

SW51B100TW2/SW51B200TW2

Battery System Quick Installation Guidance



51.2V 5.22KWH/10.44KWH



CAUTION

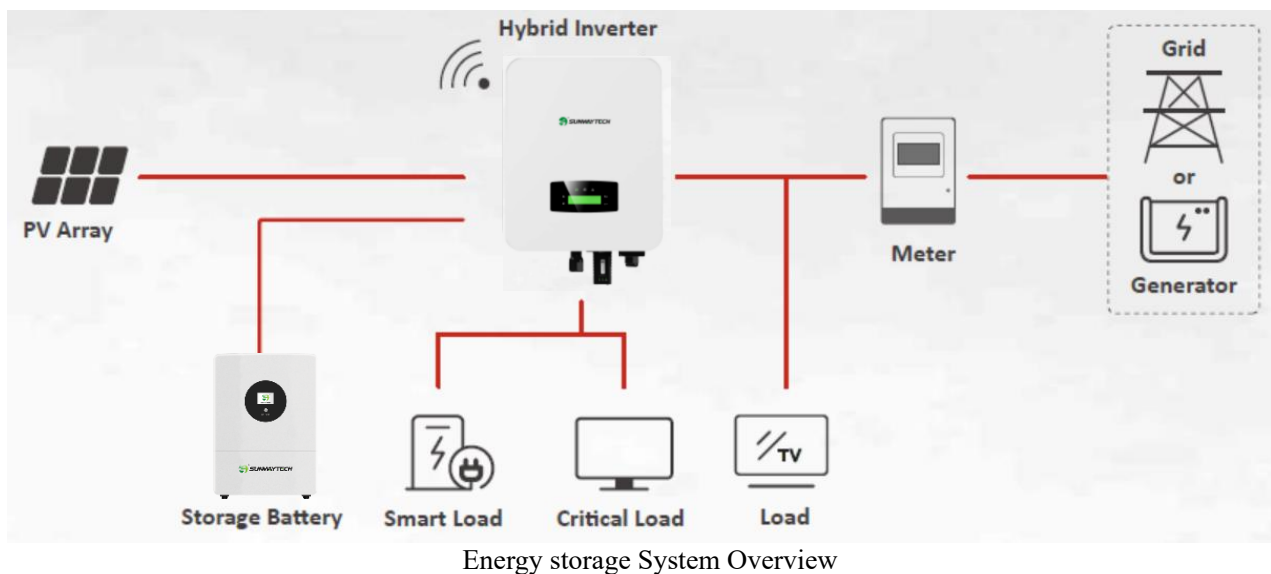
- * Ensure to read the Guidance before installation in order to understand product information and safety precautions.
- * Operators should be well trained to fully understand grid-connected photovoltaic power system and national/regional standards.
- * Installers must use insulating tools and wear safety equipment.
- * Device damages caused noncompliance with storage, transportation, installation and usage requirements specified in Quick Guidance and Manual are not covered by Warranty.

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1. Introduction

The Energy storage pack is an essential component of the photovoltaic power generation system. It can provide electricity for the connected load, and it can also store photovoltaic solar modules, fuel generators, or wind energy generators by charging the remaining energy in case of emergency. When the sun goes down, energy demand is high, or there is a power outage, you can use the energy stored in the system to meet your energy needs at no additional cost. In addition, the energy storage Pack can help you achieve energy self-consumption and ultimately achieve the goal of energy independence. According to different power conditions, the energy storage PACK can output power during peak power consumption, and can also store energy during low power consumption. Therefore, when connecting the matching photovoltaic modules or inverter arrays, external equipment is required to match the energy storage the working parameters of the pack to achieve the highest operating efficiency. For a simple diagram of a typical energy storage system.



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 long time, it is requirement that they are charged every three to six months, and the SOC should be no less than 80%,after fully discharging,The battery needs to be recharged within 12 hours.

Do not expose cable outside;
Do not use cleaning solvents to clean the battery.
All battery terminals must be disconnected before maintenance.

