



## Residential Battery Pack

System Total Energy:5.8kWh



Emergency Power Back-up



Flexible Installation



Cost-effective



Expandable



Peak Load Shifting

Web: [www.gsmarte.com](http://www.gsmarte.com)

Tel: +(0086) 400-101-8585

## **About this manual**

This manual is intended for the GSMARTE GBL5.8K3 Energy Storage battery, but the hybrid inverter and any other equipment is not included. The GSMARTE hot line +(0086)-400-101-8585 and <https://www.gsmarte.com/> are both available if you want to get additional information.

## **Statement**

Compliant to Best Practice Guide for Battery Storage Equipment—Electrical Safety Requirements- version 1- Pre-assembled integrated battery energy storage system equipment – Method 1 mandatory requirements and Optional requirements – a), c), e), f), g), h), i), j), k), l), m), n), o), p), q).

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# 1. Safety introduction

## 1.1 Important Safety Instructions

This manual contains important instructions for:

GBL5.8K3 Energy Storage product and this manual must be followed when installing and using this product.

The product is designed and tested in accordance with international safety requirements IEC 60364, but as with all electrical and electronic equipment, certain precautions must be observed when installing and/or operating the product. To reduce the risk of personal injury and ensure the safe installation and operation of the product, you must carefully read and follow all instructions, cautions and warnings in this manual.

## 1.2 Warnings in this Document

A warning describes a hazard to equipment or personnel. It calls attention to a procedure or practice, which, if not correctly performed or adhered to, could result in damage to or destruction of part or all of the GSMARTE equipment and/or other equipment connected to the GSMARTE equipment or personal injury.

Symbol	Description
	Caution, risk of electric shock
	Heavy enough may cause severe injure
	Keep the battery away from open flame or ignition sources
	Keep the battery away from children
	Do not dispose of the product with household waste
	Recycling
	Read this manual before installation and operation

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

## 1.3 Battery handling guide

- Use the battery pack only as directed.
- If the battery defective, appears cracked, broken or otherwise damaged, or fails to operate, contract the GSMARTE hot line immediately.
- Do not attempt to open, disassemble, repair, tamper with, or modify the battery. The battery pack is not user serviceable.
- To protect the battery and its components from damage when transporting, handle with care.

- Do not subject it to any strong force.
- Do not insert foreign objects into any part of the battery pack.
- Do not use cleaning solvents to clean the battery.
- The battery shall not be connected directly to SELV circuit.

#### 1.4 Response to emergency situations

The GSMARTE battery is designed with multiple safety strategies to prevent hazards resulting from failures. However, GSMARTE cannot guarantee their absolute safety for uncertain situations.

##### 1.4.1 Leaking batteries

If the battery pack leaks electrolyte, avoid contact with the leaking liquid or gas. Electrolyte is corrosive and contact may cause skin irritation and chemical burns. If one is exposed to the leaked substance, do these actions:

**Inhalation:** Evacuate the contaminated area, and seek medical attention immediately.

**Eyes contact:** Rinse eyes with flowing water for 15 minutes, and seek medical attention immediately.

**Skin contact:** Wash the affected area thoroughly with soap and water, and seek medical attention immediately.

**Ingestion:** Induce vomiting as soon as possible, and seek medical attention immediately.



##### 1.4.2 Fire

In case of a fire, make sure that an ABC or carbon dioxide extinguisher is nearby and does not use water to extinguish the fire.

#### **WARNING**

The battery pack may catch fire when heated above 150°C.

If a fire breaks out 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 poisonous gases. Do not approach.

##### 1.4.3 Wet battery

If the battery is wet or submerged in water, do not try to access it. Contact GSMARTE hot line or your distributor for technical assistance.

##### 1.4.4 Damaged battery

If the battery damaged, please contract GSMARTE hot line or your distributor for help as soon as possible, because damaged battery is dangerous and must be handled with extreme caution. Damaged battery is not suit for use and may pose a danger to people or property. If the battery seems to be damaged, return it to GSMARTE or your distributor.

**CAUTION**

Damaged battery might export electrolyte or flammable gas, so contact GSMARTE for advice and information immediately we will deal with it within 48h.

**1.5 Installers**

GSMARTE Energy Storage battery is suggested installing by skilled worker or electrician. A skilled worker is defined as a people who had been trained and qualified electrician or had all of the following skills and experience:

- Knowledge of the functional principles and operation of on-grid Energy Storage 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.

**1.6 Scrap battery**

For scrap battery(-ies), please treat with local laws or regulations to recycle or scrap.

**1.7 Contact information**

Use the contacts below for technical assistance. This phone numbers is available only during business hours on weekdays.

China		Australia	
Phone number	+(0086)400-101-8585	Phone number	+61-039-021-7788
Address	No.23 Xingke Middle Road,Meilin Street,Ninghai County,Ningbo City,Zhejiang Province,China	Address	Unit 35,15Ricketts Road.Mount Waverley,Victoria,3149,Australia

Importer(EUR)	
Phone number	+49 911 95649069
Address	Neumeyerstr. 28-34,90411 Nürnberg   Germany

E-mail:service@gsmarte.com;chenjn1@risenenergy.com

## 2. Product Introduction

### 2.1 Technical data

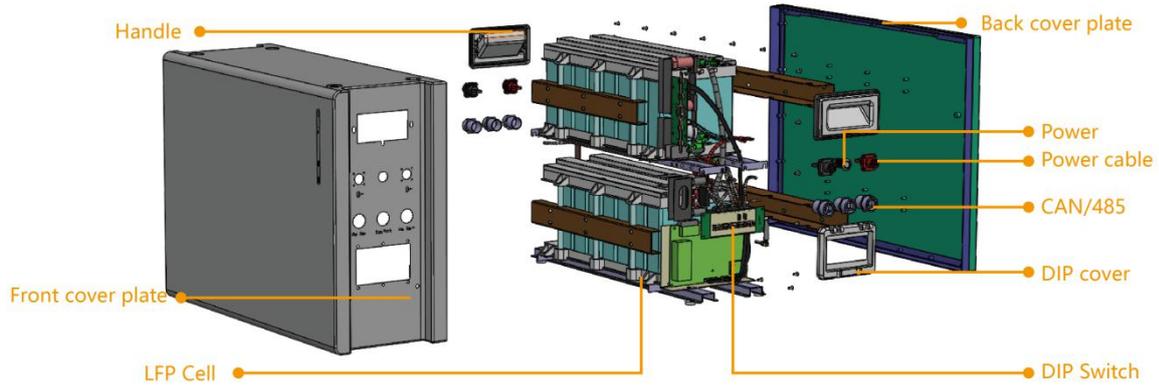
Model	GBL5.8K3
Total Energy*	5.8kWh
Usable Energy(DC)*	5.3kWh
Nominal Charge/Discharge Power	2.75kW
Peak Power(Only discharge)	7kW for 5seconds
Constant Current(Only discharge)	100A
Voltage	42-54Vd.c
Nominal Voltage	48Vd.c
Nominal Current	57A
Max. Charge Voltage	54.0V
Recommended Peukert Setting(Off-grid)	1.05
Max. Recommended DOD (Off-grid)	90%
Operating Condition	Indoor or outdoor
Operating Temperature	From -10~50°C
Dimension(L*W*H)	650*480*258 mm
Max. Transmission Power	<20dBm
Weight	70kg
Humidity	4-100%
Pollution Degree	3
Over Voltage Category	II
Cooling Type	Natural cooling
Case Material	Metal
Color	White
Installation	Mounting/Free Standing
IP rating	IP 65
Protective Class	I
Max. Number of Parallel Connection	4
Warranty	10 years battery warranty
Life Span	>15 years
Communication	CAN/ RS485
Protection Mode	Triple hardware protection
Battery Protection	Over-current/Over-voltage/Short circuit/
Safety	Cell UL 1973
	Pack TUV(IEC 62619, IEC 62040-1)
Hazardous Material Classification	9
Transportation	UN 38.3
Max. Charge Power	2.75kW
Max. Discharge Power	2.75kW
Max. Charge Current	57A
Max. Discharge Current	57A

Fault Current	Charge 100A>3s,Disharge 135A>3s,
WIFI Frequency Range	2400MHz-2483MHz

Testing conditions based on temperature 25°C at the beginning of life.

