.5C/0.5C
Charging temperature	/	0°C ~ 60°C	
Discharging temperature	/	-20°C ~ 55°C	
Storage temperature	/	0°C ~ 35°C	
Recommended DOD	/	≤98%	
Communication function	/	RS232/RS485/CAN	
Protection class	/	IP54	
Shipping SOC	/	30% ~ 50%	

NOTE!

Lithium battery has no memory effect and can be charged and discharged directly.

CAUTION!

If the battery pack is not installed within one month after receiving the battery pack, the battery pack must be charged till the SOC is more than 50%.

4. Installation

4.1 Installation Prerequisites

Make sure that the installation location meets the following conditions:

The building is designed to withstand earthquakes.

The location is far away from the sea, to avoid saline water and humid air.

The floor is flat and level.

There are no flammable or explosive materials nearby.

The ambient environment is shady and cool, and away from heat as well as direct sunlight.

The temperature and humidity stays at a constant level.

There is minimal dust and dirt in the area.

There is no corrosive gases present, including ammonia and acid vapor.

The ambient temperature is within the range from 0°C to 55°C, and the optimal ambient temperature is between 15°C and 35°C.

- **NOTE!**

The Triple Power battery is rated at IP54 and thus can be installed outdoors as well as indoors. However, if installed outdoors, do not expose the battery directly to sunlight and moisture.

- **NOTE!**

If the ambient temperature is beyond the operating range, the battery will stop operating to protect itself. The optimal temperature range for the battery to operate is from 15°C to 35°C. Frequent exposure to harsh temperatures may deteriorate the performance and lifetime of the battery.

4.2 Installation Places and Environmental Requirements

The location where the battery is installed should have no risk of wading. The installation location needs to be well drained

The location where the battery is installed should have no risk of wading. The installation location needs to be well drained

The battery is installed on a level ground

The distance from the heat source is greater than 2 meters

There is no forced ventilation requirement for battery packs, but avoid installation in confined spaces

Ventilation should avoid high salinity, high humidity or high temperature

The following places are not allowed to install:

- The temperature is lower than -10°C or higher than 55°C.
- Places where humidity and condensation exceed 95%.
- Areas where saline and moist air can penetrate.
- Earthquake Areas - Additional safety measures are required.
- Areas with an altitude of more than 2000 meters.
- Places with explosive atmosphere.
- Places exposed to sunlight for a long time.
- Places where the ambient temperature changes drastically.
- Places with highly flammable materials or gases.

Note: If the ambient temperature exceeds the working range, the battery pack will stop working to protect the battery. The optimum temperature range for battery pack operation is 0°C to 50°C. Frequent exposure of the battery to harsh environments may degrade the battery's performance and lifespan. is 0°C to 50°C. Frequent exposure of the battery to harsh environments may degrade the battery's performance and lifespan.

4.3 Precautions

The battery is heavy. If it is improperly lifted or dropped during transportation or installation and disassembly, there is a risk of injury;

There must be more than 2 people when hoisting, transporting and handling the battery;

During battery wiring, one person shall wire and one person shall supervise and inspect to prevent battery short circuit;

Installers need to wear labor protection equipment.

4.4 Safety Gear

Installation and maintenance personnel must operate according to applicable federal, state and local regulations as well as the industry standard.

The product installation personnel shall wear safety gears, etc. in order to avoid short circuit and personal injury.



