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HOME-ESS-LV-5.12K-M

## ***Quick Installation Guide***

EN202601120102



User Manual

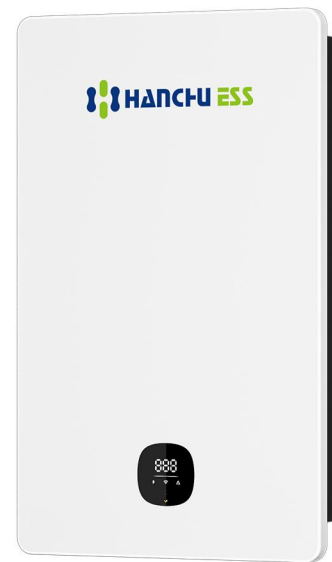


Android APP



iOS APP

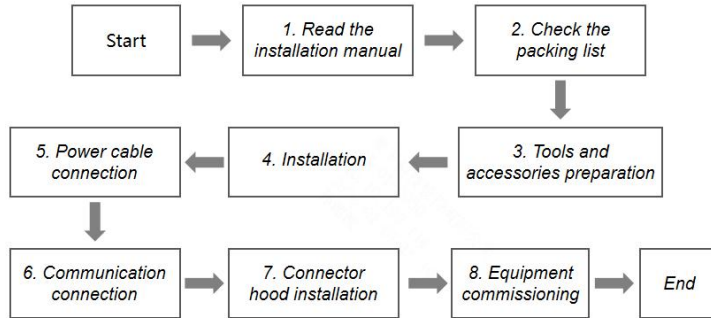
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# 1.Installation Precautions

## Flow chart of installation steps:

Please follow the equipment installation steps process to ensure the equipment can be successfully installed.



## Please ensure that the installer meets the following requirements:

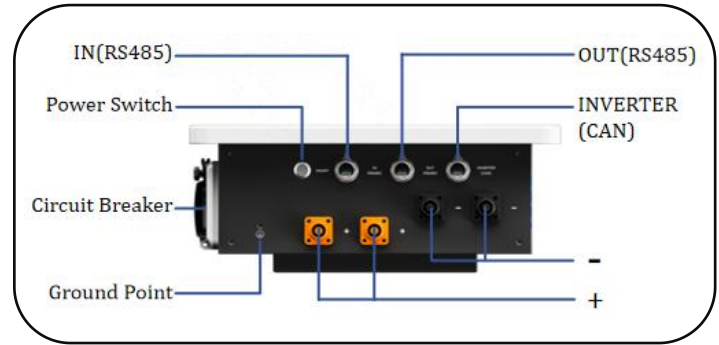
This system should only be installed by personnel with training and adequate knowledge of electrical power systems.

## Please ensure that the installation location meets the following conditions:

- The installation and operational environment need to comply with local laws and regulations and relevant international national and regional standards for lithium battery products.
- Install in a dry, well-ventilated environment and secure the equipment on a sturdy and horizontal support surface.
- Avoid water accumulation in the installation location and keep away from water sources such as faucets, sewer pipes, and sprinklers to avoid water infiltration.
- The environment around the installation location is clean. There is no infrared radiation, heat source, conductive dust, organic solvents, corrosive gases, etc.
- When the equipment is running, the temperature of the under-frame and heat sink will be relatively high, please do not install it in a place where it is easy to be touched.
- When the equipment is running, do not block the ventilation openings or cooling system to prevent high-temperature fires.
- Please choose a sheltered installation site or build an awning to avoid direct sunlight or rain.

## Schematic diagram of battery interface:

The definition of each interface must be clear during the installation process, otherwise the wrong connection will lead to installation failure or even damage to the equipment.



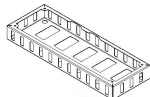
## 2. Check the Packing List

Please refer to the packing items shown below, please check the packing list carefully, if any items are missing, please contact your dealer directly.

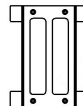
A rectangular battery with a black terminal on the front.

BATTERY

Battery



Connector Hood



Wall mount bracket



Quick Installation Guide



RS485 communication line



CAN communication line



Power cable 3 Black



Power cable 4 Red



Power cable 1 Black



Power cable 2 Red



Expansion bolt \* 5



Ground screw and terminal  
OT6-4/M4x10\*5/M4x30\*2



Spare terminal  
SC25-8 \*2

## 3. Tools and Accessories Preparation

**Step 1:** Protective equipment products must be worn and maintained during the installation process.



Safety gloves



Safety glasses



Safety shoes

**Step 2: Installation Tools:** tools needed in the process of installing equipment, more effective to improve installation efficiency.



