HYXiPOWER
华 昱 欣

Three-Phase String Inverter Installation Guide

HYX-H(5-12)K-HT

-General

Delivery and Service Center

品质 创新 高效 共赢

V2.0 – 2025/06

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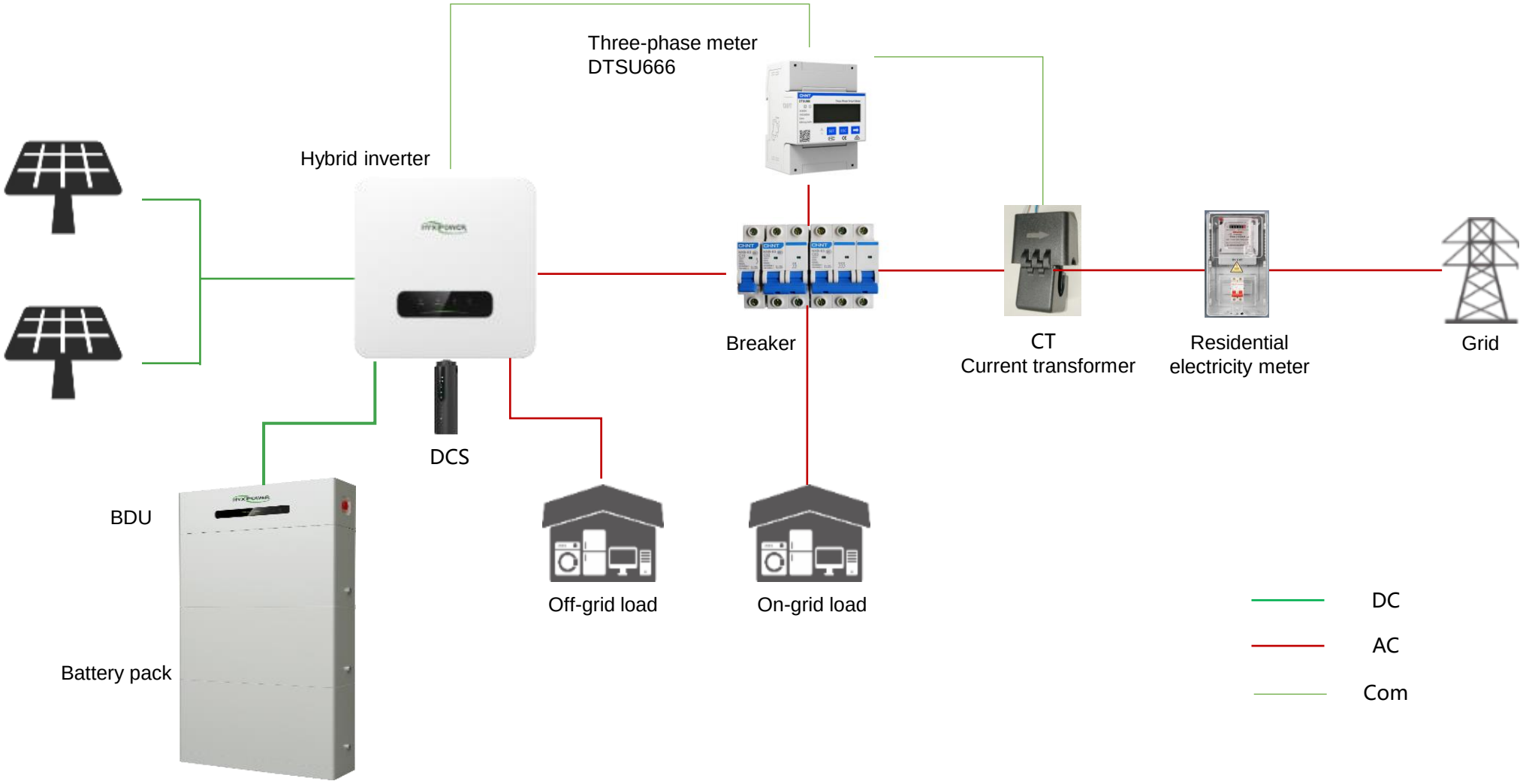
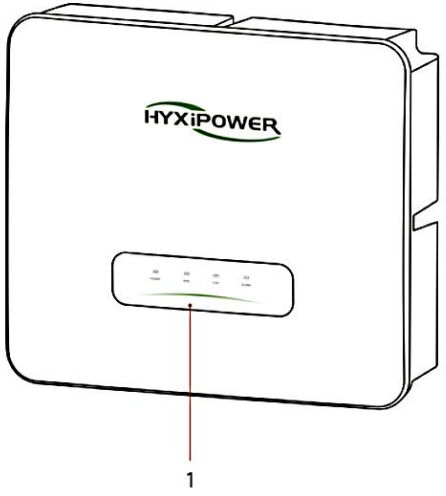
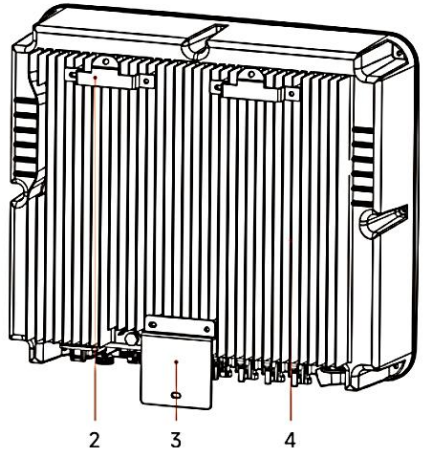
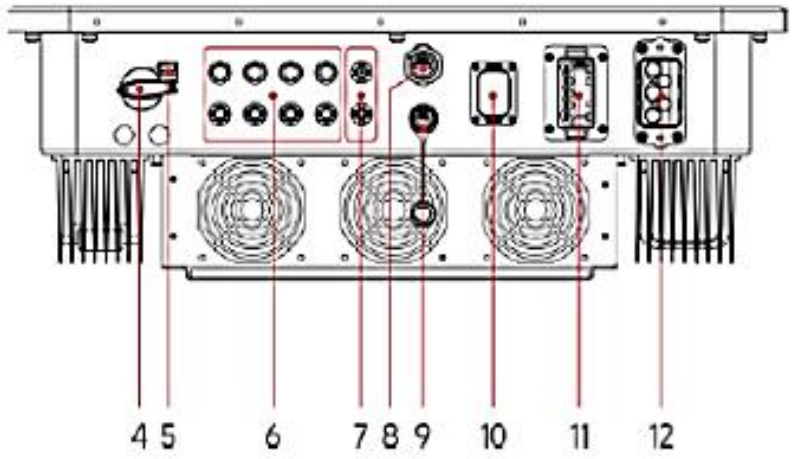
Program Overview-System Wiring Topology Diagram



Program Overview-Hybrid Inverter Overview



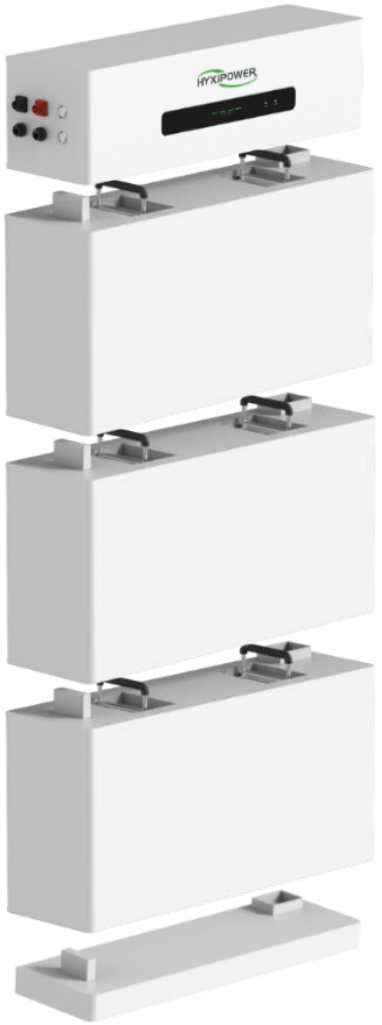




No	Name	Description
1	LED indicator panel	Display the status of the inverter
2	Heat Sink	for ventilation and heat dissipation
3	Bracket	Fix the hybrid inverter
4	DC Switch	PV panel DC power input switch
5	DC switch locking hole	DC keyhole reserved
6	DC inputs	DC input from the panels to the inverter
7	Battery Input	the connection port between inverter and battery

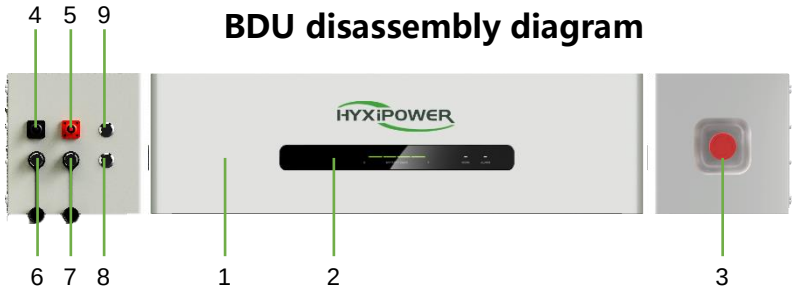
No	Name	Description
8	DCS Terminal	Data communication stick connection port
9	Battery Terminal	Inverter and battery communication terminal, standard RJ45 port
10	Communication Hub	Meter RS485 communication/dry contact/DRM (Australia)/parallel communication/other communications
11	Off-grid load port	AC output port for off-grid loads
12	AC Terminal	for the inverter AC grid Connection

Program Overview-BDU Introduction



Battery Disassembly Diagram

BDU disassembly diagram



Battery System

No.	Explanation
1	Battery Distribution Unit（BDU）
2	Display Panel
3	Emergency Stop
4	High-voltage negative terminal
5	High-voltage positive terminal
6	Debug port
7	Inverter com port
8	High-voltage power button
9	12V low-voltage power button

Note: When starting the battery, short press the "POWER" low-voltage power button, then long press the "ON/OFF" high-voltage power button for about 5 seconds. When you hear a "click" sound from the relay, it means the battery has started;

Program Overview- DCS Startup Check

1. USB port, used to connect to inverter
2. Reset button
3. Power indicator
4. Net indicator
5. Com indicator

RESET button Operation Guide:

1、Double press to restart the device;

2、Press four times to restore factory settings;

Operation must be completed within 1 second;

No.	Light Indicators	Status	Explanation
3	POWER	Solid	DCS on
		Off	DCS off
4	NET	Solid	Connected to the cloud server
		Blink	Connecting to the cloud server
		Off	Connection failed
5	COM	Solid	Communicated with inverter
		Blink	Communicating with inverter
		Off	Communication failed

◆ Normal sign: After completing local debugging, three lights remain steadily lit.

Program Overview-Meter Introduction

The DTSU666 three-phase energy meter

The DTSU666 three-phase energy meter is an advanced device integrating high-precision metering, remote communication, and intelligent management. Equipped with a high-performance metering chip, this meter ensures accurate power measurement and supports real-time energy monitoring, enabling users to track electricity consumption effectively. Additionally, the DTSU666 features an RS485 communication interface and wireless modules, facilitating remote data exchange and centralized monitoring, thereby significantly enhancing operational efficiency.

Current Transformer

The CT (Current Transformer), as a critical component of the DTSU666 energy meter, employs a non-contact measurement method, enhancing safety and reliability. It enables accurate high-current measurement and adapts to varying current and voltage levels, significantly expanding the meter's application scope.

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2.1 Installation Preparation-Preparation List

The following product list is NOT included in the pre-sales configuration and must be purchased separately.
Before system installation, ensure all devices and tools are fully prepared.

No.	Name	Explanation	Specifications
1	PV Cable	Cable for connecting photovoltaic panels to the inverter, compliant with outdoor multi-core copper cable standards (1000V, 18A).	4~10mm²
2	Communication Cable	485 communication cable for connecting the inverter and electricity meter.	RVVP two-core shielded cable, 0.5mm²
3	AC Output Cable	For AC-side wiring of the inverter, using a five-core outdoor copper cable.	4~10mm²
4	Backup Output Cable	For Backup-side wiring of the inverter, using a five-core outdoor copper cable.	4~10mm²
5	Ethernet Cable	For communication between the inverter and battery, a standard Ethernet cable is used. (Include one 2-meter-long Ethernet cable; if the length is insufficient, purchase separately.)	Standard
6	Ground Wire	For equipment grounding purposes.	4~10mm²
7	Battery Power Cable	Power cable for connecting the battery and inverter, must comply with 600V and 35A standards. (Optional battery power cable can be selected when placing future product orders.)	6mm²

2.2 Installation Preparation–Common Product List

The following product list is included in the pre-sales configuration.
Before system installation, ensure that all devices and tools are fully prepared.