Insulated gloves



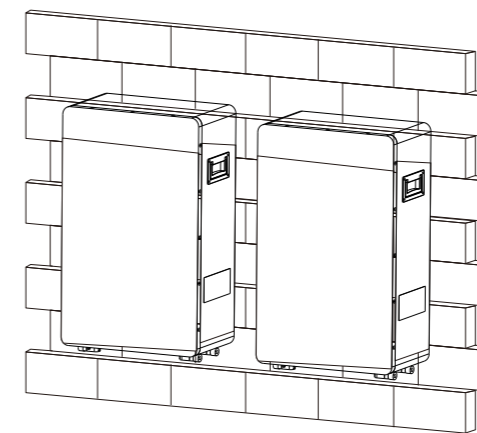
Safety goggles



Safety shoes

4.5 Installation Conditions

Attached with installation position diagram

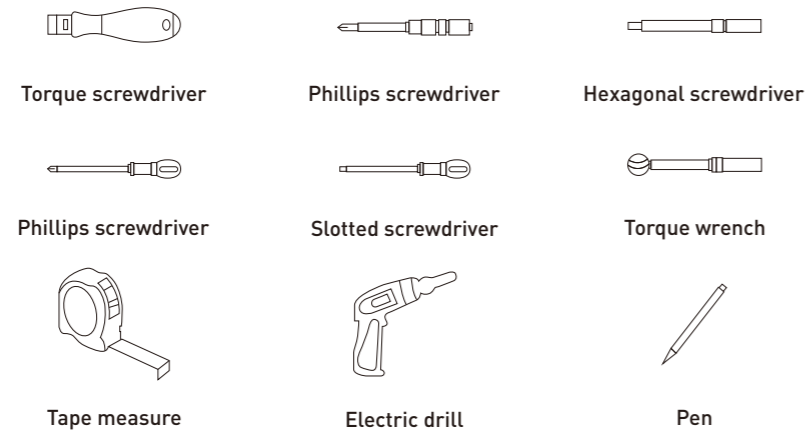


Note: The space on the left and right sides is $\geq 300\text{mm}$;
Head space $\geq 200\text{mm}$;
Distance from back to wall $\geq 15\text{mm}$.

Note: Please pay attention when disassembling the battery pack, the worst case may damage some parts.

4.6 Tools

These tools are required to install this product.



4.7 Installation

4.7.1 Check for Transport Damage

Make sure the battery pack is intact during transportation. If there are any visible damages, such as cracks, please contact your BENY or your dealer immediately.

4.7.2 Unpacking

Unpacking the battery package by cutting the packing tape, please check if the battery package and all relevant items are intact. See package items on section 4.4.3, please check the packing list carefully, if there's any item missing, please contact BENY or your dealer directly.

- **CAUTION!**
According to regional regulations, several people may be required for moving the equipment.
- **WARNING!**
Please strictly follow the installation steps. BENY will not be responsible for any hurting or loss caused by incorrect assembling and operation.

4.7.3 Accessories

NO.	Name	model	number
1	Battery Pack		1
2	Positive current wire	6AWG/1m	1
3	Negative current wire	6AWG/1m	1
4	Communication wire	1m	1
5	Earth wire	10AWG/2m	1
6	Expansion screw	M8*80	4
7	Packing information		1

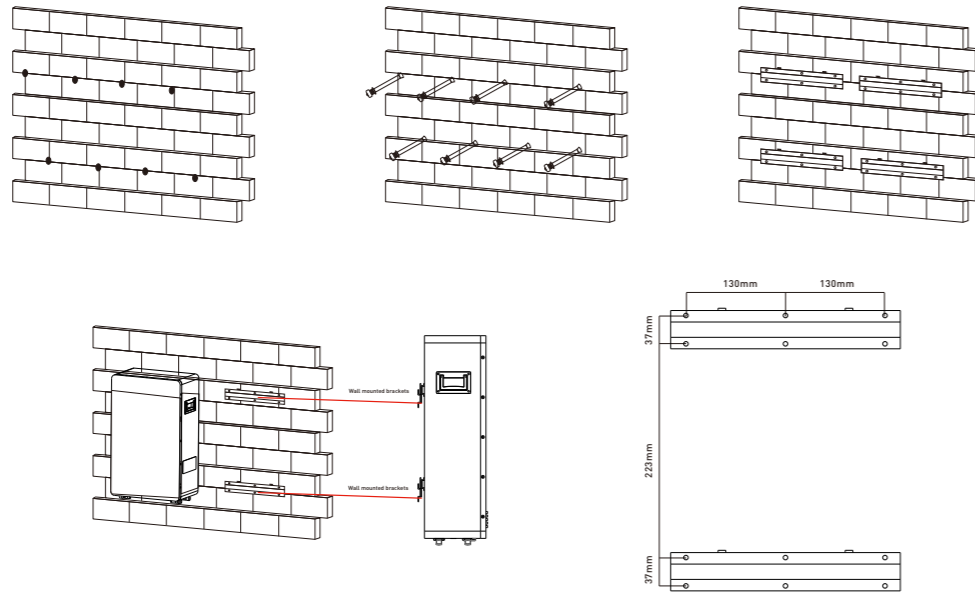


4.7.4 Battery Installation Steps

Steps

Make sure the wall is strong enough to withstand the weight of battery.

