

US Series Energy Storage System

Quick Installation Guide

Issue: V1.4b
Date: 2025-04-17

FOXESS CO., LTD.



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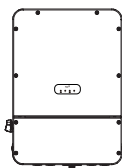
2. Only certified electricians are allowed to operate the device. Operation personnel must wear proper personal protective equipment (PPE).

3. Before installing the device, check that the package contents are intact and complete against the packing list. If any damage is found or any component is missing, contact your dealer.

4. The device damage caused by the violation of instructions in this document is not covered under warranty.

1 Packing List

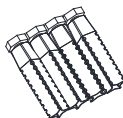
1.1 Hybrid Inverter Package Box



A



B



C



D



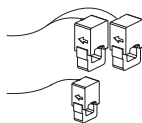
E



F



G



H



I

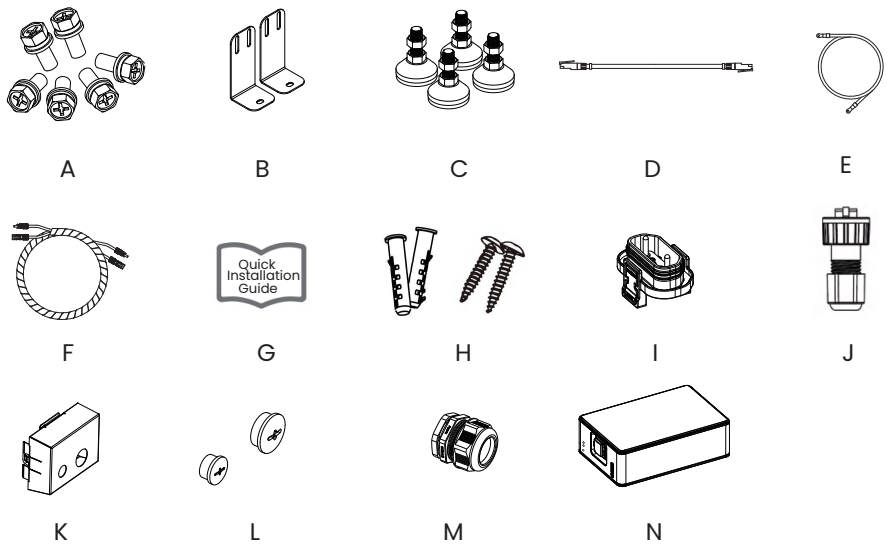
WARNING: THIS SENSOR IS PART OF A POWER CONTROL SYSTEM. DO NOT REMOVE.

J

OBJ	QTY	DESC	OBJ	QTY	DESC
A	1	Inverter	F	1	E-STOP
B	1	Bracket	G	1	Smart WILAN
C	4	Expansion Bolt M8*60	H	3	Current Transformer (1*100A, 2*250A)
D	1	Set Screw	I	1	Cable Sticker
E	1	Quick Installation Guide	J	1	Label (stuck near the CTs)

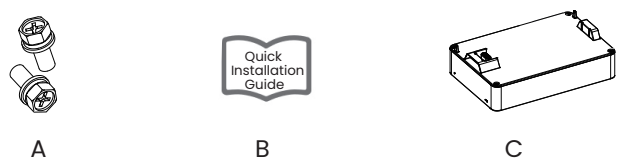
1.2 Battery Package Box

For CM :



OBJ	QTY	DESC	OBJ	QTY	DESC
A	6	Set Screw	H	4	Expansion Tube & Expansion Screw
B	2	Fixing Bracket	I	1	Waterproof Cover
C	4	Footstand	J	1	RJ45
D	1	Communication Cable (BMS-inverter) (9.8ft)	K	1	Junction Box
E	1	Grounding Cable (9.8ft)	L	2	Plug
F	1	DC Output Cable (9.8ft)	M	1	Cable Gland
G	1	Quick Installation Guide	N	1	CM

For CS :

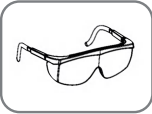


OBJ	QTY	DESC	OBJ	QTY	DESC
A	2	Set Screw	C	1	CS
B	1	Quick Installation Guide			

NOTE: This manual takes the ECS4000 series battery as an example. Always refer to the actual product and its quick install guide.

2

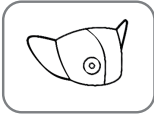
Required Tools



Safety Goggles



Steel Toe Boots



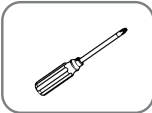
Dust Mask



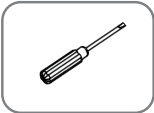
Helmet



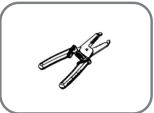
Insulating Gloves



Phillips-Head Screwdriver



Flat-Head Screwdriver



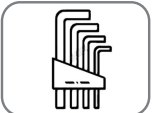
Wire Stripper



Electric Drill



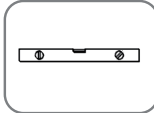
Adjustable Wrench



Hex Wrench Set



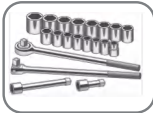
Hole Punch



Level



Tape



Sleeve



Multimeter



Phone

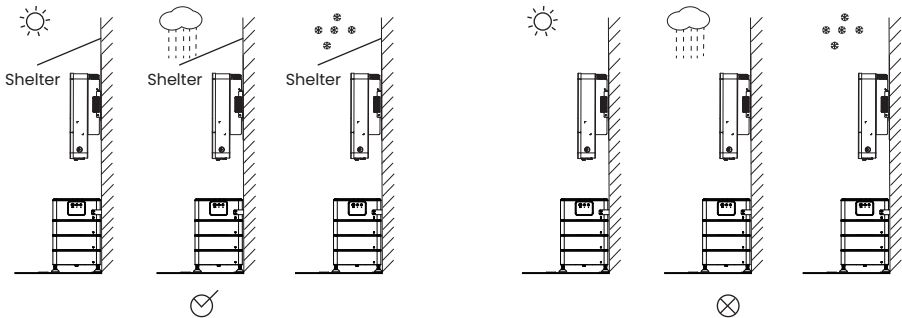
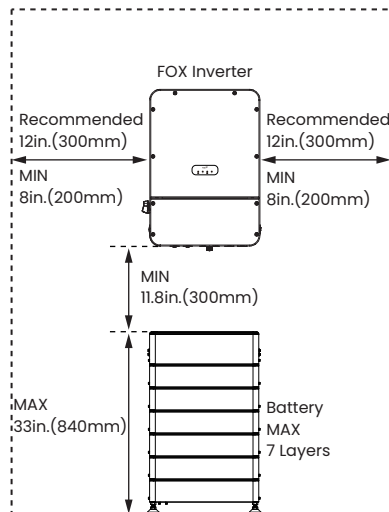
**DANGER:**

Special care must be taken to protect personal safety.

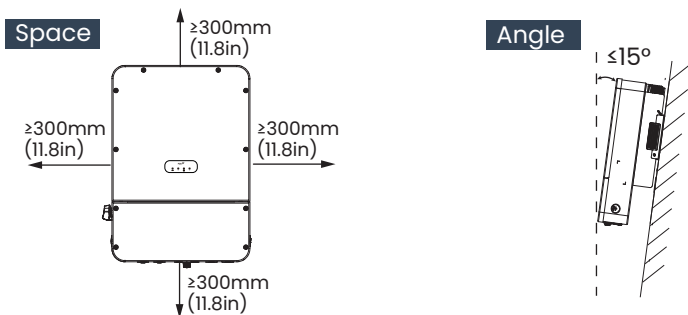
PPE must be worn during transfer and installation.