\*Total Energy/Usable Energy measured under specific conditions from GSMARTE 0.2C CC-CV

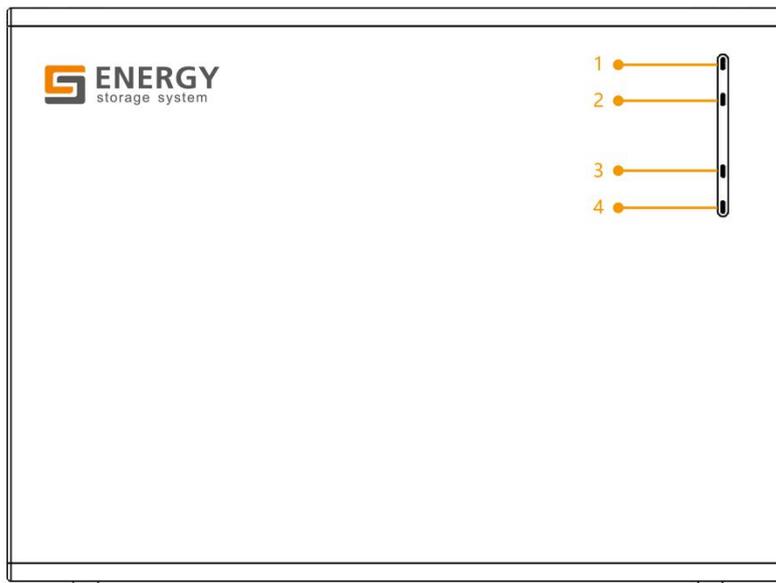
## 2.2 Exploded views of battery



## 2.3 Indicator and ports

### 2.3.1 Indicator

There are four LED indicators on the front of the battery to show its operating status.



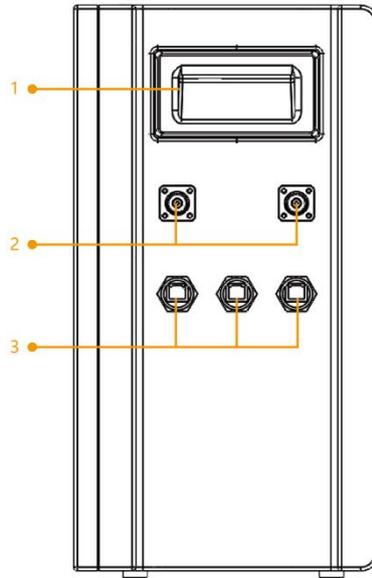
**Table 2-1** Designations on the battery

Item	Designation	Definition
1	Fault	Battery no power output or input

2	Discharge	Battery is charging
3	Charge	Battery is discharging
4	Standby	Battery is in a warning state, see troubleshooting in <b>Chapter 6</b>

### 2.3.2 Ports

#### 2.3.2.1 The left side of power cable connectors and communication cable

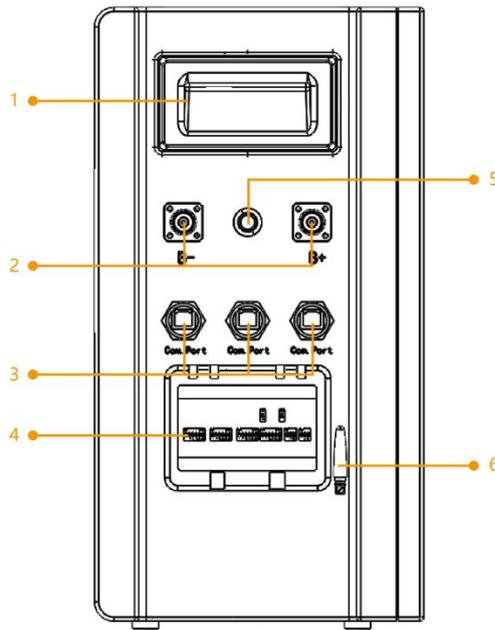


1 Handle

2 Power cable sockets

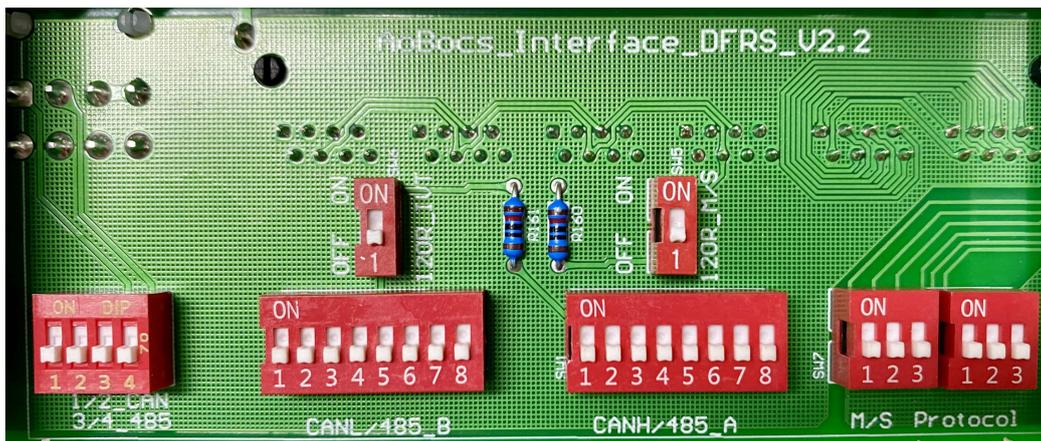
3. CAN/485

#### 2.3.2.2 The right side of power cable connectors and communication cable



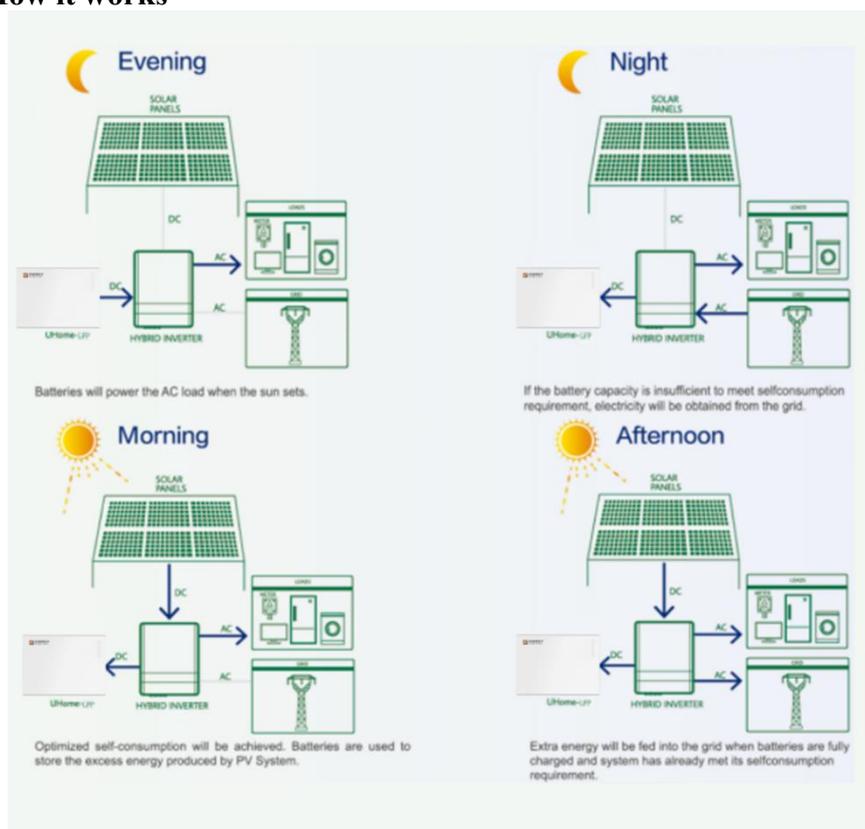
1. Handle
2. Power cable sockets
3. CAN/485
4. DIP Switch
5. Power ON/OFF
6. WIFI Sticker

