HYXiPOWER
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Three-Phase String Inverter Installation Guide S15K/S17K/S20K/25K-T -General

Delivery and Service Center

品质 创新 高效 共赢

V2.0 – 2025/06

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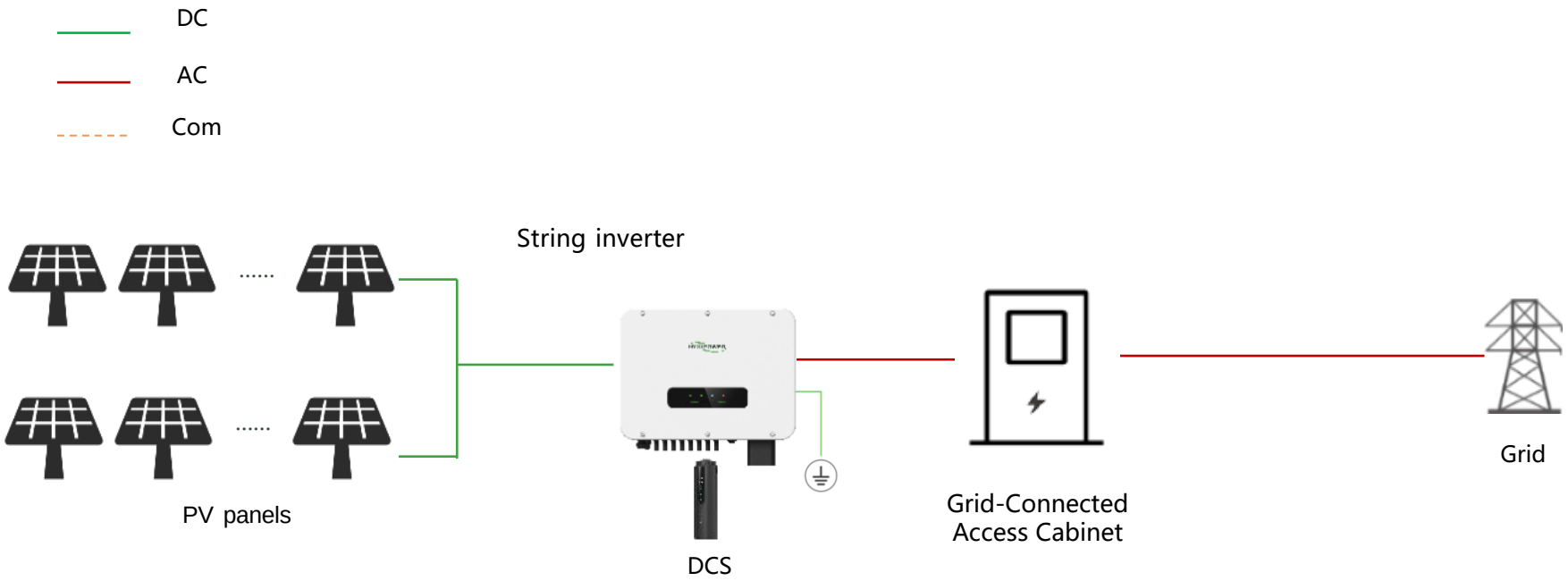
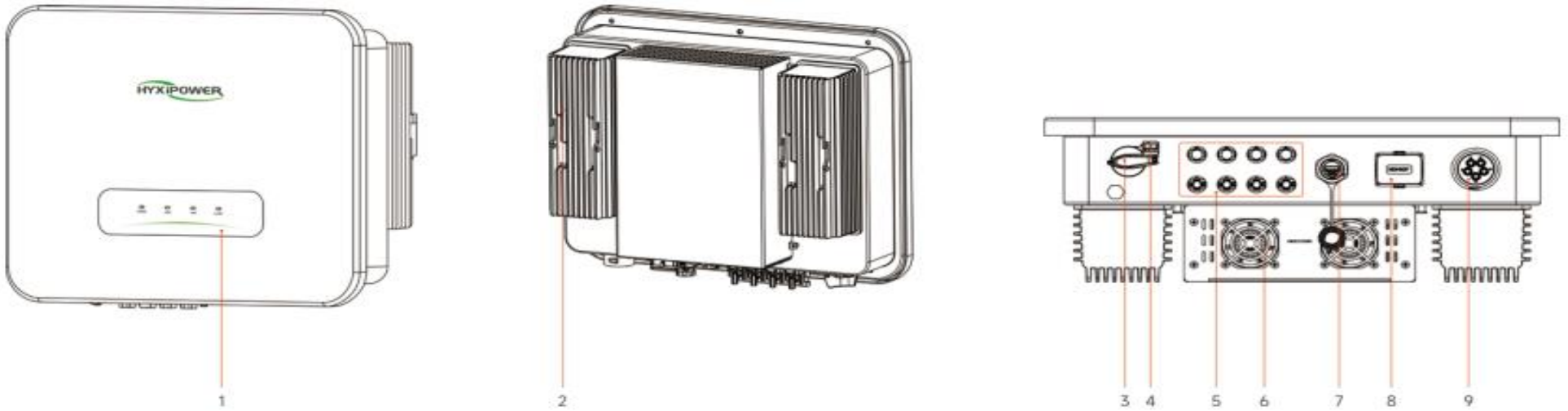
1.1 Program Overview-Solution Overview



