

Model:CJSL-7.68KWH/CJSL-10.24  
KWH /CJHV-15.36KWH

**PONY Q**



## User Manual

Model:CJSL-7.68KWH/CJSL-10.24  
KWH/CJHV-15.36KWH

# CATALOGS

Thank you for choosing PONYQ battery energy storage system products. To help you properly use, operate, maintain, inspect, troubleshoot, and care for this battery energy storage system product, please read this user manual carefully before use, and operate it in accordance with this user manual when using it, and please keep this user manual in a safe place.

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# 01 / SAFETY PRECAUTIONS

- It is very important and necessary to read the user manual carefully before installing or using the battery. Failure to follow any of the instructions or warnings in this document can result in electrical shock, serious injury, death, or may damage the battery and the whole system.
- If the battery is stored for a prolonged time, it is a requirement that they are charged every three to six months, and the SOC should be no less than 80%.
- The battery needs to be recharged within 12 hours, after fully discharging.
- Do not expose cable outside.
- All battery terminals must be disconnected before maintenance.
- Do not use cleaning solvents to clean the battery.
- Do not expose the battery to flammable or harsh chemicals or vapors.
- Do not paint any part of the battery, include any internal or external components.
- Do not connect battery with PV solar wiring directly.
- Any unwanted object is prohibited to be inserted into any part of the battery.
- Damage caused by failure of the above requirements is not covered by the warranty.

## 1.1 Product Composition

- After unpacking, please check the battery and packing list first, if the battery is damaged or spare parts are missing, please contact the distributor.
- Before installation, be sure to cut off the grid power and make sure the battery is in the turned-off mode.
- Wiring must be correct, do not mix-connect the positive and negative cables, and ensure no short circuit with the external device.
- It is prohibited to connect the battery with AC power directly.
- The embedded BMS in the battery is designed; The battery pack does not support serial use.
- It is prohibited to connect the battery with different type of battery.
- Please ensure the electrical parameters of battery system are compatible to inverter.
- Keep the battery away from fire or water.

## 1.2 During operation

- If the battery system needs to be moved or repaired, the power must be cut off first and the battery is completely shutdown.
- It is prohibited to connect the battery with different type of battery.

- It is prohibited to put the batteries working with faulty or incompatible inverter;
- In case of fire, only dry powder fire extinguisher can be used, liquid fire extinguishers are prohibited;
- Please do not open, repair or disassemble the battery. We do not assume any consequences or related responsibilities due to violations of safe operation and design and manufacturing.

## BATTERY SPECIFICATIONS

Battery Specifications			
Model No	CJHV-15.36KWH	CJSL-10.24KWH	CJSL-7.68KWH
Nominal Parameters			
Voltage	307.2V	51.2V	51.2V
CELL	50Ah	100Ah	50Ah
Capacity	50Ah	200Ah	150Ah
Energy	15.36KWh	10.24 KWh	7.68 KWh
Dimensions (L x W x H)	720mm*1020mm*240mm	639mm*207.5mm*849mm	580mm*247mm*830mm
Weight	155kg	100kg	96kg
Basic Parameters			
Life time(25°C)	5 years		
Life cycles(80% DOD,25°C)	8000Cycles		
Storage time / temperature	5 months @ 25°C; 3 months @ 35°C; 1 months @ 45°C		
Operation temperature	-20°C to 60°C @60+/-25% Relative Humidity		
Storage temperature	0°C to 45°C @60+/-25% Relative Humidity		
Lithium Battery Standard	TUV:CE-EMC/UKCA-EMC;CB-IEC62619;UN38.3;MSDS;UL1973;UL9540A		
Enclosure protection rating	IP65		
Electrical Parameters			
Operation voltage	259.2-345.6 Vdc	44-56 Vdc	44-56 Vdc
Max. charging voltage	345.6Vdc	58.4Vdc	58.4Vdc
Max. charging and discharging current	50A/50A	115A/140A	115A/140A
rated power	15360w	5120W	5120W

# 02 / INTRODUCTION TO THE SERIES BATTERY

## 1.2 Key FeaturesKey

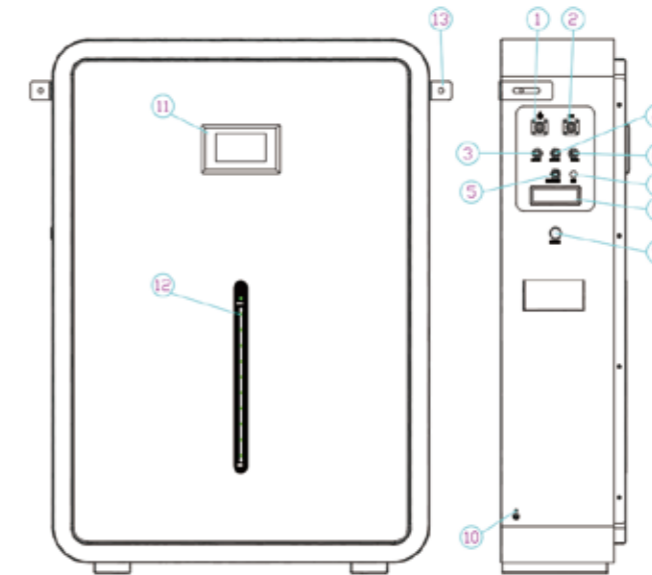
- LiFePO4 composition – provides exceptional safety and longevity.
- High safety and reliability
- 8,000cycles/5 year service life Continuous performance within wide temperature range
- Wall-mounted, convenient installation
- Integrated state-of-the-art BMS to manage and monitor battery information including voltage,current and temperature as well as balance cell charging/discharging rates
- 5-10 year warranty

## 2.2 Interface Introduction

- LiFePO4 composition – provides exceptional safety and longevity.

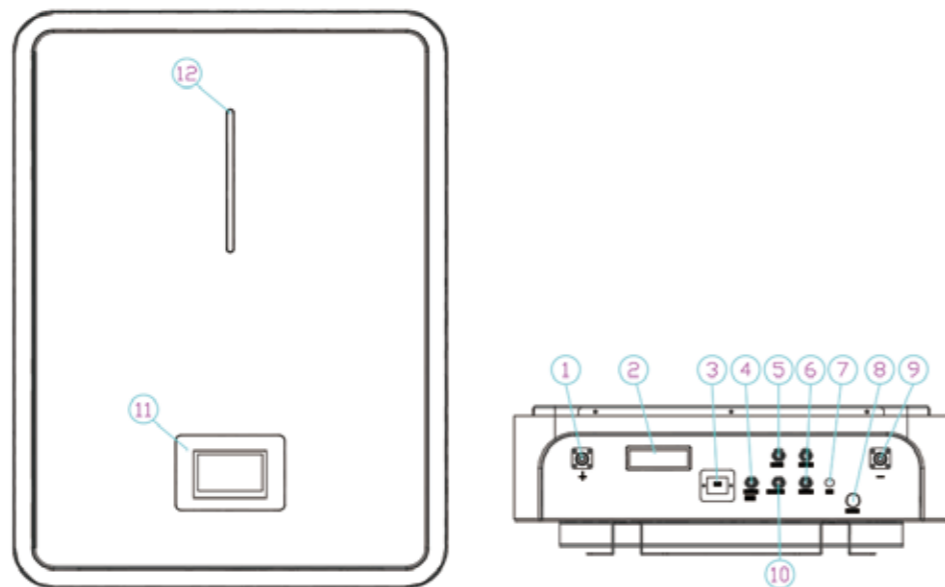


## 15.36KWh battery pack panel structure definition:



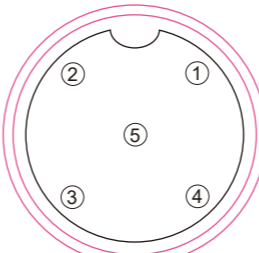
No.	Description	Port Name	Remark
1	UES0800	P+	Output terminal
2	UES0800	P-	
3	CAN Port	CAN	
4	communication port	UART	
5	RS232 Port	RS232	
6	RS485 Port	RS485	
7	PRV	PRV	
8	external antenna		
9	Switch	ON/OFF	
10	ground		Output terminal
11	LCD screen	RS232	
12	LED		
13	Fixed bracket		

7.68KWh and 10.24KWh battery pack panel structure definition:



No.	Description	Port Name	Remark
1	UES0600	P+	Output terminal
2	external antenna		
3	Dial switch	ADS	Set the address
4	CAN and RS485A Port	RS485A CAN	CANbus and inverter connection port
5	communication port	UART	4G module upgrade port
6	RS485B Port	RS485B	Parallel communication port
7	PRV	PRV	
8	Switch	ON/OFF	
9	UES0600	P-	Output terminal
10	RS232 Port	RS232	
11	LCD screen		
12	LED		

2.3 Communication pin definition:



PIN Port	parallel com	RS485A	CAN	RS232
①	RS485B-B	RS485A-B		
②	RS485B-A	RS485A-A		
③				COM/GND
④			CAN-H	RX
⑤			CAN-L	TX

2.4 SOC Indicator & Status Indicator Guides

● Chart 1: Battery Status

1 Start self-test: Blue LED runs from low to high, and then enters standby after completion, such as from lamp 1 to lamp 10, after completion, turn on the charge and discharge function.



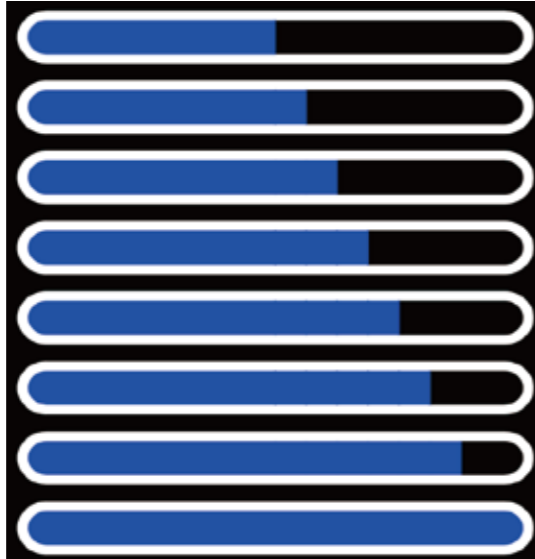
2 It is always on during normal operation (displayed according to the set color, except for red), as shown in the figure below, the lamp shade is displayed in Blue (when set to blue).