#### 2.4 Communication interface plat (DVC-A<sub>2</sub> voltage)



J2	Communication interface for battery or master battery with Inverter
J3&J4	Communication interfaces for batteries between parallel connected batteries
SW1&SW2&SW3	DIP switches for CAN and RS485, see <b>part 6.2</b>
SW4	DIP switch select for CAN or RS485
SW7	DIP switch select for master and slave battery, see <b>part 6.1</b>
SW8	DIP switch to select default protocol type, 000 <sub>2</sub> is the default configuration

## 2.5 How it works



## 2.6 Feature

The GSMARTE Energy Storage battery has following features:

- **Energy storage unit:** This battery is suit for photovoltaic system compatibility.
- **Battery management system (BMS):** The battery built-in BMS monitors its operation and prevents the battery from operating outside design limitations.
- **Monitor:** The battery BMS built-in with WIFI module, the battery running information could be seeing in mobile phone and computer.
- **Expandability:** The battery capacity can be increased by adding another battery. See **part 5.6 Parallel connection** on page 20.

## 3. Guidance for disconnection of batteries during shipment

3.1 GSMARTE GBL5.8K3 is not suit for air transport.

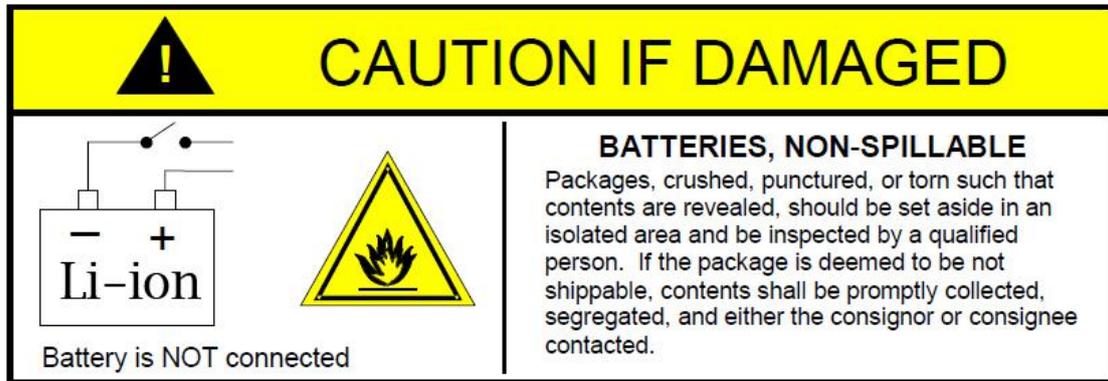
3.2 Cartons that have been crushed, punctured, or torn in such a way that contents are revealed shall be set aside in an isolated area and inspected by a skilled person. If the package is deemed to be not shippable, the contents shall be promptly collected, segregated, and either the consignor or consignee contacted.

3.3 An additional 125A DC breaker of GSMARTE GBL5.8K3 battery is necessary. It should be connected by skilled installer before use

3.4 A precautionary label had been affixed to the shipping carton to alert individuals as to the battery within the package have been disconnected; otherwise, the battery should not be transported.

3.5 We have conducted comprehensive tests to ensure the equipment they distribute

around the world is safe for **shipping** transport. These products shall be handled with care and immediately inspected if visibly damaged. If the carton visibly damaged, please contract with GSMARTE hot line to confirm whether the battery could be used safely or not.



## 4. Installation Prerequisites

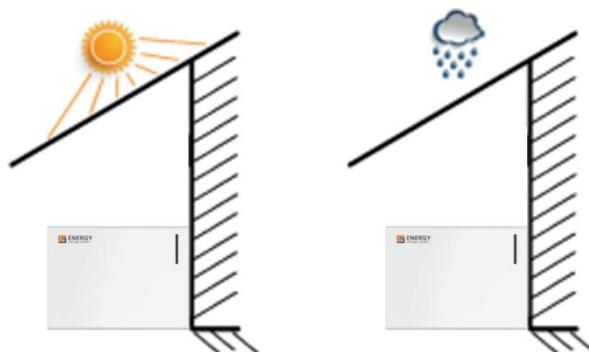
### 4.1 Installation location

Make sure that the installation location meets the following conditions:

- The building is designed to withstand earthquakes.
- Far away from the sea to avoid salt water and humidity.
- The floor is flat and level.
- No flammable or explosive materials nearby.
- Optimal ambient temperature is between 15°C and 30°C.
- Temperature and humidity stays at a constant level.
- Minimal dust and dirt in the area.
- No corrosive gases present, including ammonia and acid vapor.

The GSMARTE battery is rated at IP65, so the battery could be installed outdoors as well as indoors.

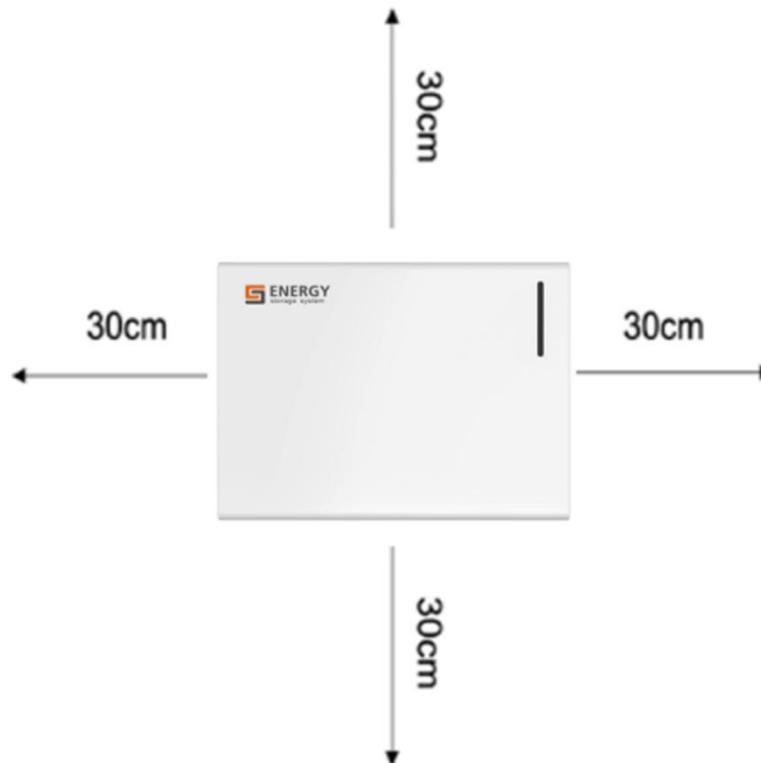
But if installed outdoors, do not allow the battery to be exposed to direct sunlight or moisture.