2. Important Safety Warning

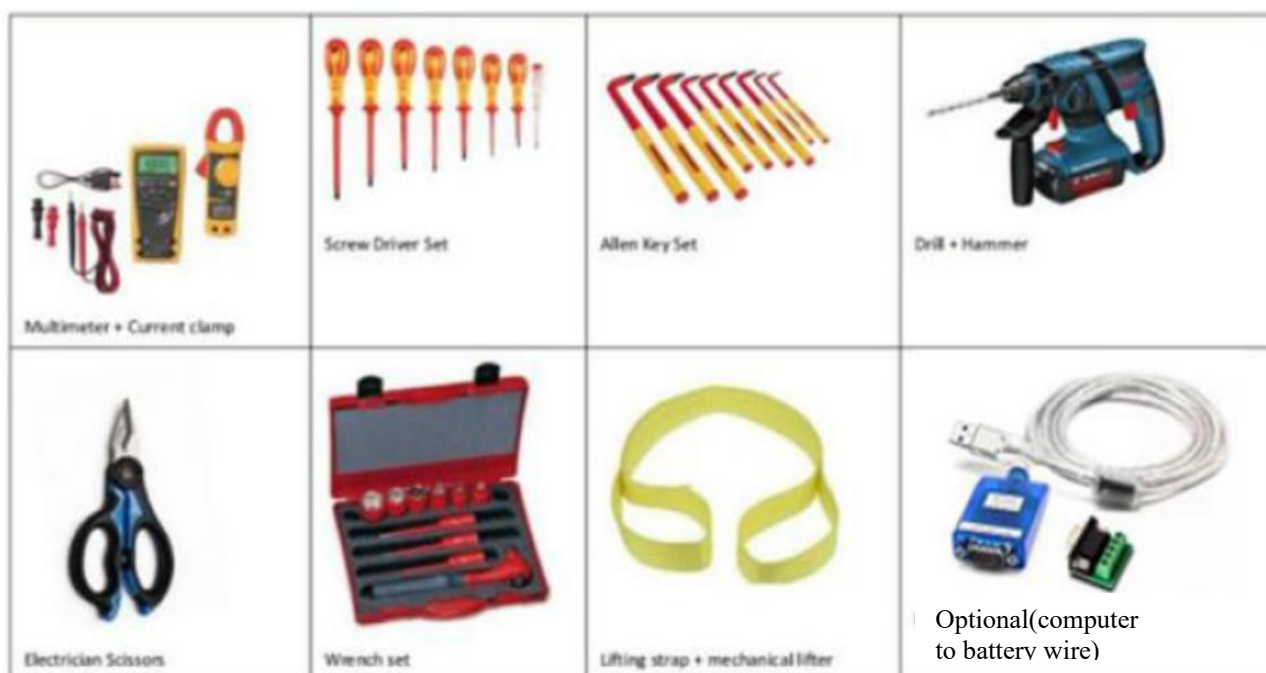
Do not expose the battery to flammable or harsh chemicals or vapors.
Do not paint any part of the battery, include any internal or external components.
Do not connect battery with PV solar wiring directly.
Any foreign object is prohibited to be inserted into any part of the battery.
Our company will not bear any warranty claims for direct or indirect damage caused by violation of the above items.

2.1 Before Connecting

After unpacking, please check the battery and pack list first, if the battery is damaged or spare parts are missing, Please contact the dealer. 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 BMS in the battery is designed for 48VDC, DO NOT connect battery in series; 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.

3. Necessary installation Tools.

Tool preparation: wall-mounted electric drill, hammer, Phillips screwdriver, M8/10 wrench, multimeter, etc.












Personal protective equipment



4. Unpacking & Overview

4.1 Packing List

You will receive the following parts(Not a full set),sample as follow picture.For customized requirements, please place an order with the manufacturer.

Battery pack	Mounting brackets	Power out positive cable
		
Power out Negative cable	Manual *1	Parallel com cable(RJ45)
		
Inverter com cable(RJ45 optional)	Mounting frame screw	Combiner box(Optional)
		

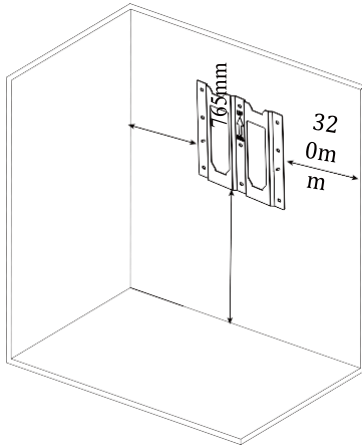
NOTE : Combiner box and extra communication tools need to place extra order.