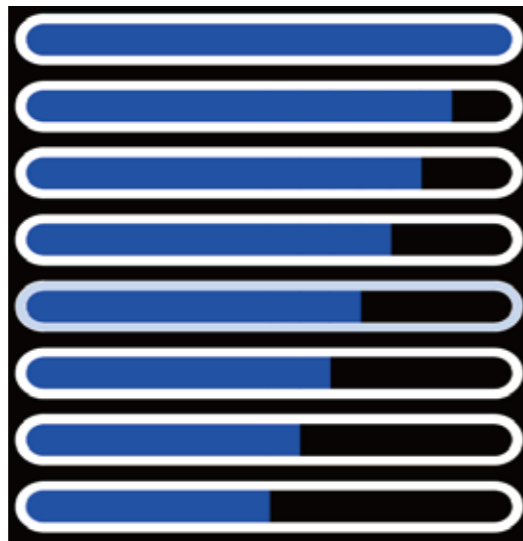
3 When there is a fault, a long red light bar will flash (red light flashes for 1 second/1 time when alarming).



4 Charging,running in cycle.



5 Discharge decreases as energy decreases.



● Chart 2: Connectors

Charge/Discharge connectors: to connect the positive pole (+) and negative pole (-) from the battery to the inverter.

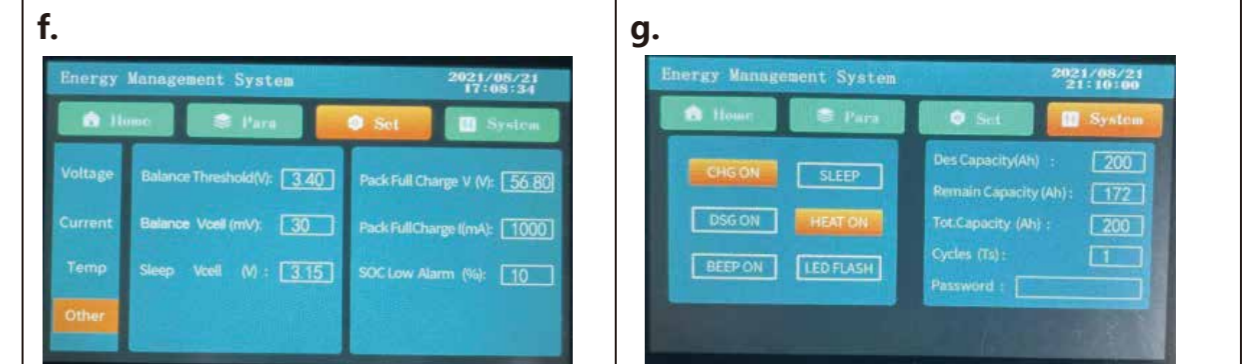
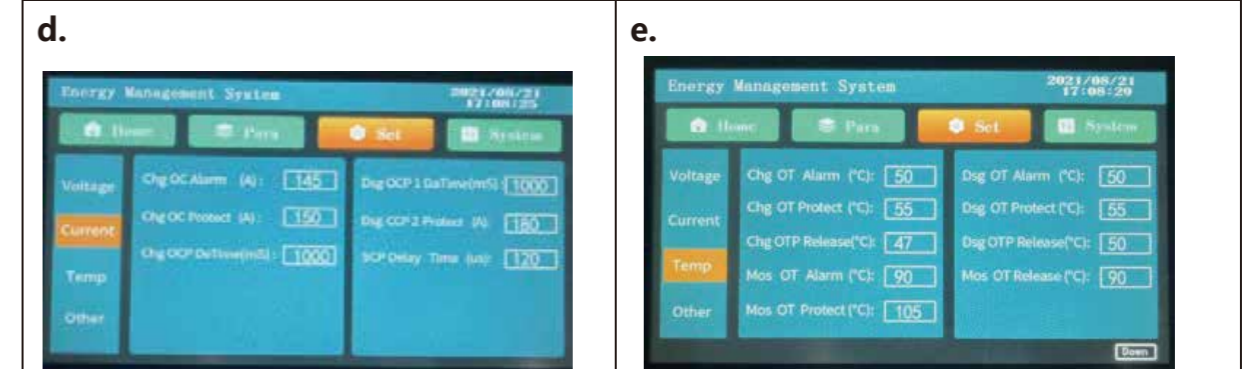
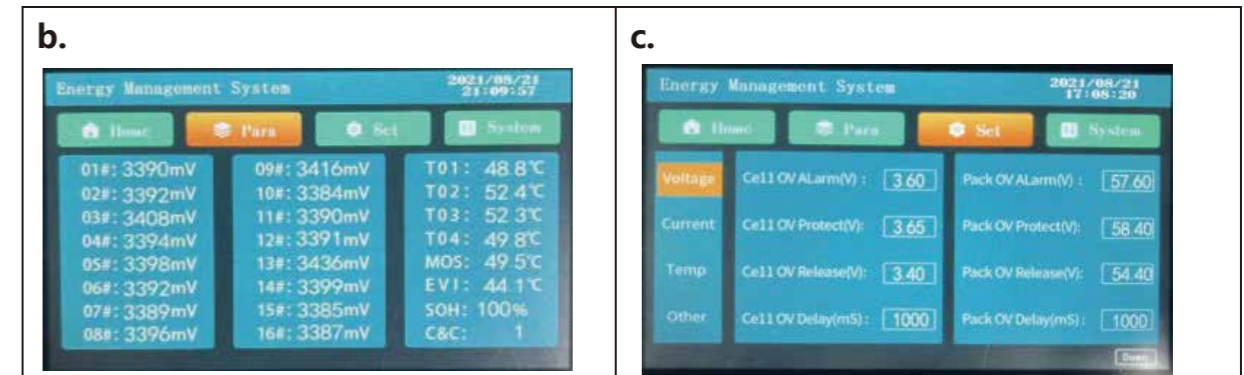
RS485A cable: Communication cable between battery and inverter.

USB To RS485 box: Used for the host computer to monitor battery information. Address Coder:used to set the identification address of each battery when batteries are used in parallel.

Power Switch ON/OFF:When battery is shut down, press this button. BMS is activated.

2.5 Display function instruction.

Once BMS is activated,use the buttons on the LCD to navigate the BMS parameters.



# 03 / GPRS REMOTE DATA MONITORING USAGE

The product can be used to view the real-time working status of the energy storage system through the "Changjiang Cloud" system (PC) and BMS Cloud APP (mobile phone application).

## 3.1 PC Remote Usage:

3.1.1 PC web link: enter [gps.changjiangevcloud.com](http://gps.changjiangevcloud.com) in the search engine to see the following page. Users can choose different types of roles according to their own needs to log in to the data center and view real-time equipment data.



Log in to view the status of all devices in your account,as shown below:

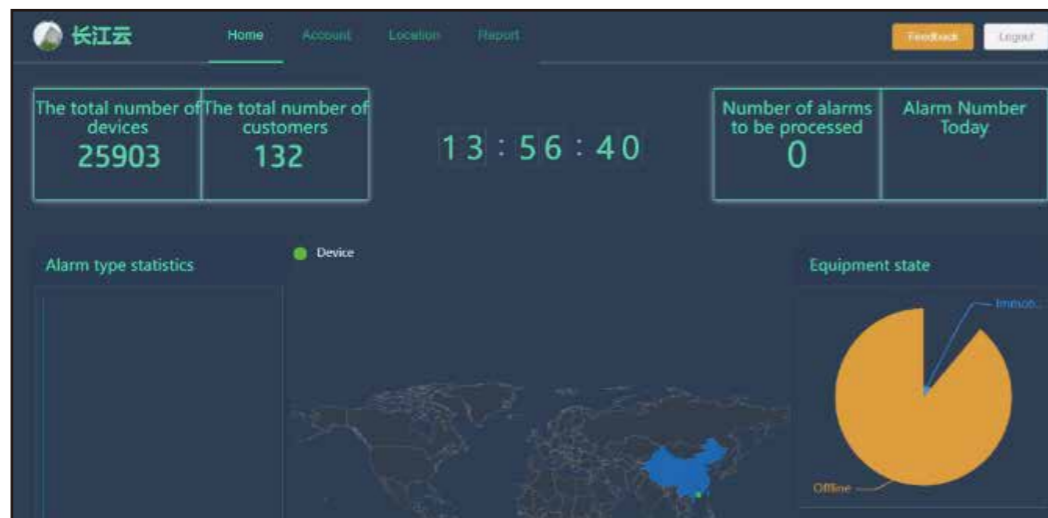


Figure 1

Figure 1 shows the system home page,enter the page to view the total number of devices under the current account,the total number of customers,device alarm information.

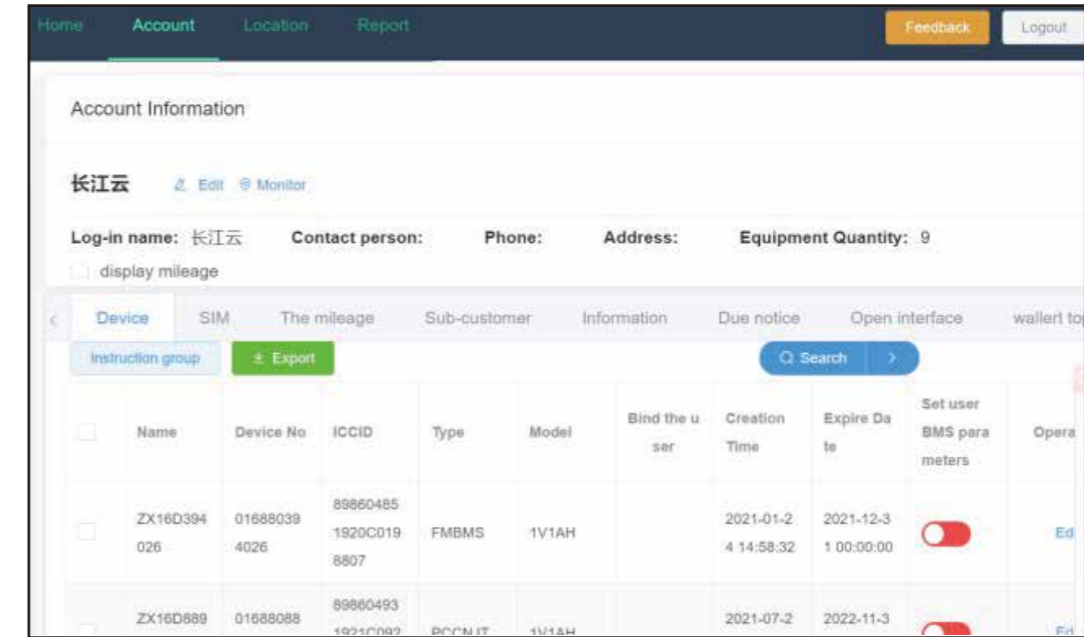


Figure 2

3.1.2 Figure 2 Click Account management menu to view device attributes or modify device attributes and other operations,such as viewing the device name, device creation time, device expiration time,SIM card CCID number,subordinate customer data management, device transfer,device balance recharge(this function is only applicable to leasing services) and a series of other operations.