Step 1: fix the wall bracket on the wall Use the wall bracket as a template to mark the position of the holes Drill holes with driller,make sure the holes are deep enough (at least 50mm)for installing and tightening the expansion bolts Install the expansion bolts in the wall,and tighten the screws on the bracket by using the screw driller.



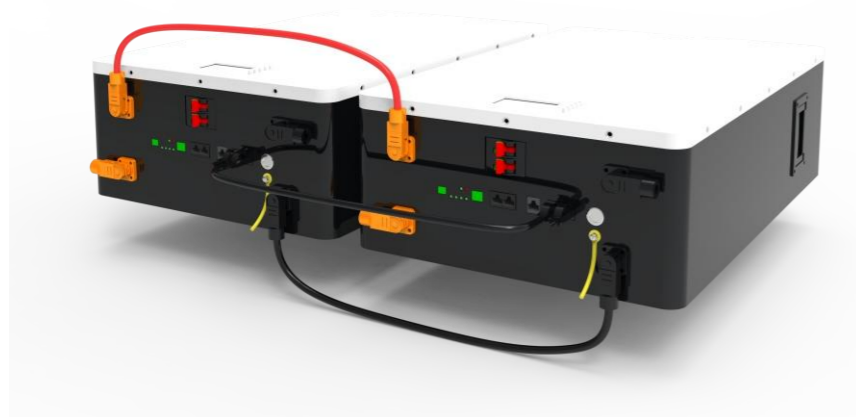
Step 2: Match the battery with the wall bracket Lift the battery to the wall bracket Hang the battery over the wall bracket,move the battery close to the wall and match it on the wall bracket

Step 3: Lock the joint between hanging board and wall bracket with M5 combination screw.
Note: Keep the distance from installation point to the floor less than 650mm.

4.8 Cable Connection

4.8.1 Connecting Power Cables between Battery Packs

The step of connecting power cable is connecting the series-connected cable to "-" and "-", "+" and "+" between the Battery Packs. The series-connected cable is used to make a complete circuit.



4.8.2 Connecting Power Cables to Inverter

This step is going to connect power cables between Inverter and battery system.

The default length of power cables are 2 meters, you can appropriately cut the cable according to the actual installation environment.

• Cable Connection Steps:

Step 1. Strip the cable to 15mm.

Step 2. Crimp the wire with a suitable copper nose and insulate it with heat shrinkable sleeve or electrical tape.

• WARNING

If you do not have the corresponding accessories and tools, please use the factory supplied line, and do not cut it.

Connecting Charging Cables between the inverter and battery:

The step of connecting power cable is connecting the series-connected cable to "-" and "-", "+" and "+" between inverter and battery. The series-connected cable is used to make a complete circuit.

• NOTE!

1. Check to ensure that the connection is secure.

2. Once connected, do not shake both ends of the cable at the connector

Disassembling Power cable

Disassemble the power cable by plugging the slot type screwdriver or the power cable disassemble tool(L) to the terminal groove of the power cable. Please see the illustration as shown below:

• CAUTION!

DO NOT disassemble power cables when the inverter or battery is not turned off, otherwise there would be an arc discharge that could cause serious injury!

Disassembling power cable at the battery. Please refer to the illustration as shown below:

Disassemble the power cable at the inverter. Please refer to the illustration as shown below:



4.8.3 Communication Cable Connection

CAN or RS485 is required for the BMS to communicate with the inverter for proper operation under normal conditions. Use the communication network cable to connect the battery pack and the inverter.



4.8.3.1 CAN

- 1.Insert one end of the CAN communication cable directly to the port of the Inverter.
- 2.Insert the other end of the CAN communication cable to the CAN connector on the first battery.

4.8.3.2 RS485

- 1.Insert one end of the RS485 communication cable directly to the port of the Inverter.
 - 2.Insert the other end of the RS485 communication cable to the CAN connector on the first battery.
- The wiring order of the communication cable is as follow

CAN	PIN 1	White with an orange stripe	CANL
	PIN 2	Orange	CGND
	PIN 3	White with a green stripe	NC
	PIN 4	Blue	CAN H
	PIN 5	White with a blue stripe	CAN L
	PIN 6	Green	NC
	PIN 7	White with a brown stripe	CGND
	PIN 8	Brown	CANH

RS485	PIN 1	White with an orange stripe	RS485-B1
	PIN 2	Orange	RS485-A1
	PIN 3	White with a green stripe	RS485-GND
	PIN 4	Blue	RS485-B1
	PIN 5	White with a blue stripe	RS485-A1
	PIN 6	Green	RS485-GND
	PIN 7	White with a brown stripe	NC
	PIN 8	Brown	NC

4.8.4 Address assignment

Set the DIP switch on the battery panel, and assign the communication address of the battery module according to the table below. If there is only one battery cabinet, then set the address to 1. If it needs to be used in parallel, assign the second battery to address 2; The third one is assigned address 3 and configured sequentially (note: only the battery pack with address 1 can be connected to the inverter).