CAUTION

- * A manually operating breaker should be installed between battery and PCS to control the main circuit under installation, wire connection and maintenance mode. The breaker can be operated manually without using any tool. The distance between battery and the breaker should comply with local regulations.
- * Do not install or use battery near explosive or inflammable substances.
- * Use battery in well-ventilated environment with temperature ranging from -10°C to 50°C.
- * For outdoor installation, build sun & rain shade to avoid direct sunlight and rain exposure.
- * Do not place battery upside down nor alongside as the above picture shown.
- * Maintain a minimum level of dust and dirt in the environment.
- * Do not install battery in highly humid area such as bathroom.
- * Ensure two batteries in parallel connection are from the same batch, same model and same manufacturer. Do not mix old battery with new battery. Batteries with no more than 300 cycles are defined as new batteries.

5.2 Wall Mountable Installation

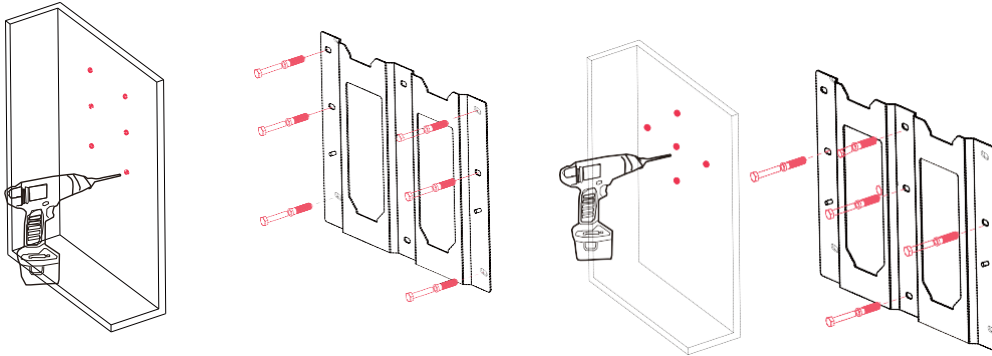


Step 1: Put bracket on wall and mark drilling spots

Note :

1. Keep a minimal distance of 320mm between wall and bracket; a maximum distance of 765mm between bracket and ground. Leave a minimum clearance of 133mm before the front surface of battery.
2. The weight capacity of wall should exceed 4 times weight of batteries.
3. At least two persons conduct the installation. One person places the bracket on wall and ensure the gradienter horizontal; the other person marks four spots of screw driving.

Step 2: Drill in the spots for at least 60mm. Clean the soil and drive expansion tube into the hole



Note:

1. Choose alloy drill bit with a diameter of 12mm.
2. One person puts the bracket on wall and minds to keep gradienter horizontal. The other person drives M8 screw through the bracket into holes.

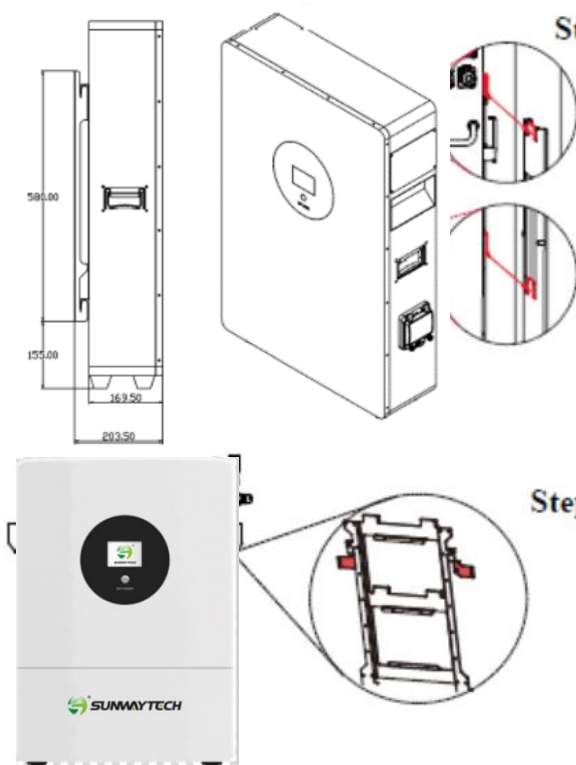


CAUTION

There are two spot drilling proposals available.