**WARNING:**

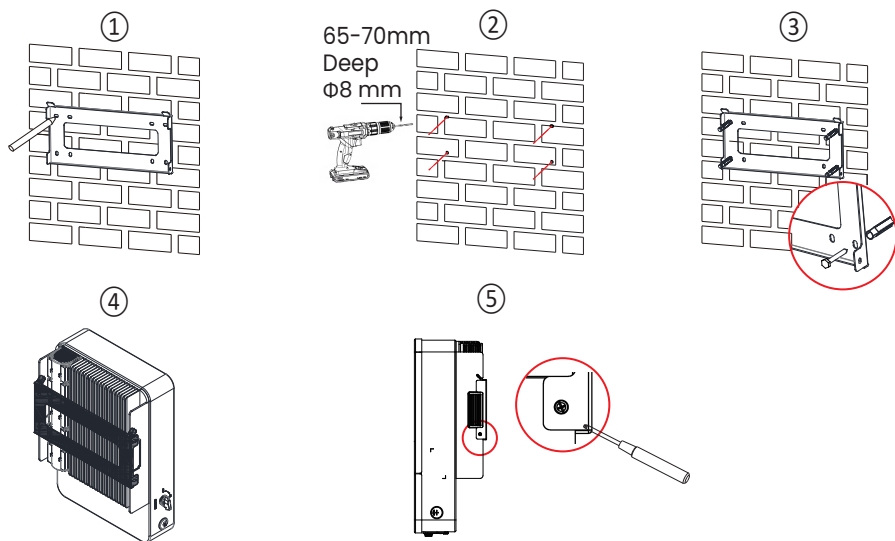
Please use proper protective measures, such as foam or protective cloth, keep the inverter well protected from hard objects that may damage their exterior appearance or body during handling and installation.

3**Installation Steps****3.1 Installation Environment****3.2 System Installation**

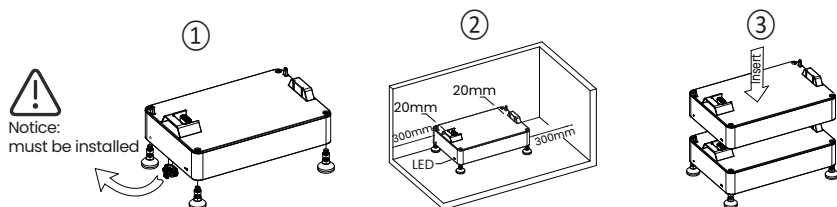
3.3 Inverter Installation

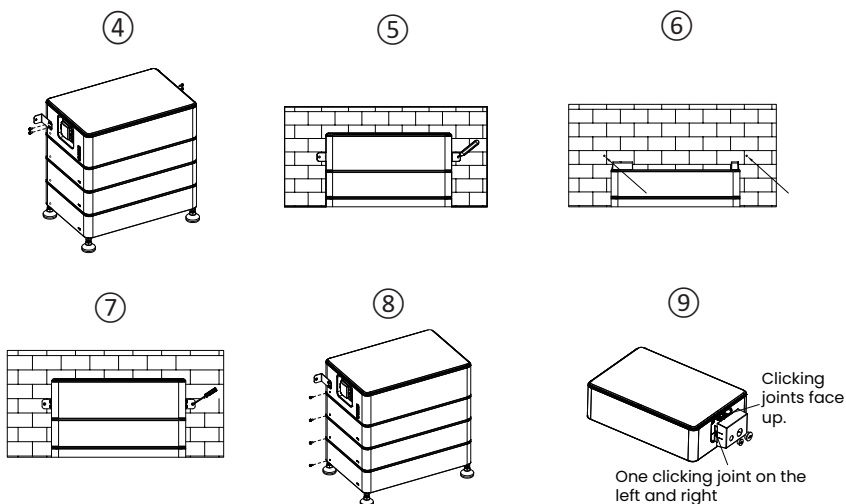


Steps



3.4 Battery Installation



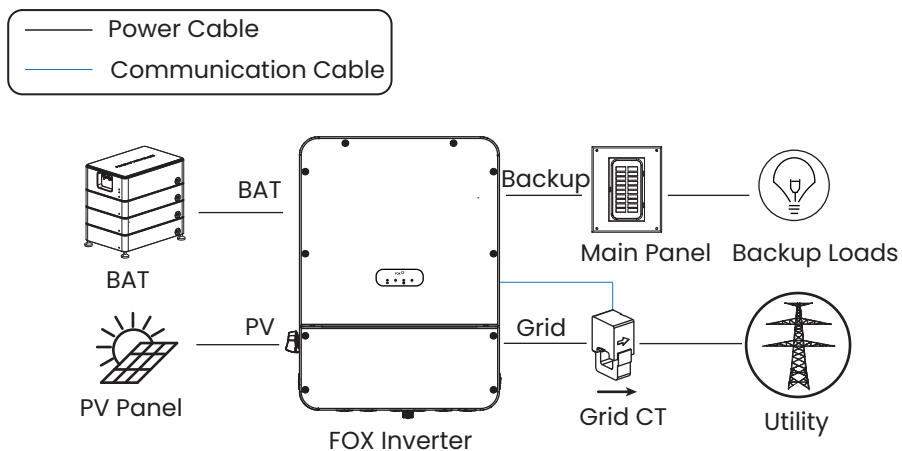


NOTE: This manual takes the ECS4000 series battery as an example. Always refer to the actual product and its quick install guide.

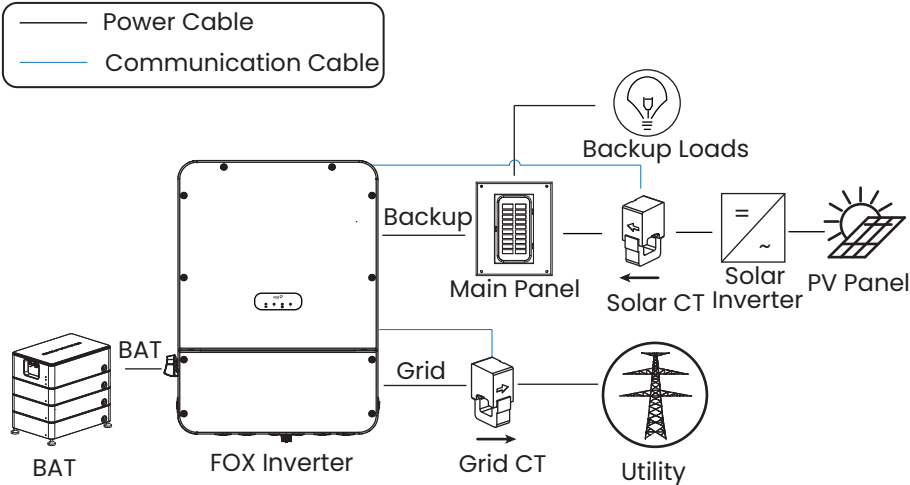
4 System Wiring Diagram

4.1 Whole-home Backup

Whole-home Backup (DC Couple)