Before installation, conduct a site survey and, referring to the diagram above, plan the equipment installation positions and wiring scheme in advance.

1.2 Program Overview-String Inverter Introduction



NO.	Name	Description
1	LED Panel	Indicates the current operating status of inverter
2	Mounting Pegboard	Fixed inverter top
3	DC switch	On/Off DC input
4	DC switch lock	DC lock hole Reserved(Australia)
5	DC Input Terminal	Inverter-PV

NO.	Name	Description
6	Fan	Heat dissipation and ventilation
7	COM Port 1	DCS Connection
8	METER Port	Smart Meter
9	AC Port	AC output

1.3 Program Overview-DCS Introduction

RESET button:

1. Press 2 times to restart
2. Press 3 times to enable local configuration (AP mode);
3. Press 4 times to restore factory settings (Within 1 second between pressing)

Indicator	Status	Description
Power	On	Power ON
	OFF	Power OFF
NET.	Solid Green	Connected to server
	Flashing	Connecting to server
	OFF	Disconnected from server
COM.	Solid Green	Normal communication with inverter
	Flashing	Communicating with inverter
	OFF	Communication with inverter failed

1.4 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.

CONTENTS

2.1 Installation Preparation-Materials and Tools Preparation

Conduct a site survey and make plans in advance before installation

1. Plan the equipment placement in advance: Determine the mounting position for the inverter.
2. Understand the PV connection status on-site: Check whether photovoltaic (PV) panels are present and whether their current and voltage meet the inverter's specifications. If they exceed the specifications, inform the customer in advance to reduce the number of PV panels to avoid equipment damage.
3. Check the location of the inverter and the main circuit breaker where power enters the house.
4. According to the pre-installation assessment of the site environment, measure the required length of each cable and purchase the necessary cables in advance for installation, as shown in the table on the right.

Important! ! The following cable products are not provided and need to be purchased separately.

No.	Name	Description	Specification
1	PV Cable	Cables used from the photovoltaic panels to the inverter should be multi-core photovoltaic cables with a maximum voltage tolerance of 1100V.	conductor cross-sectional area: 4~6mm² outer diameter of the cable: 5.5~9mm
2	AC output cable	Used for AC-side wiring of the inverter, outdoor copper-core cable / aluminum-core cable	conductor cross-sectional area: 16-35mm² copper-core cable /35~50mm² aluminum-core cable outer diameter of the cable: 20-30mm
3	Ground wire	For equipment grounding use	conductor cross-sectional area≥ 6mm²

2.2 Installation Preparation-Materials and Tools Preparation

Existing equipment list			
No.	**Name**	**Figure**	**Description**
1	Three Phase String Inverter		Includes one inverter main unit and related accessories.
2	DCS		After registering the device to the cloud server, it can be centrally managed through the cloud platform.
3	The DTSU666 energy meter		Measurement of circuit voltage, current, power, etc.
4	Current Transformer		To acquire grid-side AC current for precise inverter power output regulation and anti-islanding protection. Note: The directional arrow must be oriented toward the grid during installation.
5	Ethernet Cable		The device includes a 2-meter CAT5e Ethernet cable as standard. Extended cable lengths must be procured separately if required.
6	Wall-mounted Bracket		Wall-mounted inverter support (mounting bracket included in product packaging)