If the ambient temperature is outside the operating range, battery will protect itself by shutting down. The battery optimal operate temperature is 15°C to 30°C. Frequent

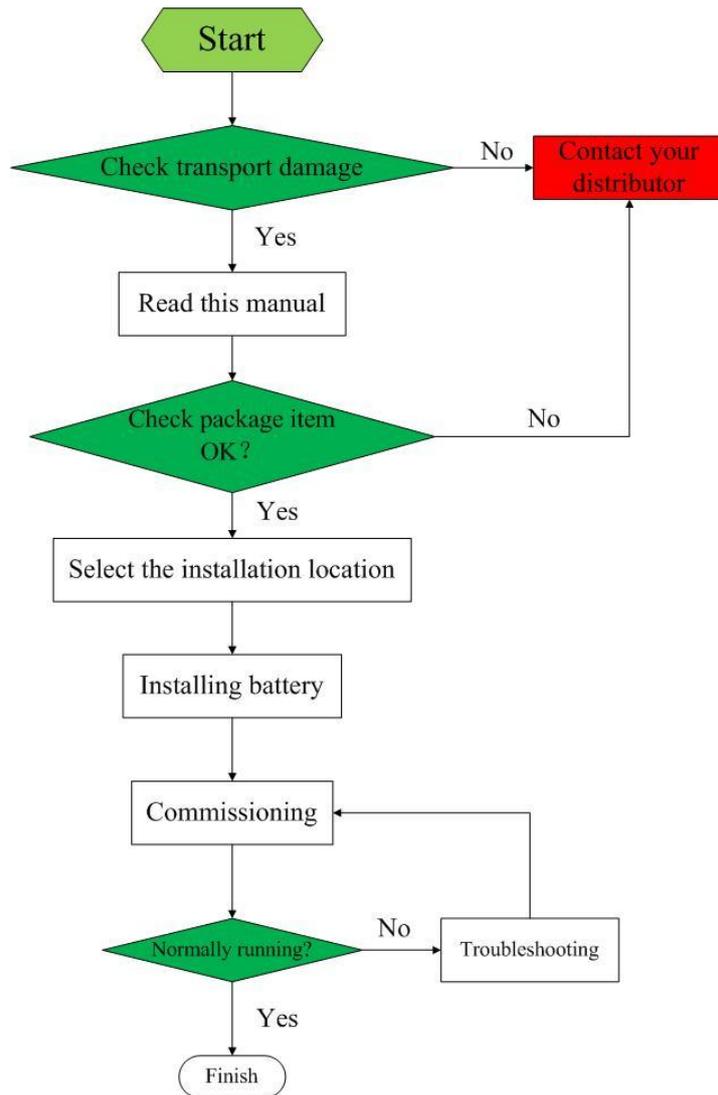
exposure to severe operating condition would exacerbate the performance and lifetime of the battery.

#### 4.2 Installation clearance



#### 4.3 Installation process

The battery should be installed according to the following flow chart. The detail installation process described in chapter 4 **Install process**.



#### 4.4 Installation materials

Following installation materials should be prepared by installers.

- Power cable
- Data cable
- Ground wire
- RJ45 plug
- Bipolar external isolator (must be installed), when two or more battery systems in parallel, each of them shall have a bipolar isolator.

#### **NOTICE**

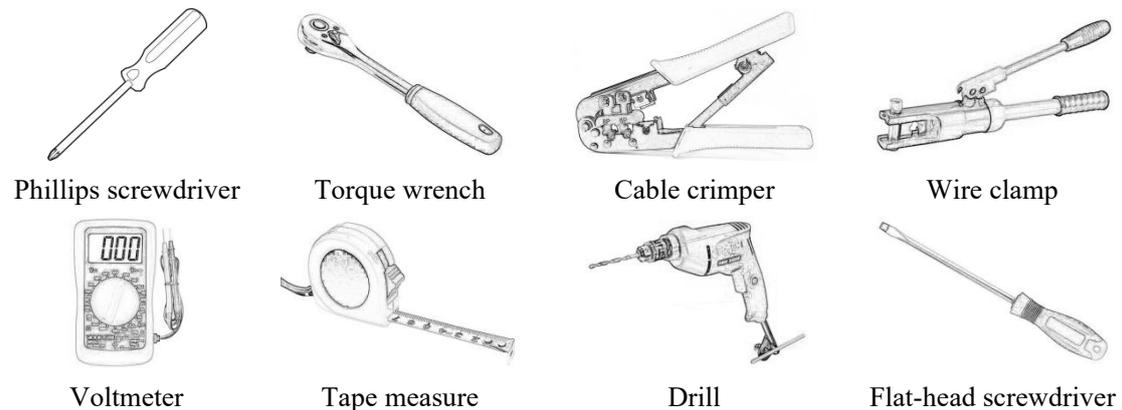
Make sure the cross-sectional area of charging cables is 25 to 35 mm<sup>2</sup>.

#### **NOTICE**

A bipolar breaker between GBL5.8K3 battery and inverter was required to install, and the breaker's min. current should be over 125A or following with local regulations.

#### 4.5 Tools

To install the battery pack, those following tools are required:



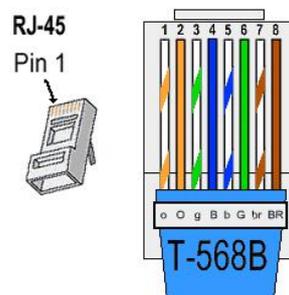
In order to protect operator and installer's safety, please select and use suitable tools and measuring instruments that are certified for precision and accuracy.

#### 4.6 Safety instruments

When dealing with the battery, following safety gears should be equipped. Installers must meet the relevant requirements of IEC 60364 or the domestic legislation and other relevant international standards.



#### 4.7 Making network cable



The network cable between GSMARTE battery and inverter should be made like that diagram. If available, use a LAN cable tester to see whether the cable is faulty.

#### 4.8 Storage

If the battery is not to be installed immediately, or removed from operation and needs to be stored for a long period, please choose an appropriate location to store it.

Instructions for storage are:

- Do not stack more than four battery boxes.
- The temperature of battery stored recommended in the range of -20°C to 45°C.
- Do not expose to water

The battery box should be upright as shown in the following figure and not stacked upside down when storing the battery box.



If the battery needs to be stored over 3 months, the main breaker of battery suggests be disconnecting. Otherwise, the battery would discharge at a minimum rate and capacity degrades depended on storage time, the battery self-consumption less than 5w. And, if the battery stored over 6 months, it is suggested to connect the battery with inverter and commission the system.

## 5. Battery Installation

### 5.1 Unpacking

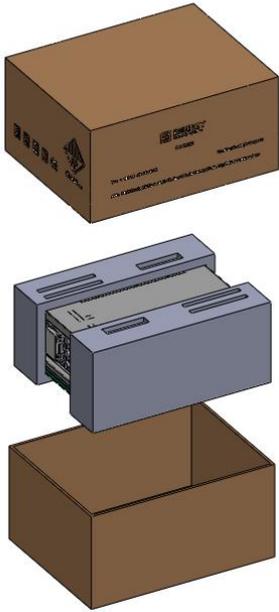
#### **WARNING**

The battery is 69kg and it is too heavy for one to carry. Make sure that two or more persons are available.