No.	Product	Picture	Explanation
1	Hybrid inverter		Include one inverter and related inverter accessories.
2	Battery		Include a Battery Distribution Unit (BDU) and battery modules for electrical energy storage.
3	Three-Phase Meter		Measure circuit voltage, current, power, etc.
4	Current Transformer		Used to measure the grid-side AC current, enabling the inverter to control power output and prevent backflow. Note: During installation, the arrow must point toward the grid.
5	DCS		After registering the device to the cloud server, it can be centrally managed via the cloud platform.
6	Ethernet Cable		The device comes with a 2-meter-long Ethernet cable. If the length is insufficient, you will need to procure one separately.
7	Wall-mounted bracket		Wall-mounted bracket for securing the inverter.

2.3 Installation Preparation–Tool Installation

Installation Tool


Electric Drill


Heat Gun


Hex Key


Wire Stripper


Hydraulic Pliers


Crimping Tool


Screwdriver


Marker Pen

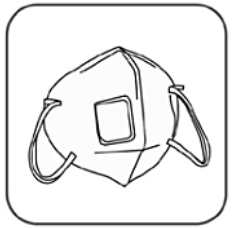

Utility Knife


Multimeter


Tape Measure


Hammer

Protect Tool


Protective Mask


Safety Glasses


Insulated Safety Shoes


Insulating Gloves

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3.1 Device Installation-Unpacking Inspection

Inverter Unpacking Inspection:

- Check if the device hardware and ports are intact.
- Check if the device accessories are intact

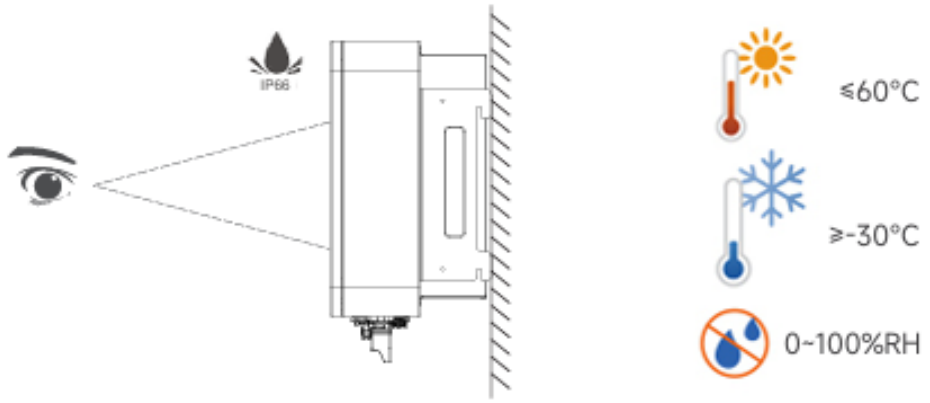
No	Name
1	Hybrid Inverter
2	Bracket
3	Communication Connector
4	AC Connector
5	Backup Connector
6	Battery Terminal (female)
7	Battery Terminal (male)
8	Bracket Screw
9	RJ45 waterproof terminal
10	PV Insulation Terminals

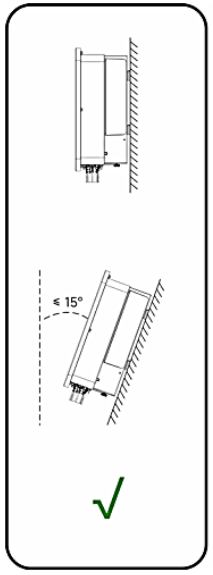
1

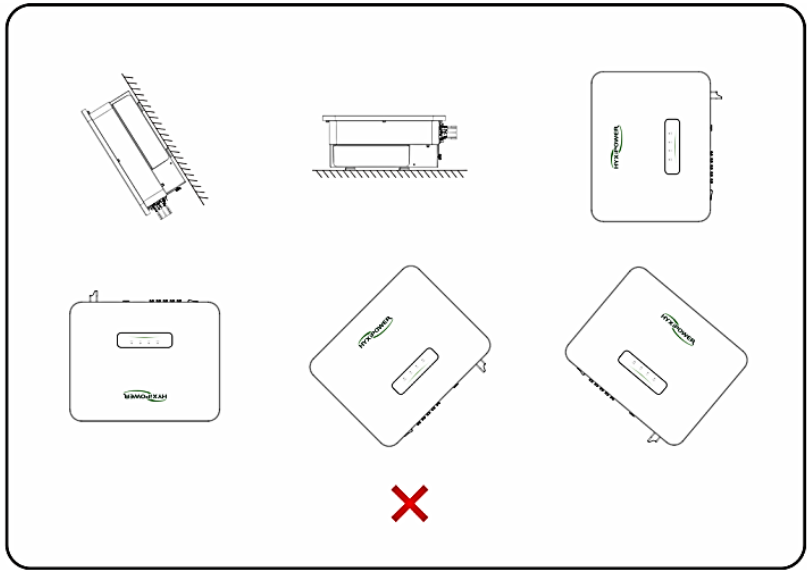
2

3.2 Device Installation–Environment Requirements

1. Suitable for both indoor and outdoor installation.
2. -30°C to +60°C, 0~100% relative humidity (RH).
3. Select a shaded location to avoid direct sunlight and protect against rain/snow.
4. Ensure proper ventilation for heat dissipation.
5. The mounting structure must support at least 4 times the inverter’ s weight.,
6. Mount vertically or tilted backward ≤15° to optimize thermal performance.
7. Do NOT install forward-facing, backward-facing, upside-down, horizontally, or sideways.
8. For multi-unit installations, maintain ≥300mm clearance between inverters.

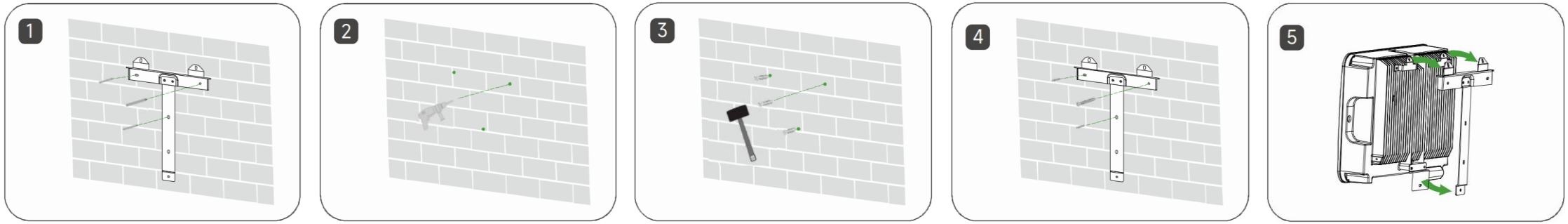




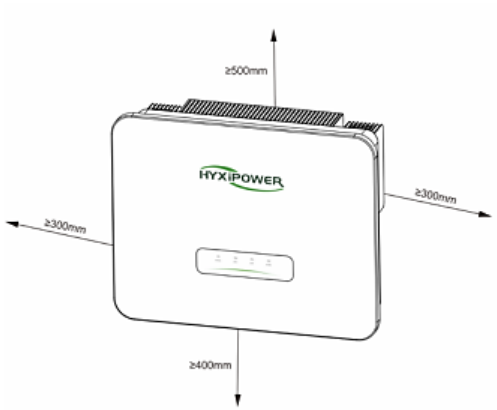


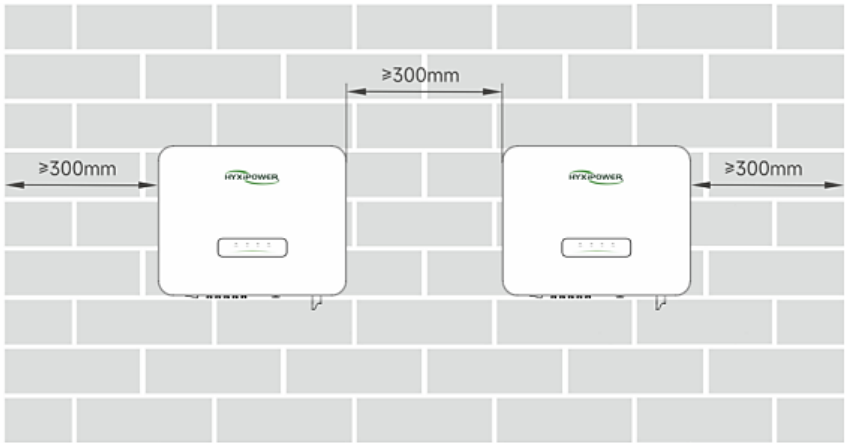
3.3 Device Installation-Physical Installation

Fix the mounting bracket and inverter as follows:

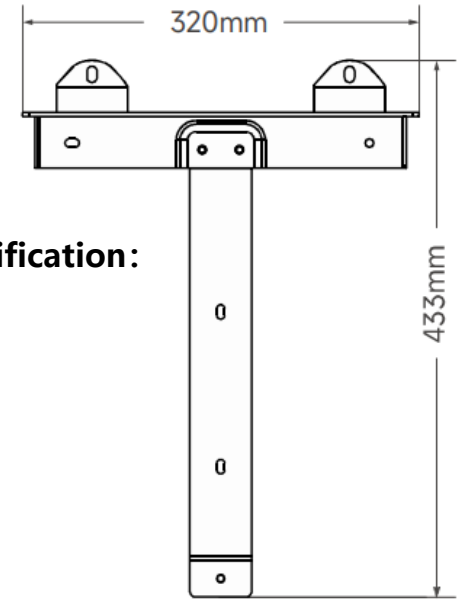


When installing multiple inverters, the distance between two inverters should be > 300mm.



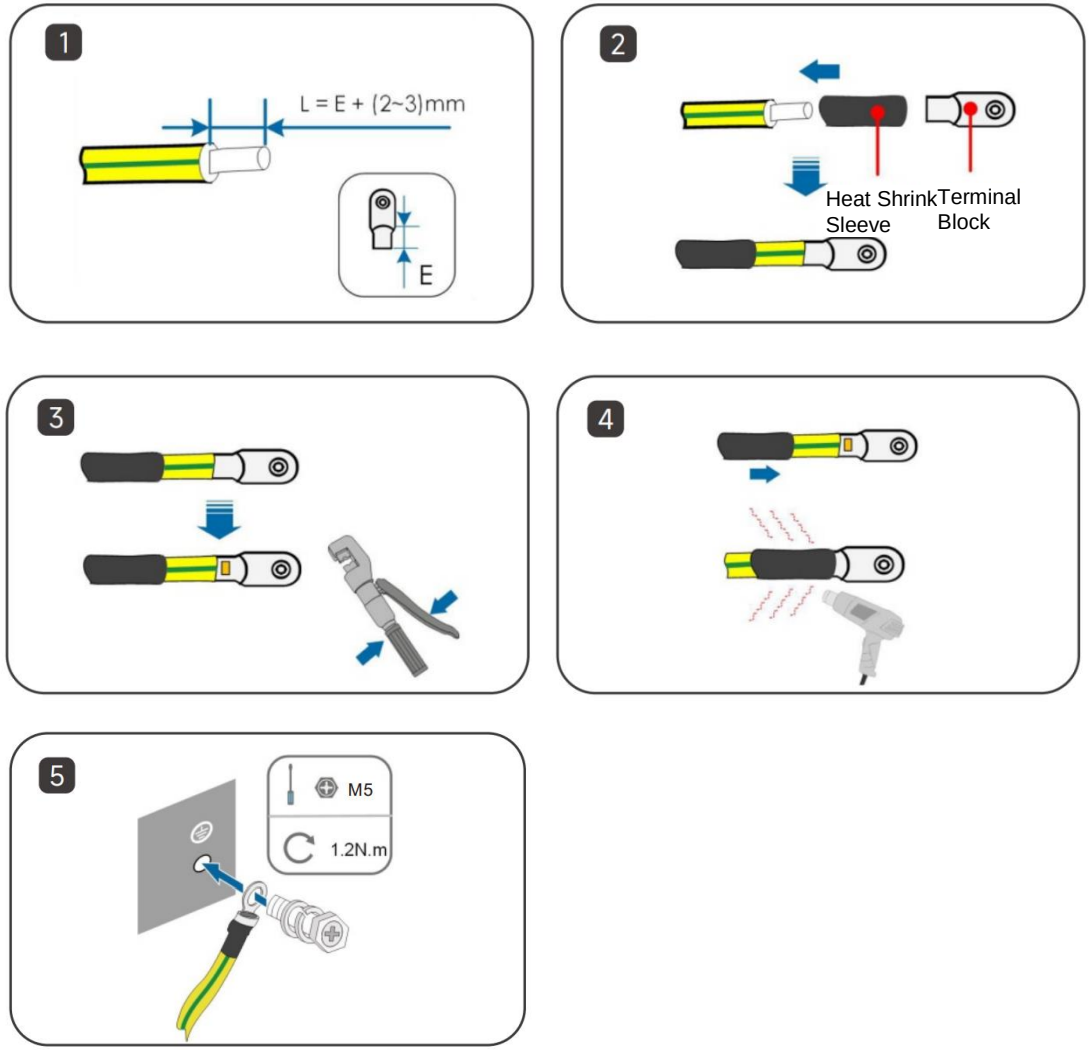


Bracket Specification:



Note: Before installing the equipment, please ensure the photovoltaic panels have been installed and the cables have been laid in place;

3.4 Device Installation-Grounding Cable Connection



Step 1: Strip a certain length of the insulation layer of the power cable as shown in the figure, the length is L=E+(2-3)mm as shown in the figure.