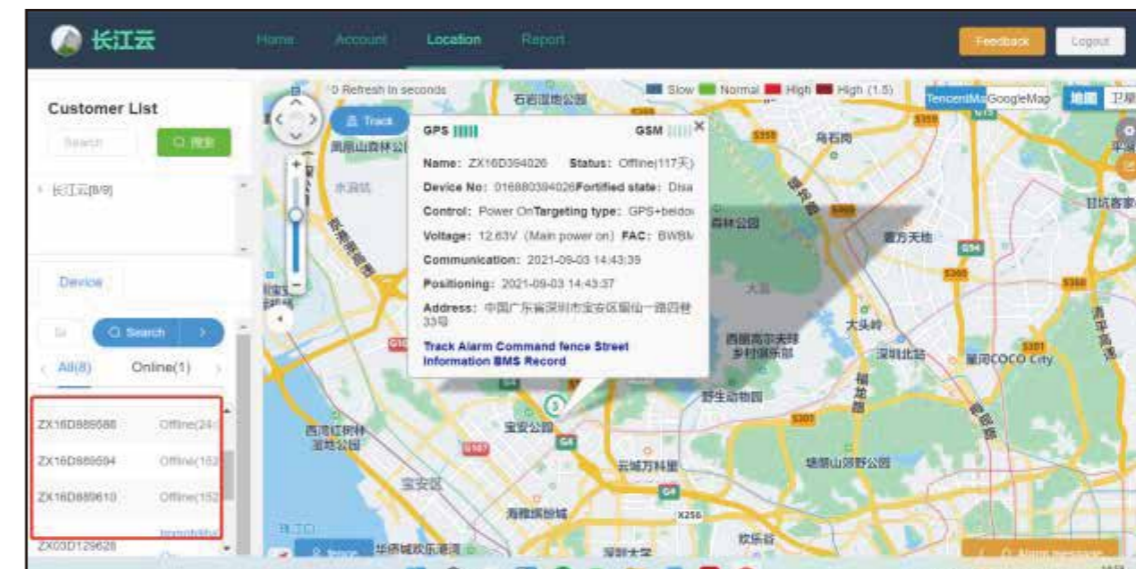


Figure 3

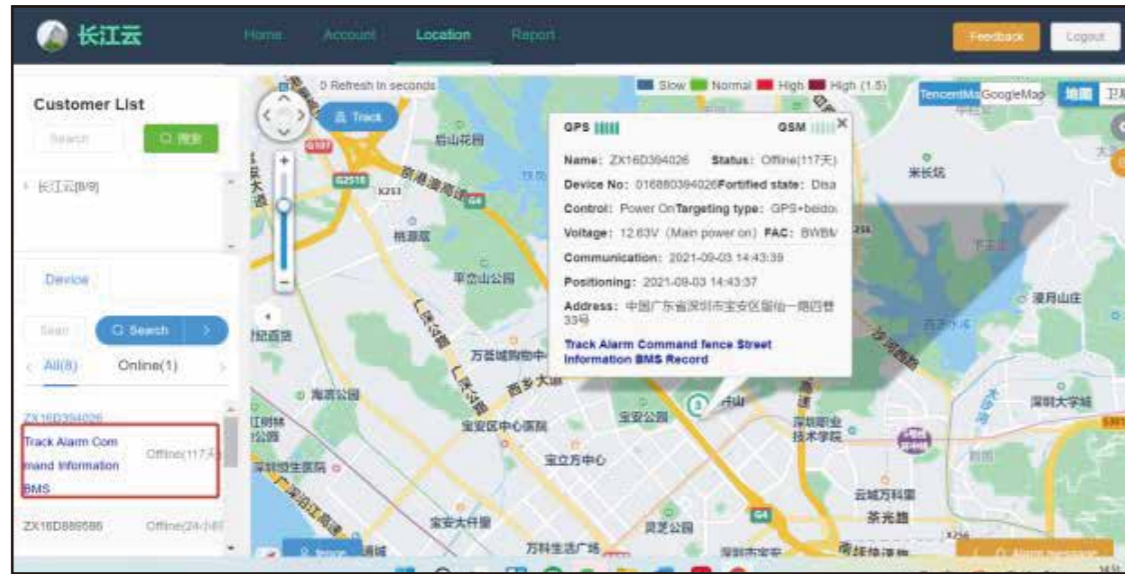


Figure 4

3.1.3 Figure 3 Click the Location menu button on the left side of the page to see the online status of the device (red frame),click the device to view the device's current location information (positioning accuracy depends on the local communication network),alarm data, other information about the device and BMS data.



Figure 5 (see left for alarm data queries)

3.1.4 Click on the BMS menu to view the battery management system's real-time data of the battery cell. (such as:equipment total voltage,equip-ment charging / discharging current, battery cell single voltage, temperature and equip-ment has been used cycle times, etc.),you can also view the historical data,alarm data (detail information),the parameter settings (this division retains the right to have access to open the rights of the following conditions) shown in Figure 5 below :