1. Cut the packing belt and remove the packing box top cover.



2. Take out the battery.



3. Pull out the battery pack and stand it upright. Check if the battery pack is damaged.

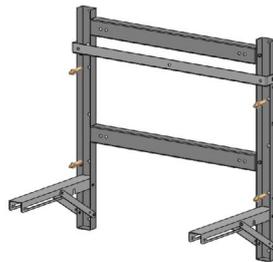


## 5.2 Package items

These items are included in the package.



Battery\*1



Bracket\*1



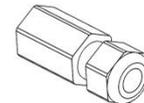
Screw anchors M6\*4



Screws M5\*2



Battery link\*2



Waterproof terminal\*1



Data cable\*1

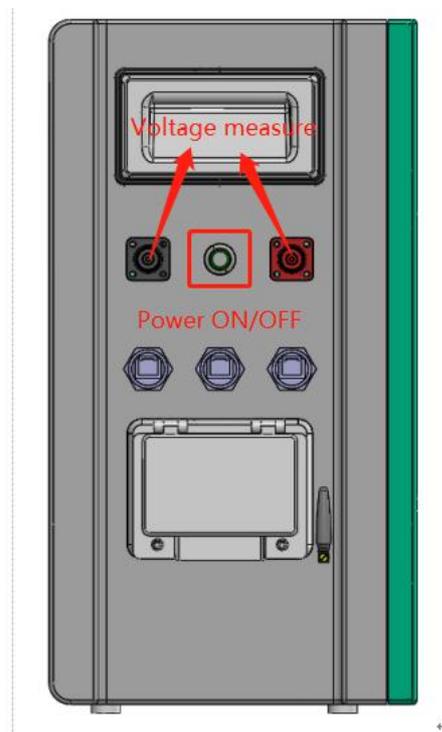
### 5.3 Checks before installation

There are a few things to check before installing the battery to ensure that it has no defects.

Check item : Check the battery voltage.

**WARNING**

If this checking process is executed for any reason after the battery is fully installed, make sure that the inverter is turned off or break the connection between battery and inverter while checking the battery.



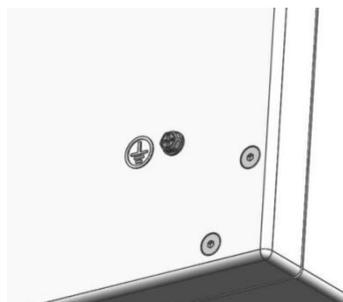
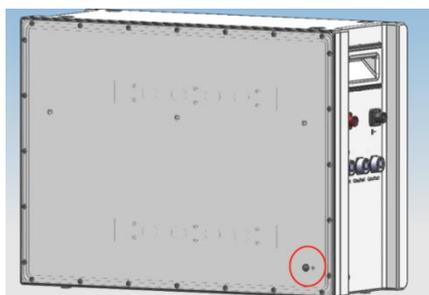
Press and hold the Power ON/OFF button for about 4s and then release it after the two LED lights on, measure the voltage at the terminal interface with a voltmeter. If the voltage is lower than 48 V, do not use the battery and contact GSMART hot line 4001018585 or your distributor.

### 5.4 Installation the battery

To prevent the battery from moving, make sure the battery fixed to a wall.

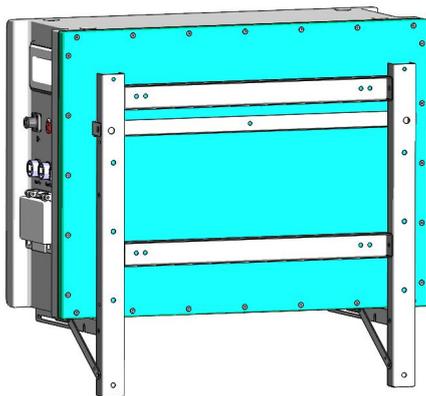
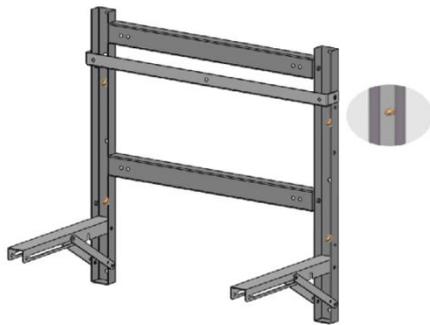
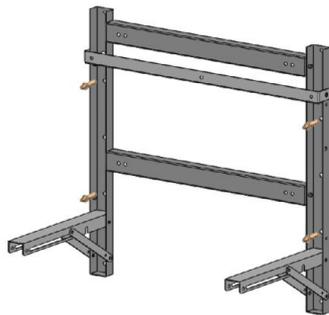
**NOTICE**

⚡ The symbol located on the back cover plate, and the earth wire between battery and inverter is not compulsive but recommended.

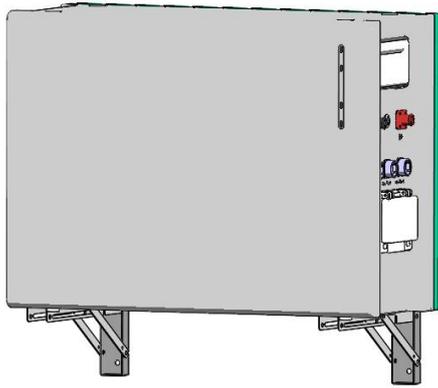


## NOTICE

If the battery is installed above the floor or on a platform, make sure that the wall or platform is capable of supporting the battery's weight.



1. Determine bracket mounting place to be fixed using the bracket.
2. Drill holes in the wall for the M6 (0.25 in) screw anchors, and the hole depth should be at least 50 mm.
3. Drive the screw anchors through the mounting bracket into the holes.
4. Tighten the screws to a torque of 2.5 N·m.
5. Fasten the mounting beam to battery.



6. Fixing the battery to bracket with screws.

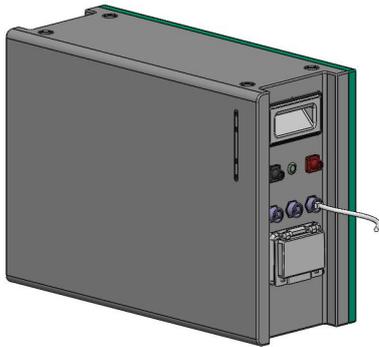
## 5.5 Cable connections

### **WARNING**

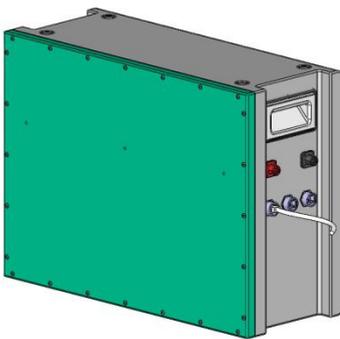
Before connecting battery with inverter, please make sure that no inverter connected or the inverter turned off.

#### 5.5.1 Connect the communication cable from inverter

Plug in the communication cable from inverter to the CAN/485 port. The ports on both sides of battery are optionally used.

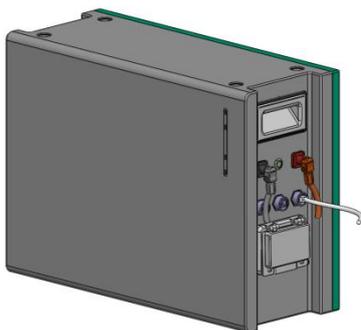


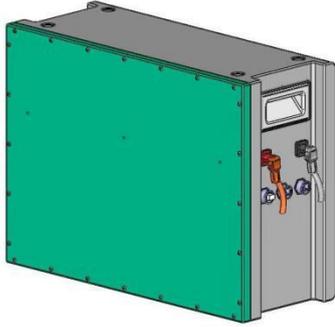
or



#### 5.5.2 Connecting the power cables for battery

Take off the covers of power cable sockets, then plug in a pair of power cables (to inverter) into them through the correct positive and negative directions, and the sockets on both sides of battery are optionally used.