For installation on a wall with its main supporting beams at a distance of 16 inches, it is recommended to adopt the first drilling spots.

For wall with its main supporting beam at a distance of 24 inches, it is recommended to adopt the second drilling spots.



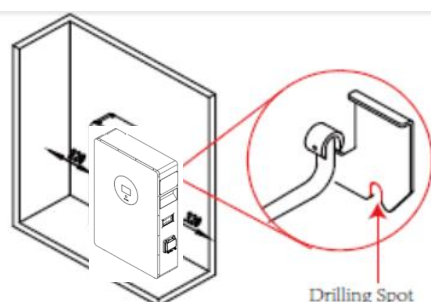
Step 3: Fix battery on bracket from the top down.

Note:

In order to guarantee a stable connect between battery and bracket, please visually check if the two upper joints are fixed. Try to move the lower part of battery away from wall. The connection is proved qualified if the battery cannot be moved at all. Otherwise, please connect the battery and bracket again until confirming a fixed connect.

Step 4: Rotate the left latch rightward until the notch locks limiting pin, rotate the right latch leftward until the notch locks limiting pin too.

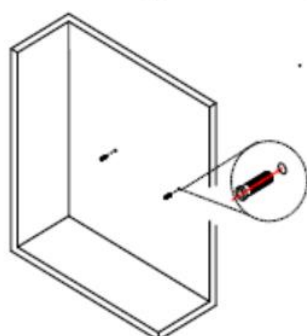
5.3 Floor Standing Installation



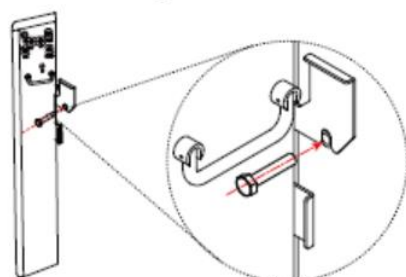
Step 1: Place battery in the to-be-installed area and mark two drilling spots.

Note:

1. Keep a minimum distance of 320mm between wall and battery.
2. Leave a minimum clearance of 133mm before the front surface of battery.



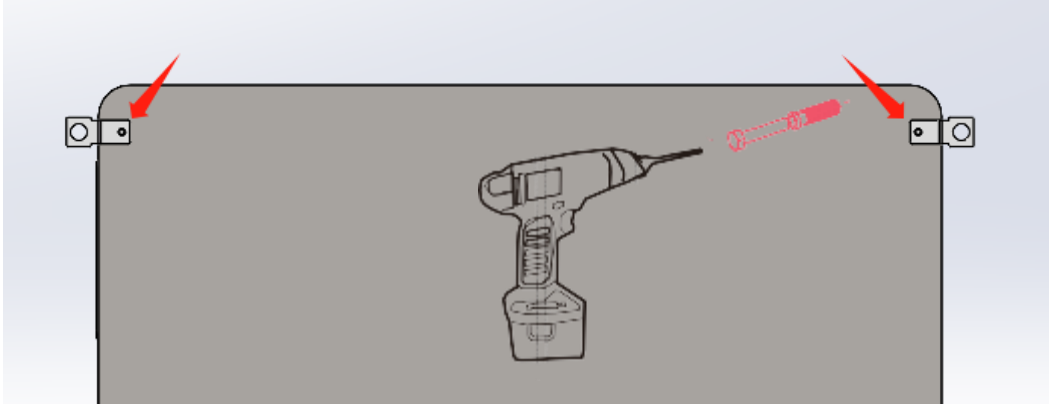
Step 2: Drill in the spots for at least 60mm. Clean the soil and drive expansion tube into hole.