4.8.5 Close the circuit breaker (air switch) of the battery pack

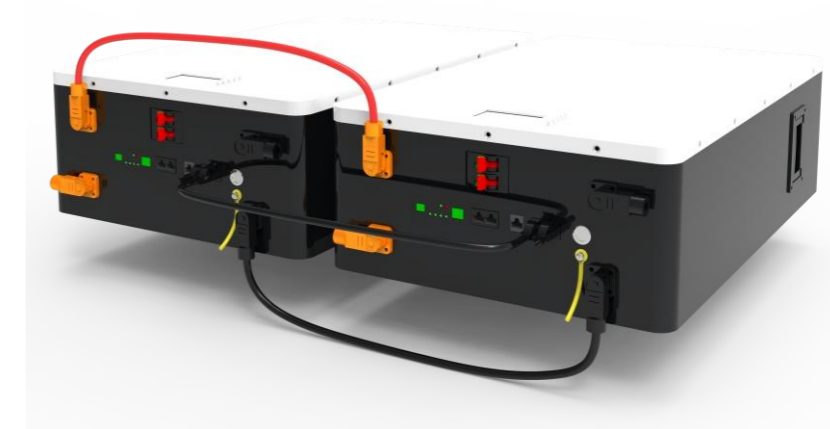
After the wiring harness is installed, close the air switch on the battery pack.

4.8.6 Inverter Harness Connections

Connect the total positive, total negative and communication wires of the battery pack to the corresponding BAT+, BAT-, RS485 of the inverter respectively, and make sure that the rocker switch of the inverter is off before connecting.

4.8.7 Parallel Connection

a) Parallel Connection Diagram

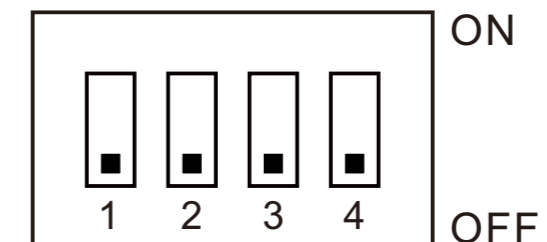


b) Parallel Connection Instructions

- Step 1: Lead the power cable of the two split units to the DC combiner box, and connect them to the BAT+ and BAT- interfaces of the inverter after the DC combiner boxes are connected in parallel.
 - Step 2: Connect the RS485-1 interface of the battery host to the RS485 interface of the inverter.
 - Step 3: Connect the RS485-2 interface of the battery host to the RS485-1 or RS485-2 interface of the next battery.
- Remarks: Refer to the above connection method for more than two parallel connections.

4.8.8 Dial switch setting

When multiple battery packs need to be used in parallel, in addition to connecting communication lines, it is also necessary to distinguish different packs by setting addresses on the coding switch. Avoid setting addresses to the same. Refer to the following table for the definition of the coding switch



ADD.	1#	2#	3#	4#
0	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF
2	OFF	ON	OFF	OFF
3	ON	ON	OFF	OFF
4	OFF	OFF	ON	OFF
5	ON	OFF	ON	OFF
6	OFF	ON	ON	OFF
7	ON	ON	ON	OFF
8	OFF	OFF	OFF	ON
9	ON	OFF	OFF	ON
10	OFF	ON	OFF	ON
11	ON	ON	OFF	ON
12	OFF	OFF	ON	ON
13	ON	OFF	ON	ON
14	OFF	ON	ON	ON
15	ON	ON	ON	ON

4.8.9 Connecting Ground Wire

For one battery module:

Use a hex wrench to unscrew the ground terminals on both sides of the ground port on the BMS and battery module, as shown in the figure below.

Connect the BMS to the battery module.

Note: Grounding requires a 10AWG earth wire.



For 2-4 battery modules:

The GND connection between the BMS and the battery module is the same as described above.



