SMART ENERGY LIGHTS UP THE GREEN EARTH

aloe pro

QUICK INSTALLATION MANUAL

ALOE PRO-M5	ALOE PRO-M10	ALOE PRO-M15	ALOE PRO-M20	ALOE PRO-M25	ALOE PRO-M30
ALOE-MB5	ALOE-MB10	ALOE-MB15	ALOE-MB20	ALOE-MB25	ALOE-MB30

Potis Edge

REV . 3 2024-03-10

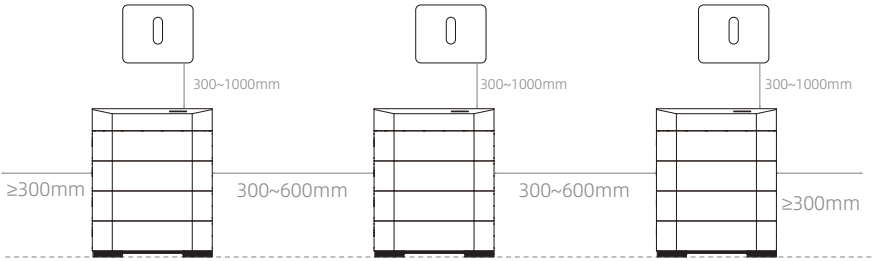
01 System Installation

⚠ Note

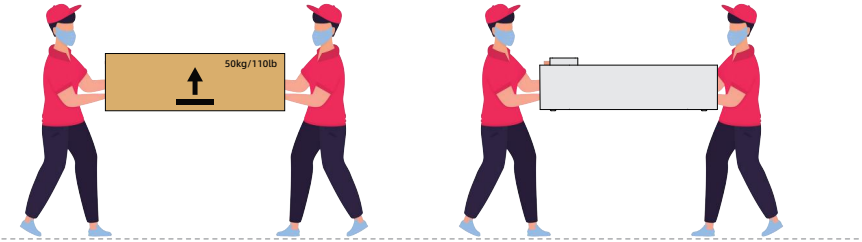
- This product needs to be used with specified inverter. It is recommended to install the inverter first (wall-mounted), and then install the energy storage battery.
- For information about installing the inverter, please refer to the manual of the inverter, and such information will not be repeatedly provided in this manual.

1.1 Installation space requirements

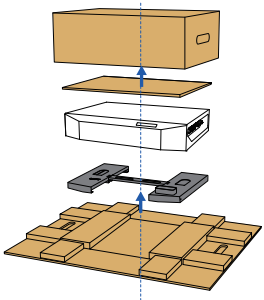
- When installing the equipment, ensure that there is no other equipment (except related equipment and sunshade) or inflammable and explosive articles around. Reserve adequate space for heat dissipation, safety isolation, and safe operation.
- For wall-mounting, do not place anything above or below the equipment.



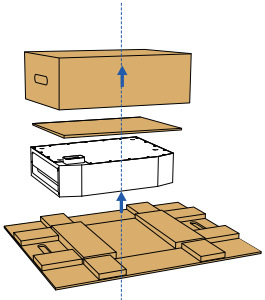
1.2 Handling and removal



01 A single package is approximately 50 kg. It is recommended to be moved by two persons. Keep the product level and upward during movement.



Electric contro box ALOE PRO-MC5



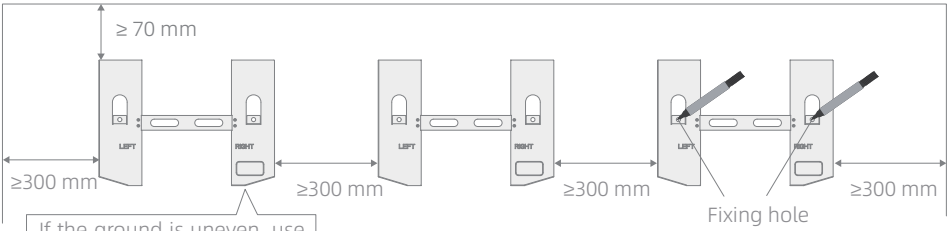
Pack ALOE-MB5

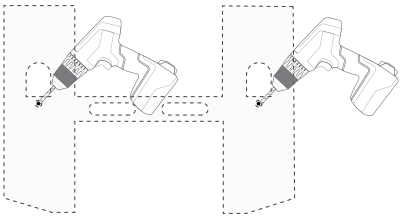
02 Check the outer packing. If the outer packing is intact, open up the box and check whether the products and accessories are complete.

1.3 Base Fixing

⚠ Note

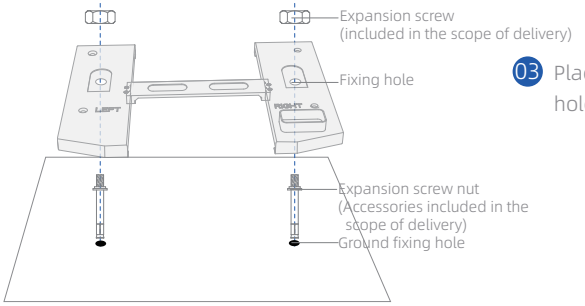
- The following reinforcement methods are optional for customers according to their needs.
- If the product has to be operated in an area with harsh environment, such as frequent earthquakes, tsunamis, open air,, and typhoons, it is recommended to take the following reinforcement methods. Any accidents caused by failure to use the following reinforcement methods will not be covered by the product warranty.



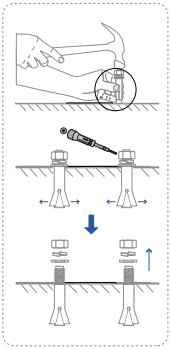


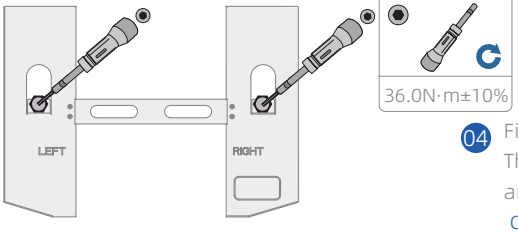
01 Place the base at the position to be installed, and mark the position of the fixing hole with a marking pen.

02 Drill a hole at the mark.
Hole diameter: 14 mm
Hole depth: 100mm
Note: Please avoid the pre-embedded pipes or lines when drilling, so as to avoid short circuit or other dangers.