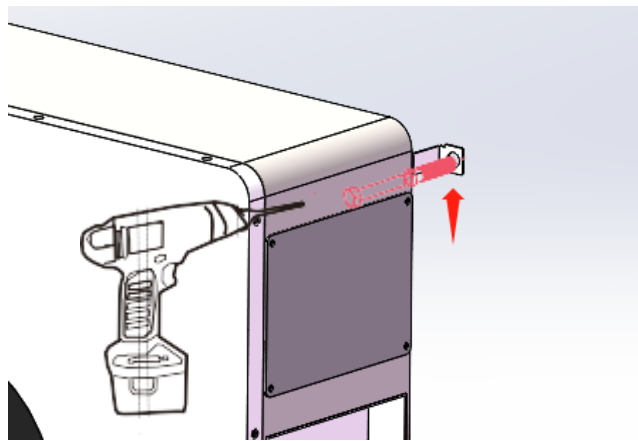
Drive M8 screw through notch of latch into wall.

5.4 Floor Standing Installation(10kwh)

1. Floor-standing type: Support the lithium battery pack equipment on the ground through the lower 4 feet; install the battery shell and wall handle to prevent it from falling forward; install the handle (both sides): first tighten the M4*6 flat head screws as shown in the figure Display direction is fixed:



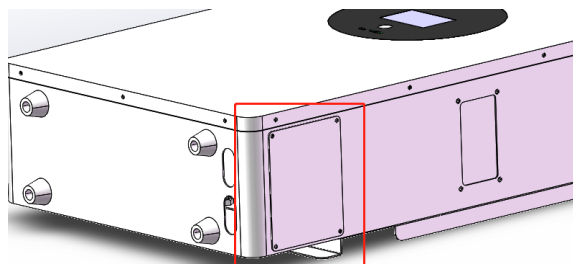
2. Use expansion screws to fix it to the wall:



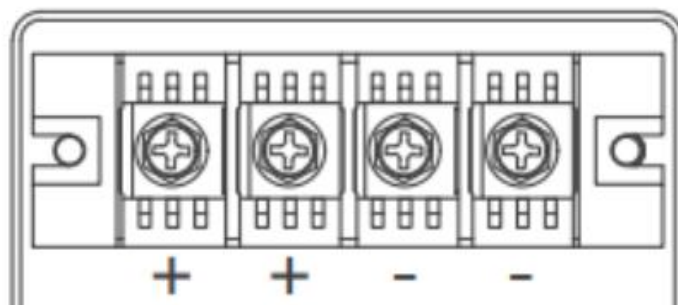
6. Wiring operation guide:

6.1 Power Cable connection:

Use a cross screwdriver to remove the protective cover of the battery wiring compartment. The 5KWh protective cover is located on the lower right side of the housing (marked by the red line), and the 10KWh protective cover is located on the upper right side of the case. Then pass the wire harness through the protective coil at the bottom of the battery and lock it. on the corresponding terminal. See below



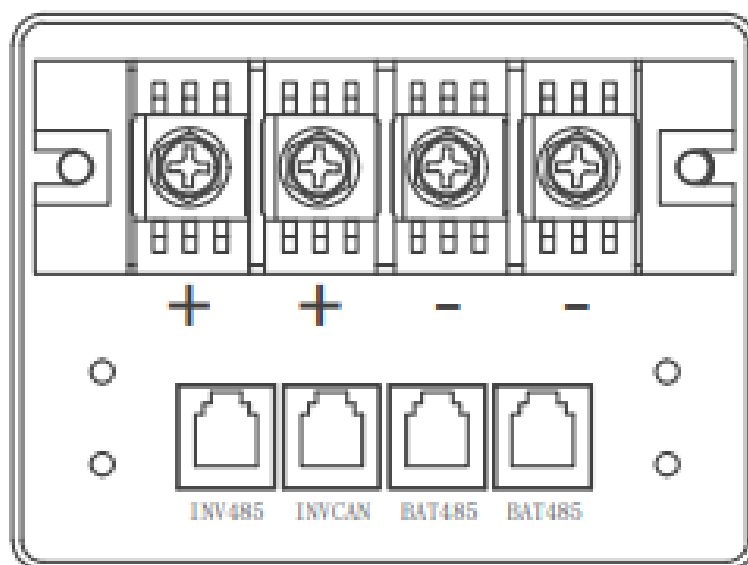
The red wire (positive pole) for ++ terminal (++ terminals are all positive, just connect any one);
The black wire (negative pole) for -- position (-- all terminals are negative, you can connect any one); see the picture below (5KWh terminal diameter is M5, 10KWh terminal diameter is M8):