Note: Grounding requires 10AWG earth wire .

4.9 Overall Installation

- 1.Connect the cables at one end of the battery.
- 2.Run the cables through the corrugated pipe.
- 3.Set the cables into the groove of metal plates and screw them back to the battery packs on both sides.
- 4.The last step is connecting the series-connected cable to "-" and "-", "+" and "+" between inverter and battery.The series-connected cable is used to make a complete circuit.

CAUTION!

When multiple batteries are connected in parallel, appropriate cables shall be selected according to the load size, otherwise overload may occur

5. Commissioning

Under normal circumstances, the battery packs have been debugged before leaving the factory. Users only need to correctly connect the cable and communication cable to use it normally. However, special cases cannot be excluded. The following debugging steps can be used for reference

5.1 Commissioning

If all the battery packs are installed, follow these steps to put it in operation.

- 1.Check that the cable and communication line are connected normally and firmly;
- 2.Remove the upper cover board of the battery pack;
- 3.Rotate the coding switch to corresponding number with small tool according to the number of battery pack(s) that has(have) been installed;
- 4.Switch the circuit breaker to ON position;
- 5.Switch the weak current switch to ON position;
- 6.Reinstall the upper cover board to the battery pack.
- 7.Power on the Inverter.

5.2 Status Indicators

The LED indicators on the front panel of the battery pack are showing the operating status.

5.2.1 LED working status indication

State		RUN	ALM	SOC LED				Explain
Shut down	sleep	●	●	●	●	●	●	
		OFF	OFF	OFF	OFF	OFF	OFF	ALL off
Standby	normal	Flashing 1	OFF	In di cati ons according to SOC				Standby
	alarm	Flashing 1	Flashing 3					Low voltage alarm
Charging	normal	ON	OFF	According to the battery indicator (Maximum power, LED flashes 2)				Maximum power LED flashes (2 flash),and the overchargealarm ALM does not flash
	alarm	ON	Flashing 3					
	overcharge protection	ON	OFF	ON	ON	ON	ON	If there is no electric supply,the indicator is in standby state
	temperature protection, overcurrent protection, fail-safe	OFF	ON	OFF	OFF	OFF	OFF	Stop sharging
Discharging	normal	Flashing 3	OFF	According to the battery indicator				
	alarm	Flashing 3	Flashing 3					
	undervoltage protection	OFF	OFF	OFF	OFF	OFF	OFF	Stop discharging
	temperature, overcurrent,short circuit,reverse polarityprotection, fail-safe	OFF	ON	OFF	OFF	OFF	OFF	Stop discharging
Invalid		OFF	ON	OFF	OFF	OFF	OFF	Stop charging and discharging

5.2.2 Description of SOC LED

State	Charging				Discharging				
SOC LED	L4 ●	L3 ●	L2 ●	L1 ●	L4 ●	L3 ●	L2 ●	L1 ●	
SOC(%)	0~25%	OFF	OFF	OFF	Flashing	OFF	OFF	OFF	ON
	25~50%	OFF	OFF	Flashing	ON	OFF	OFF	ON	ON
	50~75%	OFF	Flashing	ON	ON	OFF	ON	ON	ON
	≥75%	Flashing	ON	ON	ON	ON	ON	ON	ON
RUN ●	ON				ON				

5.2.3 LED Flashing

Flashing	ON	OFF
Flashing 1	0.25s	3.75s
Flashing 2	0.5s	0.5s
Flashing 3	0.5s	1.5s

5.3 Buzzer Description

When the battery pack is powered on, the buzzer will give a long sound;
 Shut down and sleep, the buzzer gives a short sound;
 In case of short circuit protection, the buzzer will sound once every 2s. After the short circuit protection is locked for three times, the buzzer will not sound again; The buzzer function can be enabled or disabled through the upper computer, and is disabled by default;
 When the buzzer function is disabled, the buzzer will not work when the protection board alarms and protects (except for short circuit and reverse connection protection)

5.4 Shutting Down Energy Storage System

To shut down the energy storage system, follow the steps below:

1. Turn off the breaker of the Inverter and battery pack;
2. Open the upper cover board;
3. Switch the weak current switch to OFF position;
4. Switch the circuit breaker switch to the OFF position;
5. Make sure that every indicator on the battery pack is off;
6. Disconnect the cables (in case of long-term non use).