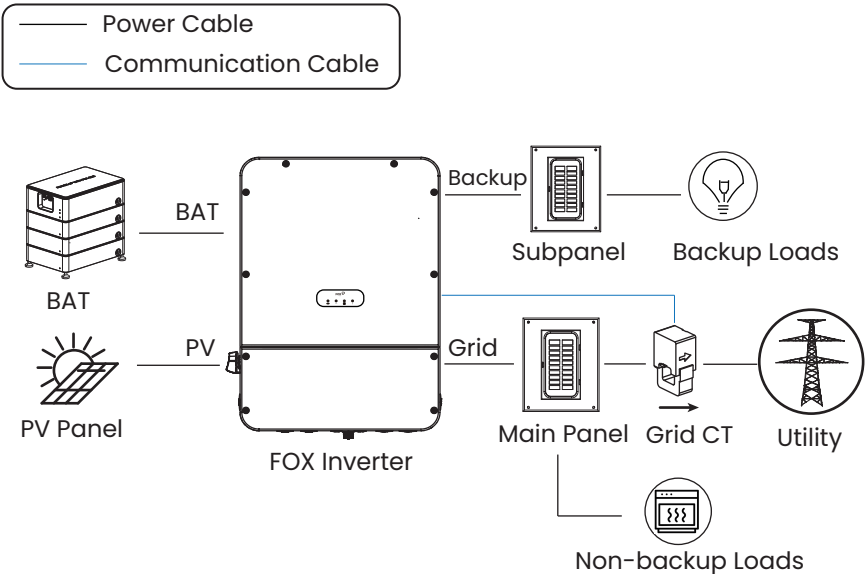


Whole-home Backup (AC Couple)

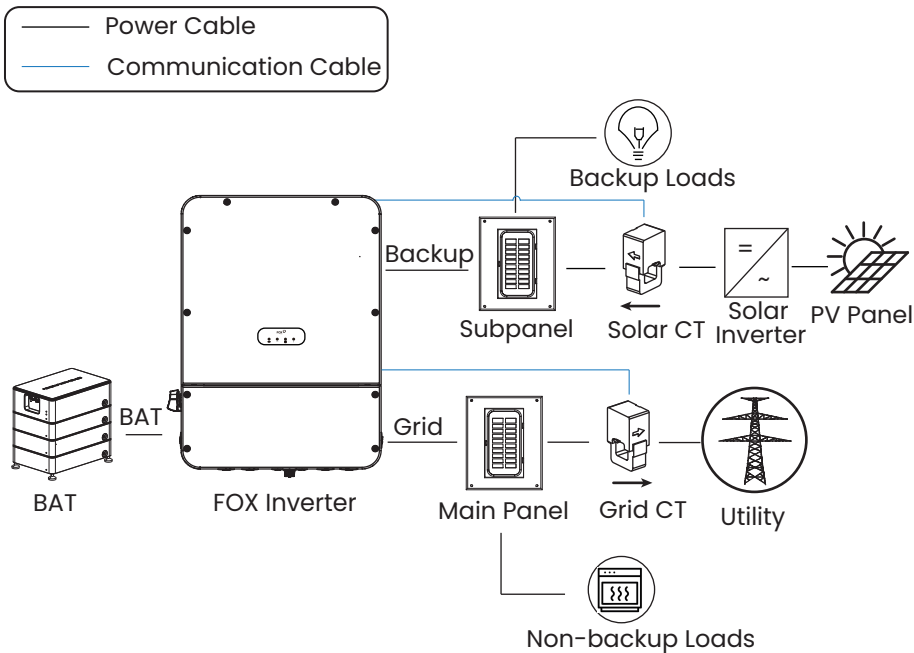


4.2 Partial-home Backup

Partial-home Backup (DC Couple)



Partial-home Backup (AC Couple)



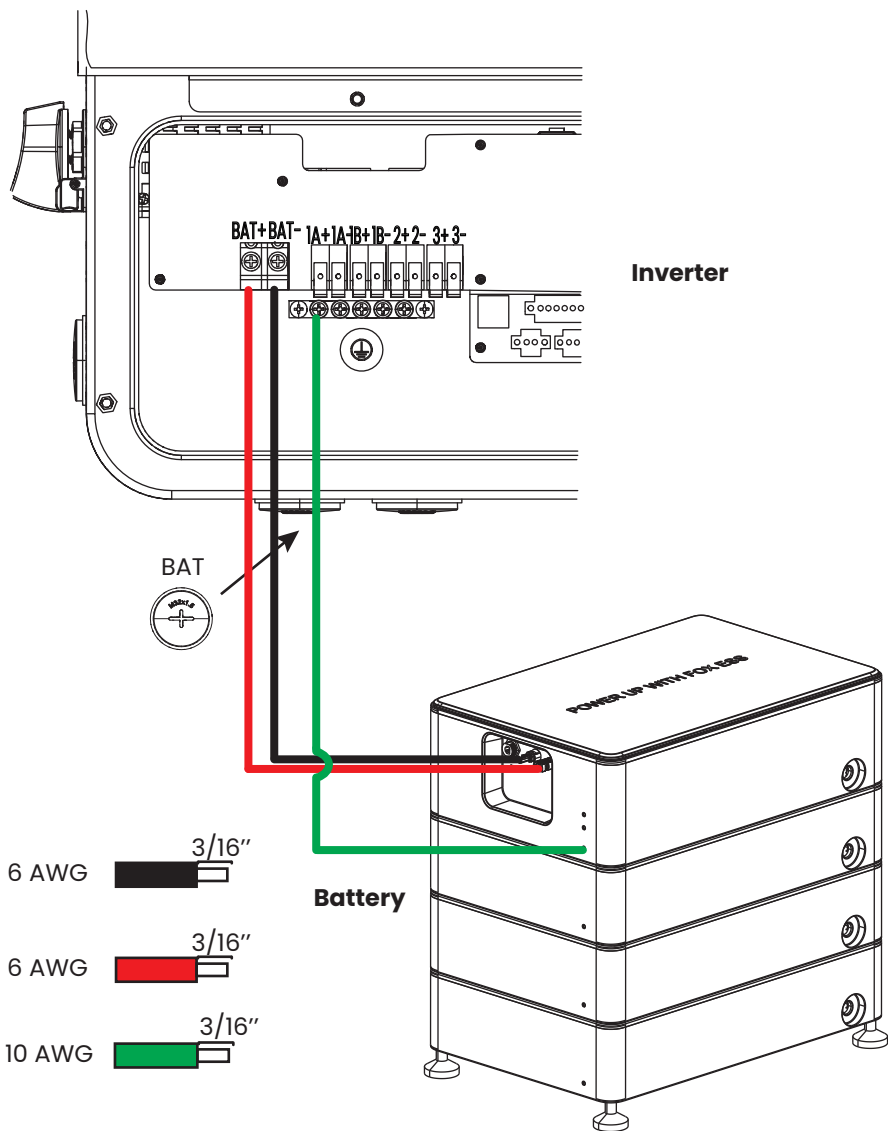
5 System Wiring Steps

5.1 Size of Conduit and Cable Gland

Inverter			
Cable Marker	Max. Cable Diameter	Conduit	Gland
L1	6 AWG	EMT 3/4"	M32
L2	6 AWG		
N	6 AWG		
PE	6 AWG		

5.2 Inverter Power Cable Wiring

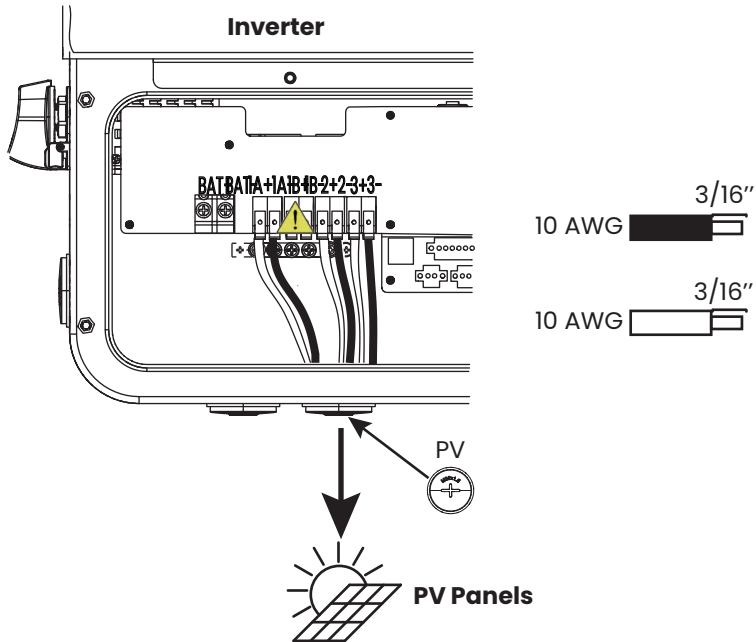
- The battery Connections to the inverter



NOTE: This manual takes the ECS4000 series battery as an example. Always refer to the actual product and its quick install guide.