03 Place the nut of the expansion screw in the hole and place the base.

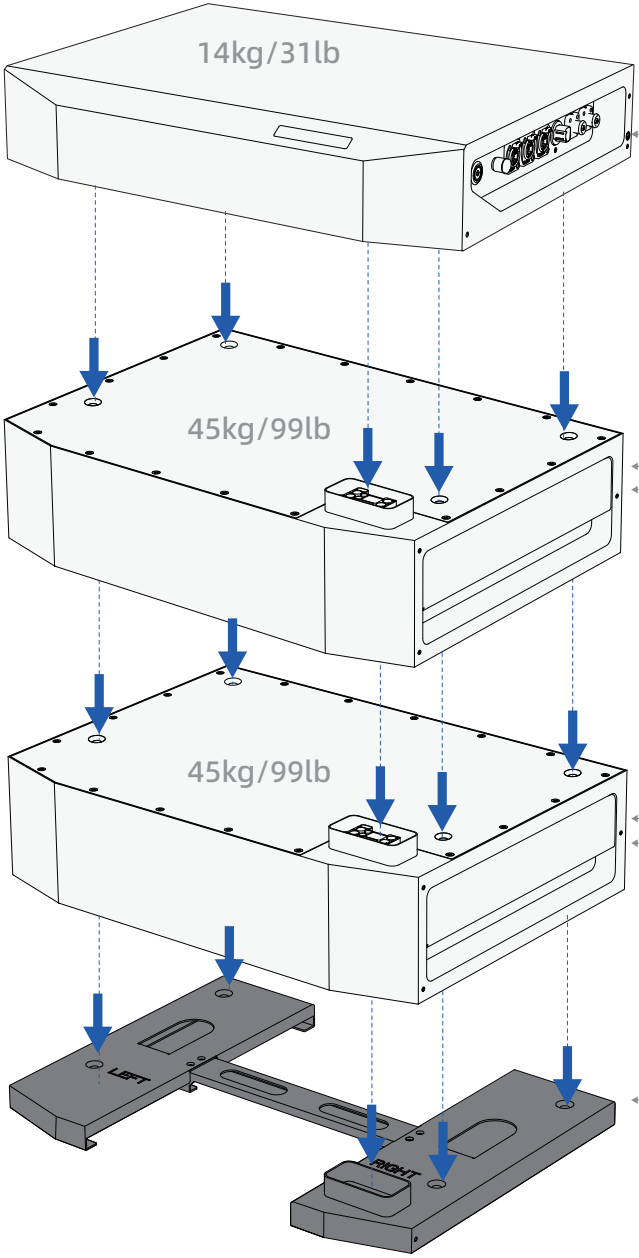




04 Fix the base to the ground with screws.
The installation and fixing of the base are completed.

Complete base fixing and mounting.....

1.4 Stacking and Fixing



03

Stack the electrical control box on top of the battery.

02

Stack up the battery.
Up to 4 batteries can be stacked.

01

Stack the battery on the bracket.

Instruction:

01. A battery is about 45kg, and it is recommended to carry it by two people.
02. When stacking, pay special attention to the joint point of the connector interface, and do not install it violently to avoid interface damage.

⚠ Note

The following fixing methods are not standard. Customers can choose to install.

- **Fixing the equipment enclosure**

01 Take out the accessory bag.

Delivered accessory

For fixing battery pack

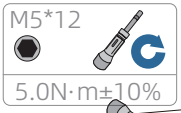
Base

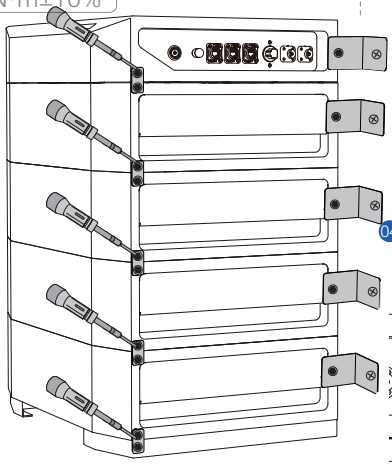
02 Attach the anti-scratch sticker to the inside of the fixing part.

Upper and lower fixing parts

Anti-scratch sticker

03 Tighten the screws on the equipment. Both sides are installed in the same way.



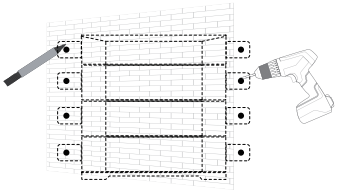


- **Fixing the equipment to the wall(Optional)**

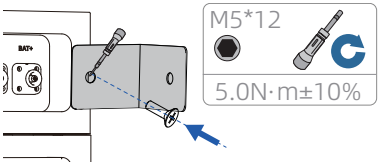
01 Place the installation positioning plate(livered accessory) on the installation location and mark the fixing hole.

Optional

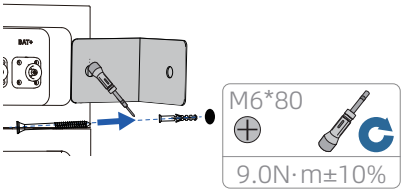
02 Drill in the marked location.
Drill bit diameter: 8mm
Hole depth: 100mm



03 Secure the fixing plate to the equipment with screws.

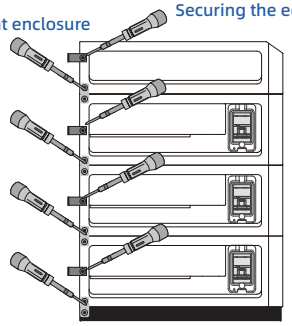


04 4 Secure the fixing plate to the wall with expansion screws.
Both sides are installed in the same way.



Fixing the equipment enclosure

Securing the equipment to the wall



Complete stacking and fixing.....

02 Electrical Connection

⚠ Danger

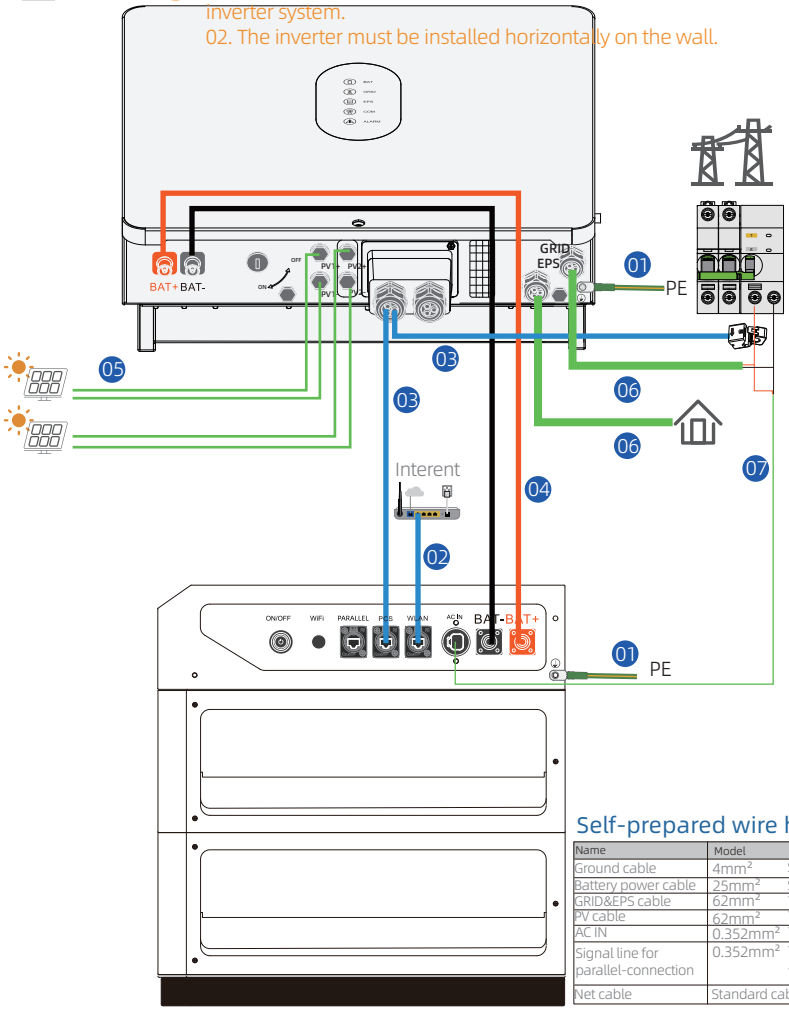
01. Observe the procedures listed in this manual and relevant international, national or regional standards, as well as industry-specific safety rules and practices before operation.
02. Make sure that all protection switches for residential circuits and equipment are disconnected before installation.