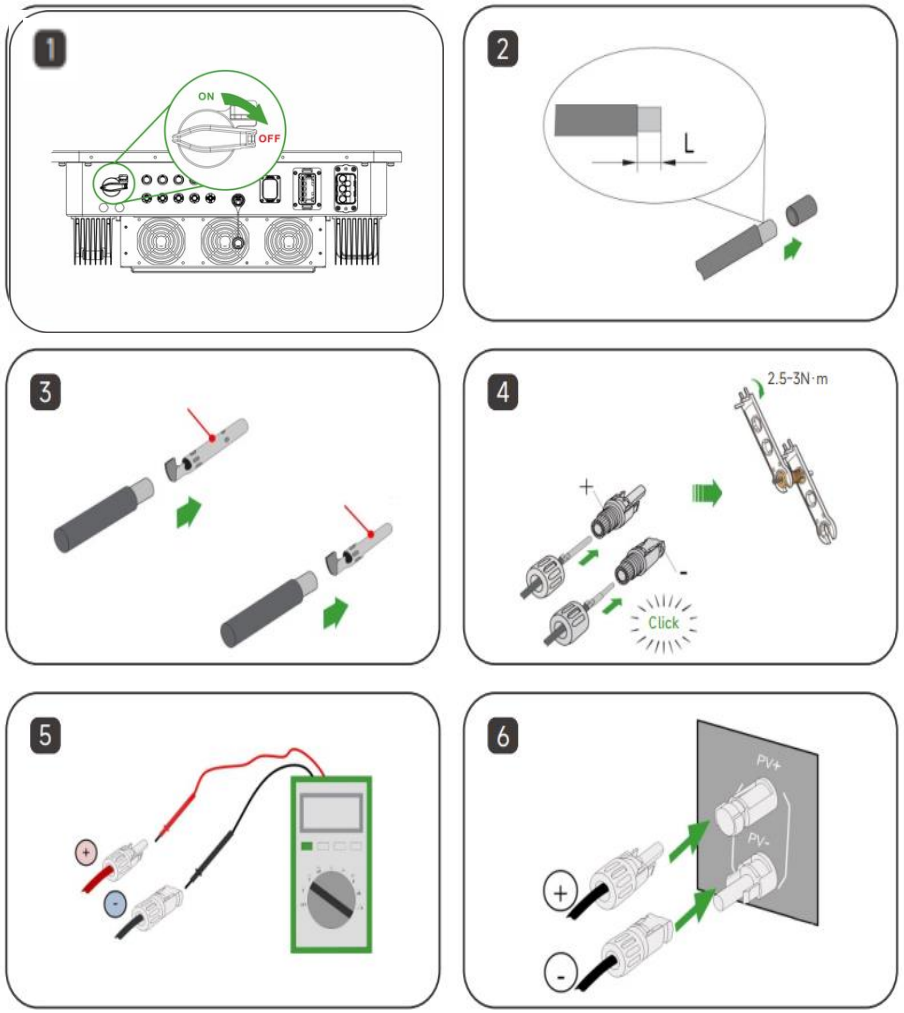
Step 2: Pass the cable through the hot melt sleeve and insert it into the terminal.

Step 3: Use a crimping pliers to press the terminal and the cable tightly together.

Step 4: Adjust the hot melt sleeve to cover the end of the terminal and the power cable, and use a hot air gun to blow the hot melt sleeve to wrap the power cable and the end of the terminal.

Step 5: Use a screwdriver to fix the ground wire to the grounding position of the inverter.

3.5 Device Installation-DC Connectors



Step 1: Keep the switch on the inverter in the off state.

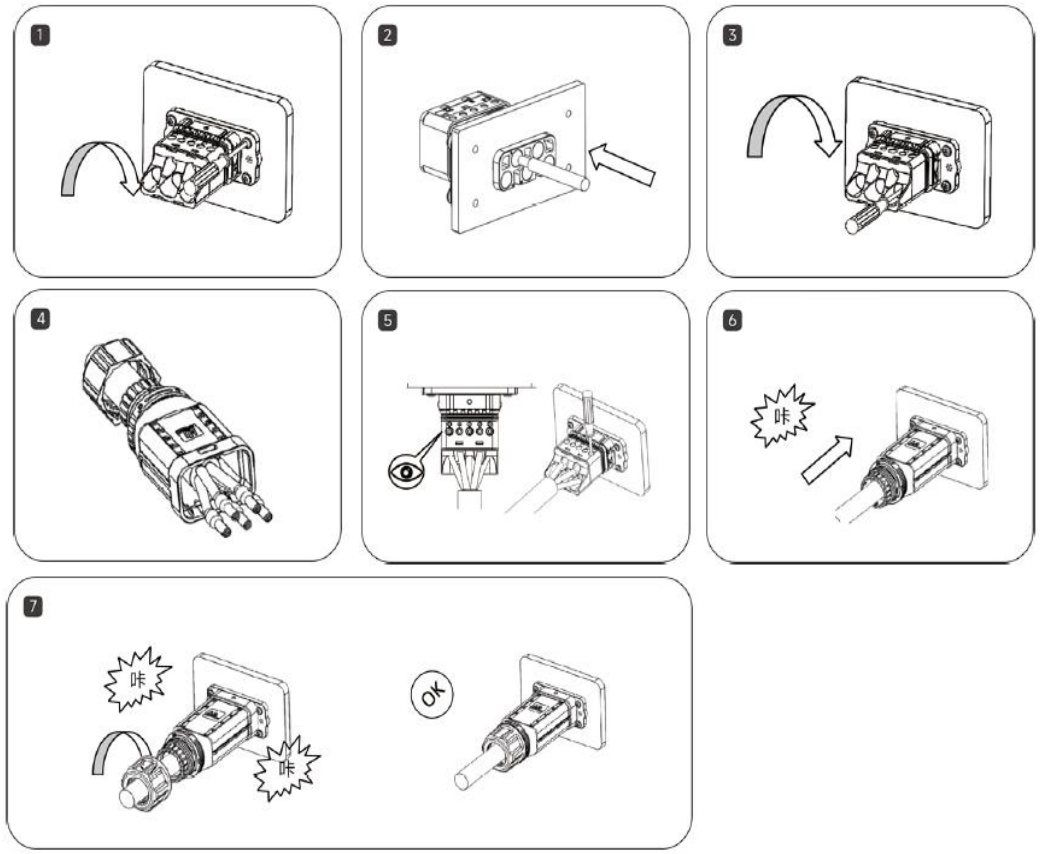
Step 2: Strip about 7 mm of insulation layer of all DC cables.

Step 3: Use crimping pliers to press the cold-pressed terminal to the cable. Note that the terminals of the positive and negative poles are different, and the positive cold-pressed terminal is slightly longer than the negative cold-pressed terminal.

Step 4: Pass the cable through the cable gland, insert the insulating sleeve and tighten it, and gently pull the cable to ensure a tight connection. Tighten the gland and insulating sleeve with a force of 2.5~3N·m, and insert the assembled terminal interface into the photovoltaic connector until you hear a "click".

Step 5: Use a multimeter to check whether the polarity of the photovoltaic string connection cable is correct. Step 6: Connect the PV connector to the corresponding terminal on the inverter until you hear a "click".

3.6 Device Installation-AC Connector



Step 1: Use a T20 center-hole Phillips screwdriver to tighten the locking plate screws to a torque of 1.2±0.1N·m.

Step 2: Insert the stripped wires into the corresponding wiring holes according to the wire sequence.

Step 3: Use a T8 Phillips screwdriver to crimp the wires, with a torque of 1.2±0.1N·m.

Step 4: Insert the stripped wires into the locking wire nut and the main body in sequence (the soft wire needs to be riveted with an insulated terminal).

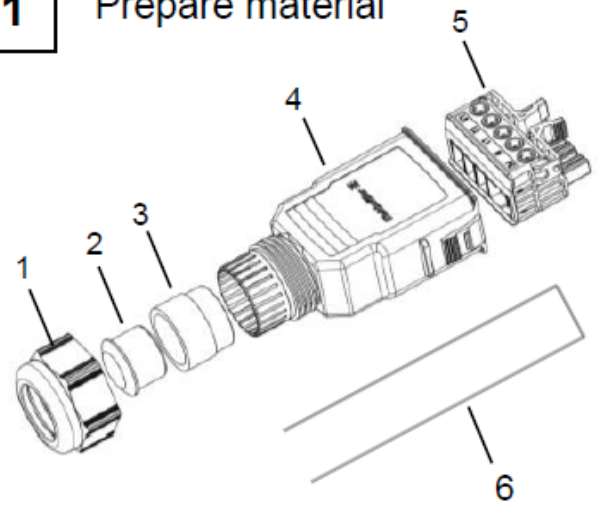
Step 5: Insert the cables into the rubber core according to the wire sequence, observe the cables in place through the perspective hole, and crimp the screws to a torque of 4±0.1N·m.

Step 6: Insert the main body into the rubber core and hear a "click" sound.

Step 7: Use an open-end wrench to tighten the nut (torque 10.0±0.1N·m), and the installation is completed after a "click, click" sound.

3.7 Device Installation-Backup Connector 1

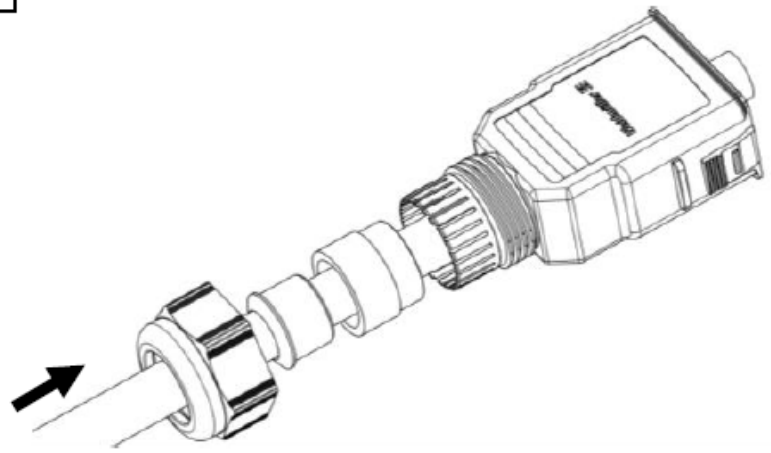
1 Prepare material



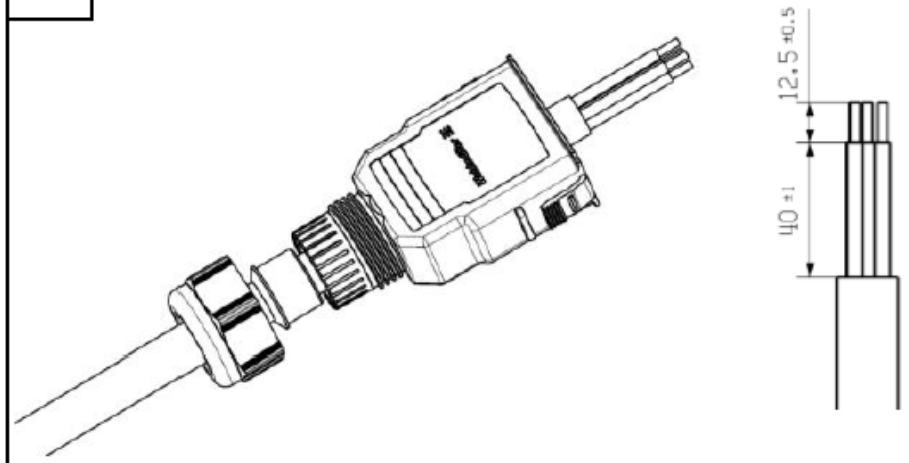
1-Seal gland
2-Seal 1
3-Seal 2
4-Cable housing
5-Plug
6-Cable

Notes:
1. Cable diameter:11-19mm Mounting with sealing 1 & 2
2. Cable diameter 19-26mm Mounting without sealing 1