- The PV Panels Connections to the Inverter

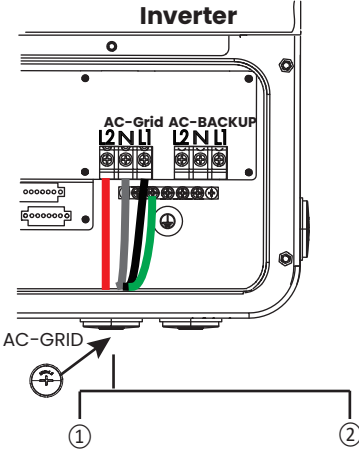
Turn off the DC switch before connection.



If there are ≤ 3 PV strings, 3 PV strings are preferentially connected to terminals 1A+, 1A-, 2+, 2-, 3+, 3-.

If there are 4 PV strings, the number of PV panels connected to terminals 1A+, 1A- need to be the same as that connected to terminals 1B+, 1B-.

• The Utility Connections to the Inverter



L1:	
6 AWG	3/4"
L2:	
6 AWG	3/4"
N:	
6 AWG	3/4"
PE:	
6 AWG	3/4"

Whole-home Backup Partial-home Backup

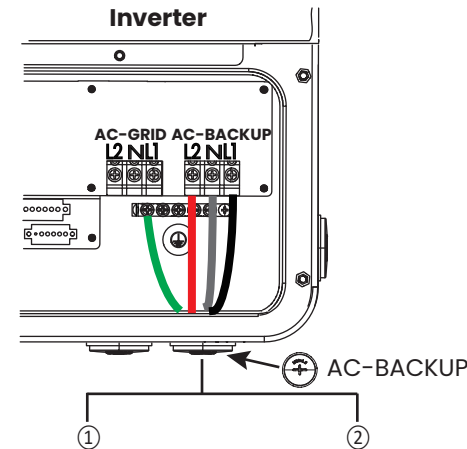


To Utility



To Main Panel

• The Backup Loads Connections to the Inverter



L1:	
6 AWG	3/4"
L2:	
6 AWG	3/4"
N:	
6 AWG	3/4"
PE:	
6 AWG	3/4"