Installation sequence:

01 Connecting PCS and battery grounding cable → 02 Connecting battery network cable(not necessary) → 03 Connecting PCS and battery signal line (synchronous connection with CT) → 04 Connecting PCS and battery power line →

05 Connecting PCS of PV → 06 Rewiring home circuit (GRID and EPS installation) → 07 Connecting battery AC IN (optional)

⚠ Warning 01. Please refer to the inverter installation instructions for the installation of the inverter system.
02. The inverter must be installed horizontally on the wall.



Self-prepared wire harness

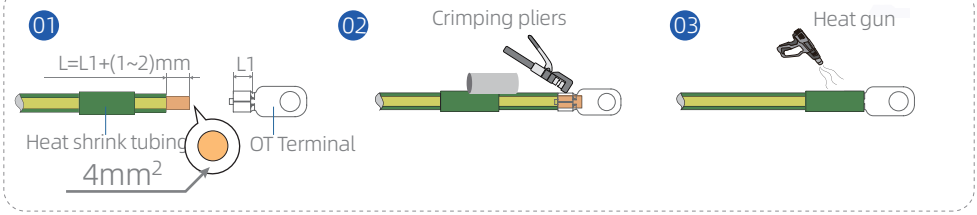
Name	Model	
Ground cable	4mm²	Single core hard copper
Battery power cable	25mm²	Single core hard copper
GRID&EPS cable	62mm²	Three core multi-strand
PV cable	62mm²	Two core multi-strand
AC IN	0.352mm²	Two core single strand
Signal line for parallel-connection	0.352mm²	Two core single strand + two core shielded twisted pair
Net cable	Standard cable 100M CAT5	

2.2 Grounding Cables Connection of PCS and Battery

Instruction

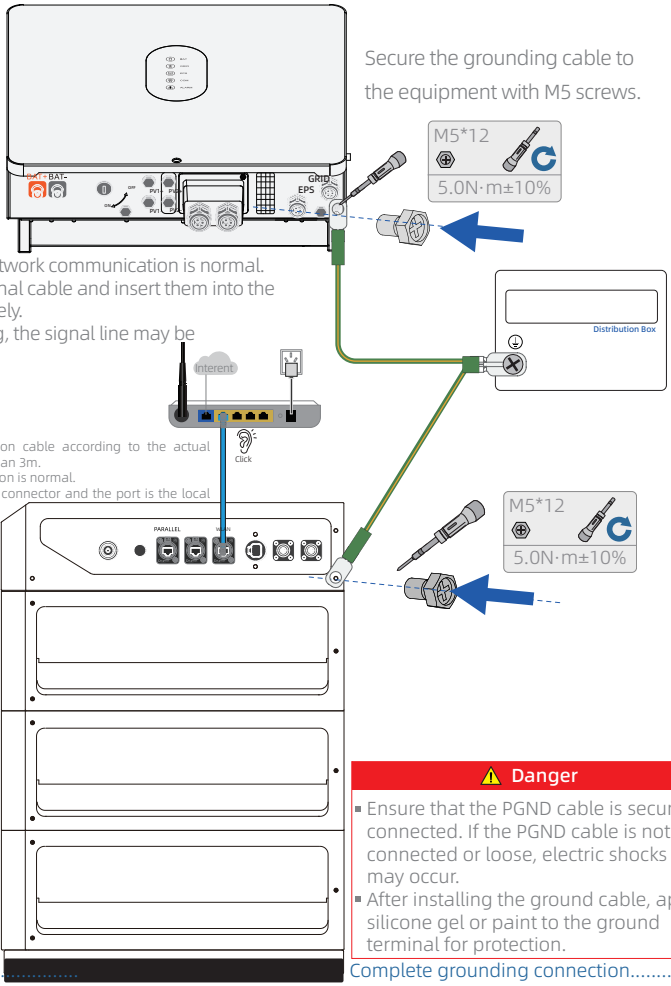
Delivered accessory

Grounding wire making



2.3 Battery Network Cables Connection

Self-prepared by the buyer



No.	Colour	WLAN
01	Orange-white	T568B
02	Orange	
03	Green-white	
04	Blue	
05	Blue-white	
06	Green	
07	Brown-white	
08	Brown	

Danger

- Ensure that the PGND cable is securely connected. If the PGND cable is not connected or loose, electric shocks may occur.
- After installing the ground cable, apply silicone gel or paint to the ground terminal for protection.

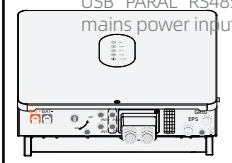
2.4 PCS and Battery Signal Line Connection
(Synchronously connecting CT)

⚠ Instruction

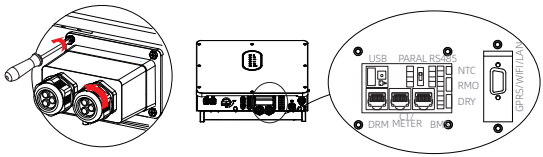
Delivered accessory — 4PIN Communication terminal — RJ45 — CT

N
L
Grid

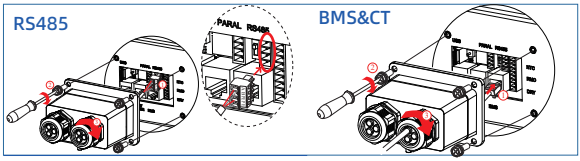
04 4During installation, theCT arrow faces towards the equipment(same direction USB PARAL RS485 as the mains power input).

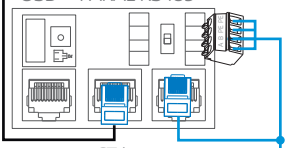


01 Remove the waterproof cover and loosen the rubber nut on the waterproof cover.



02 Make RJ45 and BMS terminals according to the functional description defined above for each pin. Thread the BMS cable through the rubber nut, seal, and waterproof cover in turn.

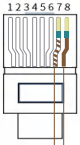




(RS485)4PIN communication terminal

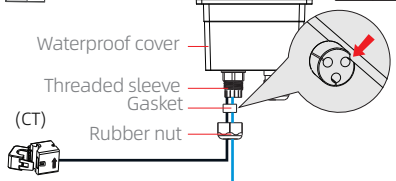
PIN	A	B	PE	PE
Function Description	485A-2 (PCS)	485B-2 (PCS)	PE	NC
Color	Orange	Orange white	NC	NC

(BMS)RJ45



No.	Color	BMS
01	NC	NC
02	NC	NC
03	NC	NC
04	NC	NC
05	NC	NC
06	NC	NC
07	Brown white	CAN2L(PCS)
08	Brown	CAN2H(PCS)

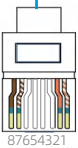
RS485_A
About 50mm is recommended

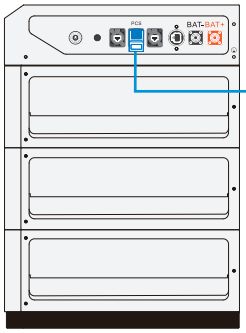


Standard cable 100M CAT5

(PCS)RJ45

No.	Color	PCS
01	Orange white	485B-2(PCS)
02	Orange	485A-2(PCS)
03	NC	485B-1(VPP)
04	NC	CAN1H
05	NC	CAN1L
06	NC	485A-1(VPP)
07	Brown white	CAN2L(PCS)
08	Brown	CAN2H(PCS)