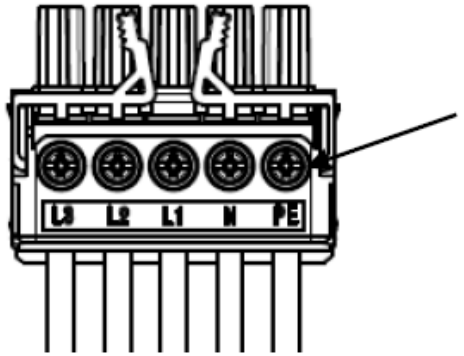
2 Pass cable through gland, sealing and cable shell



3 Cable Stripping



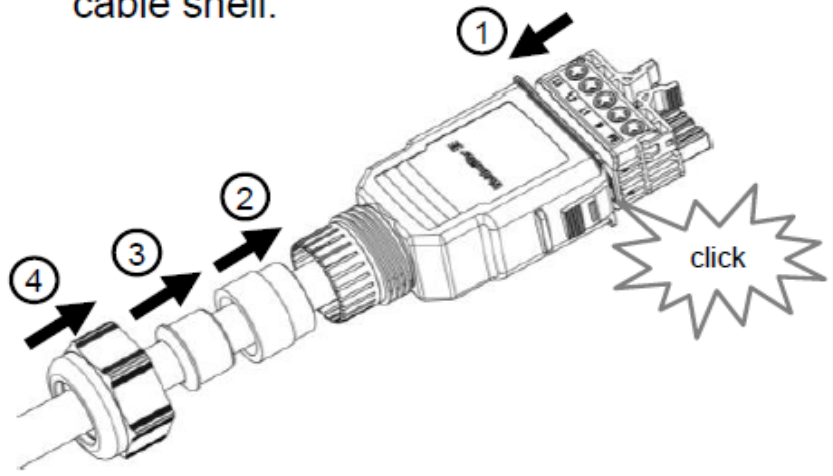
4 Insert the stripped wire into the corresponding pole. Tighten the screws when the wires are in place.



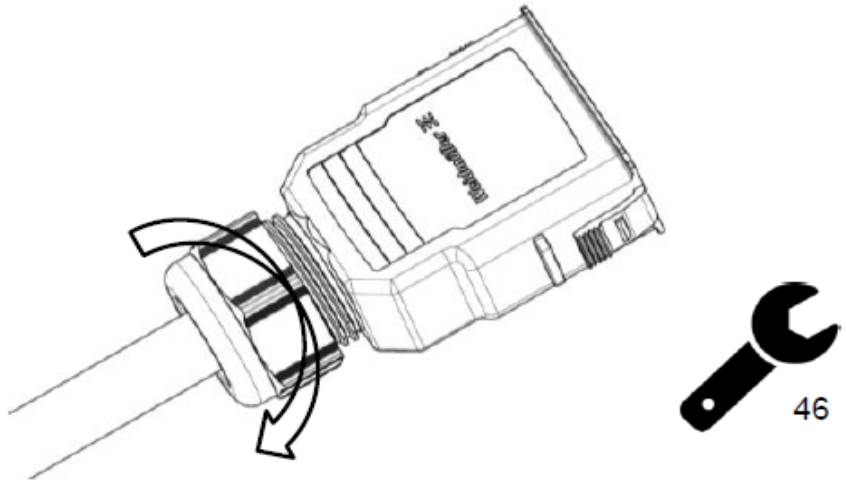
Mounting torque:
1.2 ~1.5 N.m

3.7 Device Installation-Backup Connector 2

5 Install plug adapter, sealing parts, gland on cable shell.

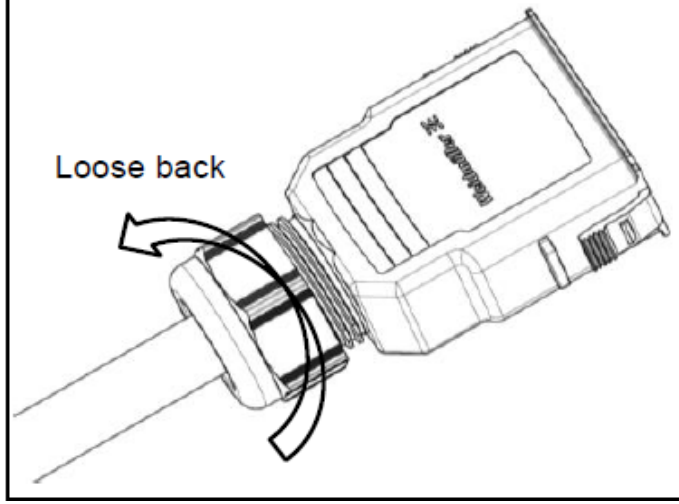


6 Tighten the torque 7 ~ 7.5 N.m

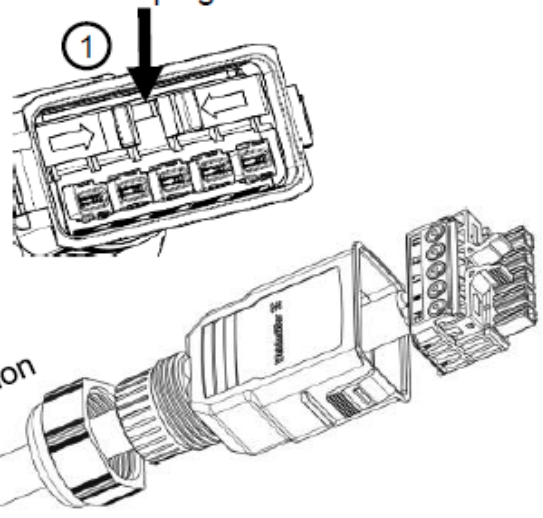


Disassembly instructions

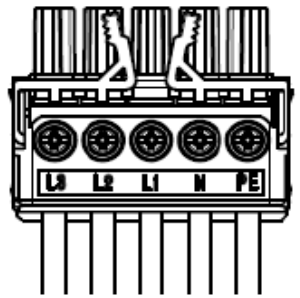
Loose back



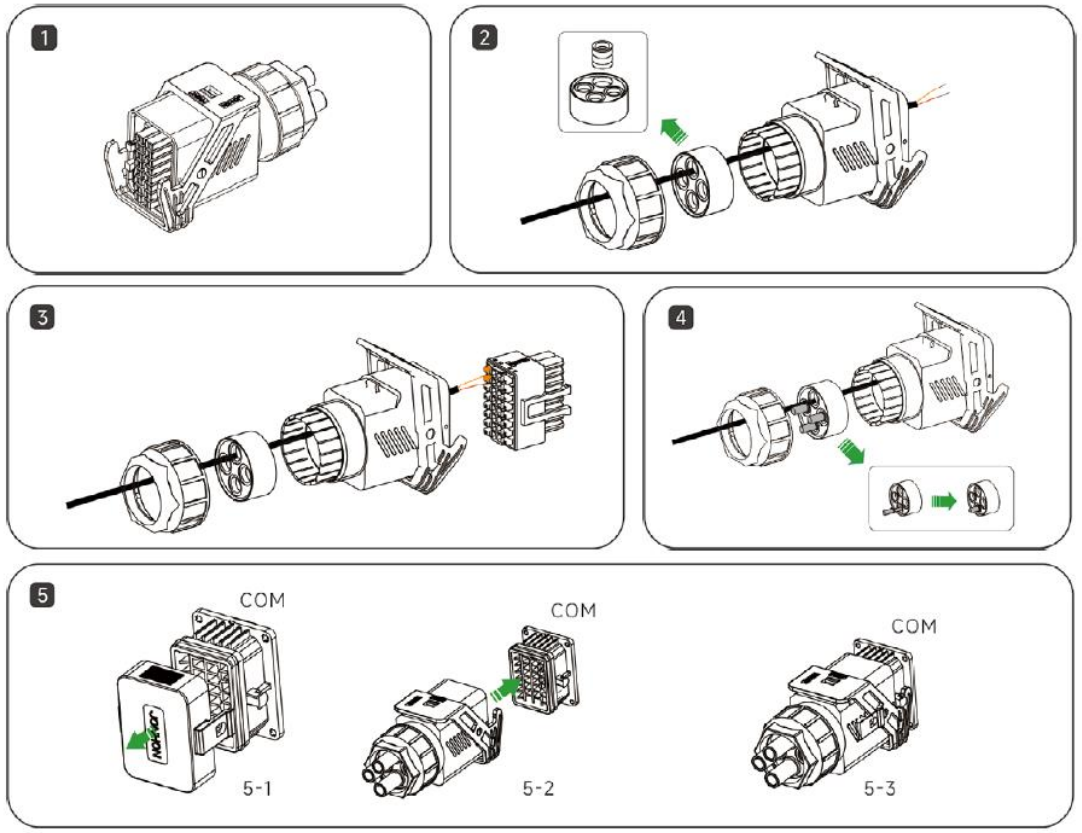
Pinch and unplug



③ Loosen the screws and pull out the wires.



3.8 Device Installation - Meter Installation



Step 1: Pull the crimping assembly out of the communication terminal;

Step 2: Insert the meter RS485 2pin wire into the communication terminal as follows, and then strip the wire;

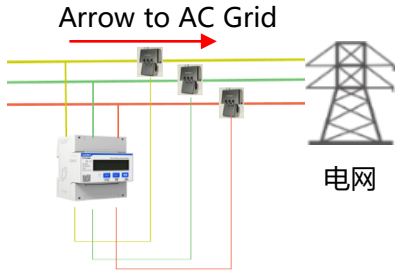
Step 3: Clamp the stripped meter RS485 2pin wire onto the crimping element (press the yellow button), see Equipment Installation 9 for details;

Step 4: Insert the waterproof rubber plug into the unused hole;

Step 5: Remove the inverter COM port cover, insert the communication terminal, and lock the pull tab;

Step 6: Connect the meter to the grid in parallel, see Equipment Installation 10 for details;

Step 7: Pass the magnetic rings of the three current transformers through the circuit breaker to the three-phase live wires of the grid, and note that the arrows need to face the direction of the grid (as shown below).



3.9 Device Installation- Meter Connection

COM Communication Port
(Close-up View)

Note:

Pin 2 on the COM port connector corresponds to RS485 Communication A on the meter, and Pin 4 corresponds to RS485 Communication B. (It is recommended to use twisted-pair cable for connection.)

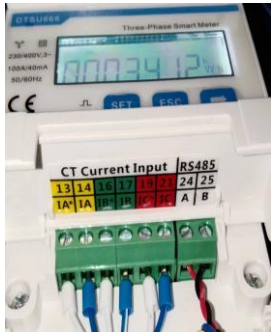
3.9 Device Installation-Meter Connection

U： Line Wire R
V： Line Wire S
W: Line Wire T
N： Neutral Wire

Wiring Diagram (Top Side of Electricity Meter)

Wiring Diagram (Top Side of Electricity Meter)：

- Connect the three-phase live wires and neutral wire between the grid and the inverter as shown in the diagram. The phase sequence of the upper terminals L1, L2, L3 must correspond one-to-one with the lower CT terminals IA (13,14), IB (16,17), IC (19,21). Ensure all CT arrows point toward the grid side.

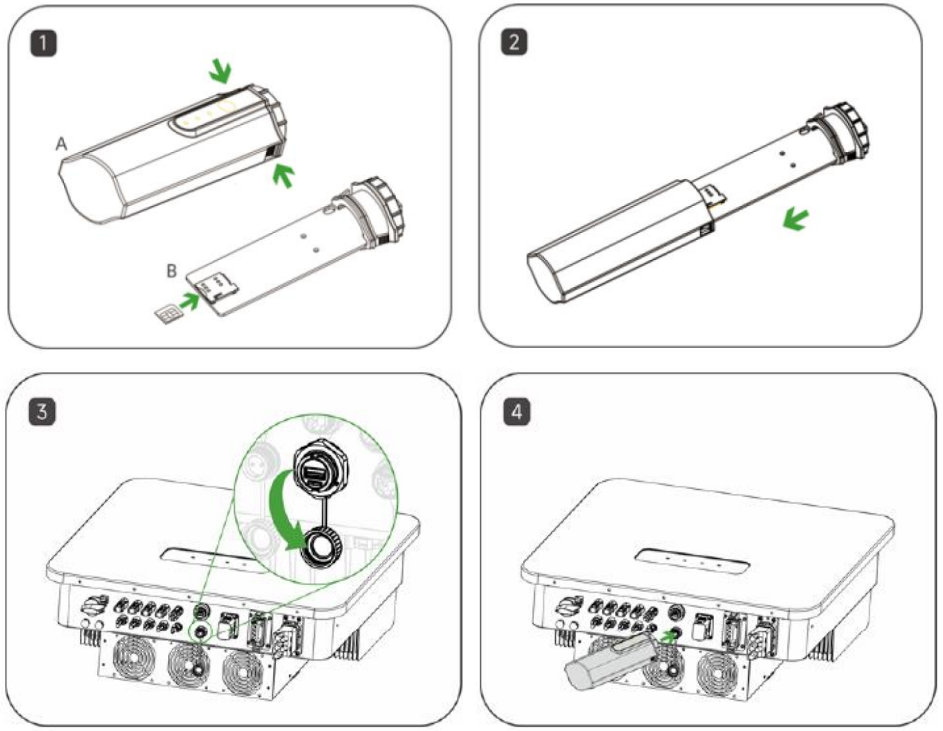


Wiring Diagram (Bottom Side of Electricity Meter)

Wiring Diagram (Bottom Side of Electricity Meter)：

- For the current transformer (CT) communication wires connected to the three-phase live lines: the white wire corresponds to I*, and the blue wire corresponds to I.
- The inverter communicates with the meter via PIN 2 (A) and PIN 4 (B) of the COM port.