6. Troubleshooting

Check the indicators on the front to determine the state of the battery pack. A warning state is triggered by a condition, for example, when voltage or temperature is beyond the designed limitations. The BMS of the battery pack periodically reports its operating state to the inverter. When the battery pack falls outside prescribed limits, it enters a warning state. When a warning is reported, the inverter immediately stops operation. If the inverter continues to work and reaches the protection value, the battery pack will stop working and enter the protection state, without output voltage and current. If the battery pack is configured with a screen, you can view the alarm and fault information from the screen (Click the button beside the display screen to enter "BMS Info", and then enter "BMS Status" to view the Warning message, "N" means normal, "A" means abnormal). If there is no display screen, you can refer to the LED display lamp, you can also connect the battery pack to the upper computer software through the computer to read the alarm and fault information.



The possible warning messages are as follows:

NO.	Warning Messages	Description	Solution
1	OV	Cell overvoltage protection	Stop charging
2	OVP	Pack overvoltage protection	Stop charging
3	UV	Cell undervoltage protection	Stop discharging
4	UVP	Pack undervoltage protection	Stop discharging
5	SHOT	Short circuit protection	Stop working and look for any short circuit in the power cables
6	OCC	Charging overcurrent protection	Stop charging,wait for a moment,try again,if it is still overcurrent protection,replace another charger
7	ODC	Discharging overcurrent protection	Stop discharging,wait for a moment,try again, if it is still overcurrent protection,check the load and reduce the load power
8	INV	Reverse connection protection of the battery pack	Check the power cable
9	OT	Over temperature protection	Stop working for a while or even longer until the temperature of the battery pack drops to the point where the BMS can work normally
10	UT	Under temperature protection	Stop working for a while or even longer until the temperature of the battery pack go back to the point where the BMS can work normally
11	DV	Voltage difference protection	Stop working and charge the battery pack
12	DT	Temperature sensor fault	Stop working,and contact your distributor directly
13	CFET_ERR	Charging MOS fault	Stop working,and contact your distributor directly
14	DFET_ERR	Discharging MOS fault	Stop working,and contact your distributor directly
15	MPT_ERR	Sampling chip fault	Stop working,and contact your distributor directly
16	CELL_ERR	Cell fault	Stop working,and contact your distributor directly
17	wOV	Cell overvoltage warning	Charging can continue, it is recommended to stop charging
18	wOVP	Pack overvoltage warning	Charging can continue, it is recommended to stop charging
19	wUV	Cell undervoltage warning	Discharging can continue, and it is recommended to stop discharging
20	wUVP	Pack undervoltage warning	Discharging can continue, and it is recommended to stop discharging
21	wOCC	Charging overcurrent warning	Charging can continue, it is recommended to stop charging
22	wODC	Discharging overcurrent warning	Discharging can continue, and it is recommended to stop discharging
23	wSOC	Low soc warning	It can continue to work, but it is recommended to start charging
24	wDV	Voltage difference warning	It can continue to work, but it is recommended to start charging
25	wOT	Over temperature warning	It can continue to work. It is recommended to stop working until the temperature drops to the normal range
26	wUT	Under temperature warning	It can continue to work. It is recommended to stop working until the temperature rises to the normal range



If the battery has no display screen, refer to the LED display lamp

State	Warning Messages	RUN	ALM	Solution
		●	●	
Charging	Overvoltage protection	ON	OFF	Stop charging
	Over temperature protection	OFF	ON	Stop charging for a while or even longer until the temperature of the battery pack drops to the point where the BMS can work normally
	Overcurrent protection	OFF	ON	Stop charging,wait for a moment,try again, if it is still overcurrent protection, replace another charger
Discharging	Undervoltage protection	OFF	OFF	Stop discharging
	Over temperature protection	OFF	ON	Stop discharging for half an hour or even longer until the temperature of the battery pack drops to the point where the BMS can work normally
	Overcurrent protection	OFF	ON	Stop discharging,wait for a moment,try again, if it is still overcurrent protection,check the load and reduce the load power
	Short circuit protection	OFF	ON	Check the circuit, find the point of short circuit, and separate ,then try again
Failure	Reverse connection protection	OFF	ON	Replace the positive and negative connections between the battery pack and the load, and then try again
		OFF	ON	Stop working,and contact your distributor directly

7. Maintenance

The product must be stored in a dry and ventilated environment for a long time, and make sure the SOC is more than 30%. It is recommended to turn off the switch of the battery pack and inverter if it is not used for a short time. It is recommended to turn off the switch of the battery pack and inverter then disconnect the cables and communication lines of the battery pack and inverter if it is not used for a long time. It must be charged once every 3 months. It must be fully charged and discharged once every 9 months. It is recommended to clean the dust on the surface of the battery pack regularly to keep it clean and tidy.