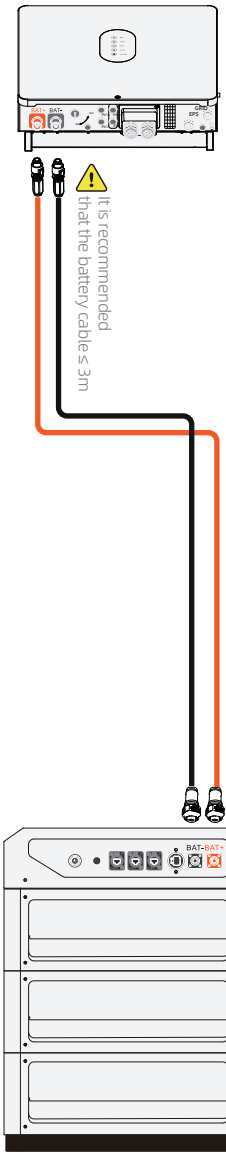
03 Insert the terminal into the appropriate port.
Screw the waterproof cover firmly back onto the inverter with four M4 screws (1.2N·m).
Install the seal into the threaded sleeve and tighten the rubber nut.

Complete PCS and battery signal line connection & CT connection.....

2.5 PCS and Battery Power Cable Connection

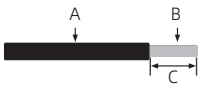
⚠ Warning

- Polarity reversal will damage the inverter!
- To reduce the risk of injury, the cables with recommended size.
- To avoid electric shock, please disconnect all DC circuit breakers on the battery side.
  This will ensure that the inverter can be safely disconnected during maintenance.



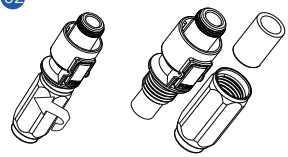
Making inverter plug

01



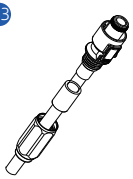
A. Diameter	10 ~ 12mm
B. Cross section	25mm²
C. Strip length	~10mm

02

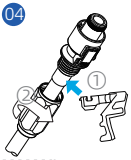


Instruction: Do not damage the core wires when peeling cables.

03

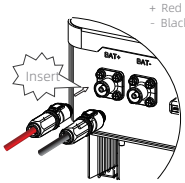


04



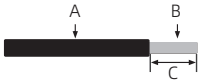
⚠ Hydraulic crimper
Select 25mm² size

05



Making battery plug

01

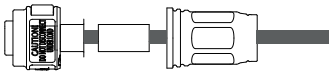


A. Diameter	10 ~ 12mm
B. Cross section	25mm²
C. Strip length	~10mm

⚠ Notice

Do not damage the core wires when peeling cables.

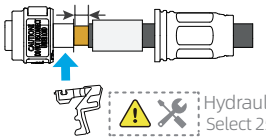
02 Select cables based on connector specifications and route them through the tail cover and seal (pay attention to the direction of the seal).



Plug body | Cable seal | Tail-cap | Cable

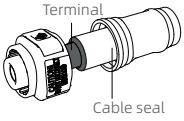
03 Insert the core wire into the crimp terminal and rivet it.

The bare core cable is less than 1mm

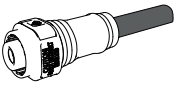


⚠ Hydraulic crimper
Select 25mm² size

04 Push the seal to the terminal position.



05 Push the tail cover to drive the seal to the thread, and use a wrench (1.0~1.5N.m) to secure the tail cover to the plug.



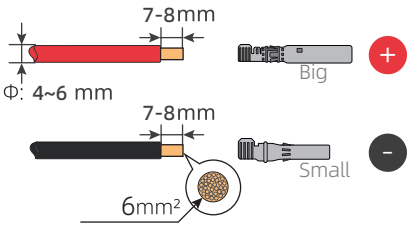
Complete PCS and battery power cables connection.....

2.6 PV-PCS Connection

⚠ Danger

- Ensure that the interface and polarity correctly connected during installation.Do not short-circuit the positive and negative terminals. Otherwise, the battery may be shortcircuited and the equipment may be damaged.
- Before connecting the PV, ensure that the parameters comply with the device requirements (product labels or product specifications).
- Any equipment damage or personal injury or death caused by knowingly connecting to a current that does not meet the equipment parameters is not covered by any warranty.

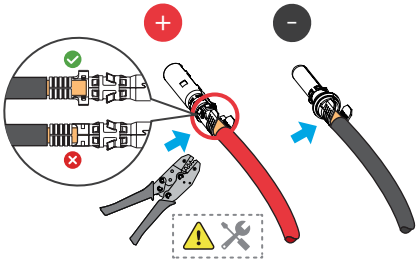
01



Instruction:

Delivered accessory - +

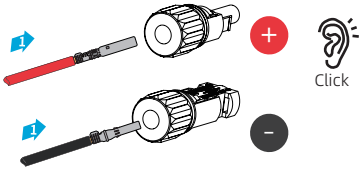
02



Instruction:

Harness crimping must be firmly in place.

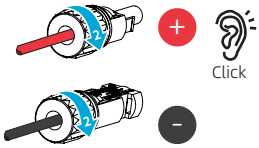
03



Instruction:

Insert the connector directly into place.

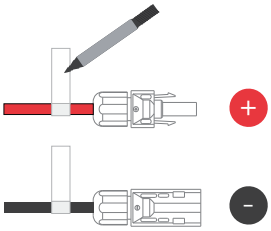
04



Instruction:

Screw the cover tightly to ensure the seal is waterproof.

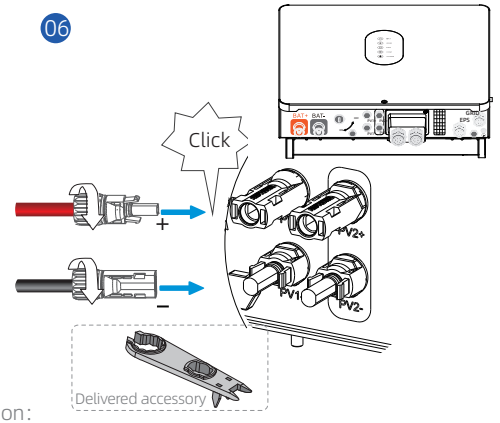
05



Instruction:

Label each harness to facilitate later maintenance.

06



Instruction:

For any unexpected insertion, please use the disassembly tool to carefully remove the plug.

Complete PV connection and the hardware installation.....

2.7 Home Circuit Rewiring (GRID & EPS Connection)

In order to supply power more safely and efficiently, it is recommended to redesign the household circuit during installation. Skip this procedure if circuit rewiring is not required. There are three methods for home circuit rewiring:

- Home circuit rewiring methods
  - Fixed power supply mode (The ALOE PRO-M is used to supply power. If the ALOE PRO-M fails, the power is cut off.)
  - Dual power suppliesmode
    - ALOE PRO-M Emitting Power mode (Daily power supply by ALOE-M. If the ALOE-M fails, the power supply automatically switches to the mains.)
    - Grid Emitting Power mode

Daily power supply by the grid. If the grid goes down, the power supply automatically switches to the ALOE PRO-M.

⚠ Danger

- This operation must be performed by a locally certified electrician.
- Before operation, please strictly abide by the "User manual", relevant international, national or regional standards, as well as industry-specific safety rules and practices.
- Do not perform any operation until the system is completely powered off.
- The total power of the load must be less than the total power of ALOE PRO-M. Overload will cause alarm or even automatic shutdown.