6.2 Communication crystal definition

The definition is as follows:

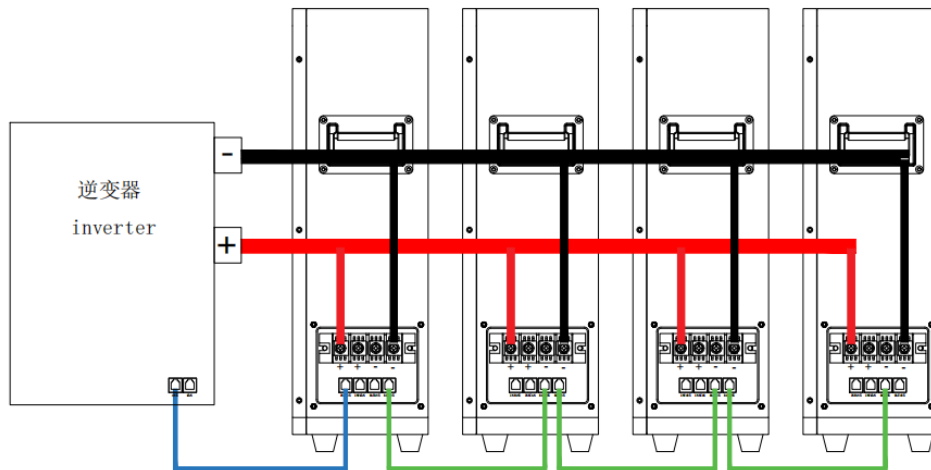
The sequence is inverter serial port 485, CAN; battery parallel serial port 485, 485; and pin definition:



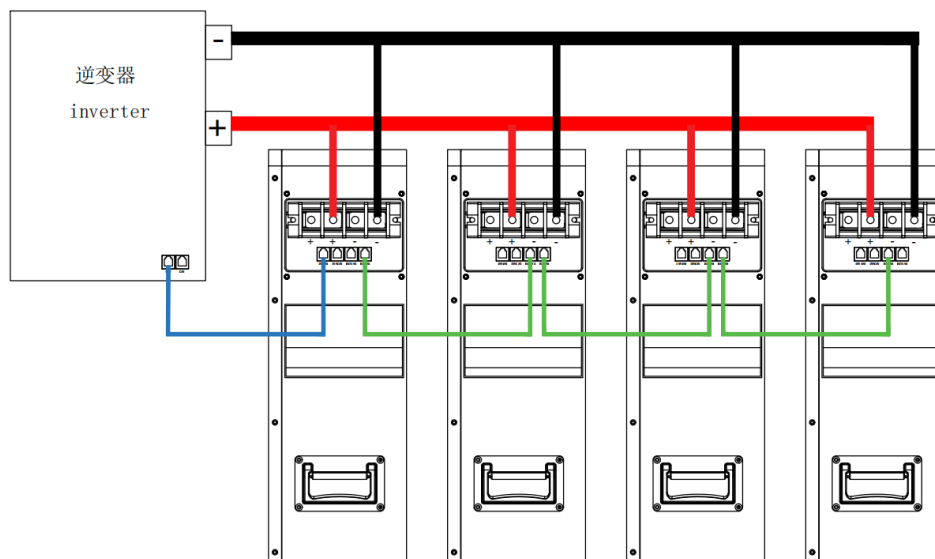
RS485--逆变器通信		CAN--逆变器通信		RS485--主从机通信、上位机通信	
引脚	说明	引脚	说明	引脚	说明
PIN1	485A1	PIN1	CAN_BUSL	PIN1	A
PIN2	485A1	PIN2	CAN_BUSL	PIN2	DI_IN
PIN3	485A1	PIN3	CAN_BUSL	PIN3	A
PIN4	485A1	PIN4	CAN_BUSL	PIN4	DI_IN
PIN5	485B1	PIN5	CAN_BUSH	PIN5	B
PIN6	485B1	PIN6	CAN_BUSH	PIN6	GND_IN
PIN7	485B1	PIN7	CAN_BUSH	PIN7	B
PIN8	485B1	PIN8	CAN_BUSH	PIN8	GND_IN