Whole-home Backup Partial-home Backup



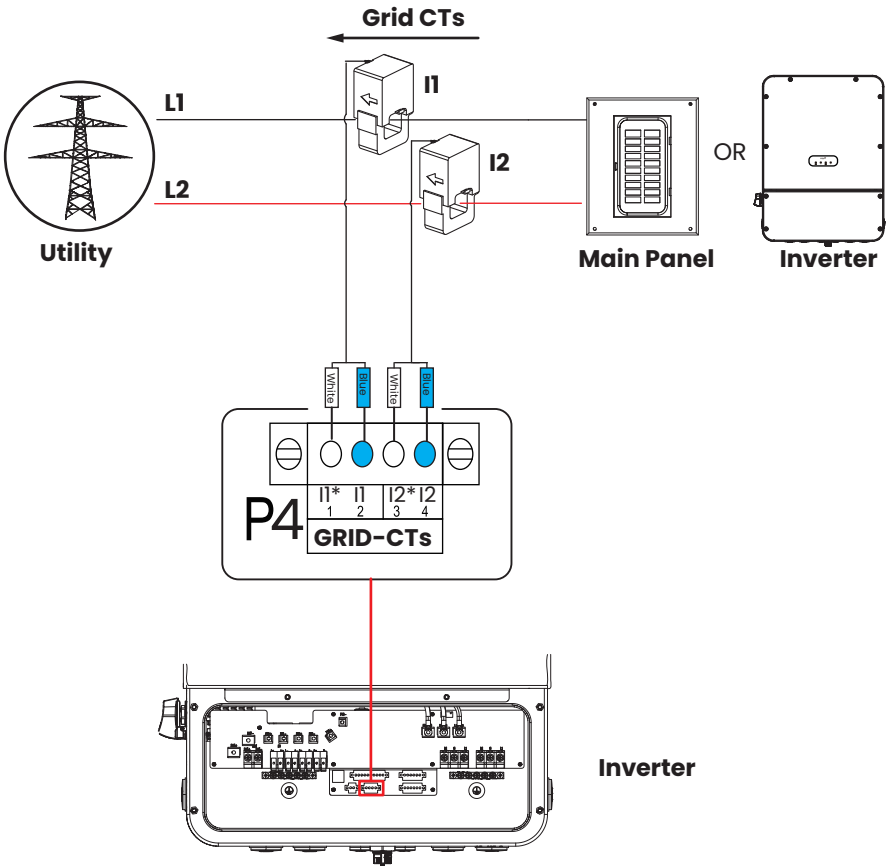
To Main Panel



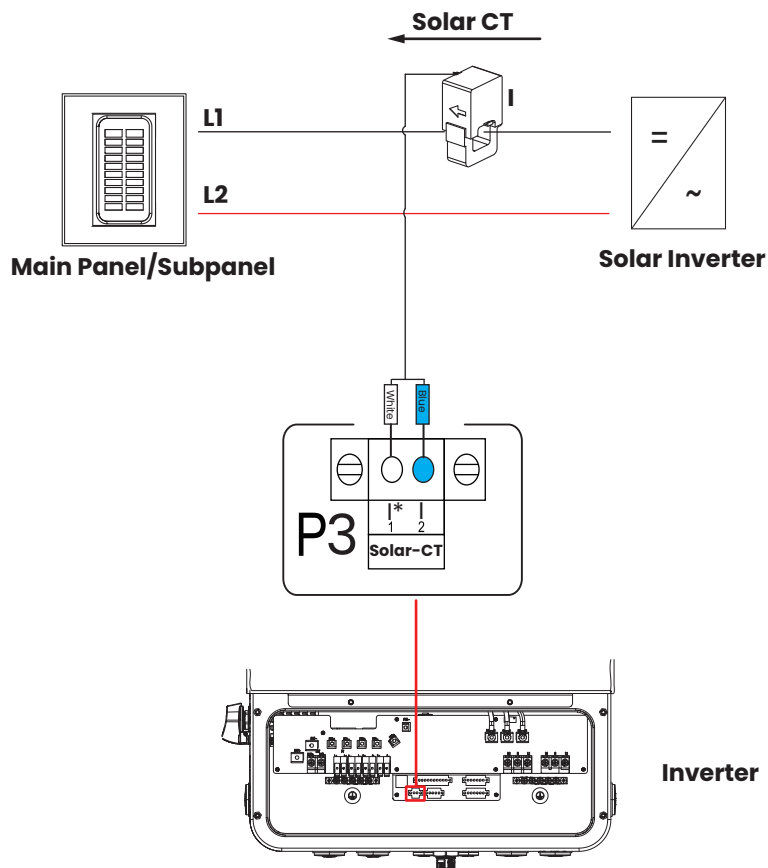
To Subpanel

5.3 CT Wiring

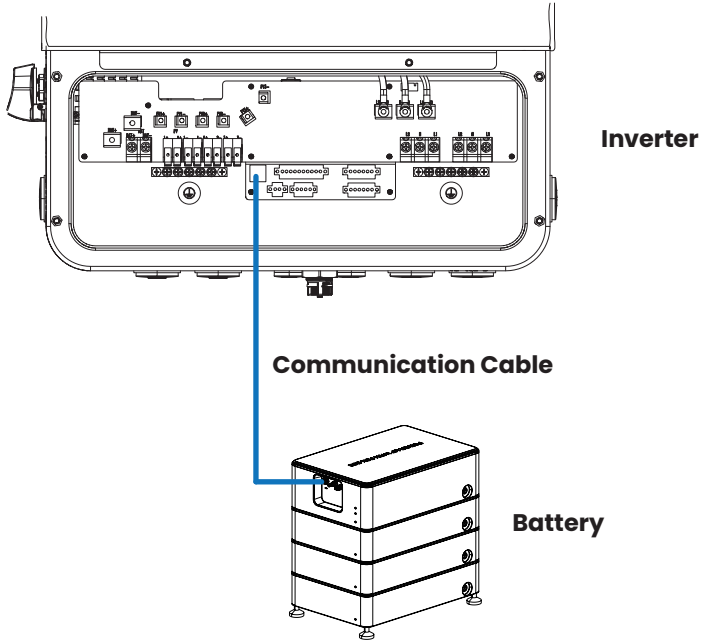
- Grid CT Wiring



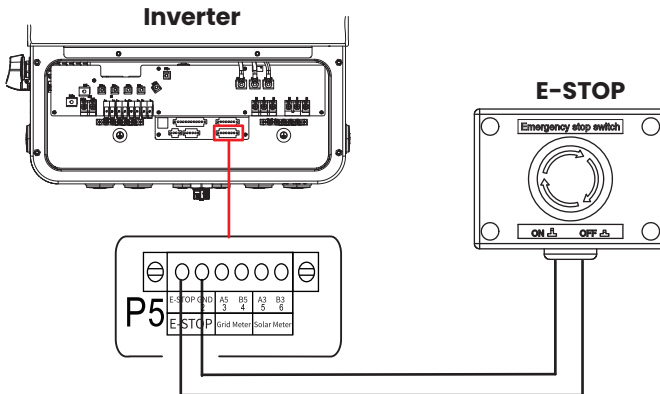
- Solar CT Wiring (Optional)



5.4 Battery Communication Wiring



5.5 E-STOP Wiring



Step 1: remove the jumper on the P5 socket.

Step 2: connect the pins 1 and 2 of the P5 socket to the E-STOP.

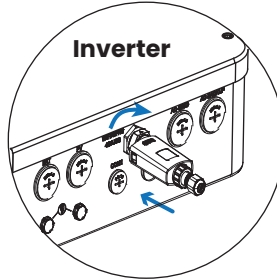
NOTE:



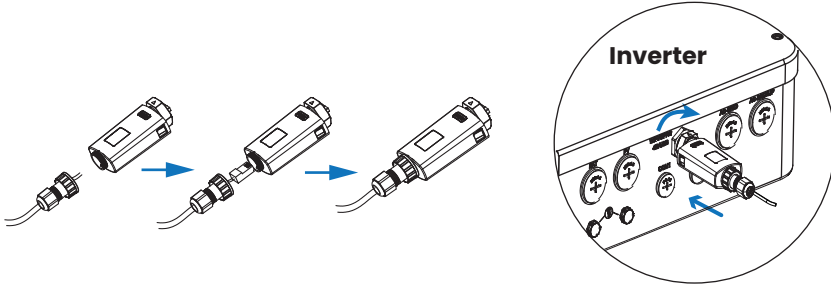
Do not remove the jumper at the P5 socket if E-STOP is not used.

5.6 Smart WiLAN Connection

- WiFi Installation: connect the Smart WiLAN to the **inverter**.



- LAN Installation: insert the network cable into the Smart WiLAN, and connect the Smart WiLAN to the inverter.



6

System Turn on

Please refer to the following steps to switch on the system.

1. Ensure all cables are connected properly.
2. Turn on the PV/DC switch on the inverter (Only for New System), and AC breakers.
3. **Battery without heating function:**
 - (Case 1) **Normal mode:** When there is PV and grid access,
 - Turn on DC switch of the battery.
 - Press "POWER" button of the battery.
 - (Case 2) **Black Start:** When there is no PV and grid access,
 - Turn on the DC switch of the battery.
 - Press the "POWER" button of the battery.
 - Press and hold the "B-Start" button within 30 seconds of the last step, releasing it after 10 seconds.

Battery with heating function:

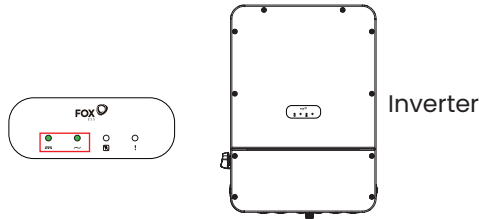
- (Case 1) **Normal mode:** When there is PV and grid access,
 - Turn on DC switch of the battery.
 - Press and hold "POWER" button of the battery for 3 seconds, and then

release.

(Case 2) **Black Start:** When there is no PV and grid access,

- Turn on the DC switch of the battery.
- Press and hold the "POWER" button of the battery for 3 seconds, and then release.
- Press the "POWER" button for 3 times within 4 seconds (completed within 30 seconds of the last step).

4. Check if green lights on the inverter are solid on.



In case you need to turn off the system, please refer to the following steps:

1. Turn off the PV/DC switch, AC breakers and off-grid breaker.

2. **Battery without heating function:**

- Press the "POWER" button of the battery.

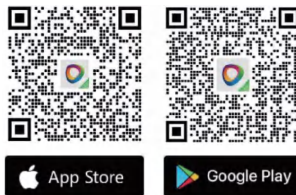
Battery with heating function:

- Press and hold the "POWER" button of the battery for at least 5 seconds until all Master LEDs (BMS/SOC) blink.

3. Wait 5 minutes before opening the upper cover of the inverter for repair.

7 Commissioning

Step 1: scan the QR code to download FoxCloud2.0 app and download the app.



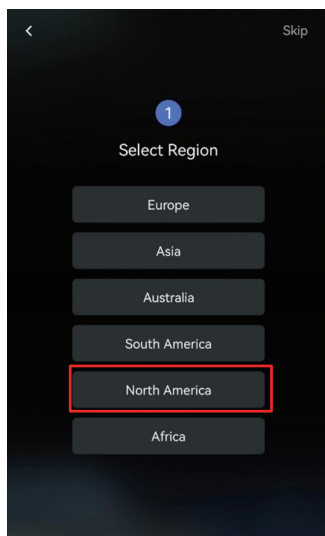
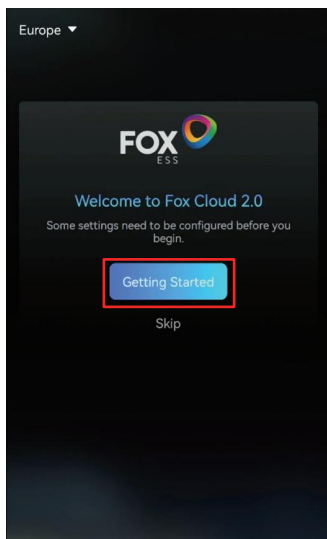
After the app is installed, the FoxCloud2.0 icon is displayed on the home screen.