3.9 Device Installation-DCS Installation



DCS communication stick installation (4G version)

Step 1: Remove the DCS protective cover and insert the SIM card;

Step 2: Install the DCS waterproof cover;

Step 3: Remove the waterproof cover at the inverter communication interface;

Step 4: Insert the DCS into the corresponding communication terminal at the bottom of the inverter and tighten it to ensure it is firm.

DCS communication stick installation (Wifi version)

Step 1: Remove the waterproof cover at the inverter communication interface;

Step 2: Insert the DCS into the corresponding communication terminal at the bottom of the inverter and tighten it to ensure it is firm.

3.10 Device Installation-Battery Installation

Step 1: Place the battery base on a flat surface.

Step 2: Carefully place the battery module on the battery base, ensuring that the interface connection is accurate (the process needs to be careful and slow). If there are multiple battery modules, stack them one by one.

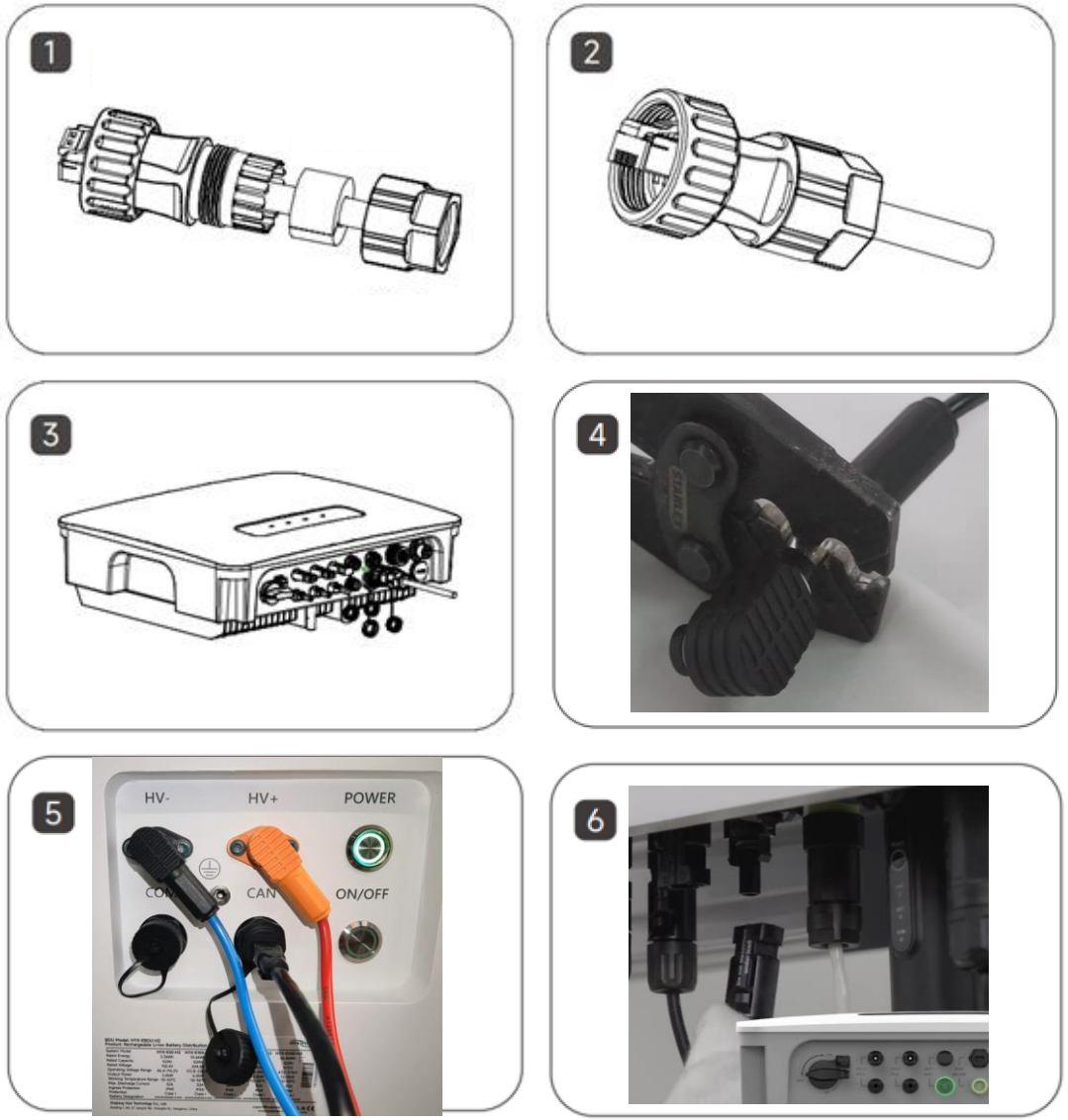
Step 3: Shake gently repeatedly to ensure that the installation is firm.

Step 4: Carefully assemble the battery management unit from the top, ensuring that the interface connection is accurate (the process needs to be careful and slow).

Step 5: Shake gently repeatedly to ensure that the installation is firm.

Note: When there are 3-5 battery modules stacked in the battery system, the stability of the equipment needs to be considered, and the installation bracket needs to be considered if necessary.

3.10 Device Installation-Battery Installation



Step 1: Put the three accessories (socket, sealing ring, nut) of the two sets of waterproof terminals on the standard network cable.

Step 2: Assemble the connector.

Step 3: Plug the two ends of the network cable into the corresponding network ports of the inverter and battery BDU respectively, and tighten the nuts.

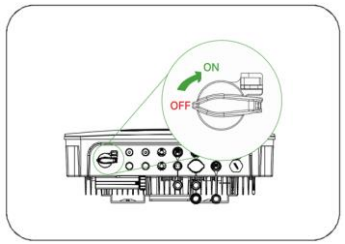
Step 4: Use a crimping pliers to press and connect the battery power line and the connector. Pay attention to distinguish the positive and negative poles, orange is positive, and black is negative.

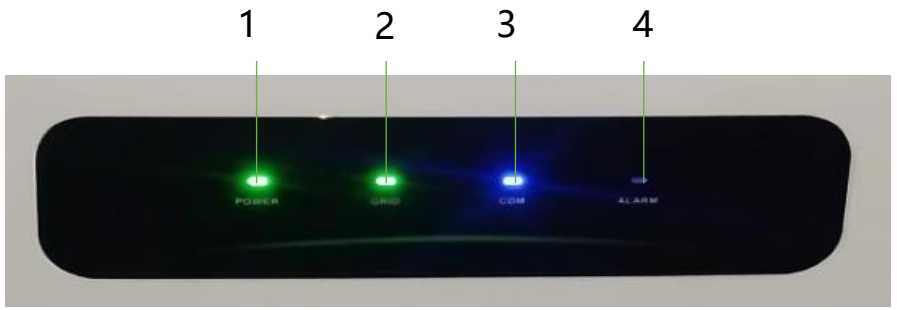
Step 5: Plug the battery power line terminal into the battery BDU until you hear a "click".

Step 6: Refer to the PV side connector production method to make the connector at the other end of the battery power line. After completion, insert it into the battery power input terminal of the inverter until you hear a "click".

3.11 Device Installation - Inverter Startup

1. Plug in the AC-side connector and turn on the circuit breaker. After closing, the meter will light up and the bulb will illuminate.
2. Turn on the DC switch on the inverter.
3. Connect the PV panel connectors on the DC side and insert the plug.
4. Verify the inverter's indicator light status. The light status shown below indicates normal operation.



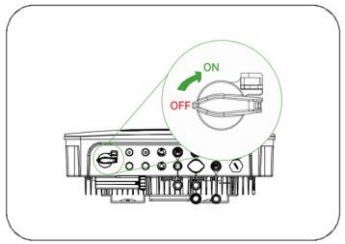


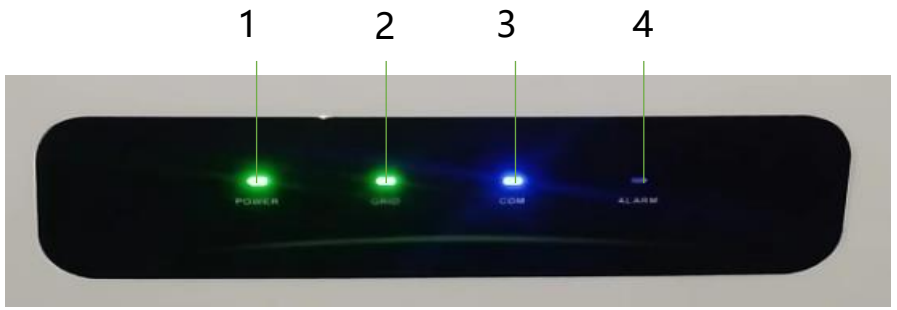
- Normal sign: Three lights on, one light off.
- Note: Before starting the inverter in the training room, ensure the switch is in the ON position.

NO.	Indicator	Status	Explanation
1	POWER	Solid	Inverter Power on
		Off	Inverter Power off
2	GRID	Solid	Grid Side normal
		Average blinking	Grid Side abnormal
		Double blinking	Not connected with grid
3	COM	Solid	Communication normal
		Average blinking	Communication failure between inverter and meter
		Double blinking	Communication failure between inverter and battery
		Off	Inverter communication failure with both meter and battery
4	ALARM	Off	No alarm from inverter
		Average blinking	Alarm from inverter
		Double blinking	Other alarms

3.11 Device Installation - Inverter Startup

1. Plug in the AC-side connector and turn on the circuit breaker. After closing, the meter will light up and the bulb will illuminate.
2. Turn on the DC switch on the inverter.
3. Connect the PV panel connectors on the DC side and insert the plug.
4. Verify the inverter's indicator light status. The light status shown below indicates normal operation.





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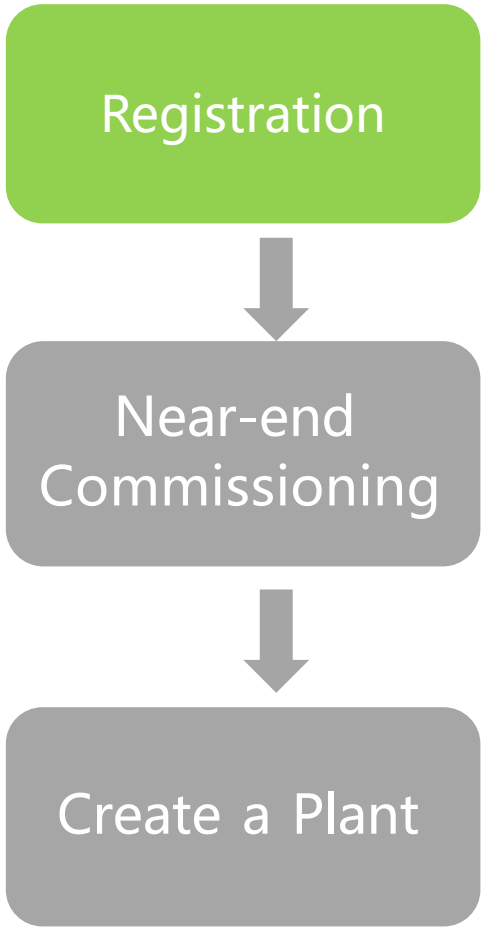
CONTENTS

4.1 APP Configuration-Registration



1、Download HYXipowerAPP

2、 Register the account of the person in charge of the organization

Register the DCS communication stick to the cloud server through local debugging.

All Hyxipower equipment is managed using the cloud platform. After the equipment is registered to the cloud server, it can be managed uniformly through the cloud platform.

Create a power station for users

You can manage the equipment through the power station and check the equipment status, system power generation and usage, etc.

4.1 APP Configuration-Registration

The entire process requires 2 email accounts: Organization and Owner.