6.3 Parallel instruction:

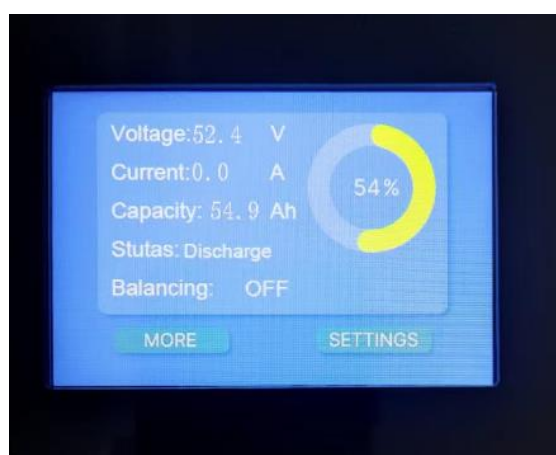
5KWh parallel:



10KWh parallel:



Screen set for Parallel: Open this interface to display SETTINGS (as shown below):



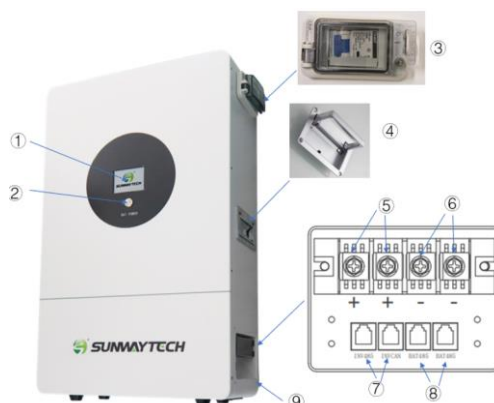
Click SETTING, put password 1981 and press OK to enter the inverter brand chosen interface:
Choose inverter brand, and battery address 1 2 3 4...etc



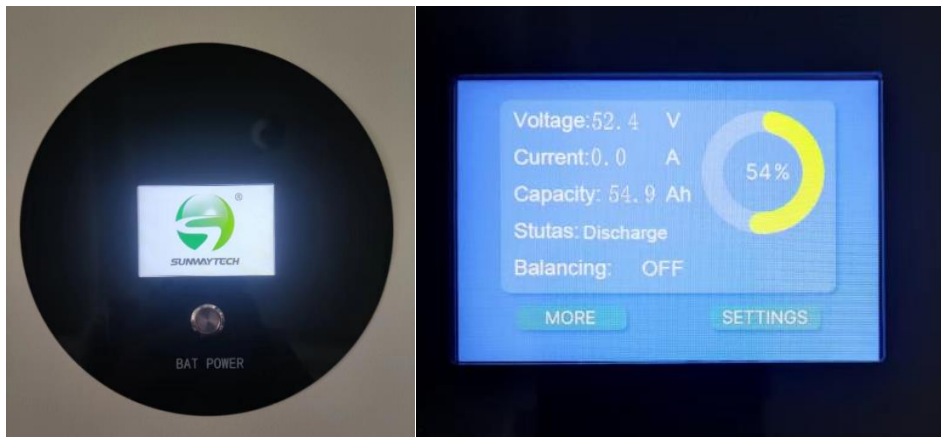
7. Power ON/OFF & Touch screen display guide:

7.1 POWER ON: Switch POWER BREAKER on right side(No.3)

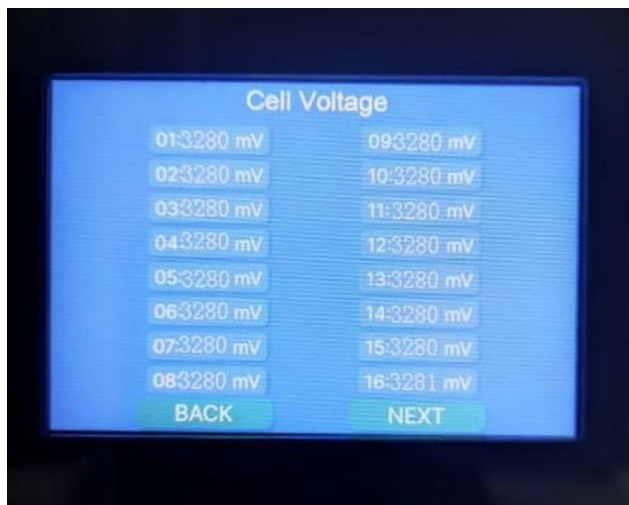
7.2 Press BAT POWER (No.2) on the front panel of the battery pack (see the picture below for the button)



7.3 After power on, the screen will display the SUNWAY interface and redirect to the following interface after 3seconds then (see the picture below). Like voltage V, current A, capacity Ah, status, balance, and remaining capacity.