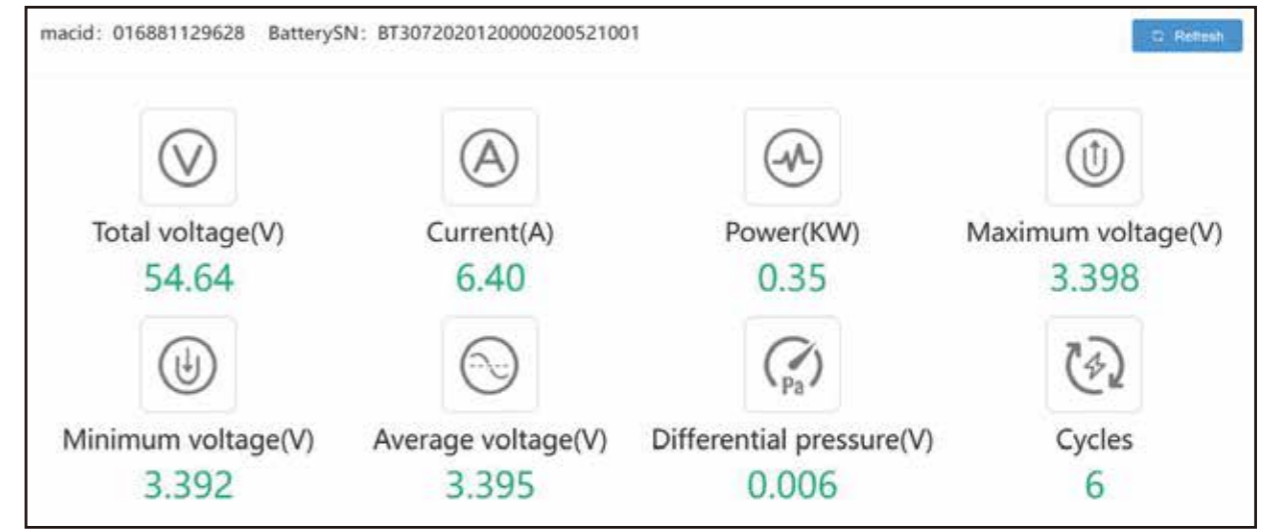


Figure 6



Figure 7

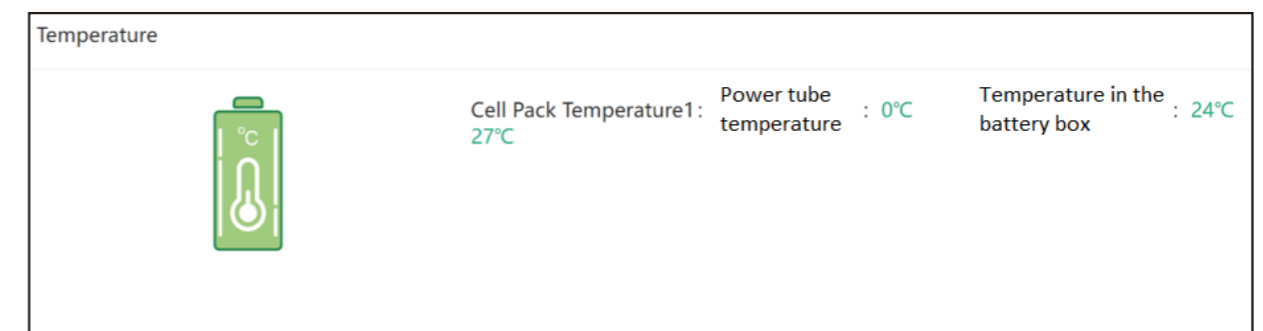


Figure 8



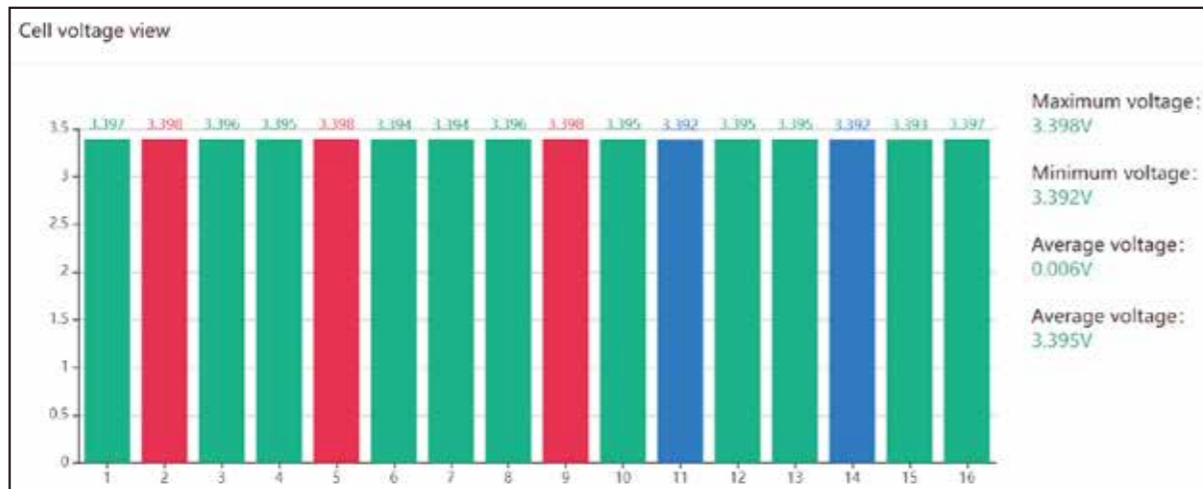


Figure 9



Figure 12 (Single Cell Voltage Historical Data)

Real-time / History / Alarm / Parameter

macid 016881129628 Select time Start time End Time Inquire

Alarm List

Device No	Alarm type	Time
016881129628	low capacity alarm	2021-12-29 10:17:09
016881129628	low capacity alarm	2021-12-28 17:50:44
016881129628	lower alarm	2021-12-28 17:50:44
016881129628	low capacity alarm	2021-12-28 17:41:43
016881129628	over alarm	2021-12-28 15:20:32
016881129628	low capacity alarm	2021-12-27 17:41:00

Figure 10 (Detailed alarm data)



Figure 13 (Charge/discharge current history data)



Figure 11 (total pressure history data)

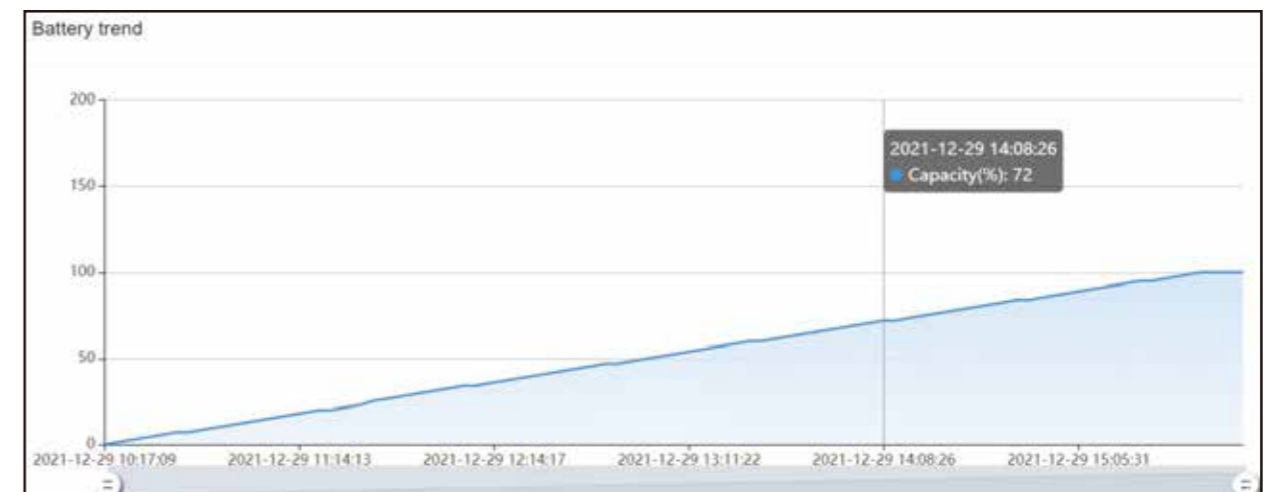


Figure 14 (Device SOC Historical Data)



Figure 15 (Equipment temperature history data)



Figure 17 (Parameter setting this reserved privilege is not open)

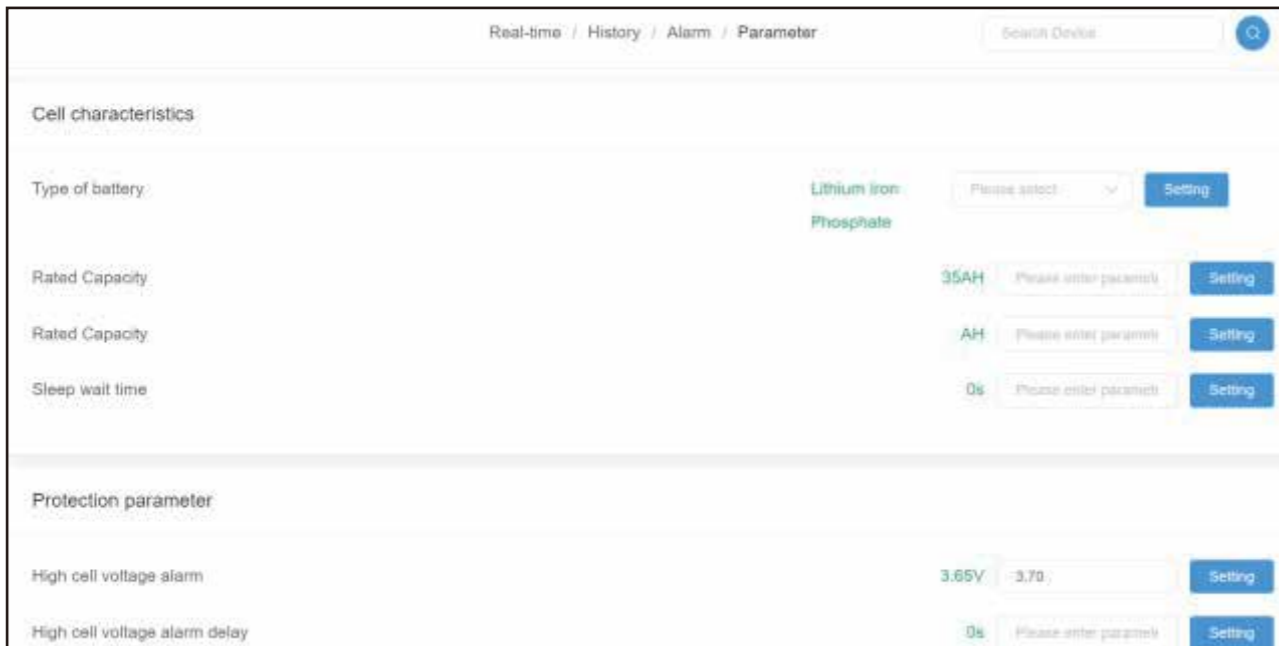


Figure 16 (Parameter setting this reserved privilege is not open)