High power home appliances (only for reference)

Kettle	2kW	Microwave	1.5kW	Bath Heater	3kW	TV	0.3kW
Induction Cooker	3kW	Oven	2kW	Hairdryer	1.6kW	Air Conditioner	2kW
Refrigerator	2kW	Toaster	2kW	Electrical Water Heater	2kW	High-power Audio	1kW
EV Charging Pile	7kW						

⚠ Instruction

The materials needed for home circuit rewiring should be purchased by the user.
If home circuit redesign is not required, skip this procedure.

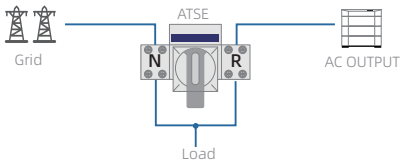
2.7.1 Dual Power Supplies Mode

⚠ Caution

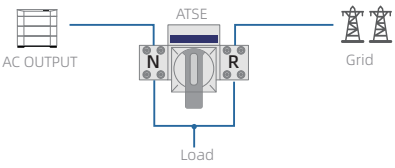
When installing an automatic converter of dual power supplies, set the converter switch to automatic mode.

⚠ Instruction

Dual power supplies mode includes grid emitting power mode and ALOE PRO-M emittting power mode.



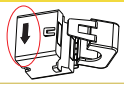
Grid emitting power mode



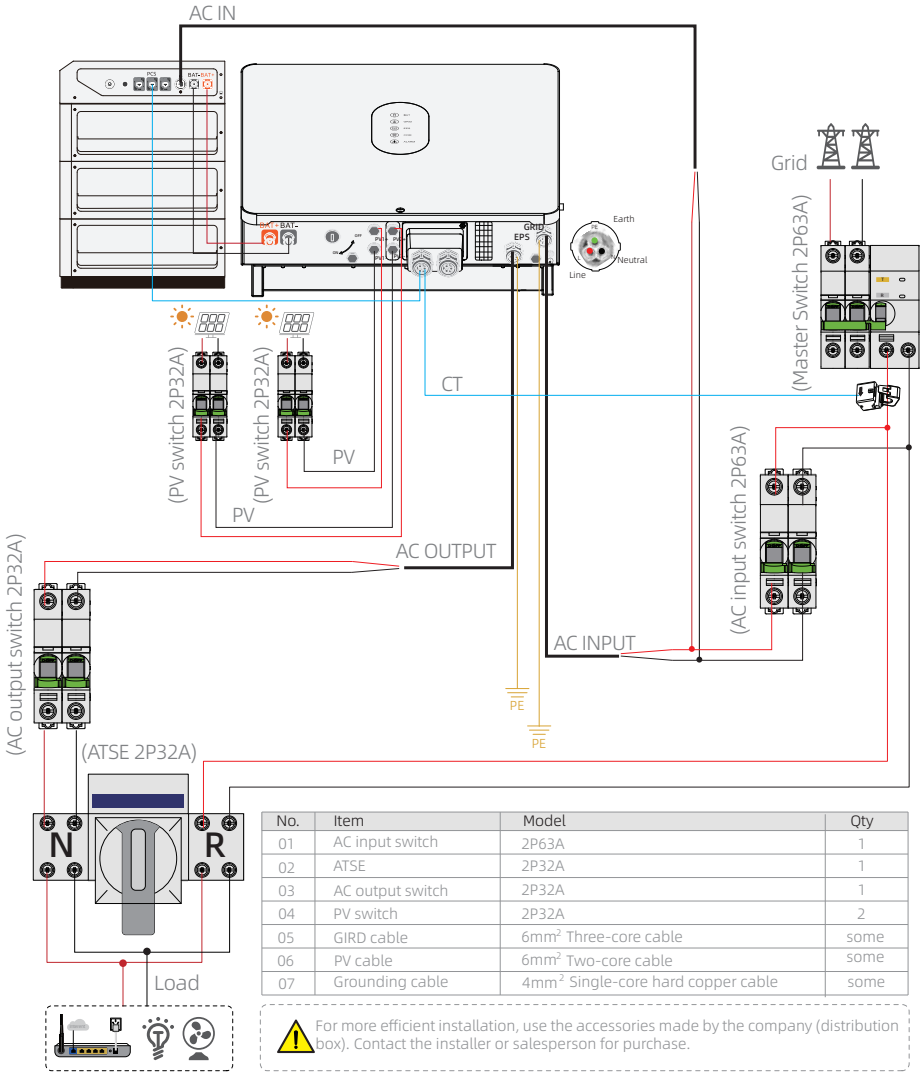
ALOE PRO-M emitting power mode

2.7.2 Dual Power Supplies Mode(The schematic diagram shows the ALOE PRO-M emitting power mode.)

⚠ Caution



When installing, please keep the CT arrow pointing towards the direction of the mains power input.



No.	Item	Model	Qty
01	AC input switch	2P63A	1
02	ATSE	2P32A	1
03	AC output switch	2P32A	1
04	PV switch	2P32A	2
05	GIRD cable	6mm² Three-core cable	some
06	PV cable	6mm² Two-core cable	some
07	Grounding cable	4mm² Single-core hard copper cable	some

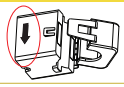
⚠ For more efficient installation, use the accessories made by the company (distribution box). Contact the installer or salesperson for purchase.

The total load power must be less than the total power of ALOE PRO-M. Overload will cause alarm or even automatic shutdown.

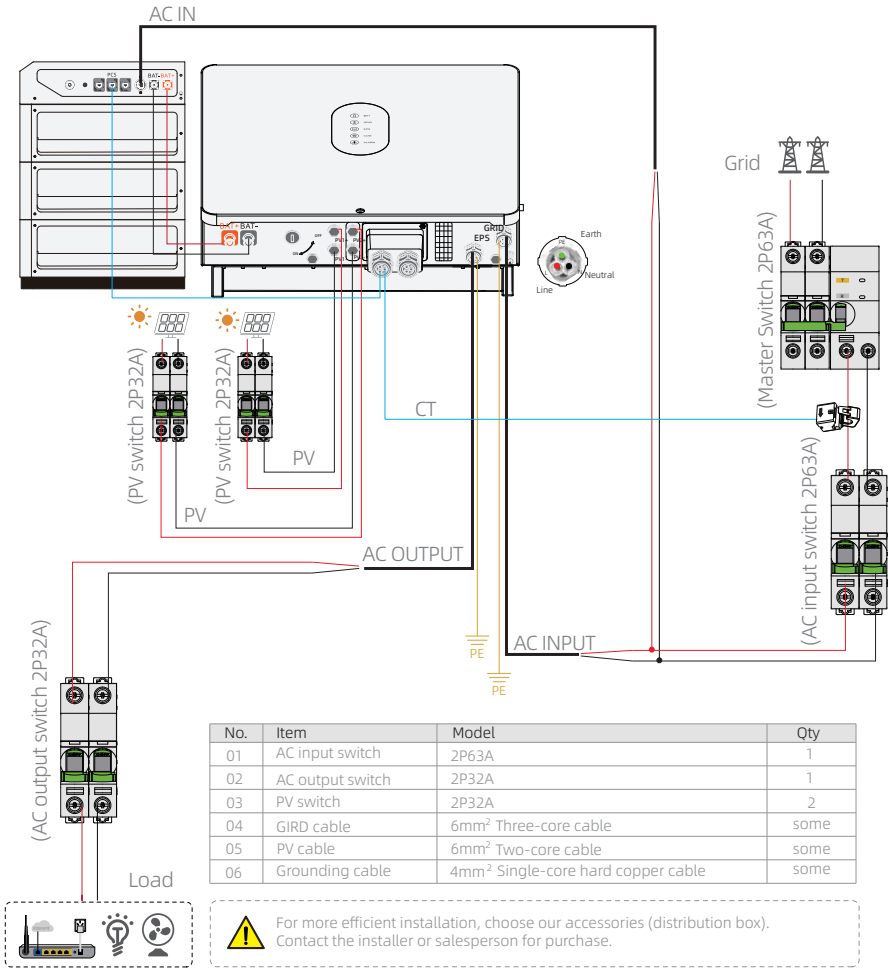
If the equipment stops frequently, check whether it is overloaded. Reduce loads for the equipment that stops running as a result of overload.