2.3 Installation Preparation–Tool Installation

Installation Tool


Electric Drill


Heat Gun


Hex Key


Wire Stripper


Hydraulic Pliers


Crimping Tool


Screwdriver


Marker Pen

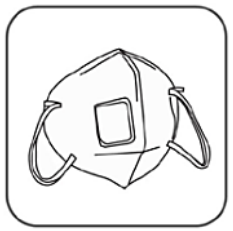

Utility Knife


Multimeter


Tape Measure


Hammer

Protect Tool


Protective Mask


Safety Glasses


Insulated Safety Shoes


Insulating Gloves

CONTENTS

3.1 Device Installation- Product Unboxing Inspection

Inverter Unboxing Inspection:

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

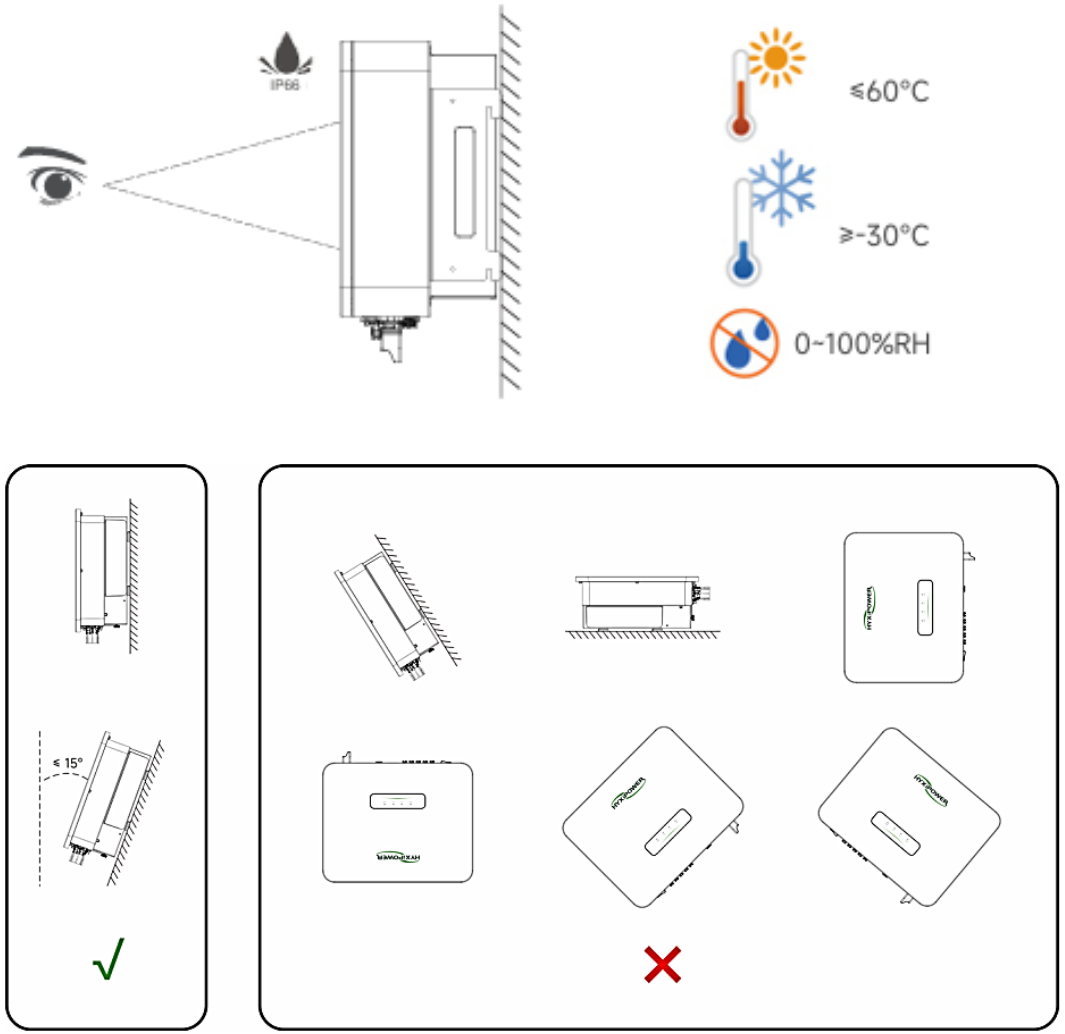
No.	Name
1	Inverter
2	Mounting Bracket
3	Signal Connector
4	AC Connector
5	Hexagon Wrench
6	DC Connector
7	Screws