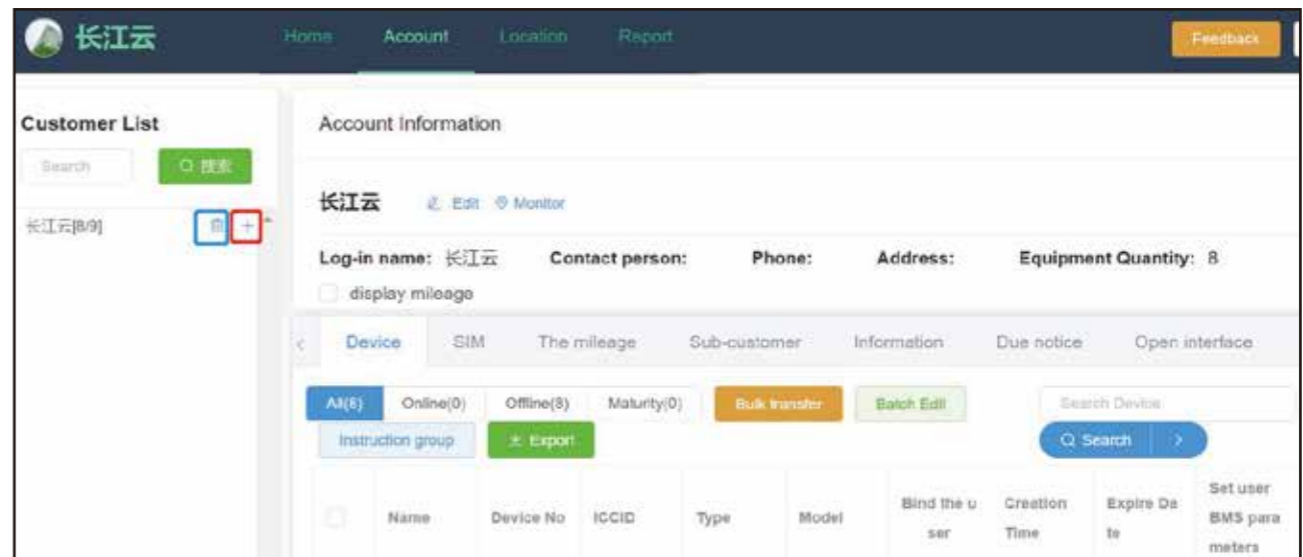


Figure 18

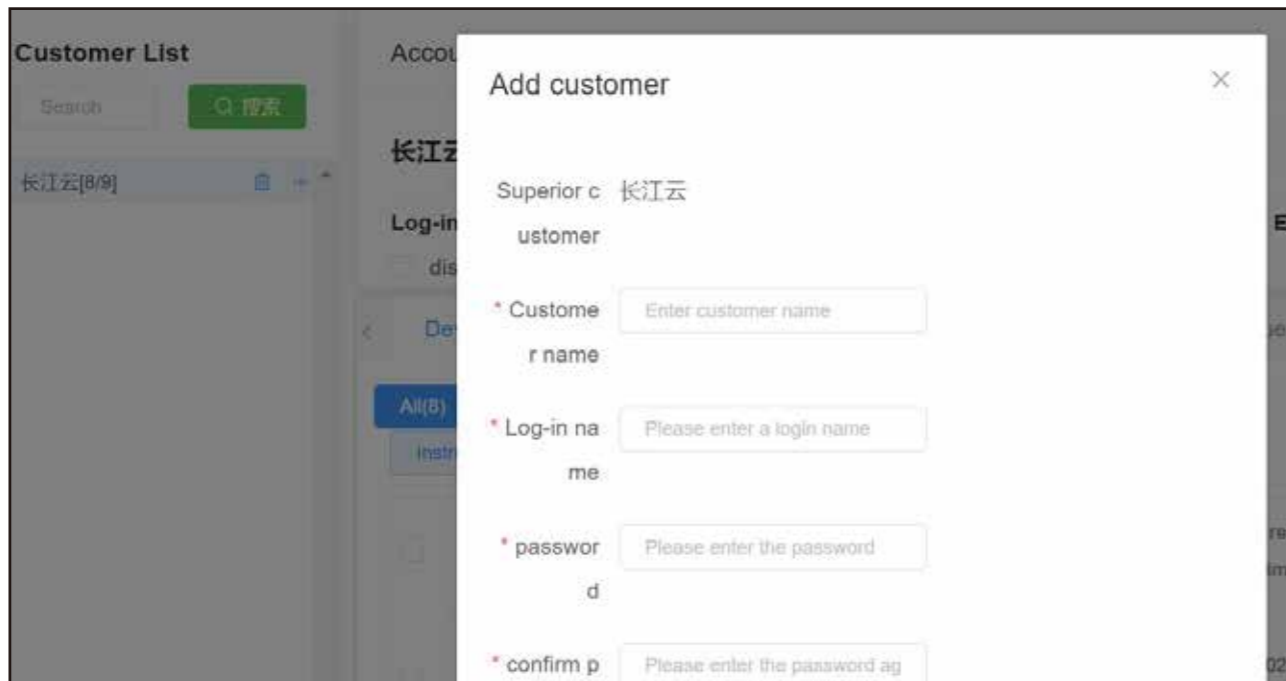


Figure 19

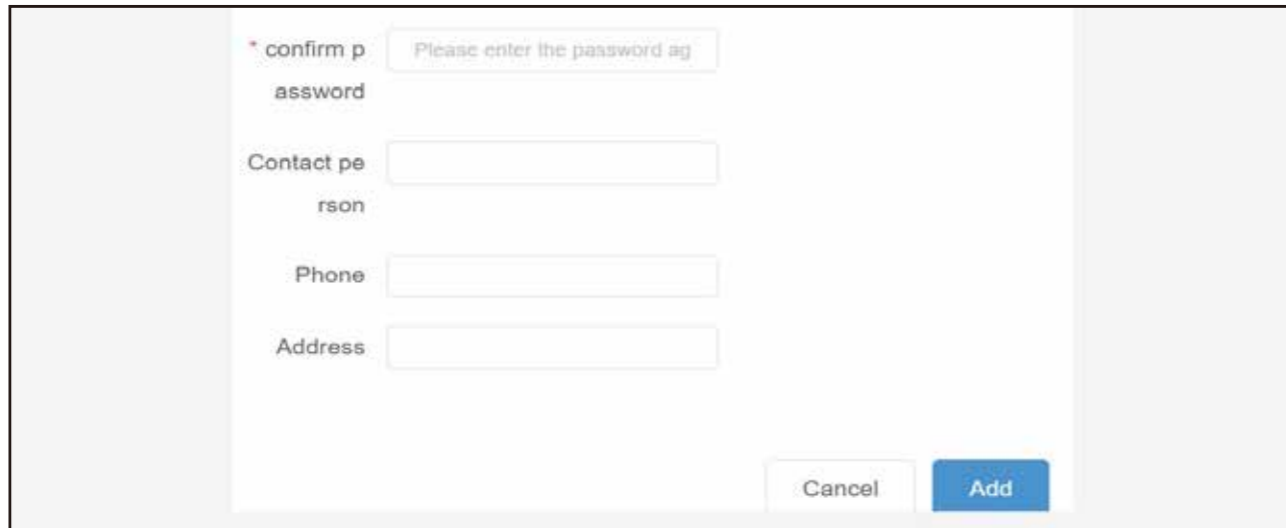


Figure 20

### 3.2 Handheld Mobile Terminal APP Usage Method :

3.2.1 Users can search for "BMS CLOUD" on Android through the cell phone application store,click and download and install it,or scan the QR code to download and install it directly, after installation,see the red frame of APP in Figure 21.



Figure 21



Figure 22

3.2.2 Click on the APP in Figure 2, enter the page (Figure 23) and then click on the red frame to enter the device list and select the device you want to view,such as clicking on the device in the red frame (Figure 24),and then return to the home page to see the relevant part of the information (Figure 25).

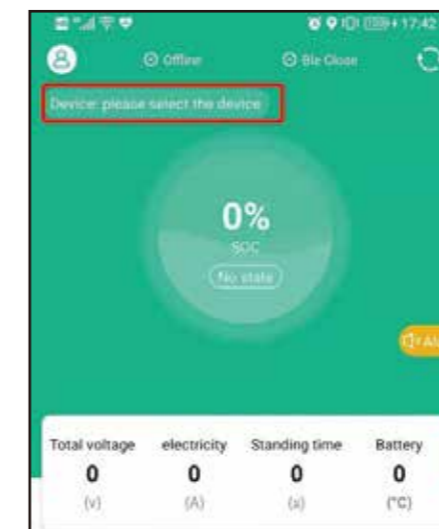


Figure 23

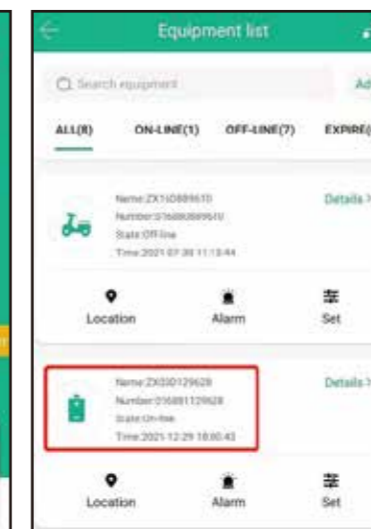


Figure 24

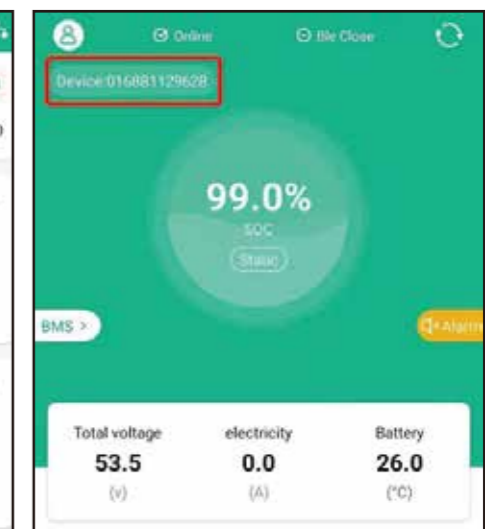


Figure 25

3.2.3 Click "BMS" menu in the home page (Figure 26) to enter the device to view the "real-time status","dynamic data" (you can check any 1 hour data),"Parameter Settings" and "Alarm Information".