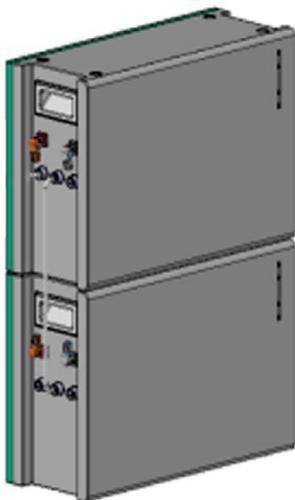
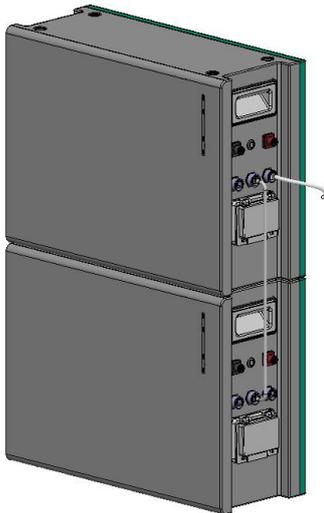
**CAUTION**

Pay attention not to reverse polarity. Connection with reversed polarity will cause severe damage to the battery and even fire.

**5.6 Parallel connection**

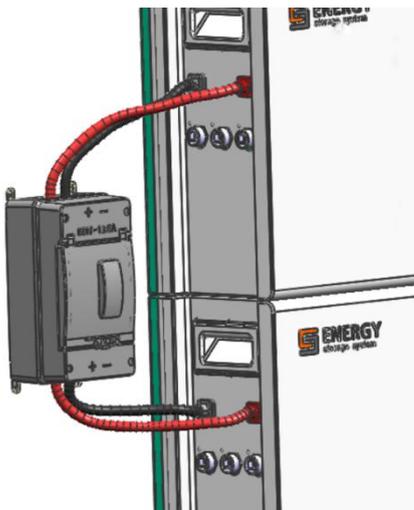
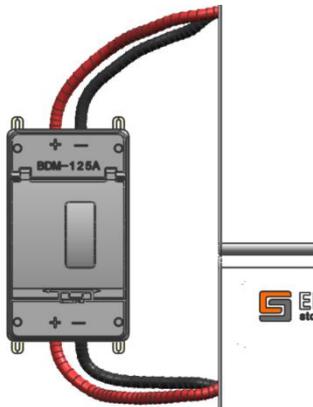
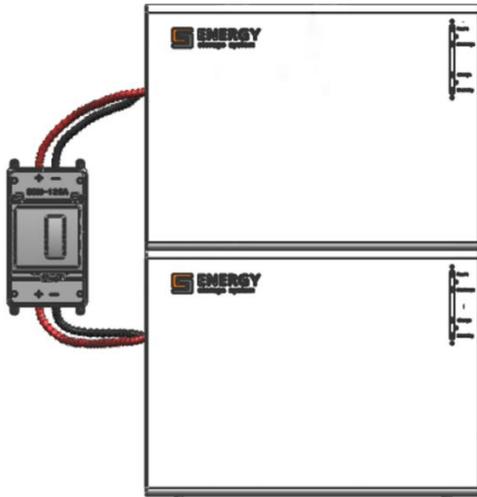
**5.6.1 Communication cable connect between batteries**

Plug in an additional communication cable between two batteries. The ports on both sides of battery are optionally used.



## 5.6.2 Power cables connect between batteries

Take off the covers of the other side power sockets, and plug in another pair of power cables to the sockets between two batteries, positive to positive, and negative to negative.



### **WARNING**

The maximum quantity of parallel mode units is 4. For Australian market, Installers should adhere to the correct section of AS 5139 when

connecting batteries in parallel.

#### **NOTICE**

In parallel connect mode, Follow the request of AS 5139, except the bipolar breaker between the battery and inverter, a bipolar breaker between each two parallel battery systems was required to install, and the breaker's min. current should be over 125A or following with local regulations, for this situation, altering the proprietary battery link cables is necessary, and altering the proprietary battery link cables will not void the product warranty.

#### **NOTICE**

Before two or more batteries installed in parallel, please check the voltage of each battery and make sure the voltage different less than 1.0V.

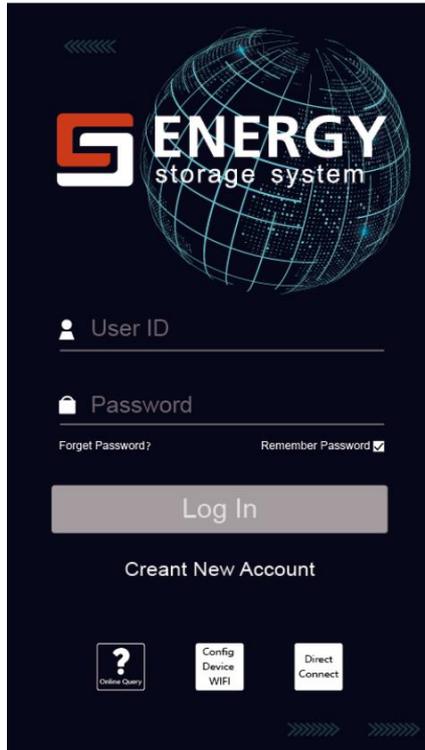
## **6. Configuration**

### **6.1 Configure device WIFI**

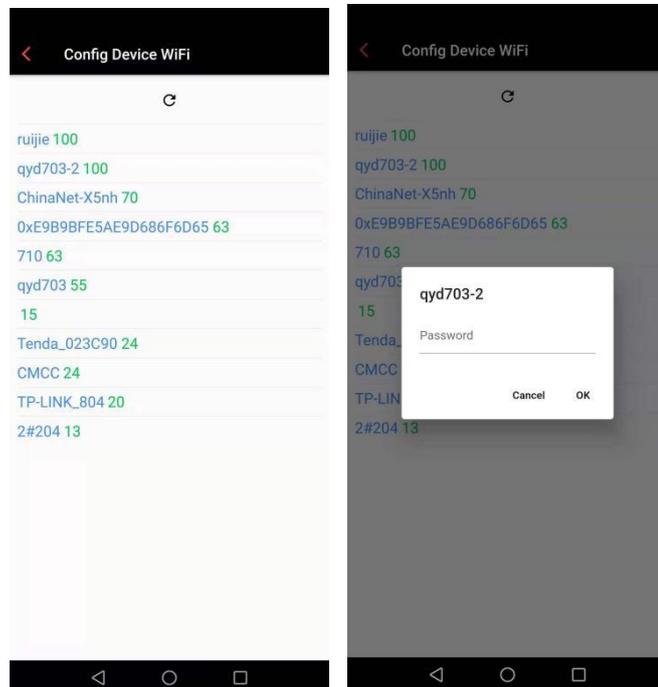
The GS ENERGY battery has a built-in WIFI module for use with the GS ENERGY APP.



1. Press and hold the panel button on the side of the unit for about 4s, after the four indicator lights on, release the panel button
2. Connect the “USR-WIFI232-XX\_XXXX” with your smart phone, and then the light of WIFI will turn on by itself within 5 seconds
3. Open the APP monitor of battery, select “Config Device Wifi ” option box.