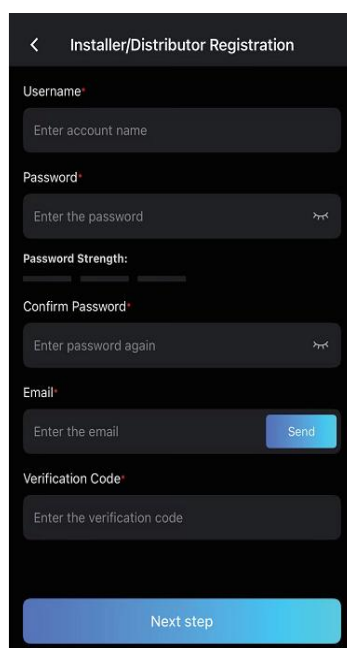
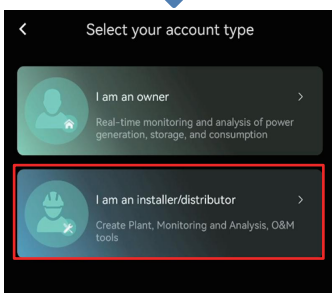
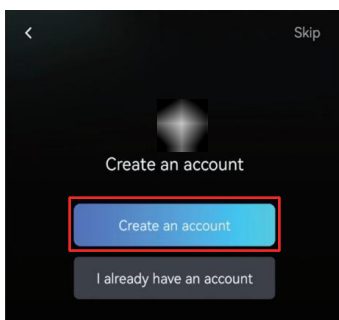
FoxCloud2.0

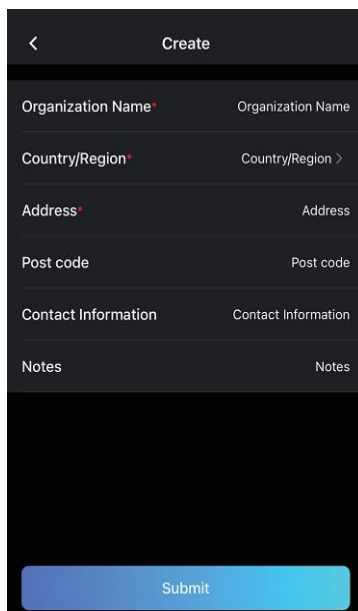
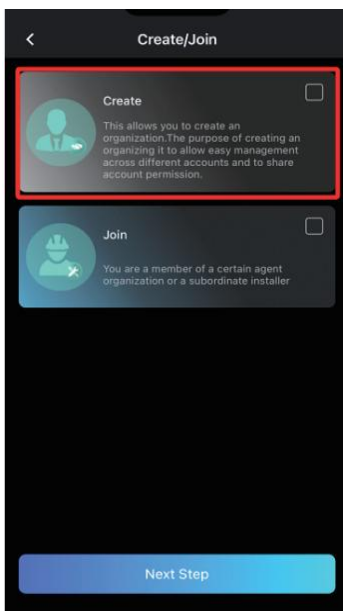
Step 2: Initial App Configuration (First Download Only)

- Tap **"Getting Started"**, select **"North America"**.

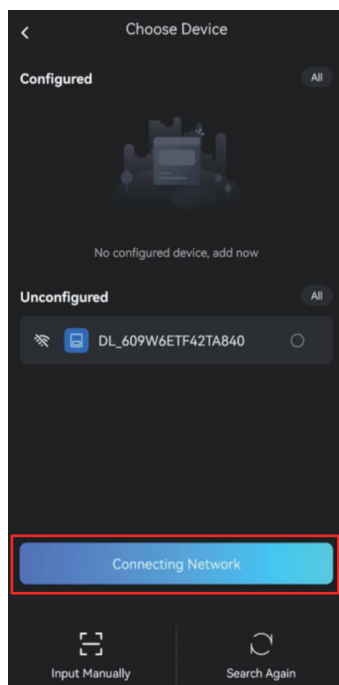
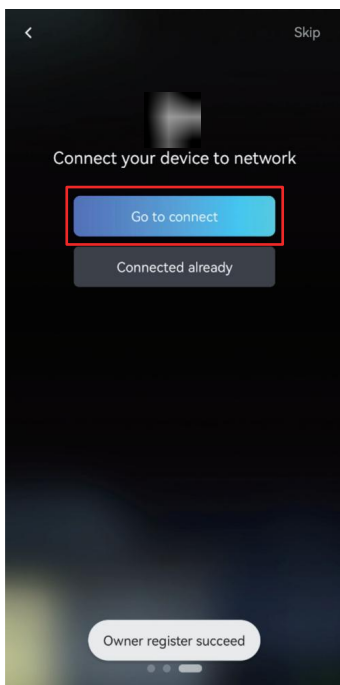


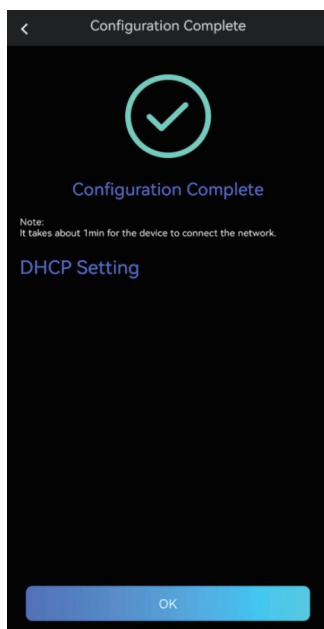
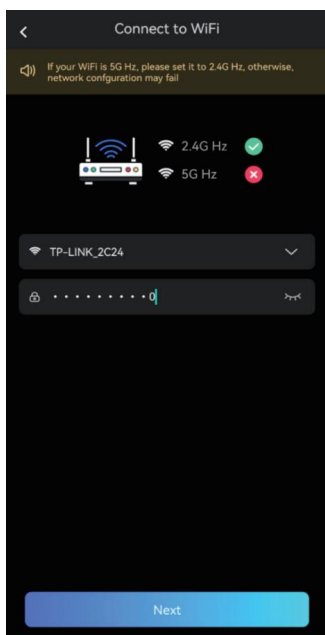
- Create an account.
For installers/distributors



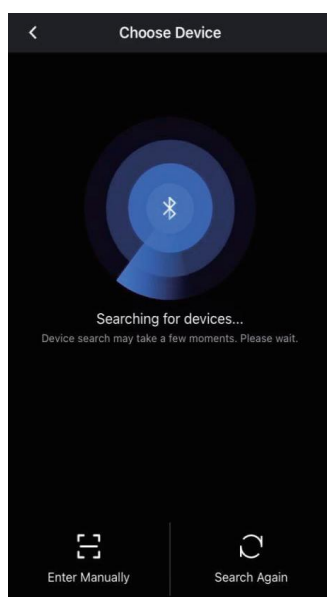
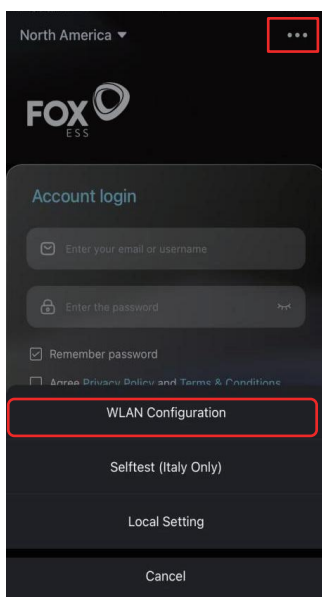


- Connect to the network. Turn on the Bluetooth of your phone in advance.