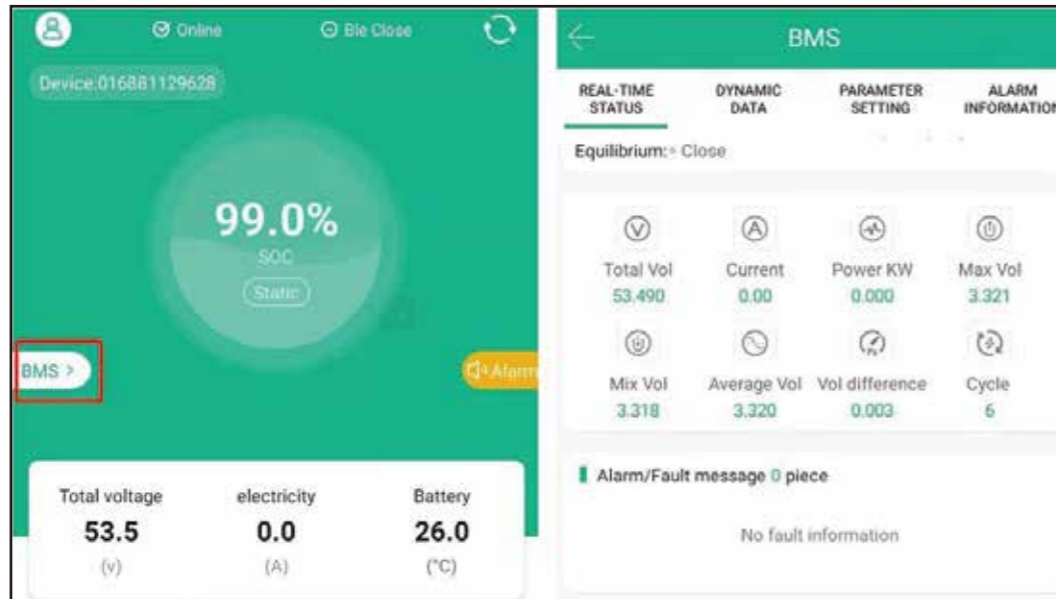


Figure 26

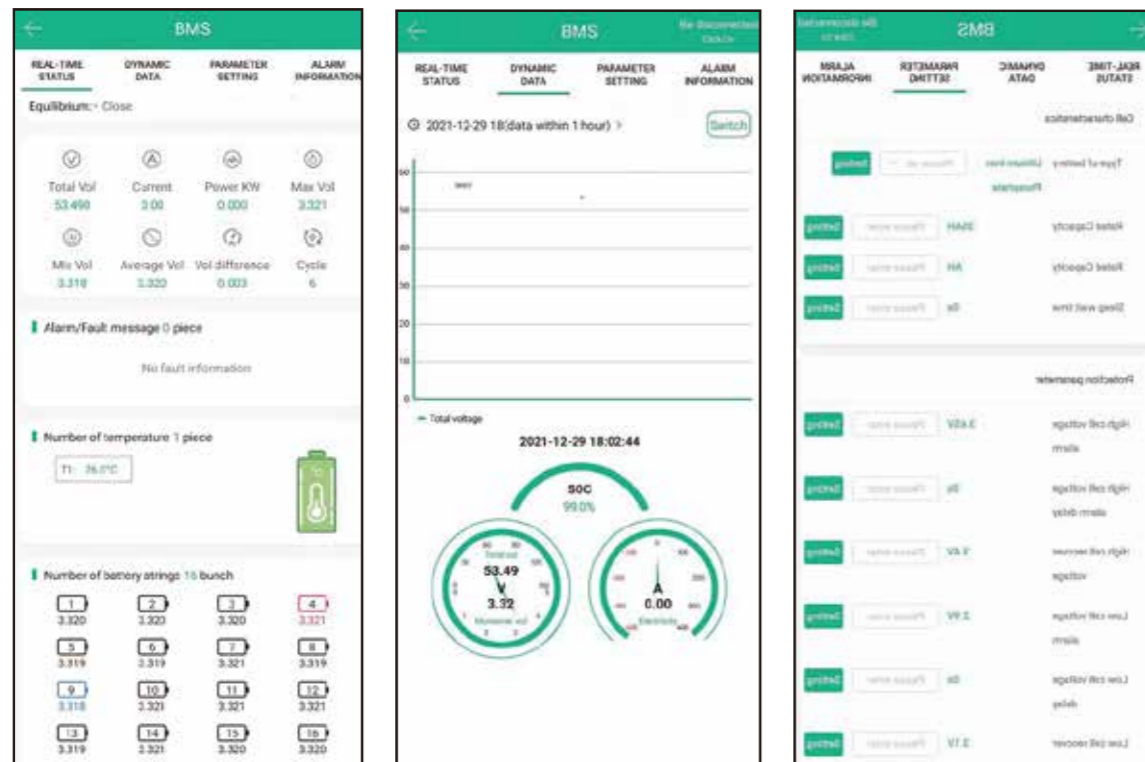


Figure 27 (real-time data of the battery cell inside the device, total voltage,current, SOC dynamics,the protection value of each parameter cannot be changed)

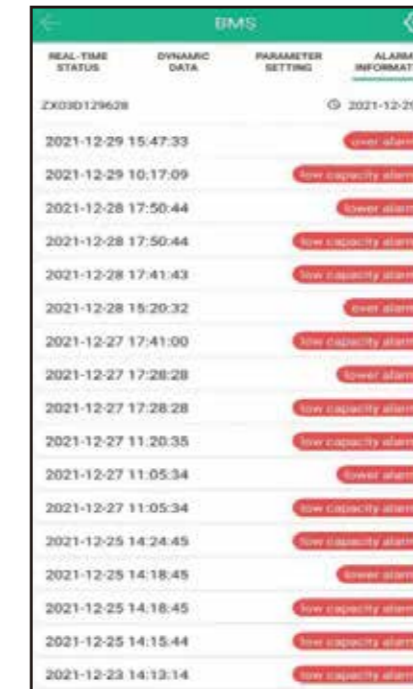


Figure 28 Device current or historical alarm information

3.2.4 If you have 2 or more users and have managed them separately (please refer to section 3.1.5 for user management),then you can enter the page in the above figure (Figure 24),click on the button in the upper right corner of the red frame (Figure 29) that will pop up the drop-down menu and display your users and devices,at this time if you want to view any one of the device information,you just need to select it and click to enter.

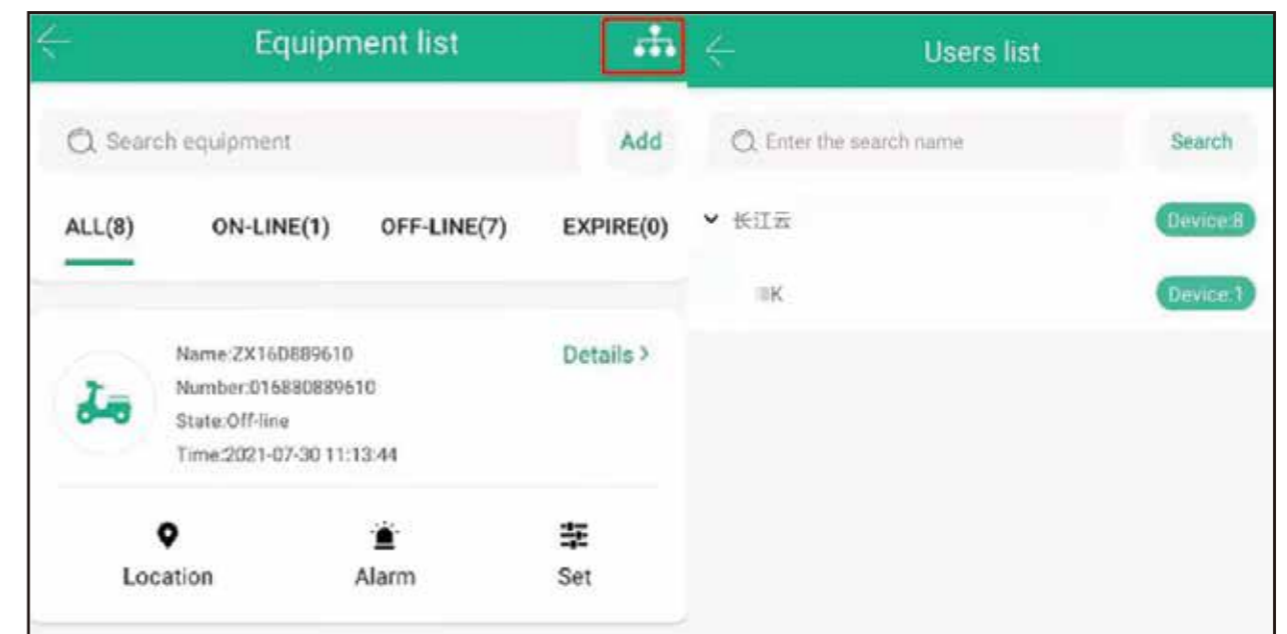
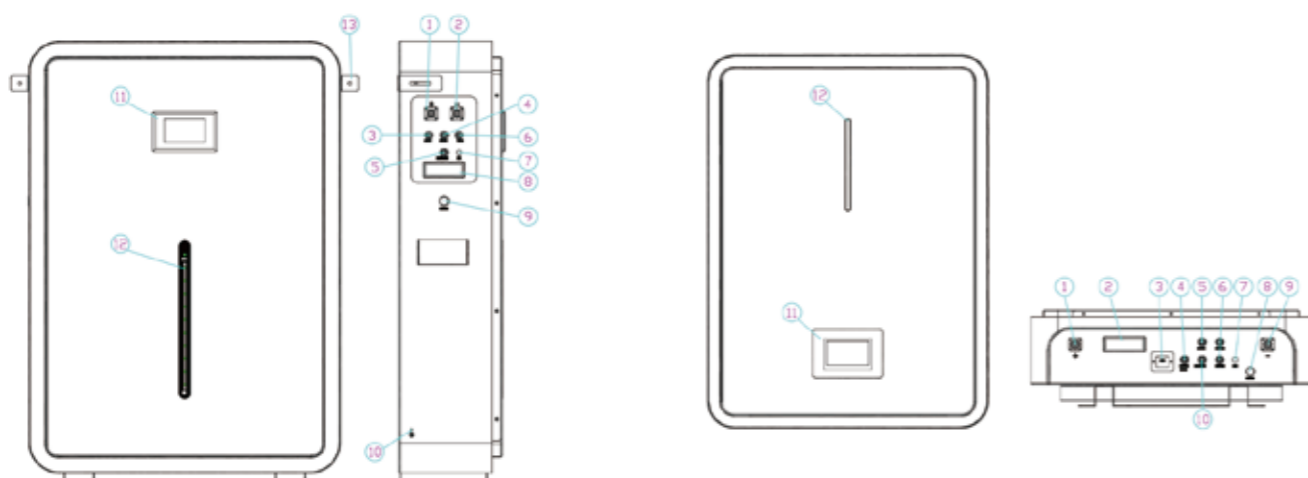


Figure 29

# 04 / SAFE HANDLING GUIDE

## 4.1 System Diagram



## 4.2 Tools

- Wire cutter
- Crimping Modular Plier
- Screw Driver
- Impact drill
- Wrench

**NOTE:**

- Use properly insulated tools to prevent accidental electric shock or short circuits.
- If insulated tools are not available, cover the entire exposed metal surfaces of the available tools, except their tips, with electrical tape.

## 4.3 Safety Gear

When installing, please wear the following protective equipment:

- Insulated gloves
- Safety goggles
- Safety shoes

# 05 / INSTALLATION

## 5.1 Inventory of items

Before installation, please carefully check the packaging and packing list to verify that the quantity is correct.