Step 2: Download the APP and **register**

Method 1

Search “Hyxipower " in the Application Store

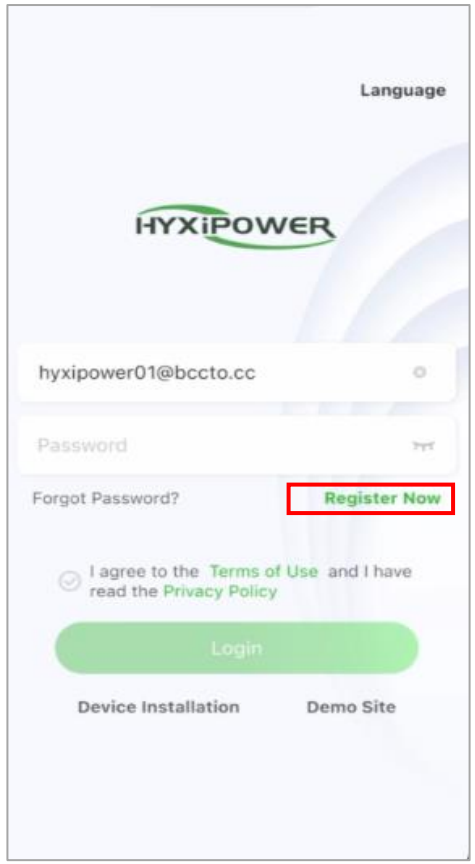
· APP store (IOS)

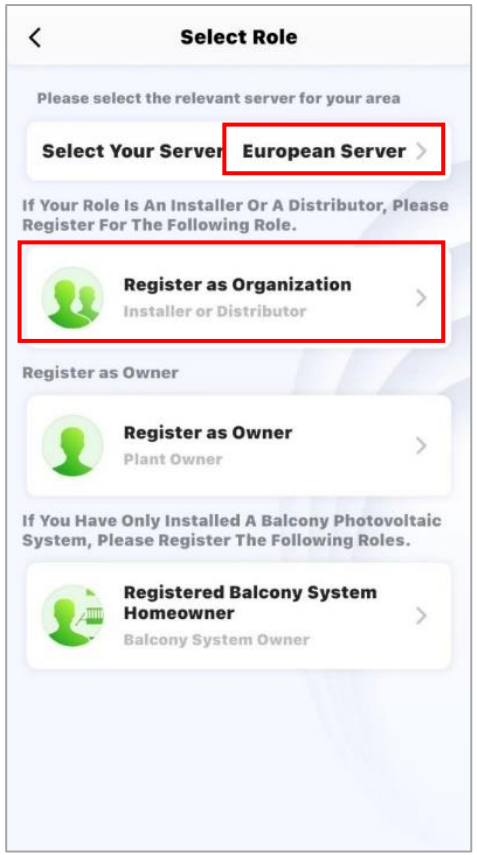
· Google play

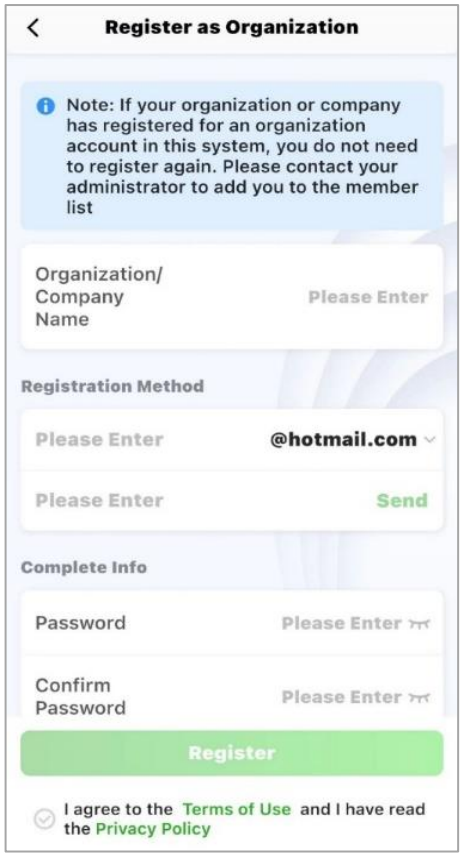
Method 2

Scan the QR code download the APP

Step 3 : According to the country or region, select server, select organization , fill in the relevant information and register**.**







4.2 APP Configuration-Near-end Commissioning

Registration

1. Download HYXipower APP .

2. Register the account of the person in charge of the organization.

Near-end Commissioning

Register the DCS communication stick to the cloud server through local debugging.

All Hyxipower equipment is managed using the cloud platform. After the equipment is registered to the cloud server, it can be managed uniformly through the cloud platform.

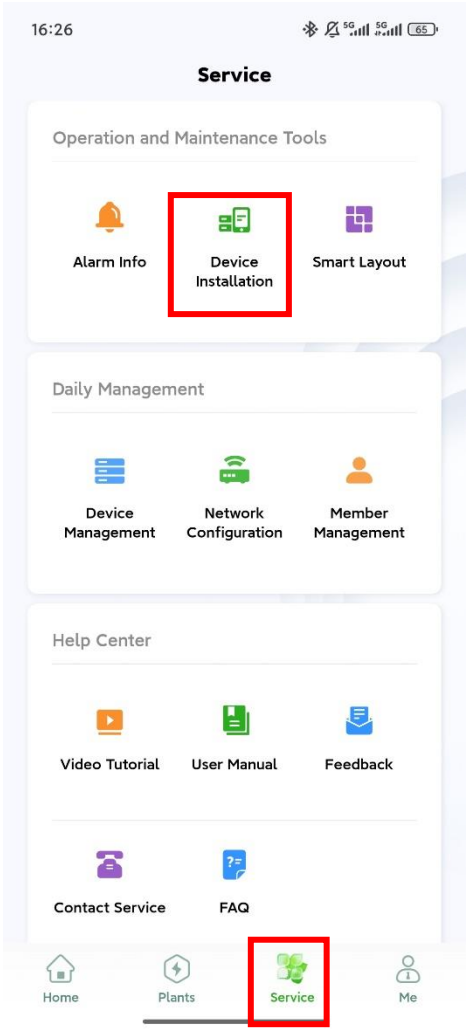
Create a Plant

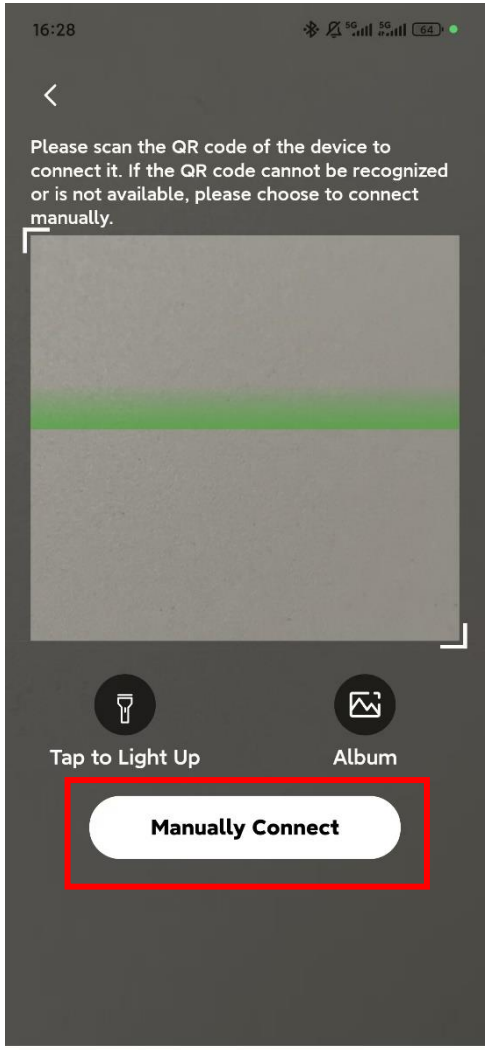
Create a power station for users

You can manage the equipment through the Plant and check the equipment status, system power generation and usage, etc.

4.2 APP Configuration-Near-end Commissioning

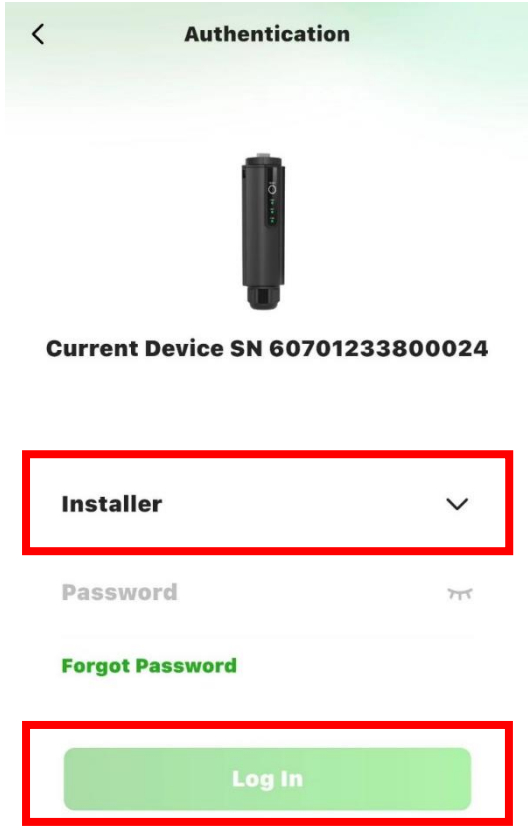
Step1: Click **Device Installation** in **Service** interface.
Then scan the QR code of the Data Communication Stick. If failed ,click the Manually Connect.





4.2 APP Configuration-Near-end Commissioning

Step2： Device login, initial password: hyxi0607. Log in and change the password, then save it.



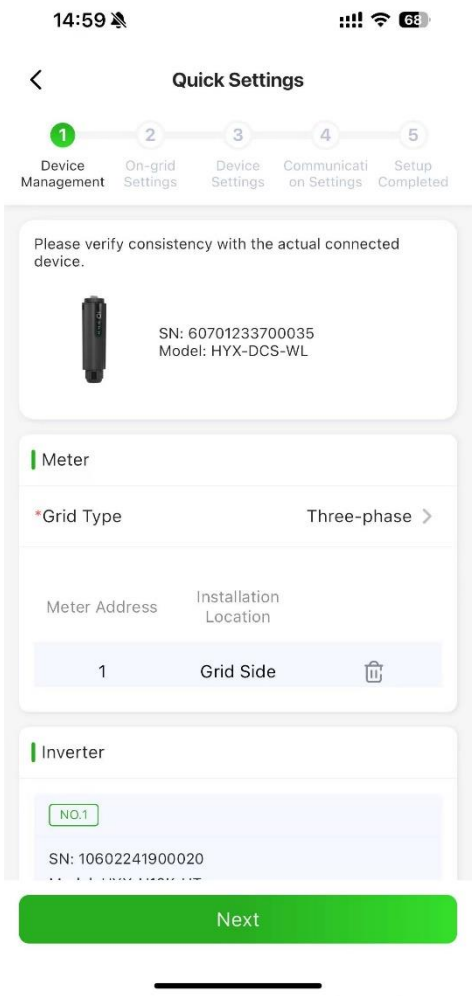
If you forgot the password, quickly press the RESET button on the DCS four times to restore factory settings

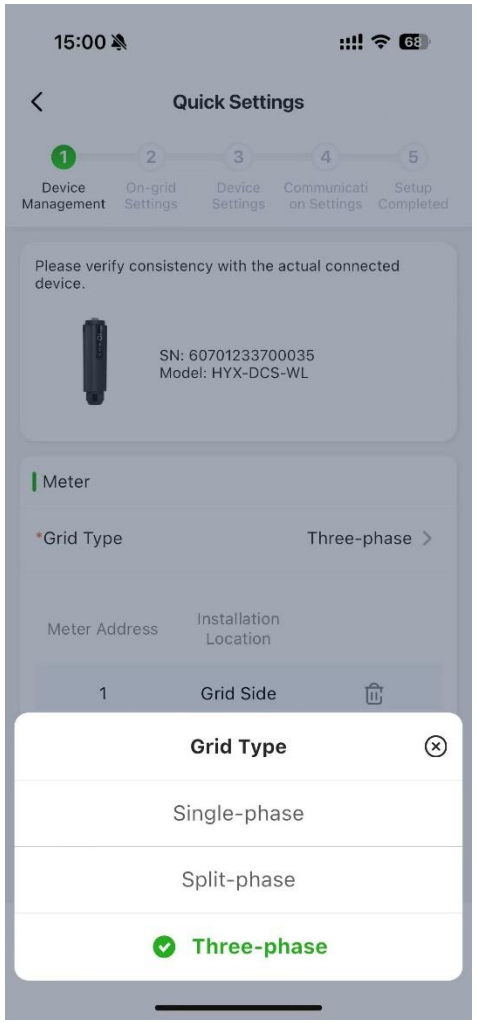
4.2 APP Configuration-Near-end Commissioning

Step3: Quick Settings

① Device Management: The DCS automatically reads the inverter's SN and model number.