2.7.3 Fixed Power Supply Mode

⚠ Caution



When installing, please keep the CT arrow pointing towards the direction of the mains power input.



No.	Item	Model	Qty
01	AC input switch	2P63A	1
02	AC output switch	2P32A	1
03	PV switch	2P32A	2
04	GIRD cable	6mm² Three-core cable	some
05	PV cable	6mm² Two-core cable	some
06	Grounding cable	4mm² Single-core hard copper cable	some

⚠ For more efficient installation, choose our accessories (distribution box). Contact the installer or salesperson for purchase.

The total load power must be less than the total power of ALOE PRO-M. Overload will cause alarm or even automatic shutdown.

If the equipment stops frequently, check whether it is overloaded. Reduce loads for the equipment that stops running as a result of overload.

Home circuit rewiring completed.....

2.7.4 Home Circuit Rewiring (GRID and EPS connection)

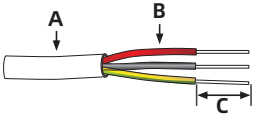
⚠ Danger

Before connecting the GRID/EPS terminals, ensure that the AC and DC terminals are powered off and the PV switch is turned off. Otherwise, there is a risk of high-voltage electric shock.

⚠ Instruction

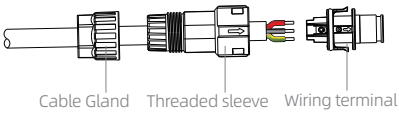
Step 1: Assemble the AC connector and plug the AC connector into the GRID/EPS port.

01 Use cables with multi-copper core designed for outdoor usage.

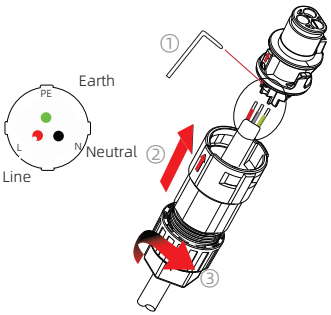


A. Diameter	14 ~ 20/10~14mm
B. Cross section	8~14/4~6mm²
C. Strip length	~10mm

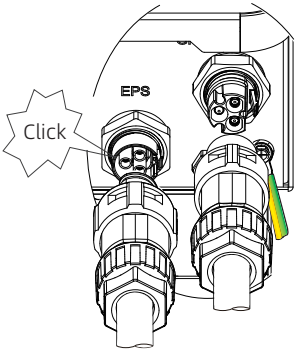
02



03 ①Tighten the three screws, ensuring that each nut does not exceed the surface.
②The cable cross-section is shown in the figure.
③Tighten the nut.



04



Step 2: Connect the AC circuit breaker. An AC circuit breaker should be installed between the inverter and the GRID/EPS.

a. Before connecting the inverter AC cable to the AC circuit breaker, ensure that the AC circuit breaker works properly. Keep the AC circuit breaker disconnected.
b. Connect the PE wire to the ground electrode, and connect the N and L wires to the AC circuit breaker.
c. Connect the AC circuit breaker to the GRID/EPS.

⚠ Caution

- Multiple inverters are not allowed to share one circuit breaker.
- No load is allowed between the inverter and the AC circuit breaker.

To ensure that the inverter can be safely and reliably disconnected from the grid, only one AC circuit breaker (≥50A) can be installed on the inverter GRID/EPS port.

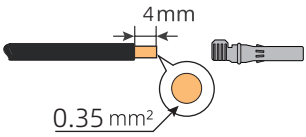
Inverter (GRID and EPS) connection completed.....

2.8 Battery AC IN Connection

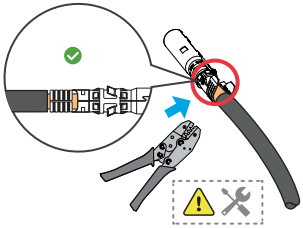
⚠ Instruction

AC IN connection, through optional, is recommended as the battery can stay discharge-ready even when the mains is available.

01 Peel the core wire.

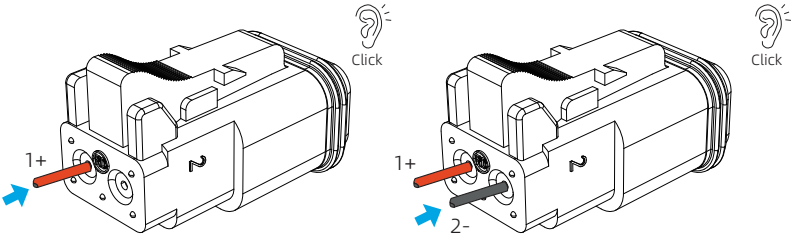


02 Insert the core wire into the terminal and rivet it in the crimping die.



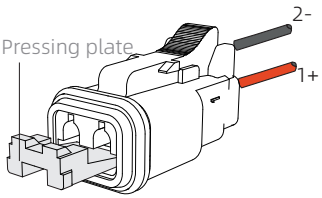
Notice:
Harness crimping must be firmly in place.

03 Push the terminal vertically into the connector. Pay attention to the position of the zero and fire lines.

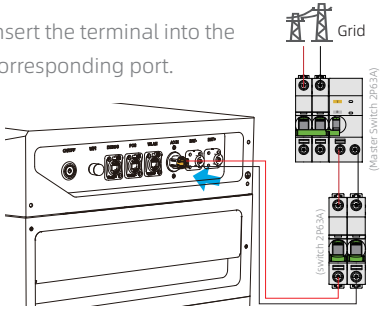


Notice:
When the crimped cable is inserted into the connector, a "click" sound is heard.

04 Push the platen and insert the platen completely.



05 Insert the terminal into the corresponding port.



Notice:
When the crimped cable is inserted into the connector, a "click" sound is heard.

AC IN connection completed, system installation completed.

3 Commissioning and Operation

⚠ Danger

- Please use special protective equipment and insulation tools to avoid electric shock or short circuit.
- Observe while powering on. If any abnormality is found, power off the battery immediately, pinpoint the cause, and power on after solving the problem.
- When the battery is disconnected for installation and commissioning or finishes discharging, please recharge the battery in time, otherwise it may be damaged due to overdischarge. Storing the batteries with low SOC may cause battery failure due to overdischarge. Please
- recharge the battery in time.