4. Search and select SSID connected and input the password, press ok and finish. The light of WIFI module would light automatically under WLAN accessible condition.



**NOTICE**

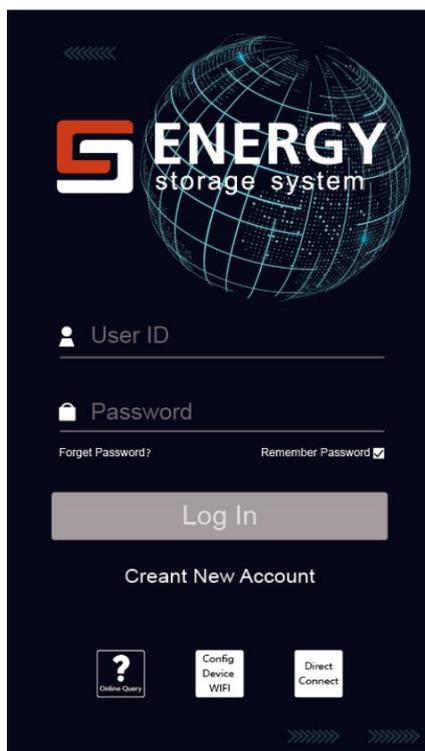
If the WIFI cannot be set or there is no WLAN accessible, the battery can still operate normally.

**6.2 Register your account**

**NOTICE**

The GS ENERGY battery could be registered only one time.

1. Open the APP monitor of battery, select “Register” option box.



2. After scanning the bar code of battery, there are some personal messages need to be filled which noted by “\*” symbol.

3. After those messages filled, the APP would jump to the running interface Automatically.

**NOTICE** The GS ENERGY battery running is not associated with registration or not.

### 6.3 Setting for communication interface

DIP switch should be set correctly for proper communication between inverter and battery.

If parallel connecting multiple batteries, please set the DIP switches as following:

For GSMARTE GBL5.8K3 Energy Storage battery, the limit of parallel number is 4. For each connecting mode, the DIP switch SW7 dial mode like following tables 6-3.

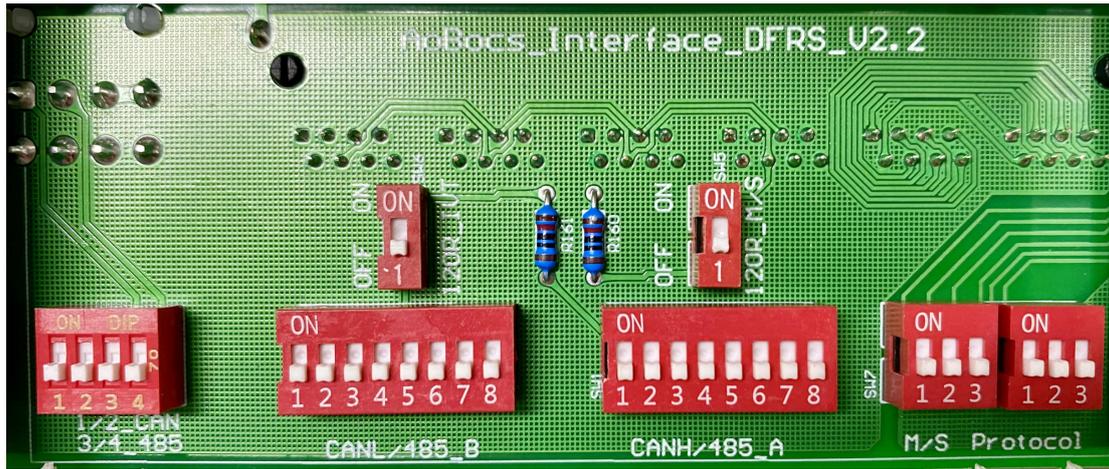
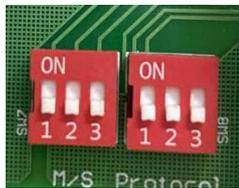
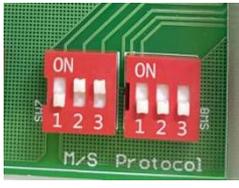
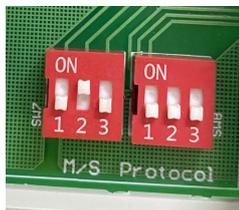


Table 6-3 The DIP switch SW7 selected for 1 battery connected with inverter

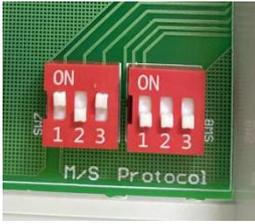
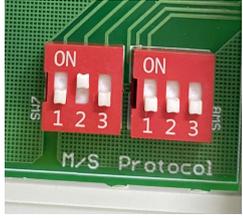
Parallel battery	Group	DIP Switch	120R_INV	120R M/S
1	—	000	ON	ON
				

The DIP switch SW7 selected for 2 batteries connected with inverter

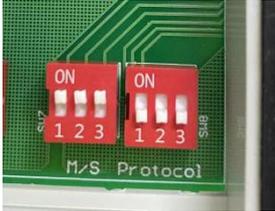
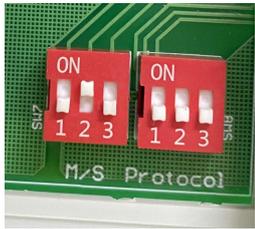
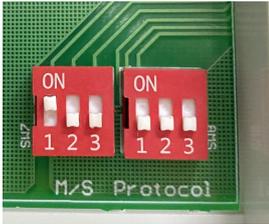
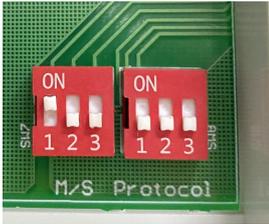
Parallel batteries	Group	DIP Switch	120R_INV	120R M/S
2	Master	011	ON	ON
	Slave	010	OFF	ON
				
				

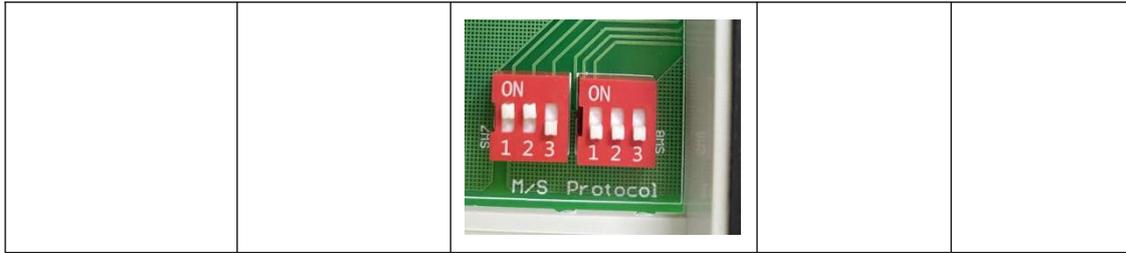
The DIP switch SW7 selected for 3 batteries connected with inverter

Parallel batteries	Group	DIP Switch	120R_INV	120R M/S
3	Master	101	ON	ON

				
	Slave 1	010 	OFF	OFF
	Slave 2	100 	OFF	ON

The DIP switch SW7 selected for 4 batteries connected with inverter

Parallel batteries	Group	DIP Switch	120R_INV	120R M/S
4	Master	111 	ON	ON
	Slave 1	010 	OFF	OFF
	Slave 2	100 	OFF	OFF
	Slave 3	110 	OFF	ON

