



COMBINER BOX 12K(4-1)

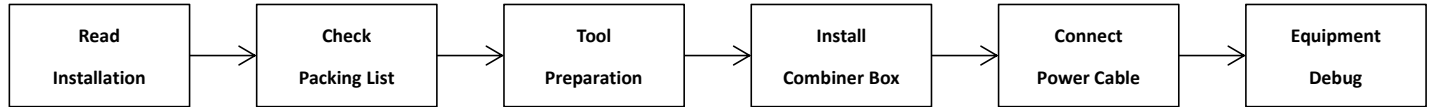
Quick Installation Guide



1. Installation Precautions

Flow chart of installation steps:

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



Please make sure the installation location meets the following conditions:

- The installation and use environment need to comply with local laws and regulations, as well as relevant international standards.
- Install in a dry, well-ventilated environment and secure the equipment on a sturdy, level support surface.
- Avoid water accumulation in the installation location, and keep away from water sources such as faucets, sewer pipes, sprinklers, etc. to avoid water infiltration
- The environment around the installation location is clean, and there is no large amount of infrared radiation, organic solvents and corrosive gases, etc.
- Please choose a sheltered installation site, or build an awning to avoid direct sunlight or rain.
- Each cable knockout should be completely sealed to prevent unexpected invasions such as insects causing a short-circuit.

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.



*Power Cable A
Red/1300mm



Power cable A
Black/1300mm



*Power Cable B
Red/1300mm x2



Power Cable B
Black/1300mm x2



Power Cable B
Red/2000mm x2



Power Cable B
Black/2000mm x2



Expansion Bolt x4



Installation Guide



Combiner box

*Power Cable A: 2/0 AWG; Power Cable B: 4 AWG

3.Tool 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 screwdriver



Hammer



Torque screwdriver



Ruler



Electric driver



Marker pen

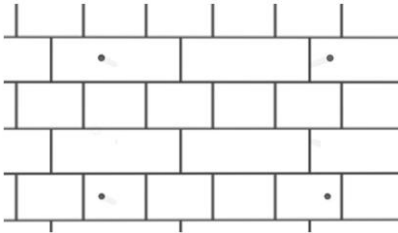
4. Combiner box installation

Before connecting cables, ensure that the combiner box, inverter, and battery are fully switched off.

Make sure the wall is strong enough to bear the weight of the combiner box and battery.

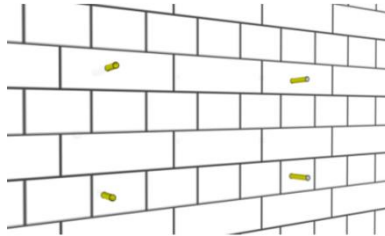
Step 1: Locate drill holes in the wall

Use the holes on box as template to mark four positioning holes on wall. Drill four holes on wall according to the marks and make sure each hole is just 10mm in diameter and more than 60mm in depth.



Step 2: Fix the expansion tube

Fit the expansion tube into the holes on wall. Gently tap on the tube with a hammer to make sure the anchor tool is buried into the wall.



Step 3: Fix the combiner box

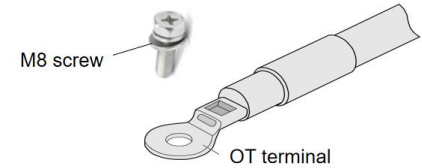
Align the holes on box to the drilled holes on wall. Use tool to screw the expansion bolts through the holes on combiner box into the prepared expansion tube in wall. Tighten the screws to install the box on wall.



5. Power cable connection

Installation Preparation:

1. Make sure both battery and inverter are turned off.
2. Make sure all breaker switches are turned off.
3. Loosen the waterproof socket connector under the combiner box.
Tighten it after the cable installation.
4. Check for loosen components inside the box and tighten them.



Step 1 : Connect power cable from combiner box to inverter

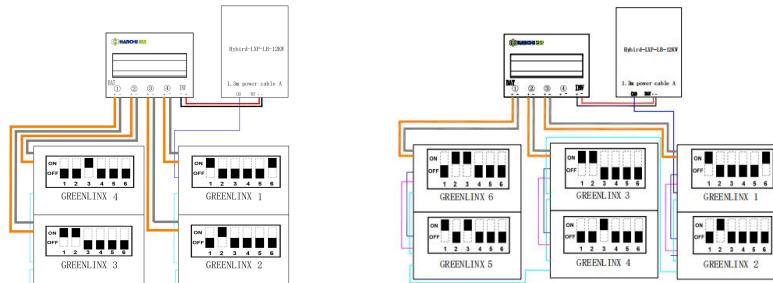
Inverter should be connected with combiner box using Power cable A 1.3m.

Use red power cable A to connect the positive pole (P+ terminal) of inverter to the positive pole (P+ terminal) of combiner box, and use black power cable A to connect the negative pole (P- terminal) of inverter to the negative pole (P- terminal) of combiner box.