1

2

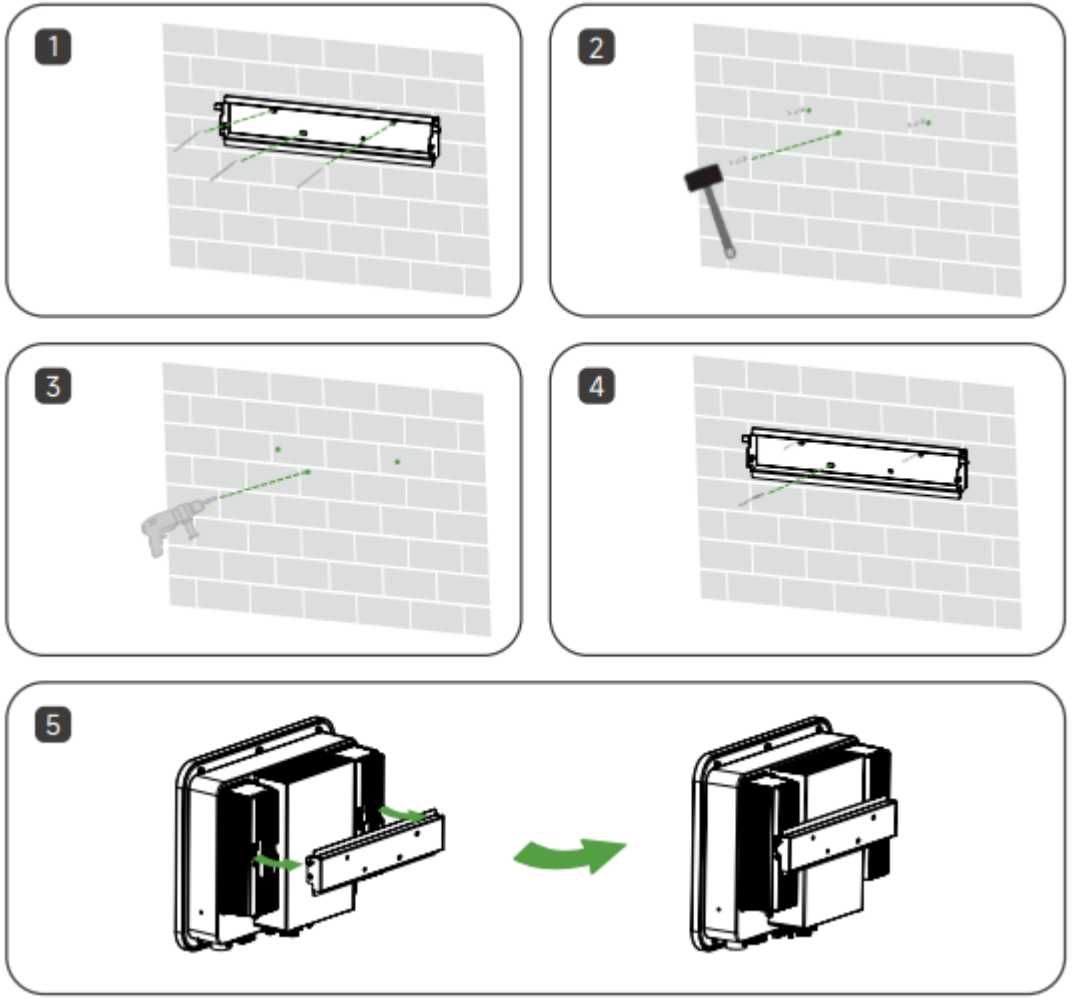
3.2 Device Installation–Environment Requirements

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-Inverter Installation

The mounting bracket and inverter can be securely installed in the following ways:



Step 1: Place the wall plate horizontally on the wall, recommend to select the hole position shown in the picture and mark the drilling position.

Step 2: Drill a hole at the location shown, the depth of the hole is about 70mm.