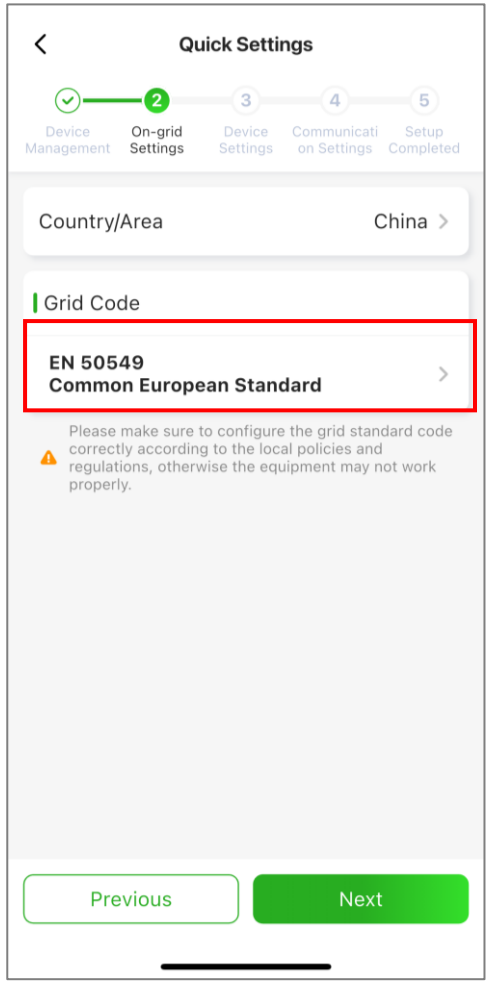
Meter settings**:** 1. Grid type—Three-phase; 2. Configure meter—default address 1, install on grid side.



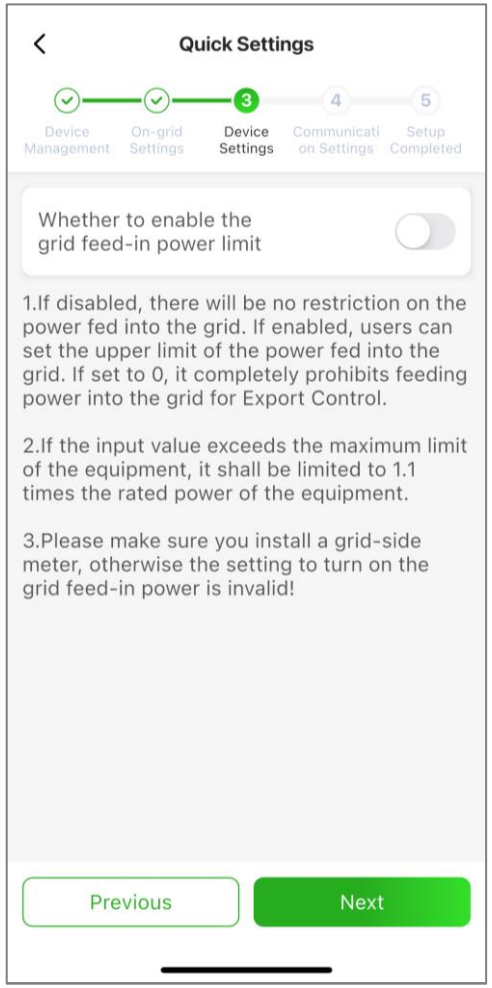


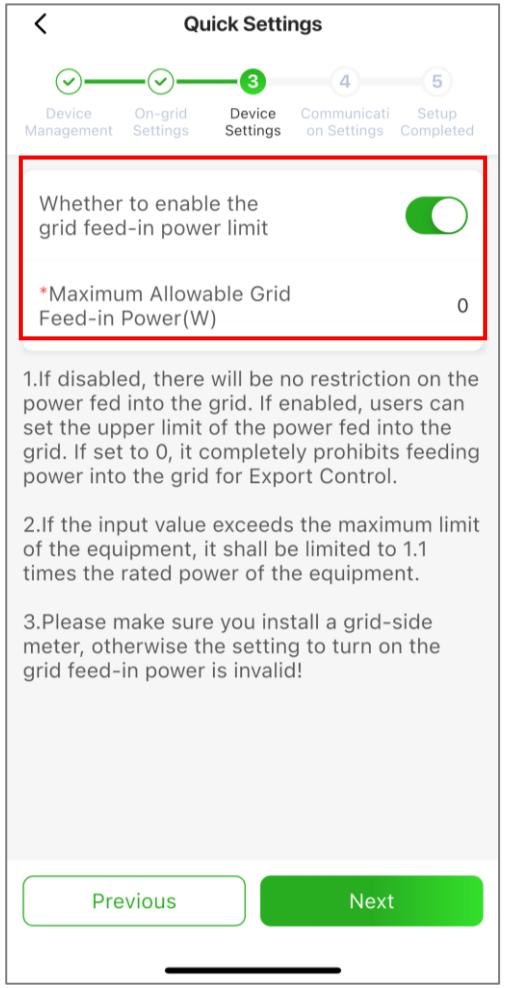
4.2 APP Configuration-Near-end Commissioning

Step4: ② On-grid Settings: Select the corresponding country's grid-code, then click Next.



Step 5: ③ Device Settings - Set feed-in power limit (enable and set to 0 to stop feeding grid).





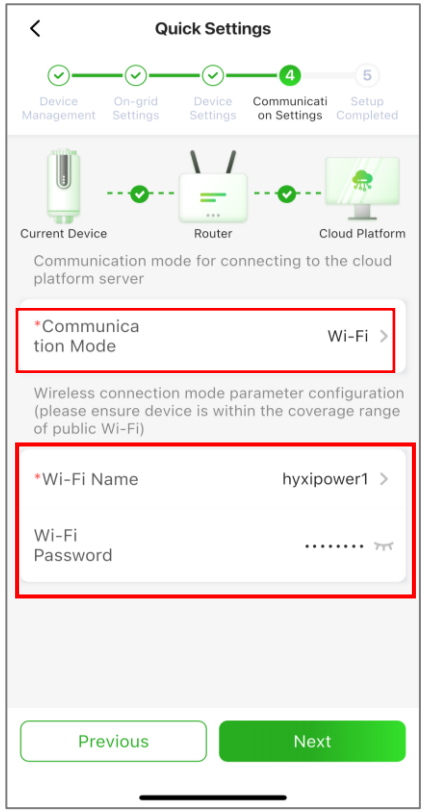
4.2 APP Configuration-Near-end Commissioning

Step6: ④ Communication Settings: Wi-Fi Mode: Enter Wi-Fi name and password.

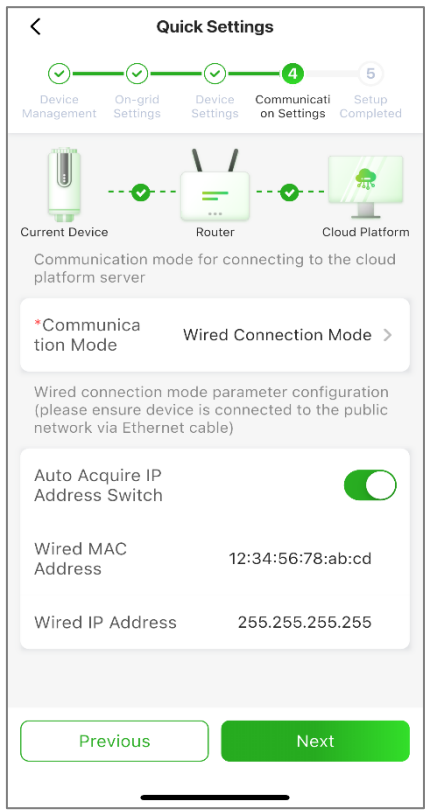
Wired Mode: Ensure automatic IP acquisition is enabled.

4G Mode: The APN, username and password will be recognized automatically, and proceed to next step after setup.

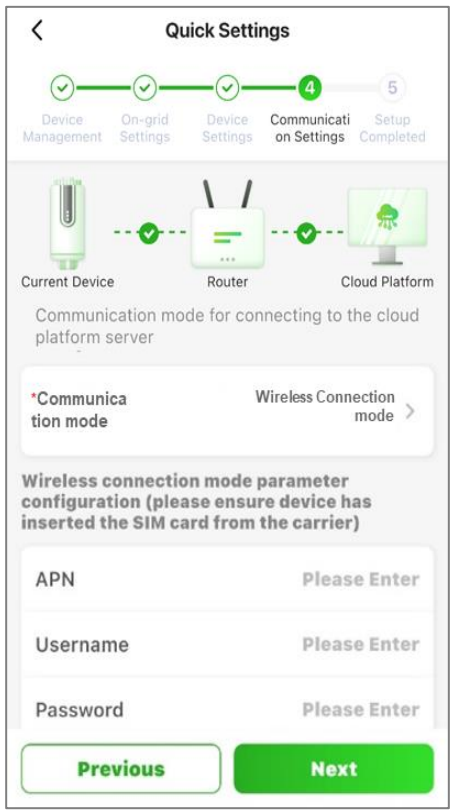
Wi-Fi

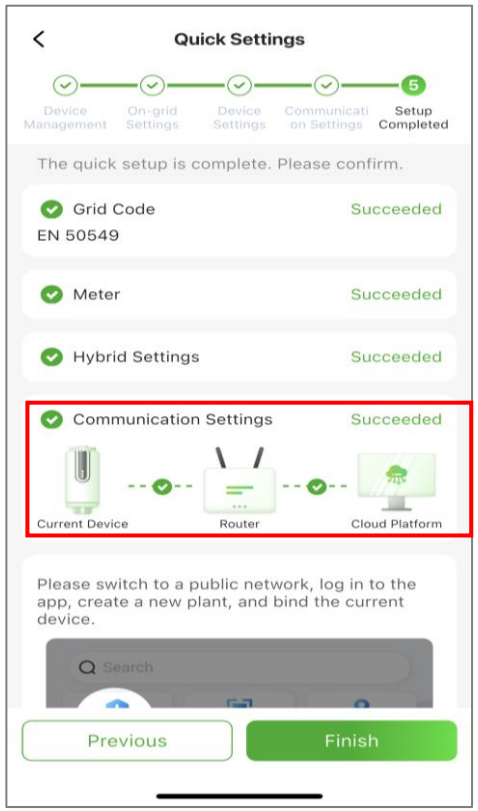


Wired



4G





- Completion sign: Green checkmarks show between Device - Router - Cloud platform DCS shows three steady LED lights

4.3 APP Configuration-Create a Plant

Registration

1. Download HYXipower APP .

2. Register the account of the person in charge of the organization.

Near-end Commissioning

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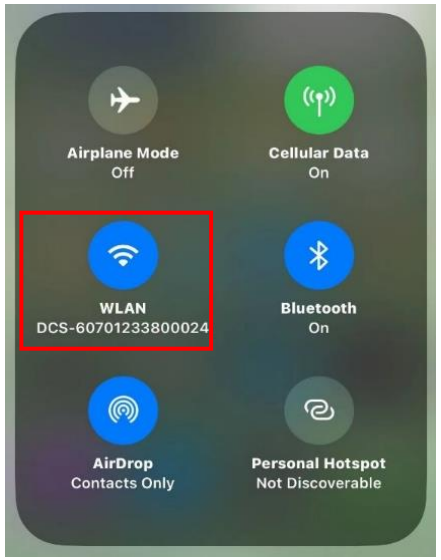
Create a Plant

Create a power station for users

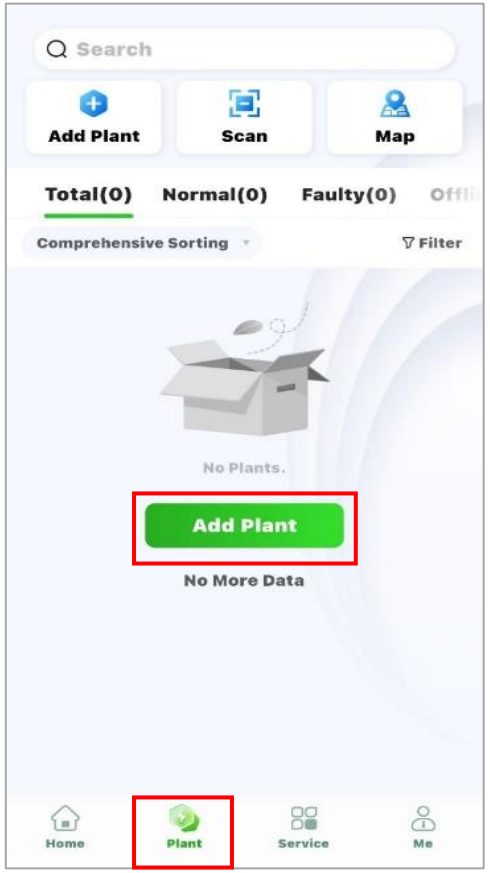
You can manage the equipment through the Plant and check the equipment status, system power generation and usage, etc.