7.4 Step 2: Touch the MODE button to display the cell voltage interface:



7.5 Step 3: Touch the NEXT button to display the temperature interface:



7.6 Step 4: The warning message is as shown below:

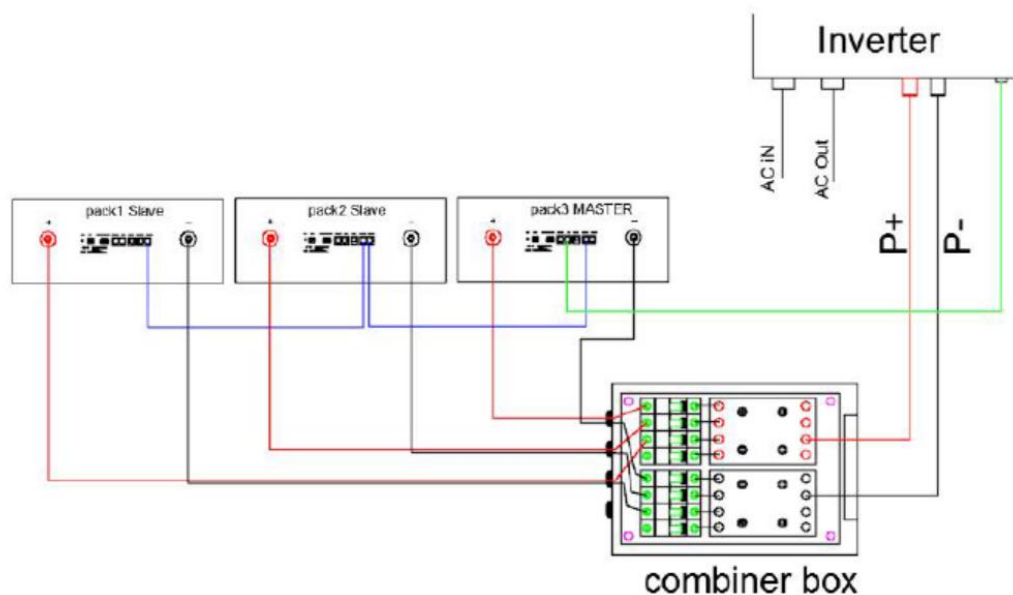


REMARKS: Recommended measuring range (used within the measuring range):





- 5KWh: Maximum charging and discharging operating current 1C/100A;
Working voltage 43.2~56.8V, charging temperature 0~45°C, discharge temperature -20~55°C
- 10KWh: Maximum charging and discharging operating current 0.75C/150A;
Working voltage 43.2~56.8V, charging temperature 0~45°C, discharge temperature -20~55°C

8. Battery Combiner box(optional)

3 port IN-1 port out



9 Battery Datasheet

Models	SW51B100TW2	SW51B200TW2
Usable Capacity	5.22kWh	10.44kWh
Normal Capacity	102Ah	204Ah
Voltage	51.2V	
Discharge Voltage Range	43.2V~57.6V	43.2V~57.6V
RateCharging/Discharging Current	75A	80A
Max Output Power	3840W	4096W
Rated Output Power	3840W	4096W
DOD	90%	
Modules Connection	Support 1-15 in parallel	
Communication	CAN/RS485	
Cycle Life	≥6000	
Working Temp.Range	Charge: 0℃~+55℃; Discharge: -10℃~+55℃	
Storage Temperature	-10℃~+35℃	
Net Weight	48.5kg	94kg
Gross Weight	52.5kg	125kg
Product Dimension	420*163*700mm	570*203*850mm
Design Life	15years	
Features	HD touch screen, active balance	
Certification	    UN38.3	

Contact US:
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