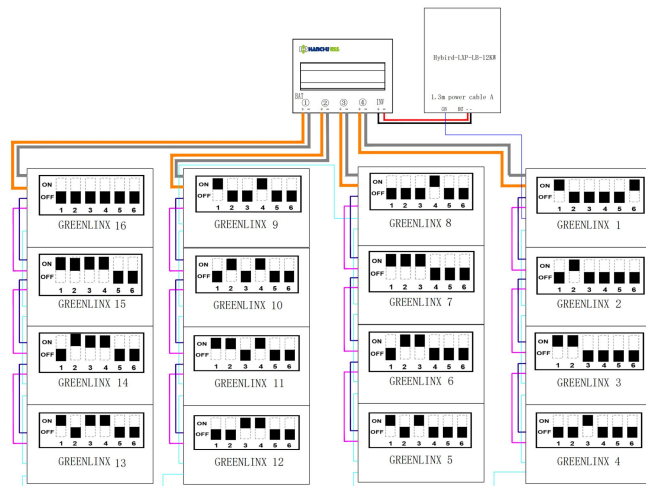
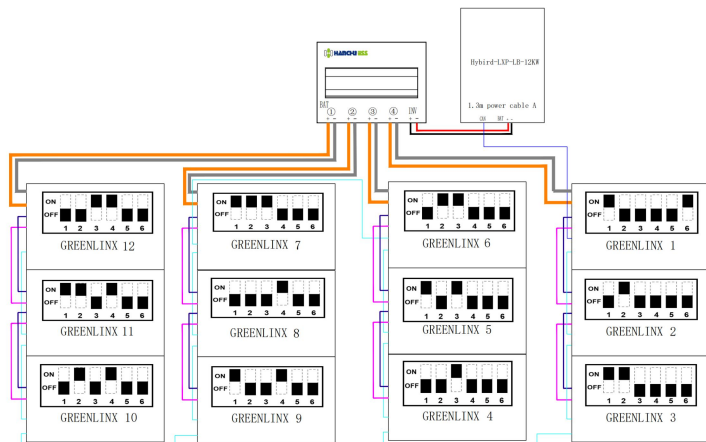
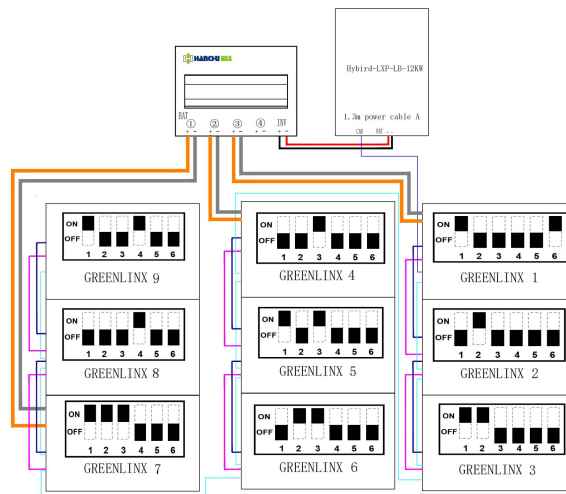
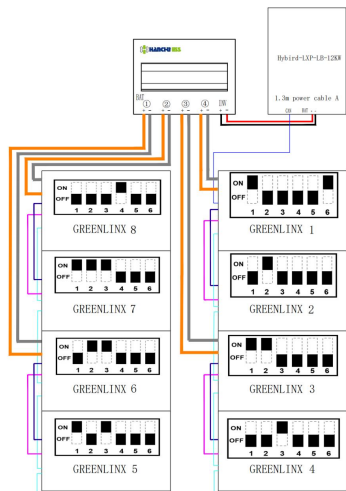
Both side of the power cable A are OT terminal. Need to tightened by M8 screws contained in tools.

Step 2 : Connect power cable from combiner box to battery

The combiner box consists of four battery input circuits and one battery output circuit. Each battery input circuit can accommodate 1 to 4 units of 3.2K batteries. A single combiner box can accommodate 2 to 16 batteries. Please refer to the installation diagram for visual representation.



- Legends:
- Red power cable A
 - Black power cable A
 - Red power cable B
 - Black power cable B
 - CAN communication cable
 - RS485 communication cable
 - 3.2K battery' s red power cable
 - 3.2K battery' s black power cable



1. The combiner box is equipped with four sets of 4AWG power cables for connecting the batteries and one set of 2/0AWG power cable for connecting the inverter.
2. The batteries directly connected to the combiner box use the power cables provided with the combiner box, while the connections between battery units use the power cables provided with the batteries.

Use red power cable B to connect the positive pole (P+ terminal) of battery to the positive pole (P+ terminal) of combiner box, and use black power cable B to connect the negative pole (P- terminal) of battery to the negative pole (P- terminal) of combiner box.

One side of the power cable B is CT terminal, it should connect to the breakers inside combiner box, tightened by the screws carried with breaker. The other side of the cable is the quick plug terminal, it should be connected to the connector socket on the battery.

Note:

- Combiner box wire connection should be operated by professional operators. Do not operate on it if you are not professional installer.
- Make sure you have heard the click sound indicating locked in place when connecting the quick plug terminal.
- It is forbidden to mix batteries of different brands, specifications and batches, otherwise it will cause system failure.

6. Equipment debugging

Step 1 : Check if the box is firmly installed, check if the components and terminals inside the box are tightened without any loose part.

Step 2 : Check all wires and cables are connected properly. Check if the negative and positive poles are connected properly.

Step 3 : After checking the cables, tighten the waterproof socket connector under the combiner box to prevent insects and steam from going in.

Step 4 : Tie up and secure the cables outside the box with cable ties to prevent from tangle.

Step 5 : With all steps above checked with no errors, continue to debug with power on. Firstly, power the inverter, turn on the inverter breaker. Secondly, turn on the battery power switch and then turn on all circuit breakers in inside combiner box.

Note:

- The breaker cannot be manually disconnected when the battery is working.
- The combiner box is only suitable for inverters within 12kw, and overpower use is strictly prohibited.