4.3 APP Configuration-Create a Plant

Step 1: Disconnect the phone from the DCS' s WiFi. Make sure your phone has Internet access



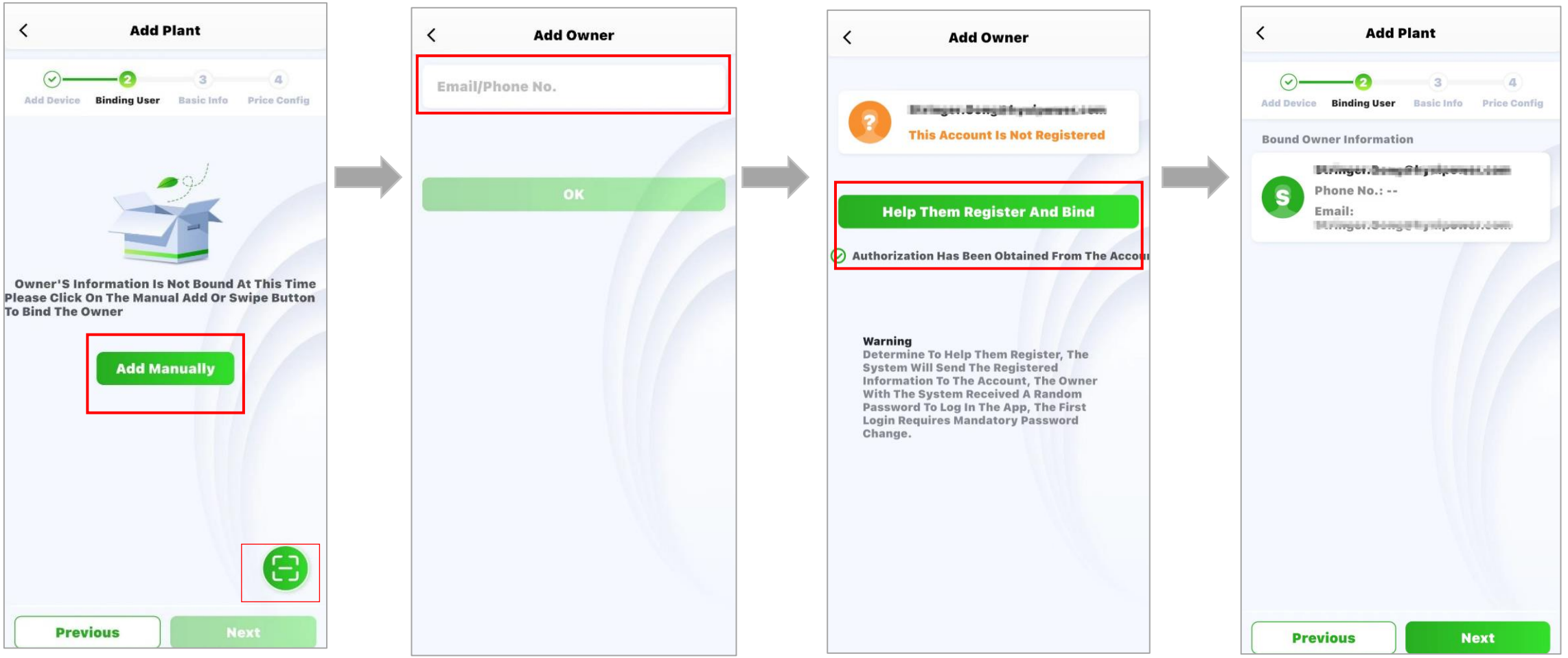
Step 2: Log in to the organization account, click "Add Plant"



Step 3: Scan the QR code of the DCS or add it through Recently Debugged Device

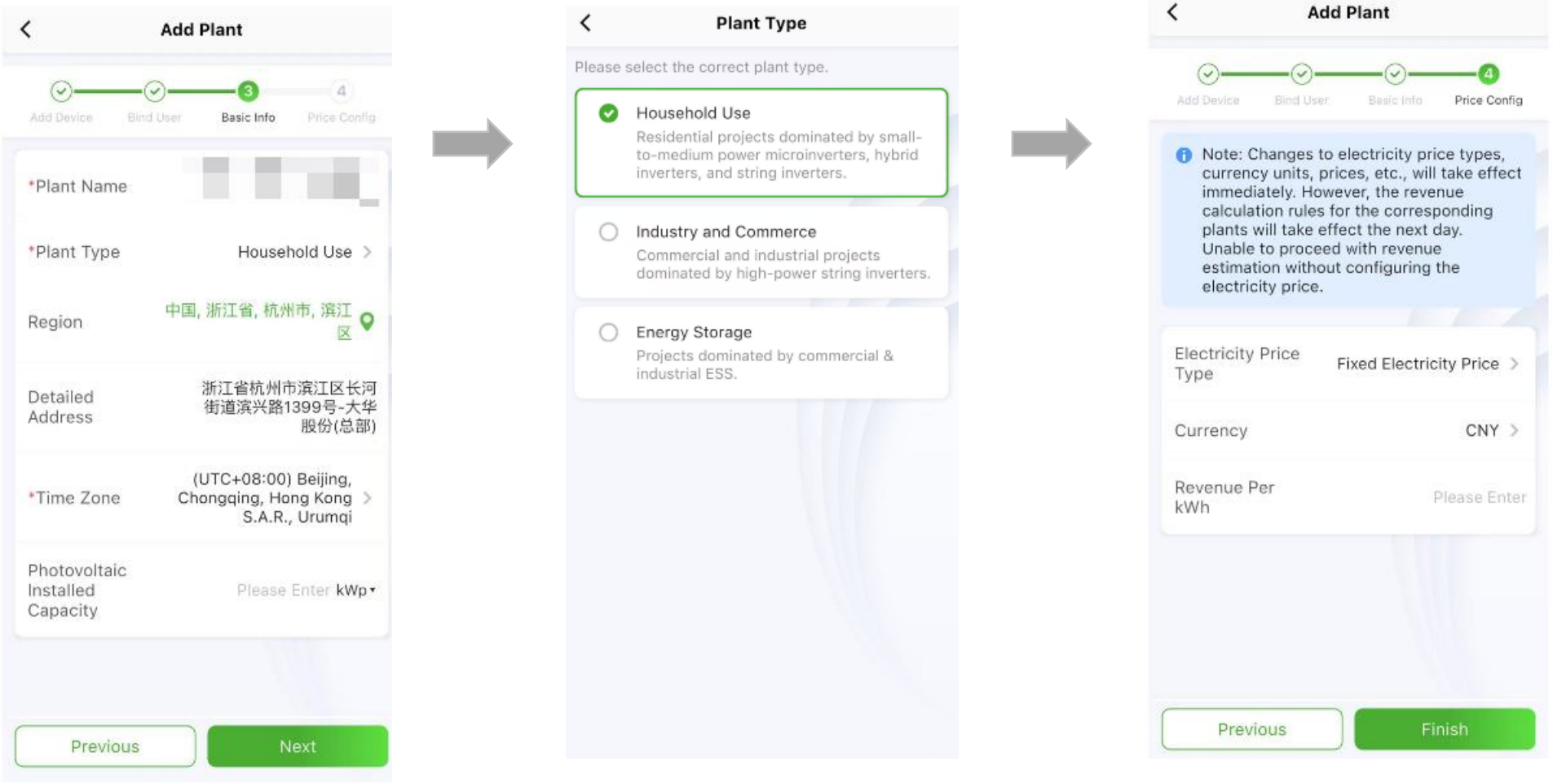
4.3 APP Configuration-Create a Plant

Step 4: Add owner - manually add or scan the owner's QR code to bind. Manually add - enter the email address or mobile phone number of the Plant owner. If the owner is not registered, click to help him register and bind. The system will generate a random password and send a text message or email to the registered account

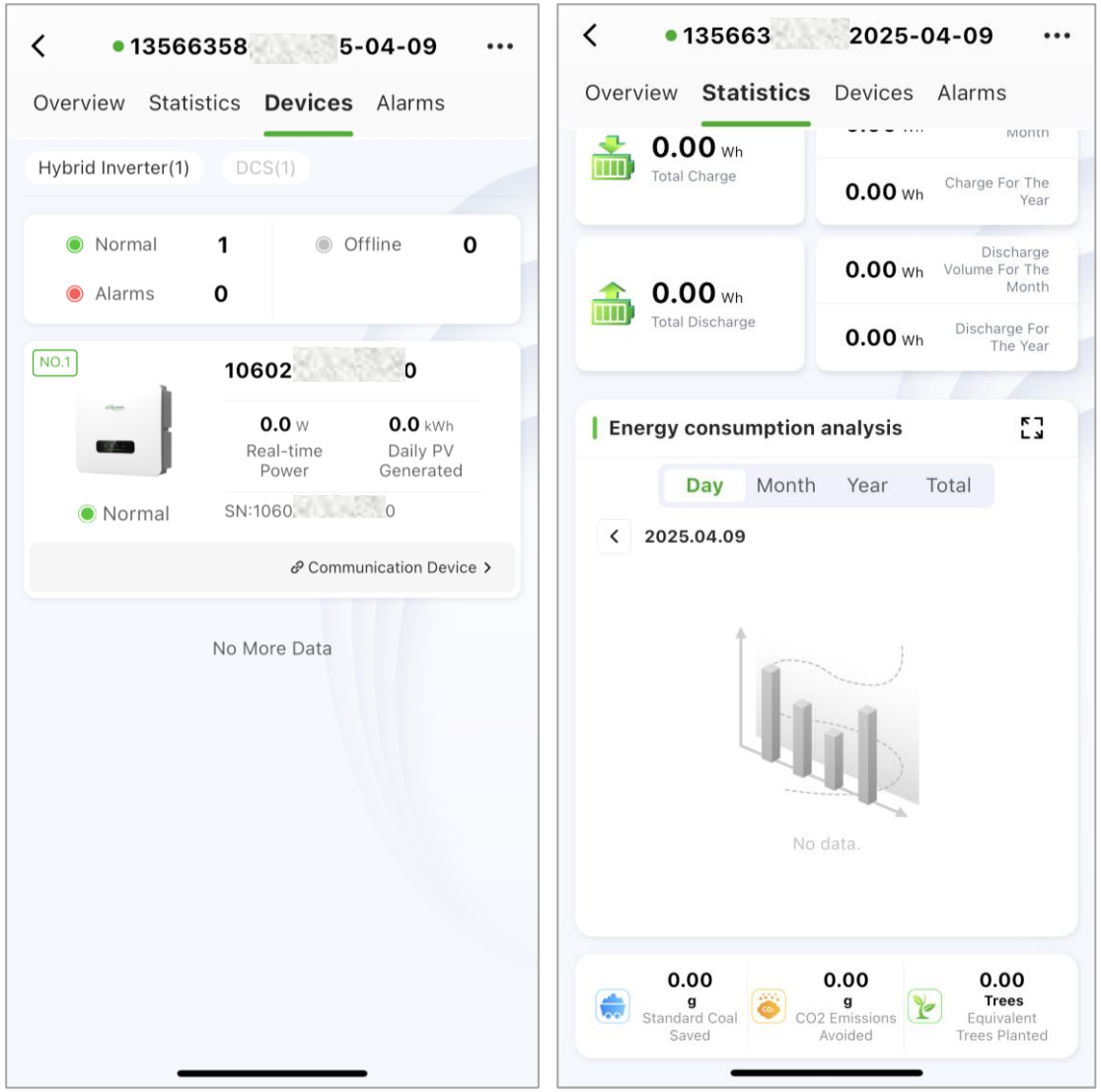


4.3 APP Configuration-Create a Plant

Step 5: Fill in basic information including Plant name, Plant type**(Household Use**), Region, Time Zone, and More information including Photovoltaic Installed Capacity, etc.



4.3 APP Configuration-Create a Plant



Step1: Select the plant, enter the user's plant interface, go to the device interface, and ensure the devices are online and functioning normally.

Step2: After installation, continuously monitor for at least 30 minutes. Select Statistics, go to the Energy consumption analysis interface, check the real-time power generation curve to confirm the plant has started normal electricity production.

After all the above checks are confirmed normal, it indicates successful installation and commissioning of the equipment!

HYXiPOWER
华 昱 欣

THANKS

Delivery and Service Center

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