7.68/10.24KWh			
NO.	Item	Quantity	Specification
A	Battery Pack	1	7.68/10.24KWh
B	Mounting frame	1	SPCC
C	Mounting frame screw	12	M8*60
D	Communication cable	1	Length:1.0m; cat 5; 1.5m;USB type A to RJ11
E	Power connector	2	125A/1000V
F	User manual	1	This document

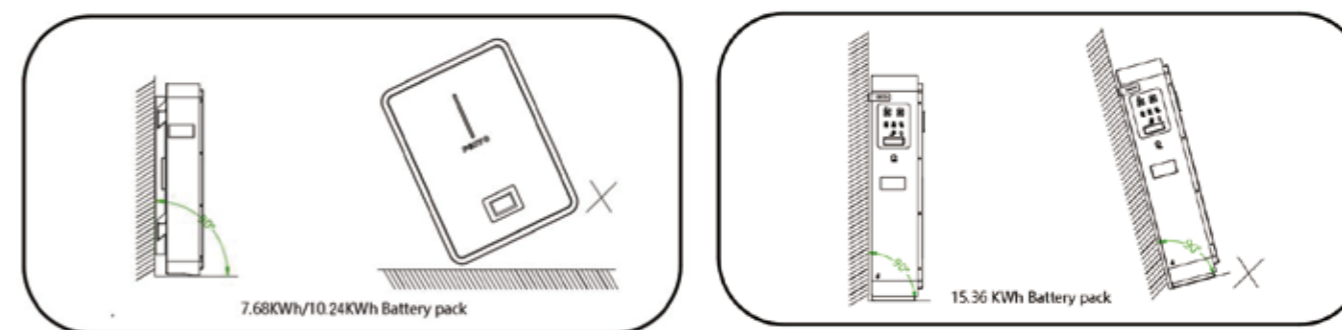


7.68/10.24KWh			
NO.	Item	Quantity	Specification
A	Battery Pack	1	7.68/10.24KWh
B	Mounting frame	1	SPCC
C	Mounting frame screw	12	M8*60
D	Communication cable	1	Length:1.0m; cat 5; 1.5m;USB type A to RJ11
E	Power connector	2	125A/1000V
F	User manual	1	This document

5.2 Inventory of items

Make sure that the installation location meets the following conditions:

- The installation site must be suitable for the size and weight of the battery.
- Must be installed on a firm surface to sustain the weight of battery.
- The area is water proof.
- There are no flammable or explosive materials in proximity.
- The ambient temperature is within the range from 0°C to 45°C.
- The temperature and humidity are kept constant, and there is minimal dust and dirt in the area.
- The installation must be perpendicular to the wall,avoiding forward or side stilts.



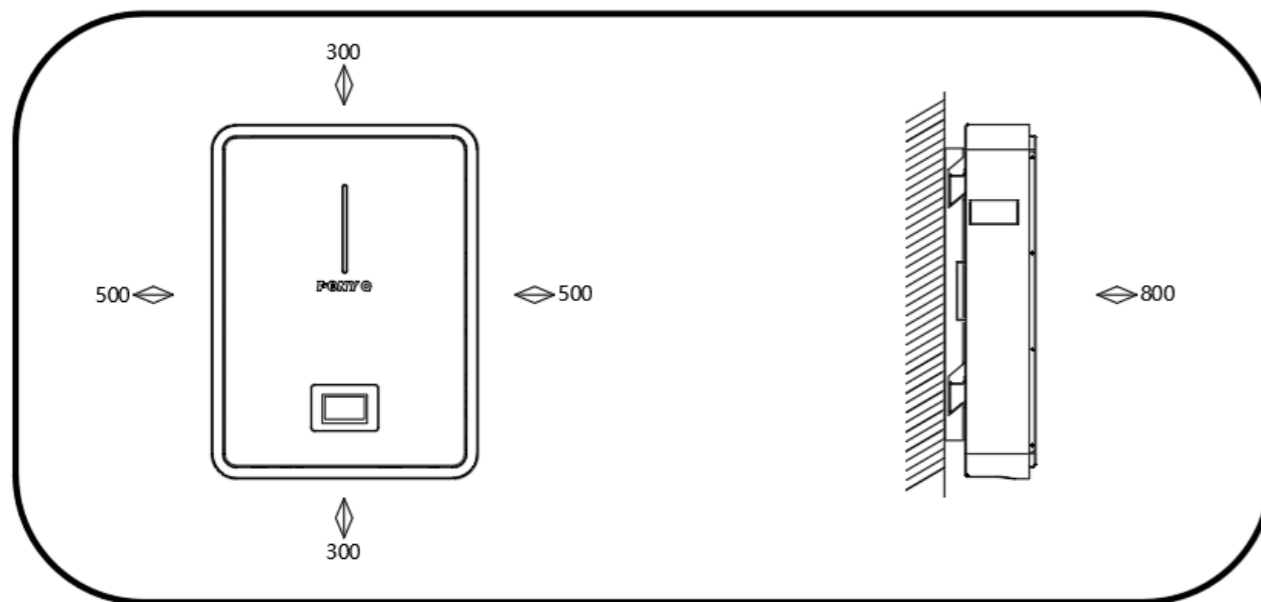
**CAUTION**

If the ambient temperature is outside the operating range, the battery pack will stop operating to protect itself. The best temperature range for the battery pack to operate is between 0°C and 45°C. Frequent exposure to extreme temperatures may reduce the performance and lifespan of the battery pack.

5.3 Minimum clearances

Observe the minimum clearances to walls, other batteries or objects as shown in the diagram and picture below in order to guarantee sufficient heat dissipation.

Direction	Minimum clearance(mm)
Above	300
Below	300
Sides	500
Front	800



5.4 Installing the Battery Pack

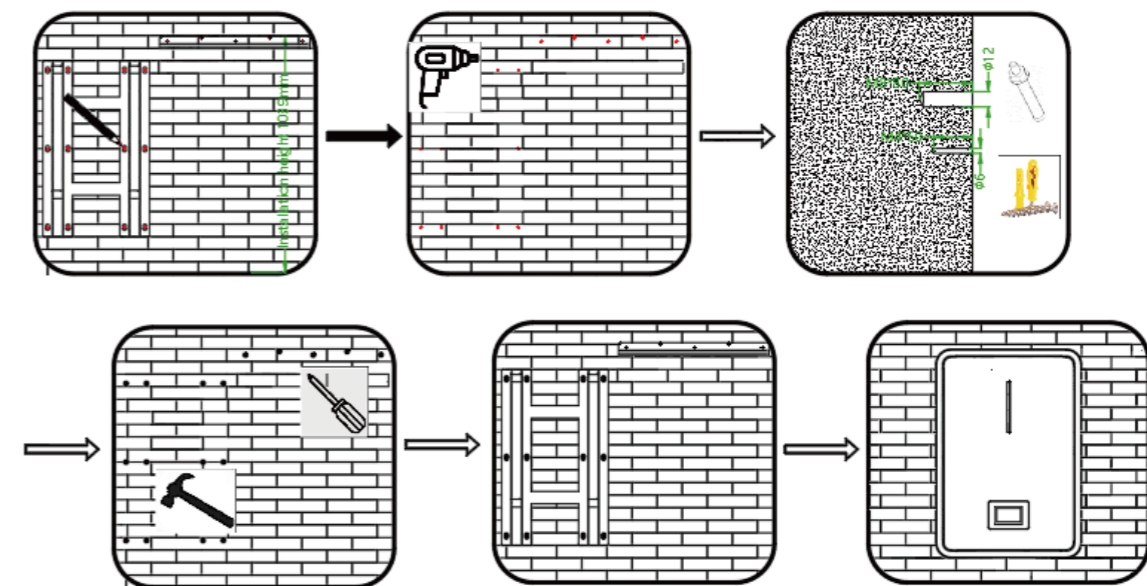
Mounting to a wall

**! WARNING**

In order to avoid electrical shock or other injury, inspect existing electronic or plumbing installations before drilling holes.

The battery is heavy, please handle with care to avoid damage to the product or injury to the installer.

1. Choose suitable firm wall with thickness greater than 80mm.
2. Use the mounting frame as a template, mark the hole position.
3. Drill 8 holes according to the hole position,  $\phi 10$  depth 60mm.  
Drill 5 holes according to the hole position,  $\phi 6$ , depth 50mm.
4. Hammer the M8 screws to the above holes, and screw the nut.  
Note: Do not position screws flush to the wall - leave 10 to 20 mm exposed.
5. Fix the fixing frame on the wall.

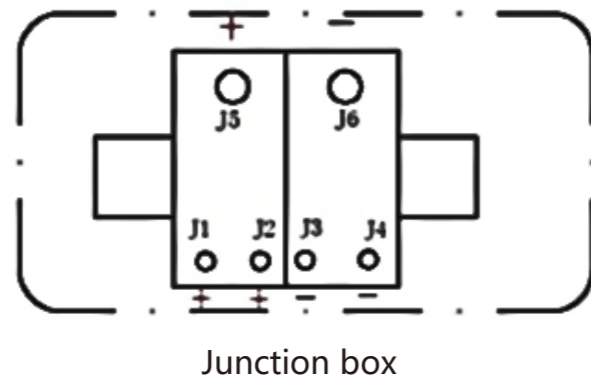


When connecting batteries in parallel, the maximum number of units allowed is 15. However, we recommend using between 3 and 5 units, depending on your specific application requirements. Proper power and communication connections are essential; please select the appropriate accessories as detailed below:

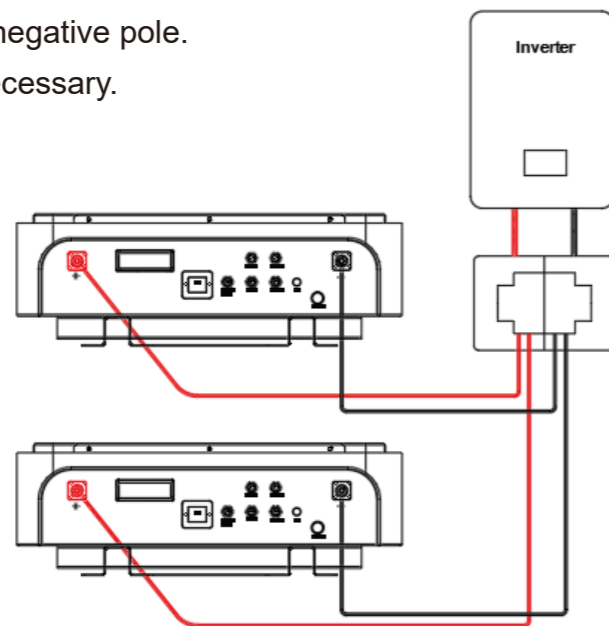
# 06 / PARALLEL USE OF BATTERY

## 6.1 Power connection

1. Taking the installation of two batteries as an example, an additional combiner box (not shipped with the package) is required to connect the outputs of the two batteries and output.