Phillips screw driver



Hammer



Ground wire



Marker



Electric driver



Marker pen

## 4. Installation

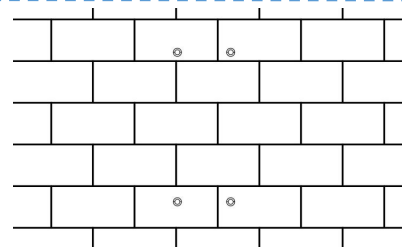
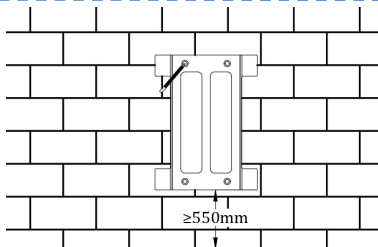
**Attention should be paid to the following items before installation:**

- **Power cable specification:** The matching power cable is 3AWG, and the max carrying capacity is 100A. Please do not work under the condition of exceeding this current. If parallel operation with current exceeding 100A is required, please scan the QR code on the cover, then find the detailed instructions inside the Battery User Manual.
- **Mounting space:** Make sure that the battery system has enough space to install, make sure the wall is strong enough to bear the weight of the battery system. Installing on a solid cement wall with a thickness of not less than 100mm is recommended.
- **Wiring:** Make sure the power cable and ground wire are reasonable. Not easy to short-circuit, water and corrosion.

### Wall Installation:

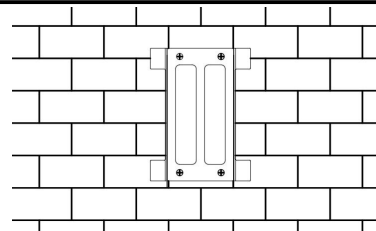
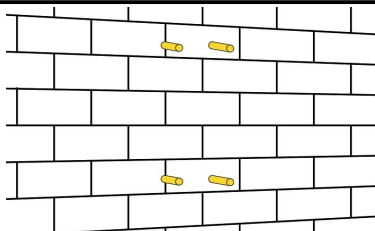
#### Step 1: Locate drill holes in the wall

Use the bracket as a template to make positioning holes in the wall, mark the positions of the 4 holes, and then drill 10mm holes to ensure that the depth of the holes is greater than 50mm. The bracket should be placed at least 550mm above the ground.



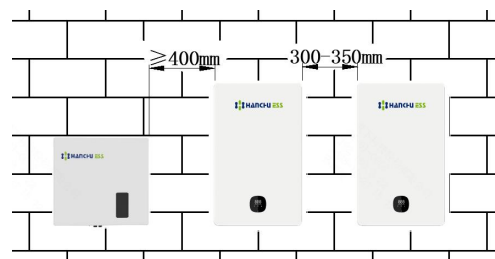
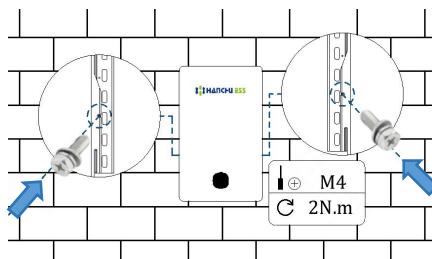
### Step 2: Fix the wall mount bracket

Fit the expansion tubes into the holes, pull them tight, and then use the expansion screws (packaged with expansion tube for use) to install and secure the wall mount bracket to the wall.



### Step 3: Fix the battery module

There is a hook design on the back of the battery box. Align and fix it to the positioning groove of the Wall mount bracket, and secure it with M4\*30 screws. The distance between the batteries should be 300-350mm, and the distance between the battery and the inverter should be no less than 400mm.



## 5. Power cable connection

### Installation Preparation:

Before connecting cables, make sure the battery and inverter are entirely switched off. Make sure all breaker switches are fully switched off.

Before connecting the power cables, use a multimeter to measure cable continuity, short circuits, and confirm positive and negative.