8. Decommissioning

8.1 Dismantling the Battery

Turn off the breaker between Inverter and the battery pack

Turn off the inverter

Open the upper cover board of the battery packs

Switch the weak current switch to OFF position

Switch the circuit breaker switch to OFF position

Disconnect the power cables and communication cables between battery pack and Inverter

Disconnect the power cables and communication cables between battery packs. Disconnect the other cables.

Use the appropriate tools to loosen the screws and remove the battery packs

8.2 Packing

Please pack the battery packs with the original packaging.

If it is no longer available, you can also use an equivalent wooden boxes or carton that meets the following requirements.

Suitable for loads more than 70kg

Can be fully closed

The place where the carton has handles or can be handled

The place where the wooden box has feet or handles or can be lifted

9. Warranty Terms and Conditions

Warranty Period

The standard warranty period of the battery pack is ** months (** years), the performance warranty period of the battery pack is ** months (** years), and the cycle life exceeds ** times from the date of purchase. Our end users are required to provide a valid purchase invoice to verify date of purchase.

If our end user fails to provide a valid purchase invoice, the standard warranty period of battery packs is **months (**years) from the date of manufacture.

After the power supply warranty service is granted, the battery guarantee is as follows: As the manufacturer of the battery, the battery ensures to be still **% of the original capacity after ** months of installation and commissioning. The usable capacity at the time of installation is **%.

Our end users may also purchase this standard warranty within ** months from the date of manufacture.



General Terms

We guarantee that if the product is defective in manufacturing or materials, we will repair or replace the product or any part of it.

We will try to replace the product with the same one. However, due to advances in technology, the product may not be available. In these cases, we will provide another type of product with at least the same value and standard, although the substitute product may be different in size, shape, color and/or capacity. Due to advances in technology, the replaced parts or parts may not be compatible with other parts already installed. Any costs related to system incompatibility are not covered by this warranty.

If a product is replaced during the warranty period, the remaining warranty period will automatically transfer to the replacement product. In such event, you will not receive a new warranty period.

During the warranty period, if there is a defect in the material or process of the product, the system can monitor it through the Internet and notify the end user.

If the system does not enable the Internet function, it cannot be monitored. If the product is found to be defective, the end user shall notify ** as soon as possible to meet the repair or replacement conditions under the warranty period.

This Warranty only covers repair or replacement of the defective product. It does not cover:

Any costs incurred by the end-user in normal or scheduled maintenance of the Product;

Or any other costs such as transportation, travelling and accommodation cost of personnel etc;

Subject to any law to the contrary, any damage to property, personal injury, direct or indirect loss, consequential losses or other expenses arising from breach of this Warranty.

Warranty Conditions

If the product is defective within the agreed warranty period, please report the defective product with a brief error description to our service hotline and email your warranty card to our service department to process the claim. You can also contact your dealer (authorized dealer or distributor of the battery) or installer if your device is defective or malfunctioning.

In order to make a claim during the warranty period, you need to provide us with the following information and documents about defective products:

Product model and serial number.

Valid purchase invoice and copy of warranty card.

Error/error messages and other information.

Detailed information about the entire system (PC, battery, etc.).

Previous claims/exchange documents (if applicable).

If a product is faulty while it is under warranty period, it will be:

Repaired by Zhejiang Benyi Electrical Co.,Ltd. or repaired on-site, or exchanged with a refurbished battery that includes all firmware updates.

If the product needs to be exchanged, the remainder of the warranty period will be transferred to the replacement unit, the warranty period of the original device will continue.

The original equipment warranty period will continue to be extended. In this case, you will not receive a new warranty card and the replacement will be registered by Zhejiang Benyi Electrical Co., Ltd.. If there are less than 6 months of warranty remaining, you will automatically receive 6 months of warranty. The warranty covers the cost of work and materials required to restore the product without failure. All other expenses of Zhejiang Benyi Electrical Co., Ltd., especially transportation, travel and accommodation expenses. Expenses for personnel and your own employees are not covered by the warranty. In addition, claims for direct or indirect damages caused by defective battery packs are not covered by the warranty. Zhejiang Benyi Electrical Co., Ltd. reserves the right to arrange warranty service for end users and use a third party for warranty service. All warranty services are free.