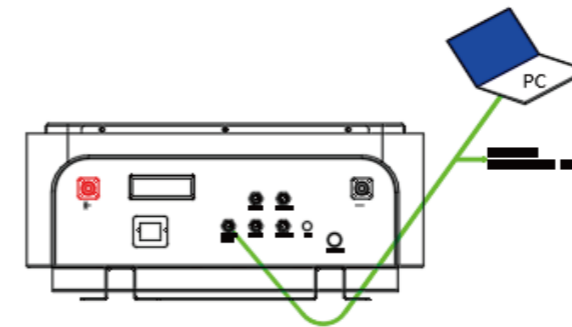
2. Refer to the chart below to designate the "master" and "slave" batteries.
3. Connect master battery's positive pole to J1 and negative pole to J3 of the junction box.
4. Connect slave battery's positive pole to J2 and negative pole to J4.
5. Connect J5 with inverter's positive pole.
6. Connect J6 with inverter's negative pole.
7. Add Power Switch when necessary.



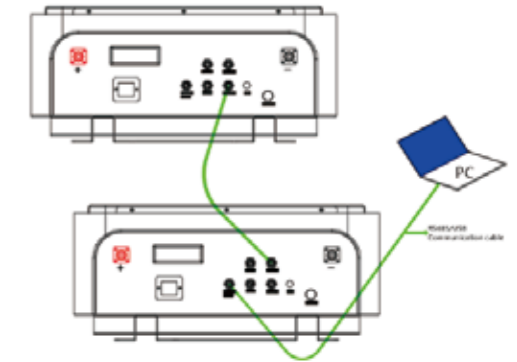
## 6.2 Communication connection

### Battery and PC communication

1) Stand-alone communication

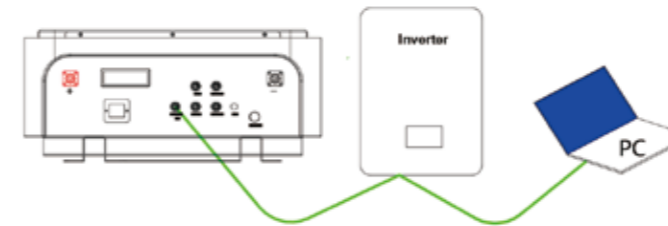


2) Parallel communication

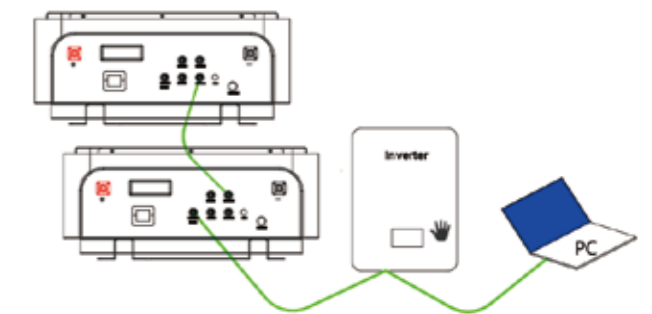


### Inverter and PC communication

1) Stand-alone communication



2) Parallel communication



**Note:** When the single unit is used, the inverter communicates with the battery as the host; When multiple batteries are used in parallel, the battery is internally connected in parallel via RS485B hardware interface, and RS485A/CANBUS communicates with the inverter.



Refer to the following diagram to set up the battery's host and slave. Select CAN communication for the inverter communication protocol (selected by dialing 5 and 6 in the host mode).



Address	DIP Switch Position				Reserve	Master	Description
	#1	#2	#3	#4			
0	OFF	OFF	OFF	OFF	OFF	OFF	(Master) Pack0
1	ON	OFF	OFF	OFF	OFF	OFF	(Slave)Pack1
2	OFF	ON	OFF	OFF	OFF	OFF	(Slave)Pack2
3	ON	ON	OFF	OFF	OFF	OFF	(Slave)Pack3
4	OFF	OFF	ON	OFF	OFF	OFF	(Slave)Pack4
5	ON	OFF	ON	OFF	OFF	OFF	(Slave)Pack5
6	OFF	ON	ON	OFF	OFF	OFF	(Slave)Pack6
7	ON	ON	ON	OFF	OFF	OFF	(Slave)Pack7
8	OFF	OFF	OFF	ON	OFF	OFF	(Slave)Pack8
9	ON	OFF	OFF	ON	OFF	OFF	(Slave)Pack9
10	OFF	ON	OFF	ON	OFF	OFF	(Slave)Pack10
11	ON	ON	OFF	ON	OFF	OFF	(Slave)Pack11
12	OFF	OFF	ON	ON	OFF	OFF	(Slave)Pack12
13	ON	OFF	ON	ON	OFF	OFF	(Slave)Pack13
14	OFF	ON	ON	ON	OFF	OFF	(Slave)Pack14
15	ON	ON	ON	ON	OFF	OFF	(Slave)Pack15

**Inverter communication protocol selection CAN communication (selected in master mode by dialing codes 5 and 6)**

0	OFF	OFF	OFF	OFF	OFF	OFF	luxpower
32	OFF	OFF	OFF	OFF	OFF	ON	Pylontech\Deye\GOODWE
16	OFF	OFF	OFF	OFF	ON	OFF	Victron\SMA\Sofarsolar
48	OFF	OFF	OFF	OFF	ON	ON	Growatt

**Inverter communication protocol selection RS485 communication (selected in master mode by dialing codes 5 and 6)**

0	OFF	OFF	OFF	OFF	OFF	OFF	SRNE
32	OFF	OFF	OFF	OFF	OFF	ON	Voltronic Power

Address setting list (from 1~15 batteries)

Duplicate address bits cannot be used for communication. Please ensure that the battery is turned on during communication.

## 07 / COMMUNICATION FUNCTION

### 1. RS485A and CANbus Communication Port Definition

PIN Port	parallel com	RS485A	CAN	RS232
②	RS485B-A	RS485A-A		
③				COM/GND
④			CAN-H	RX
⑤			CAN-L	TX

## 08 / TROUBLESHOOTING:

### 1. Battery Pack Stops Working.

A: Turn on the switch and ensure it is ON. If the battery has a low SOC, it needs to be recharged.

B: If the battery pack is at low voltage or enters sleep mode, press the ON/OFF button or start charging.

### 2. No communication ,inverter can not received any DATA from BMS.

A: Check whether if communication cable is OK, check 5 PIN cable.

PIN Port	parallel com	RS485A	CAN	RS232
②	RS485B-A	RS485A-A		
③				COM/GND
④			CAN-H	RX
⑤			CAN-L	TX

B: Replace the communication line if necessary. Contact your distributor for feedback and possible replacement.

C: Check the inverter or other devices connected to the BMS and update their firmware.

D: If the communication function needs upgrading, consult the agent or manufacturer.

E: Confirm that your inverter and battery protocols are correct. Different protocols or incorrect connections can cause errors.

**3. Battery pack report SOC is mistake.**

A: If the inverter receives data from the Master BMS but the SOC is less than the total SOC (e.g., 9 packs with 1800Ah but the inverter reads 1600Ah), check if any connections are disconnected. Inspect and replace any faulty RS485B communication cables.

B: If SOC data shows a large discrepancy, discharge the battery completely, then fully recharge it with a small current and allow it to discharge again. If there is an issue with any pack, read the BMS data (when authorized to use the terminal) with the host software, then reset the BMS and calibrate it.

**4. How to turn on the Pack to discharge.**

Recommended Method:

A: Reset the individual battery pack's BMS; the LED will flash and the system will restart.

B: Turn on the power switch on the bottom/front panel.

C: Turn on power switch in the combiner box.

**WARNING:** The operating parameters of the equipment cannot exceed the rated working voltage and current of the Pack, exceed the rated volt and current, Can cause damage to the Pack or other failures.

**5. Inverter or other external device can not connect the battery.**

recommended solution:

A: Check whether the working parameters of the device and battery are appropriate, as mismatched parameters cannot be resolved..

B: If the device is turned on and the current is too high, causing battery protection, the LED on the battery panel may flash. In this case, adjust your equipment parameters or contact the distributor for assistance.

C: It is necessary to update BMS parameters and match the device, then Reset BMS and restart your device.

**6. Replace bad Pack.**

If a battery pack is faulty, it needs to be replaced. Contact your supplier and ensure that a professional installer performs the replacement. It is recommended to replace all packs or use packs with the same voltage and specifications.

**Note:** When replacing a battery, ensure that the new module matches the voltage of the existing module.

**7. Need to replace spare parts or emergency maintenance.**

Some parts can be obtained from the sales or agency, and the excess parts need to be purchased separately. Be careful, turn off the power switch before replacing parts.

**8. Need to place some safety device for keep a safe environment.**

You'd keep a safe case for Pack and external device, Please place safety device, as: fire-fighting sand, fire-fighting blankets, fire-fighting water pipes.

Install Monitor sound, light, electricity, smoke and other equipment.

**9. User can't log in BMS-CLOUD(Changjiang cloud data center) with user account.**

Please double-check if your username and password are correct, if the server is busy or for any other issue, please contact your local Pony Q technical support team.



## **09 / WARNING:**

### **Emergency process:**

#### **1.The external device catches fire and explodes:**

A: Under the condition of ensuring safety,non-operating personnel immediately move to a safe location.

B: Under the condition of ensuring safety, the operator should immediately cut off both the external and internal power supplies of the equipment.

C: Use fire-fighting equipment for fire-fighting treatment (the use of fire-fighting sand, fire-fighting blankets, fire-fighting water pipes).

D: If you cannot completely extinguish the fire,please call the local fire department for help.

E: Keep the accident site data so that the source of the accident can be traced.

#### **2.The pack catches fire and explodes:**

A: Under the condition of ensuring safety,non-operating personnel immediately move to a safe location.

B: Under the condition of ensuring safety,the operator immediately cut off the external power supply of the equipment and the internal power supply.

C: Use fire-fighting equipment for fire-fighting treatment (first the use of fire-fighting sand, fire-fighting blankets, then fire-fighting water pipes for cool the Pack).

D: If you cannot completely extinguish the fire,please call the local fire department for help.

E: Keep the accident site data so that the source of the accident can be traced.

#### **3. The battery pack should be disposed according to local regulations for environmentally safe recycling.**