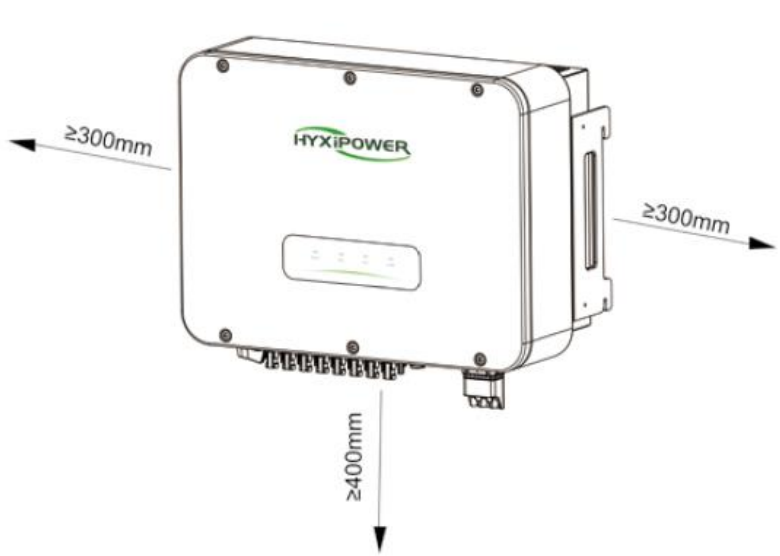
Step 3: Place the expansion tube and install the wall plate using the expansion bolt assembly.

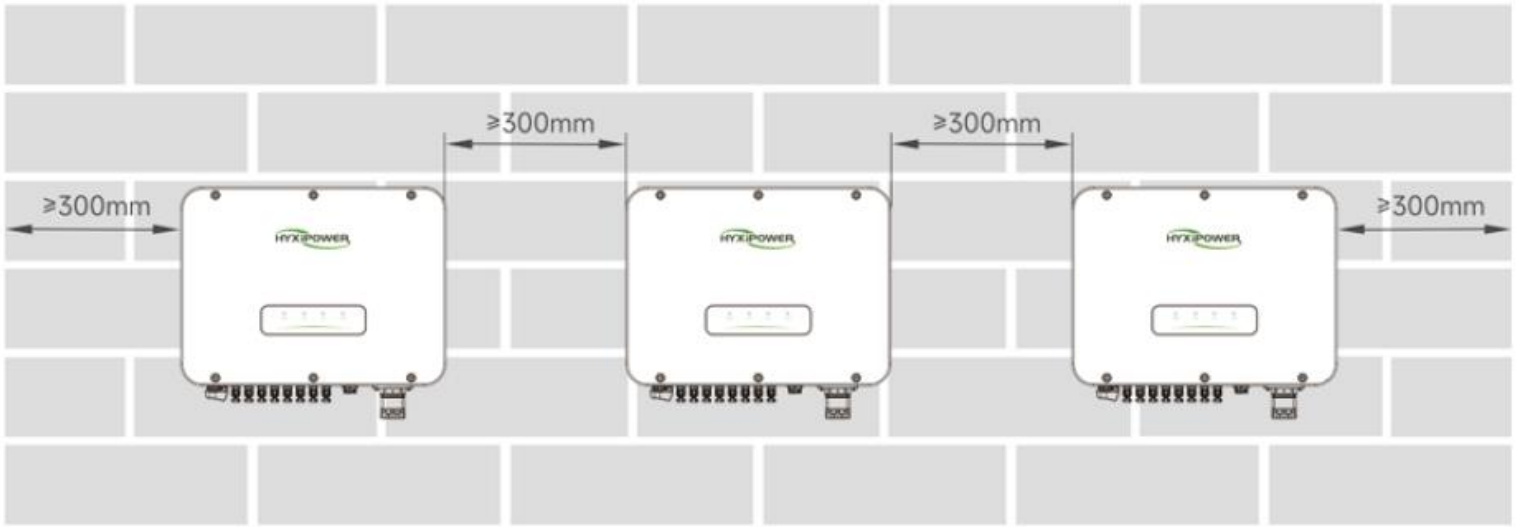
Step 4: Secure the mounting plate with M6 screws.

Step 5: Hang the mounting lugs onto the peg plate and tighten them with M6
screws and finally lock them.