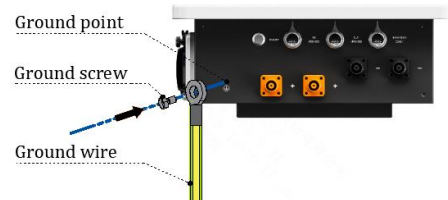
**NOTE:** First complete the cable connection at one end, then feed the remaining free end of the cable through the pre-formed hole in the protective hood.

### Step 1: Connect the battery ground cable

The area of the grounding cable shall be prepared at least  $6\text{mm}^2$ , using a ground screw and terminal to connect the ground cable which can ground the battery. The bolt locking torque is 2NM.

### Step 2: Power connections between two batteries

Use power cable 1 to connect the negative pole (P- terminal) of battery pack A to the negative pole (P- terminal) of battery pack B, and use power cable 2 to connect the positive pole (P+ terminal) of battery pack A to the positive pole (P+ terminal) of battery pack B.

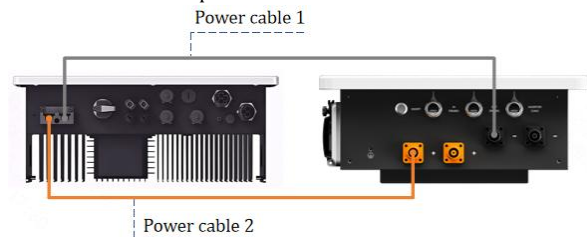
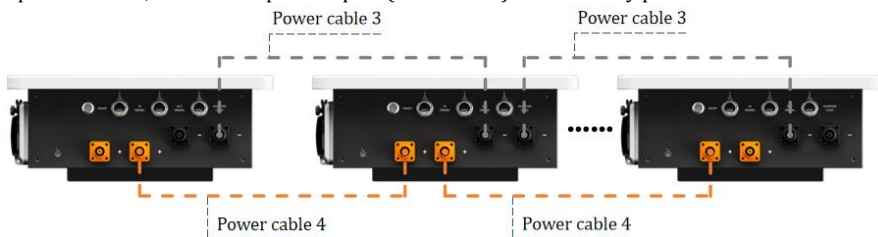


### Step 3: Power connections of more than two batteries

Analogy derivation, more than two battery connections, connect the negative poles (P- terminal) between the battery packs and connect the positive poles (P+ terminal) between the battery packs.

### Step 4: Connect the battery to the inverter power supply

After the battery is connected according to Steps 1-2, connect the negative pole (P- terminal) of the battery pack A and the BAT- terminal of the inverter with the power cable 3; connect the positive pole (P+ terminal) of the battery pack A and the BAT+ terminal of the inverter with the power cable 4.



#### NOTE :

- 1) When the input or output current of the inverter connected to the battery exceeds 100A, if not using a combiner box, the power cable connecting the main battery and inverter must be 0AWG(Optional), and set the Total Charge/Discharge Current Limit to 200 A.For more detailed information,please scan the QR code on the cover, then find the detailed instructions inside the Battery User Manual.
- 2) When the inverter is electrically connected, the inverter and batteries need to be powered off.
- 3) It is forbidden to mix batteries of different brands, specifications and batches, otherwise it will cause system failure.

## 6.Communication Connection

### Step 1: Connect the CAN communication line

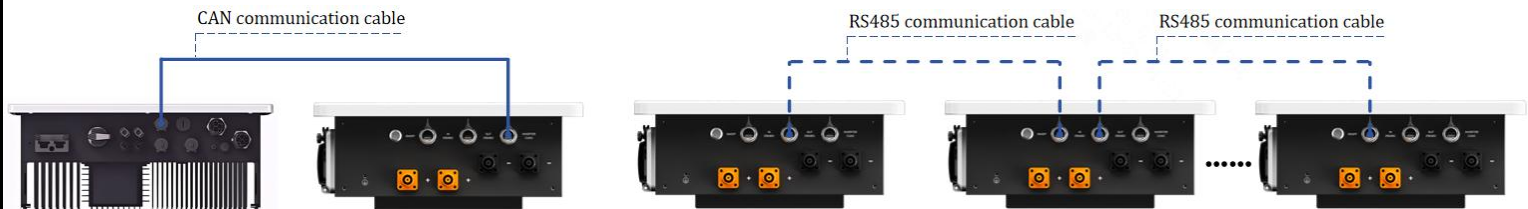
Use the CAN communication cable to connect the inverter to the battery's CAN port.