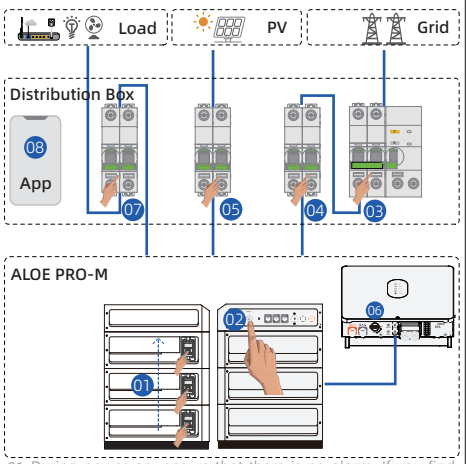
⚠ Warning

- Before powering on the equipment for the first time, the parameters shall be set correctly by professionals.
- Incorrect settings may lead to inconformity with the power grid requirements of the country/ region, impacting the normal operation of the equipment.

7.1 Inspection Before Power-on

- Switches: All switches in the household circuit and all switches connected to the energy storage system are in the "OFF" state.
- Grounding: The ground wire is connected correctly and firmly.
- Cable connection: AC output line, DC input line, power line and signal line are connected correctly and firmly.
- Cable layout: The cable layout is reasonable and tidy to meet the user's requirements.
- Binding of cable ties: The cable ties shall be evenly distributed, and no sharp corner shall be caused at the cut.
- Installation of energy storage system : The installation is correct, firm and reliable.
- Installation environment: The installation space is reasonable, the environment is clean and tidy, and there are no construction remnants.
- Unused terminals and connectors: Put waterproof covers on unused terminals and connec□tors.

3.2 System Power-on



01. During power-on, ensure that there is no alarm. If you find any problems, power off the system immediately. After troubleshooting, power on the system again.
02. You need to prepare the circuit breakers for the PV and distribution box. Please skip this procedure if PV and distribution box are not connected.
03. The state of the switch is as follows:

01 Turn on the protection switch for the battery from the bottom to the top.

02 Press the ON/OFF button, then the ON/OFF button, the BAT button, and the COM button all light up.

03 04 Turn on the switch for the grid input. The GRID button lights up.

05 Turn on the protection switch for the PV.

06 Switch the PV button to the "ON" position. The PV button lights up.

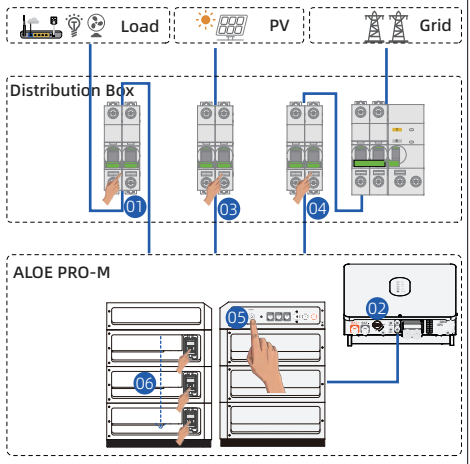
07 Turn on the switch for load output protection of the distribution box. The EPS button lights up.

08 Set up the internet connection for the APP.

3.3 System Power-off

⚠ Danger

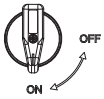
The system may still be energized after power-off. Wait 10 minutes for the system to be completely powered off before performing any operation.



01. You need to prepare the circuit breakers for the PV and distribution box. Please skip this procedure if PV and distribution box are not connected.

01 Turn off the switch for load output protection of the distribution box.

02 Switch the PV button to the "OFF" position. The PV button lights off.



03 Turn off the protection switch for the PV.

04 Turn off the switch for the grid input.

05 Press the ON/OFF button. The ON/OFF button lights off.

06 Turn off the protection switch for the battery from the top to the bottom. The PDU display screen and the inverter display screen light off.

4 APP Setting

4.1 APP Download

Method 1: Search for "PotisEdge" in Google App Store or Apple App Store to download and install.

Method 2: Visit the following link with your mobile browser to download:https://ipotisedge-file.s3.eu-central-1.amazonaws.com/h5/download.html#/pages/download/potisedge.

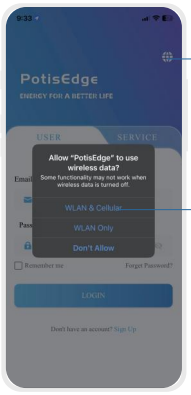
Method 3: Scan the QR code on the machine

⚠ Note

App download

- APP may require certain permissions, such as the location permission. When installing the APP or setting up your phone, grant all access to all pop-ups.
- Some prompt interfaces during App usage will not be shown in detail.
- Basic operations (for example, return to the home page after finishing setup) during the APP usage will not be shown in detail.
- Due to version iteration, some functions and interfaces are subject to change. Such changes will not be updated in the manual as long as the product usage is not affected.

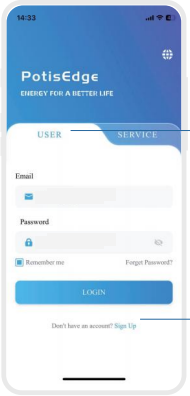
4.2 Registration and Log in



01.Language setting

02.Select authorization

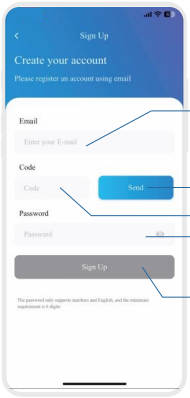
Select authorization according to actual situation



03.Select login identity

04. Start to sign up

Log in directly if already signed up



05.Enter your email
Used to accept CAPTCHA and later reset passwords

06.Click "Send"

07.Enter the code you have received

08.Set a 6-18 digit combination password

09.Click "Sign Up"

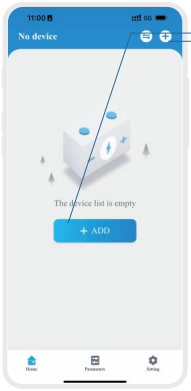
10.Enter your registered email address

11.Enter the password

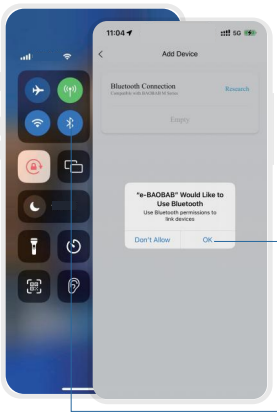
Reset the password if forgotten

12.Click to log in

4.3 Connecting the device to the network



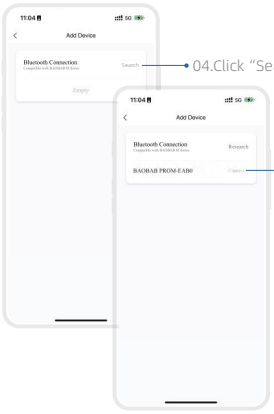
01.Clcik “+” or “+ADD” to add new device



02.Grant your bluetooth permission

03.Turn on the bluetooth and approach the machine

If Bluetooth is not turned on, please turn it on;
If Bluetooth is already on, please ignore this step



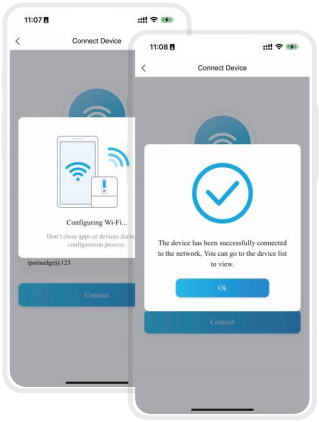
04.Click “Search”

05.Click “Connect”

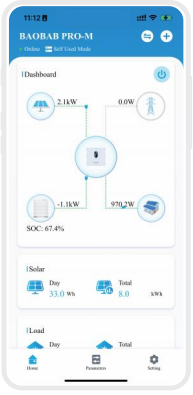
06.Enter your WiFi password

07.Click “Connect”

By default, the WiFi connects to the WiFi signal that the phone is using.
If you need to connect to the specified WiFi, connect the phone to the specified WiFi.