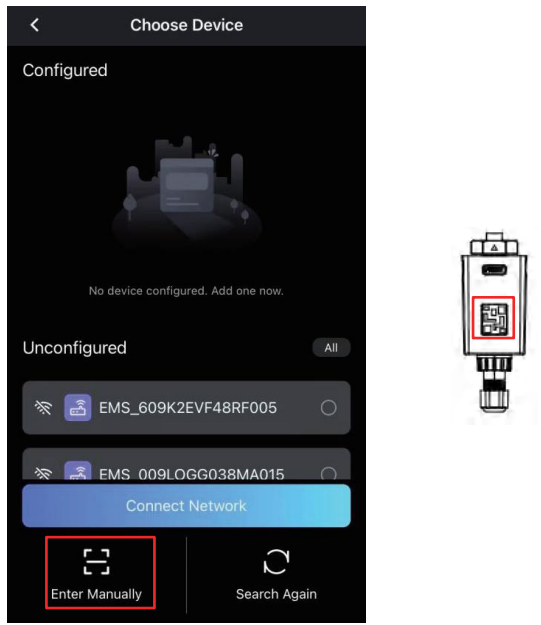




Step 3: Tap "...", select **"WLAN Configuration"**.



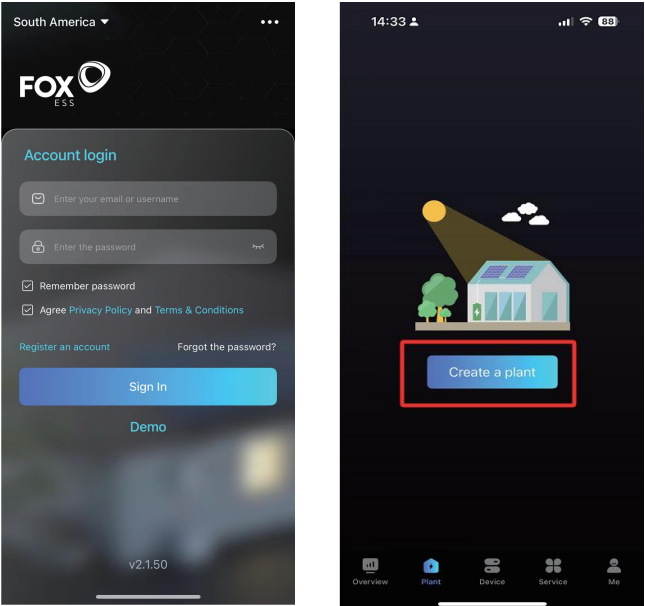
Or, manually enter the SN code on the Smart WiLAN.



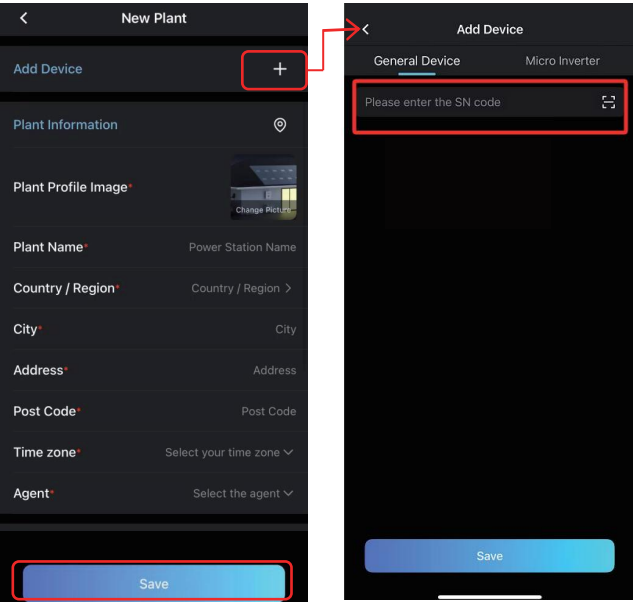
Light indication on the Smart WiLAN

Indicator	Status	Instructions
Red light	Blinking	Not connected to the server
	Solid on	Connected to the server
Green light	Blinking	Data transmission

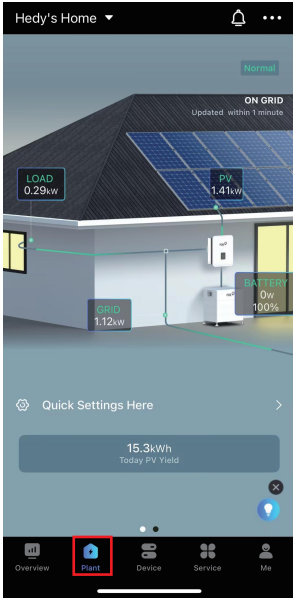
Step 4: Sign in the installer's account. Tap **"Create a plant"**.



Scan the QR code on the Smart WiLAN or enter the SN code, and fill the information.



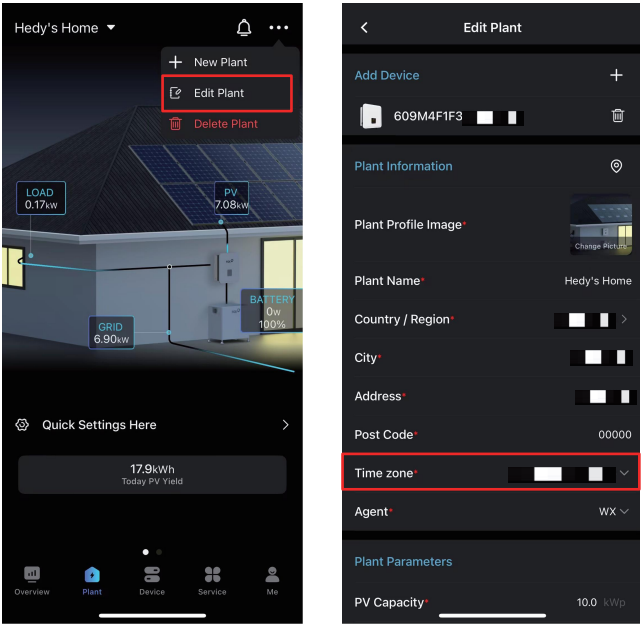
Step 5: Check system performance on “Plant” dashboard.



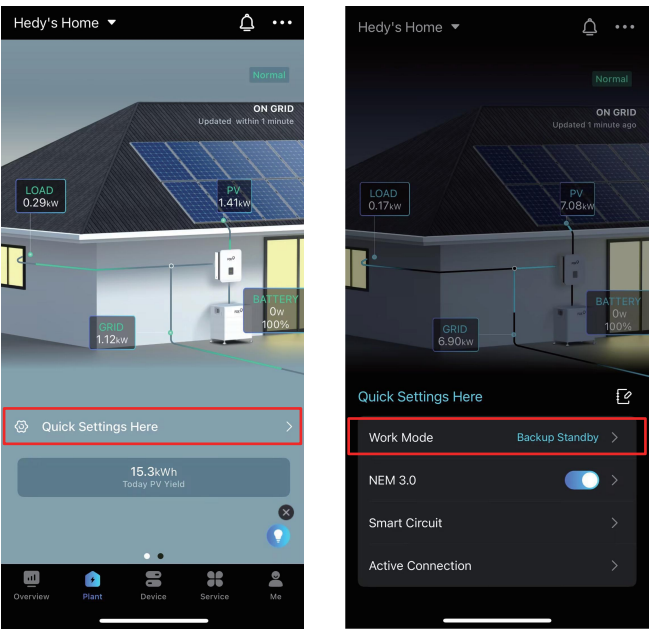
Step 6: Use the checklist below to make sure the necessary items are completed.