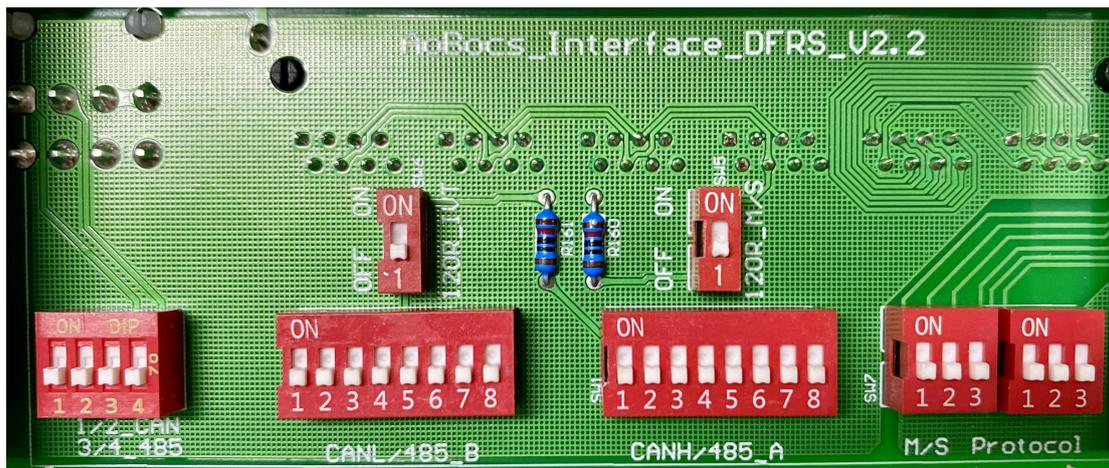


**NOTICE**

If two or more batteries connected with parallel mode, batteries need to be restarted.

**6.4 Settings for CAN /485 bus pins**

Confirm that the CANL/485B DIP switch is set to SW2 which pin is used for CAN high signal by inverter (4-CANH/485A), and the CANL/485B DIP switch is set to SW1 which pin is used for CAN low signal by inverter (5-CANL/485B). As SW3 the CAN/485 GND DIP switch, installer should confirm which pin is used for ground by inverter or not.



**NOTICE**

The battery default protocol is CAN bus, if a inverter communication mode is RS485 or other protocol, please contact GSMARTE hot line before installed the battery.

**7.Commissioning**

**7.1 Commissioning battery**

Please use the following steps to put it in operation:

1. Move the DC breaker to the ON position.
2. Press and hold the panel button on the side of the unit for about 4s, after the four indicator lights on, release the panel button.
3. Make sure that the Standby light is on. If it stays off, do not use the battery and contact GSMARTE or your distributor.

4. Turn the inverter on, and wait for the start-up sequence to complete fully.

## 7.2 Power on strategy

1. Turn on the main switch of the battery, and press switch 4 s long time, the button lights will be on;
2. After hearing the closing sound of the keypad relay, release the button;
3. When there is no power on fault, BMS closes the auxiliary relay;
4. After waiting for 100ms, BMS will close the main relay when there is no power failure
5. After waiting for 200ms, close the auxiliary relay;
6. BMS power on is completed.

## 7.3 Shutting down battery

Shut down the battery only when the battery is no charge or discharge current

1. Press and hold the Panel Button about 5s, after a disconnect voice of relay come can release it.
2. Make sure that every light on the battery is off.

## 8. Troubleshooting

1. Every fault is presented by a fault code. If the battery fault light is on, please check the Fault code in Homepage.
2. If the battery fault light on, please check the Troubleshooting number in Homepage in your GS ENERGY APP, if the code is 0x1\*\*\*, this problem would be recovered by itself. But if the code is 0x2\*\*\* or 0x3\*\*\*, please contact the GS ENERGY after service hot line or your distributor for help.
3. If the information of battery cannot be seen in the monitoring system, check the battery status first. If the battery status is OFF, please turn the battery on, and then check the WLAN is accessible for battery.
4. If Register the battery failure, please check the network of mobile phone nearby the battery installation site available and stable.

Table 8-1 Fault Code of Battery

Fault Code	Detail Fault Message
0x1001	Battery under voltage warning

0x1002	Battery over voltage warning
0x1003	Battery under temperature warning
0x1004	Battery over temperature warning
0x1005	Battery charge over current warning
0x1006	Battery discharge over current warning
0x1007	Cell over discharge warning
0x1008	Cell over charge warning
0x1009	Battery charge with over temperature warning
0x1010	Battery discharge with over temperature warning
0x1011	Battery charge with under temperature warning
0x1012	Battery discharge with under temperature warning
0x2001	Battery under voltage protect
0x2002	Battery and cell over discharge protect
0x2003	Battery over charge protect
0x2004	Battery over voltage and cell over charge protect
0x2005	Battery under temperature protect
0x2006	Battery over temperature protect
0x2007	Battery charge over current protect
0x2008	Battery discharge over current protect
0x2009	Cell over discharge protect
0x2010	Cell over charge protect
0x3000	Communication broken between master and slave Battery

## 9. Maintenance

1. Regularly check whether the battery using environment meets the requirements, and the installation location should be away from the heat source
2. Check whether the charge and discharge of lithium battery is normal, under the following circumstances, it is necessary to replenish electricity in time

- Battery over discharge to protection
- Batteries are often undercharged
- The battery has been out of use or stored for more than 3 months

3. Regularly check the appearance, wiring terminal, connecting line, indicator light, and circuit breaker of the battery and auxiliary equipment whether are normal

- Torque: please use torque wrench to tighten the battery terminal wiring connection once a year;
- Bipolar breaker: check the Bipolar breaker regularly, active the Bipolar breaker 5 times in a row once a year.
- Waterproof covers: check if waterproof covers is fasten once a year.

## 10. Appendix- RED Declaration

<b>RED Declaration of Conformity (DoC)</b>	
Unique identification of this DoC: .....	
<b>We,</b>	
Manufacturer's name: SYL (NINGBO) BATTERY CO., LTD.	
Manufacturer's Address: No.23 Xingke Zhong Road, Meilin Street, Ninghai, 315609 Ningbo City, Zhejiang Province, People's Republic Of China	
<b>declare under our sole responsibility that the product:</b>	
product name:	Rechargeable Lithium ion Battery System
trade name:	
type or model:	GBL5.8K3
relevant supplementary information:	..... <small>(e.g. lot, batch or serial number, sources and numbers of items)</small>
<b>to which this declaration relates is in conformity with the essential requirements and other relevant requirements of the RED Directive (2014/53/EU).</b>	
<b>The product is in conformity with the following standards and/or other normative documents:</b>	
HEALTH & SAFETY (Art. 3(1)(a)): IEC 62040-1:2017, IEC 62619:2017, EN 50665:2017	
EMC (Art. 3(1)(b)): EN IEC 61000-6-1:2019, EN 61000-6-3:2007/A1:2011, EN 301 489-1 V2.2.3:2019, EN 301 489-17 V3.2.4:2020	
SPECTRUM (Art. 3(2)): EN 300 328 V2.2.2:2019	
OTHER (incl. Art. 3(3) and voluntary specs): N/A	
Accessories: N/A	
Software: N/A	
Technical file held by: SYL (NINGBO) BATTERY CO., LTD.	
Place and date of issue (of this DoC): Chenjiana .....	
Signed by or for the manufacturer: ..... <small>(Signature of authorized person)</small>	
Name (in print):	Jackie
Title:	R&D Director
	