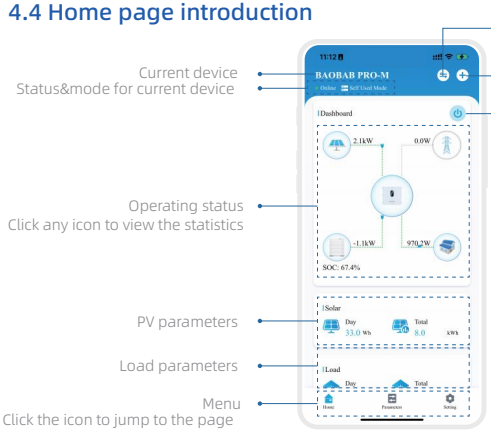


The device is connecting. Please wait 60 s to 120 s.
If the connection fails, quit to reconnect or change the WiFi singal ro reconnect.



The device has finished connection and jumps to the “Home” page automatically.
The device is ready for operation.

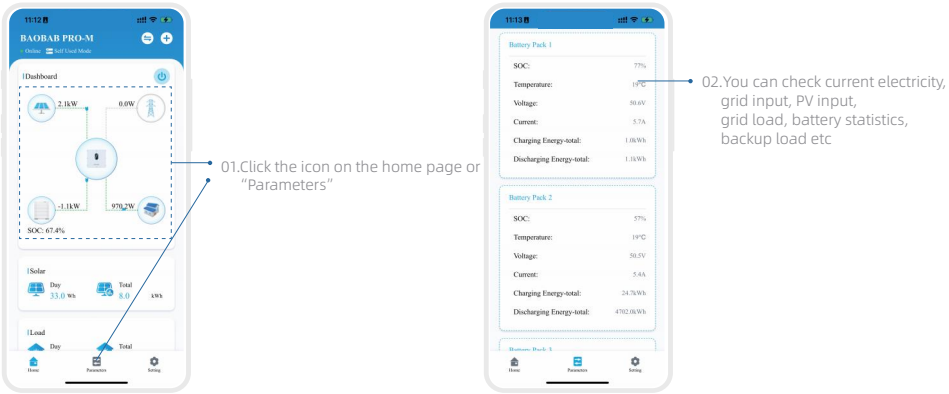
4.4 Home page introduction



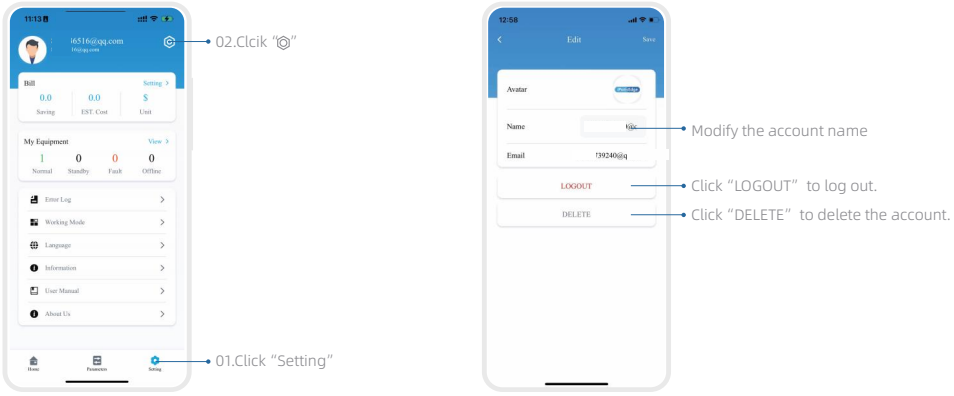
Danger

- Do not start the remote control until you have completed the installation and checked for correctness.
- The machine is still electrified after power-off. After disconnecting the inverter from all DC and AC power sources, wait at least 10 minutes before disconnecting the air switch from all battery cabinets.

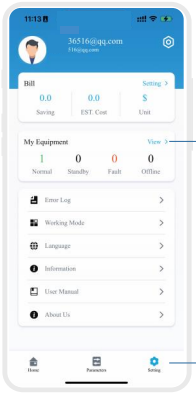
4.5 Viewing the parameters

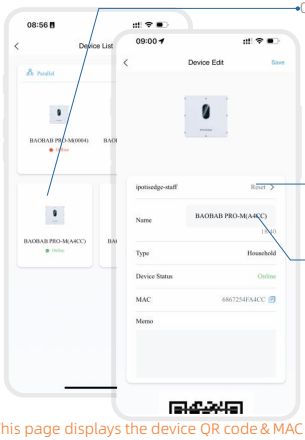


4.6 Setting up and deleting the account



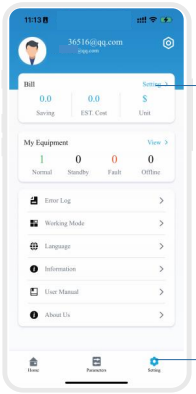
4.7 Checking product information

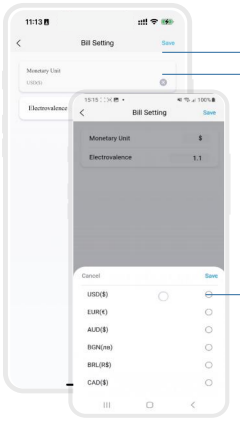




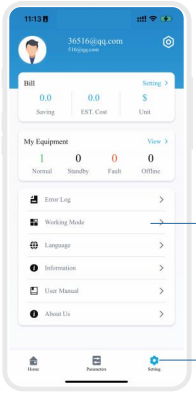
This page displays the device QR code & MAC
(This code is required for installer during installation and remote troubleshooting)

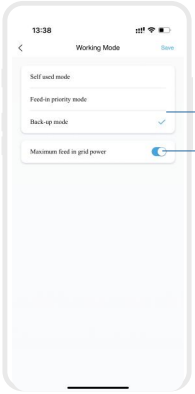
4.8 Setting up currency and unit price per kWh



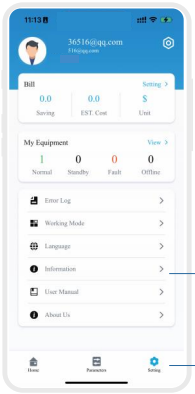


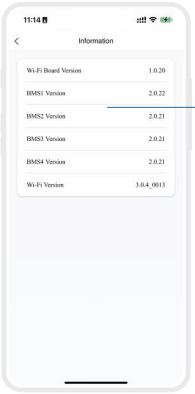
4.9 Setting up working mode



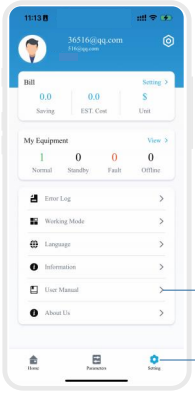


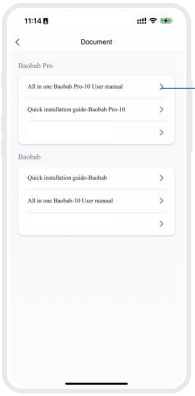
4.10 Checking the version





4.11 Viewing the user manal





4.12 Upgrading the software