Item	Necessary or Optional	Status (✓ if completed)
1. Time Zone	Necessary	
2. Energy Mode	Necessary	
3. Service Panel Parameter	Necessary	
4. Zero Back-feed	Optional	
5. Grid Code	Optional (Only needed when selling to countries except US; Change “USA” into your own country)	
6. Existing Solar Inverter Power	Optional (Only needed in Existing System)	
7. Charge from Grid	Optional (Only needed when main breaker cannot support inverter output during full load)	

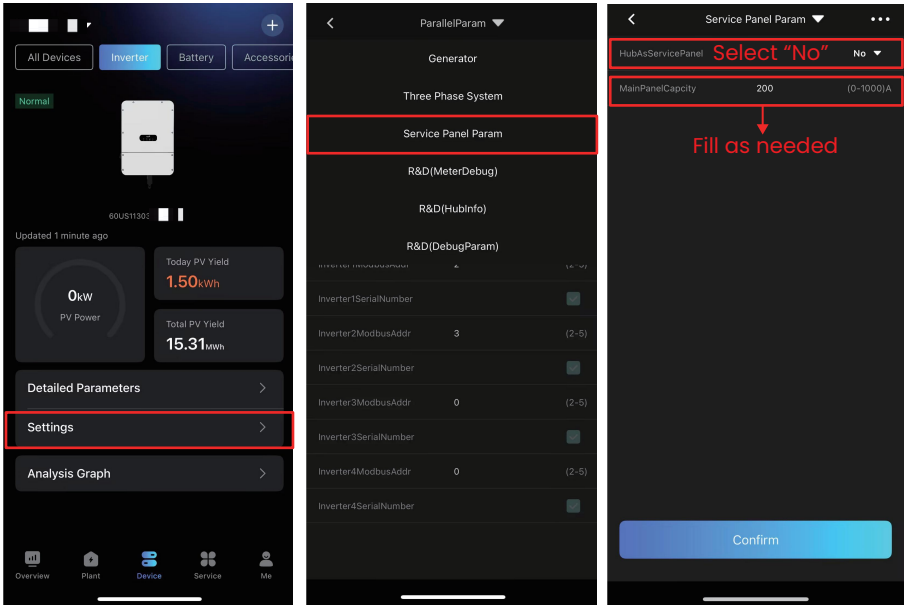
Item 1: Set up the time zone on the “**Plant**” dashboard.



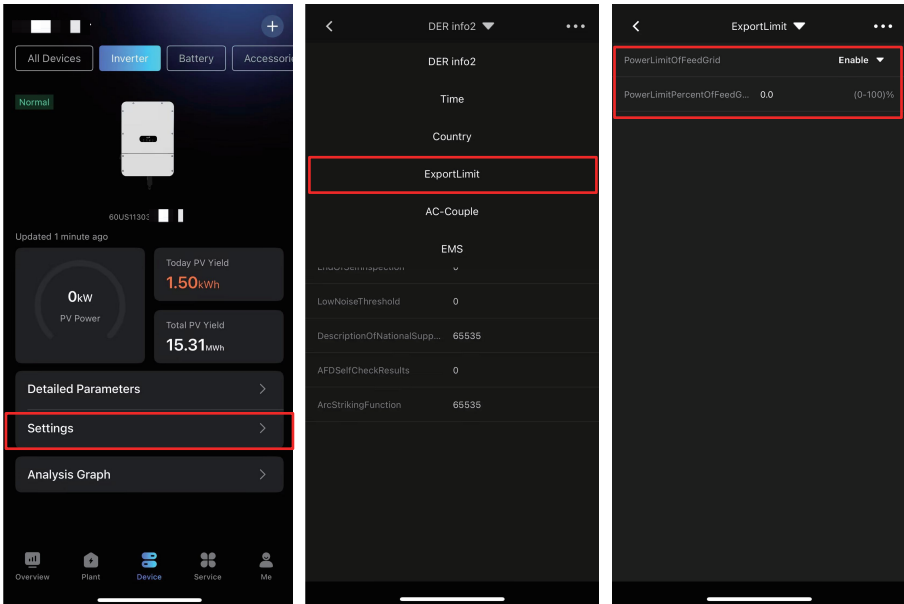
Item 2: Configure the energy management mode on the “**Plant**” dashboard.



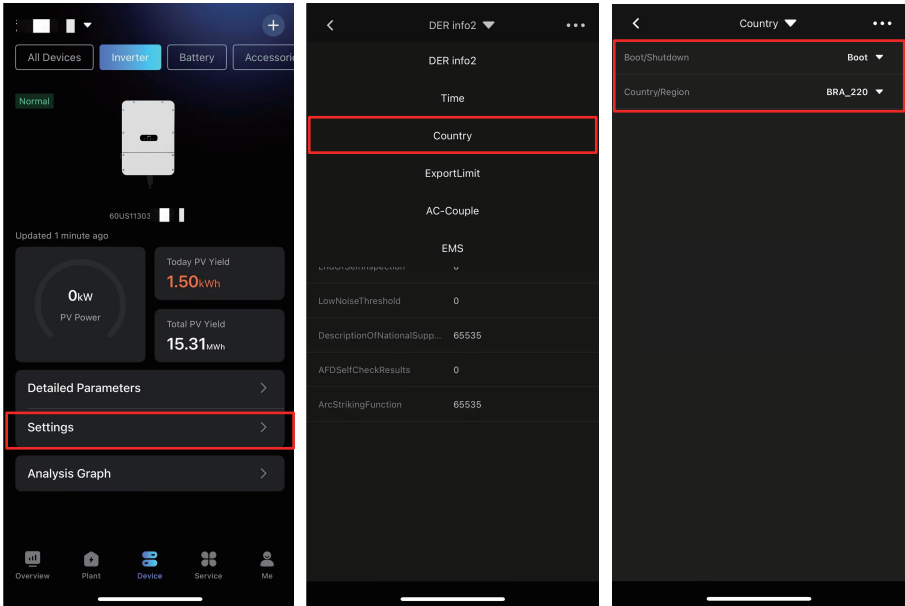
Item 3: Set service panel parameters on the **“Device”** dashboard.



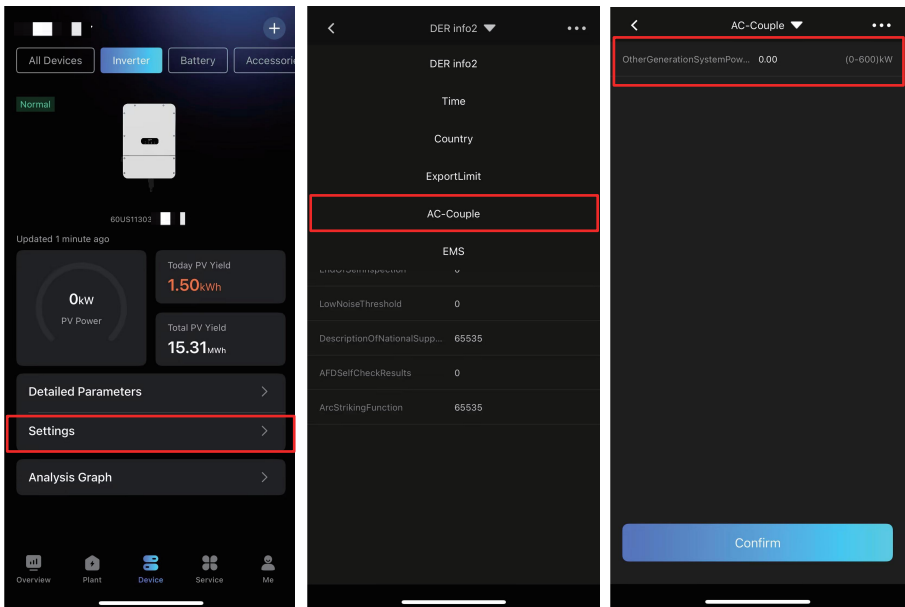
Item 4: Set the zero back-feed on the **“Device”** dashboard.



Item 5: Set the grid code on the “**Device**” dashboard.



Item 6: Set the existing solar inverter power on the “**Device**” dashboard.



Item 7: Set the the charge by grid value on the “**Device**” dashboard.