Scope of Manufacturer Warranty

To provide high-quality services to end users, Zhejiang Benyi Electrical Co., Ltd.. We require an authorized dealer or dealer to respond to your warranty claim. Zhejiang Benyi Electrical Co., Ltd. will replace any product or part of a product that proves to be defective in design or manufacture during the warranty period. Any defect caused by the following situation will not be covered by this warranty (dealer or dealer is responsible and authorized by Zhejiang Benyi Electrical Co., Ltd. to conduct the following investigation):

- 1)The "Warranty Card" will not be sent back to the dealer/dealer or Zhejiang Benyi Electrical Co., Ltd.
- 2)The product has been modified, its design has been changed or parts have been replaced without the approval of Zhejiang Benyi Electrical Co., Ltd.; Zhejiang Benyi Electrical Co., Ltd. or the serial number or sealing strip has been erased;
- 3)The product has not been installed or commissioned correctly;
- 4)You or another user failed to comply with security regulations.
- 6) Improper storage or damage by dealers or end users;
- 7) Defects are damages during shipping (including paint scratches caused by movement within the package during transit). Claims should be made directly with the shipping company/insurer once the container/package has been unloaded;
- 8) Failure by you or other users to follow any/all user manuals, installation instructions and maintenance procedures;
- 9) Improper use or misuse of equipment;
- 10) Insufficient ventilation of the equipment;
- 11) Maintenance procedures associated with the product are not of an acceptable standard;
- 12) The defect has been caused by force majeure (violent or stormy weather, lightning, overvoltage, fire etc.);
- 13) The damage is only the appearance, and has no effect on the function of the equipment.

This guarantee is without prejudice to your rights, including but not limited to guarantee rights with respect to sellers. e. If applicable, rectification, price reduction, cancellation of sale and damages can be carried out. All requireme

Extension of warranty

You can apply for warranty extension within 12 months from the date of manufacture by Zhejiang Benyi Electrical Co.,Ltd. By providing the serial number and copy of the unit warranty card. Zhejiang Benyi Electrical Co.,Ltd. may reject any application received that does not meet the required dates. Extended warranties can be purchased up to ** year, ** year, ** year or ** year. See the Warranty Extension Table for more information.

Once purchase warranty extension, Zhejiang Benyi Electrical Co.,Ltd. Send the warranty extension certificate to the user to confirm the extended warranty period.

How to Make a Warranty Claim

If a Product fails within the Warranty period, the end-user must stop using the Product or the system in which the Product is installed as the case may be by isolating the Product from any energy source, make a claim as soon as possible and follow all directions provided by us, or our representative or agents.

When repairing the product, please send the warranty card together with the purchased product to the distributor for maintenance.

When contacting us, please have the following information to hand:

In order to serve you better, after purchasing this product, please read carefully, fill in and keep the warranty card your name, address, zip code and a phone number where you can be reached

The model name and serial number of the product (you can find both on the product)

Proof of purchase, including date and address of supplier

Installation date and installation address

Costs of Submitting a Warranty Claim

For invalid claims under this Warranty, we will not be liable for the end-user's costs in making the warranty claim, including transport or return freight.

In respect of valid claims under this Warranty, the end-user will not be charged for reasonable costs associated with the making of a warranty claim, including warranty processing costs, the cost of replacement parts or freight. Reimbursement for necessary and reasonably incurred costs or expenses in making valid warranty claims under this Warranty may be claimed from us. Documentary evidence in support of such claim will be required.

Deadlines for Submitting Warranty Claims

We aim to rectify genuine quality problems as a priority. This is generally achieved by investigating why defective products have failed and by introducing immediate corrective action measures to prevent re-occurring warranty failures. It is therefore critical that all claims under this Warranty are promptly submitted to us as soon as the Product fails, and in any event, within three months of knowledge of the matter of event giving rise to the claim. No consideration will be given to claims under this Warranty which are made after this period.

Product Liability and Product Safety

We should be informed immediately about any potential product safety concerns within and outside the warranty period. We are well aware of our product liability and product safety obligations and responsibilities. It is our aim to ensure appropriate product safety standards are met in order to avoid injury, loss and damage caused by defects in any Product.