### Step 2: Connecting the RS485 communication line between two batteries

Use the RS485 communication line to connect the batteries in sequence through the RS485 port.

### Step 3: Connecting the RS485 communication line to more than two batteries

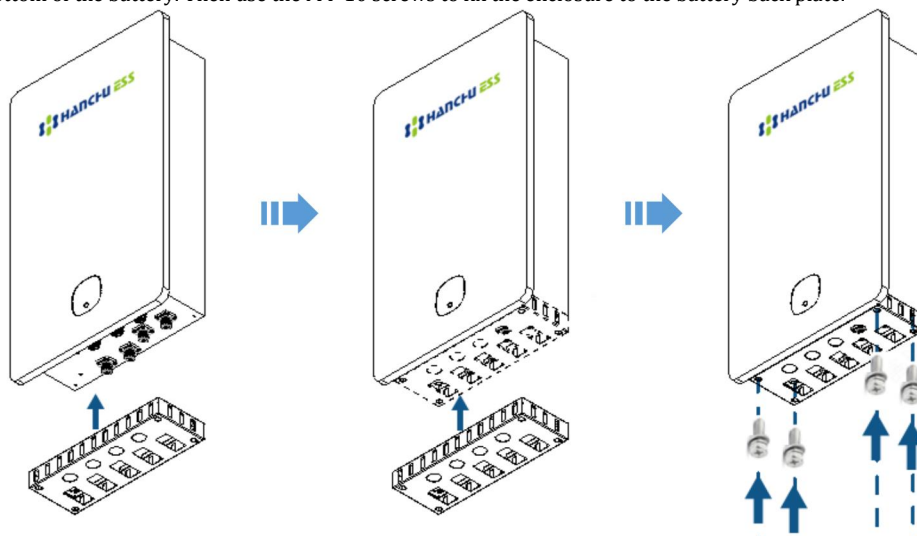
Use the RS485 communication line to connect the adjacent batteries in sequence through the RS485 port.



**NOTE:** The connection between the inverter and the battery must be connected to the CAN communication port of the battery, otherwise, communication cannot be performed; similarly, the connection between the batteries must be connected to the RS485 port.

## 7. Connector Hood Installation

After all cables have been installed and verified to be free of twists, insert the Connector Hood from bottom to top as shown in the figure below until the bottom of the enclosure is parallel to the bottom of the battery. Then use the M4\*10 screws to fix the enclosure to the battery back plate.



## 8. Equipment Commissioning

### Step 1 : Equipment power on

Confirm again that the cables are connected in the correct order and the connection is firm before starting the test.

- 1) First turn on the inverter.
- 2) Then press the power switch power on the battery pack in turn to turn on.
- 3) Next, turn on the circuit breaker switch on the battery.
- 4) Observe the status on the battery panel to ensure it is normal.

**NOTE :** The shut down procedure is opposite to the startup process, first shut down the power switch power on the battery. Then shut down the power switch power on the battery. Final turn off the inverter. When the system starts, ensure the boot sequence of each equipment, otherwise it may cause pre-charging and trigger the circuit breaker protection fault.

### Step 2 : Inverter Protocol Selection:

The default CAN and RS485 communication protocol for the battery is the HANCHUESS protocol (Battery protocol options include HANCHU ESS, GT, SMK, Voltronic, Pylon, Deye, Solis, Luxpower, Victorn, SMA). If protocols other than HANCHUESS need to be modified, please contact Hanchu ESS after-sales service or your distributor directly.

- 1) Check which protocols are supported by the inverter;
- 2) If the inverter supports the battery factory default protocol, select the corresponding protocol on the inverter directly.
- 3) If the inverter supports protocols other than the battery factory default protocol, select the same protocol on the battery and the inverter.

After setting, you can see the normal status information of the battery pack, such as voltage, SOC, etc. from the inverter. Or you can use the APP to view your device data! To access the APP Guide: scan the QR code on the cover, then find the detailed instructions inside the Battery User Manual.

### Step 3 : Confirm Address

- 1) When the system is used in parallel, it supports up to 16 batteries in parallel.
- 2) When operating in parallel, it is necessary to confirm the address of each battery. The Run Status displayed on the screen includes battery addresses 01 to 16, where 01 represents the primary battery, and the remaining addresses 02 to 16 represent the sub-batteries.

### Contact

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