3.4 Device Installation-Inverter Installation

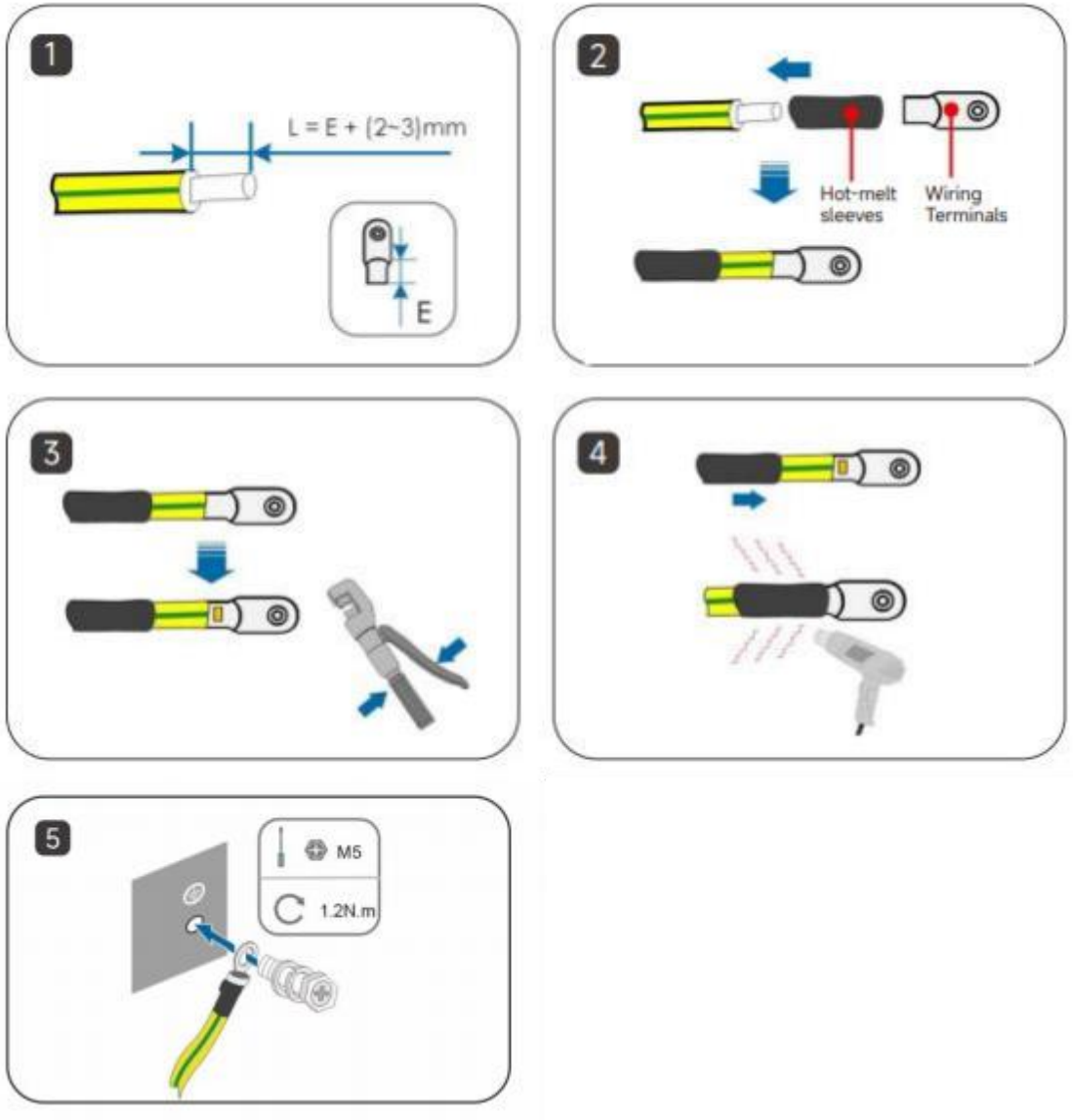
When installing multiple inverters, a distance of at least 300mm should be maintained between two inverters.





Note: Before installing the equipment, please ensure that the photovoltaic panels are installed and the cables have been properly laid.

3.5 Device Installation-Inverter grounding installation



Step 1 : Strip off a certain length of insulation L=E+(2-3)mm .

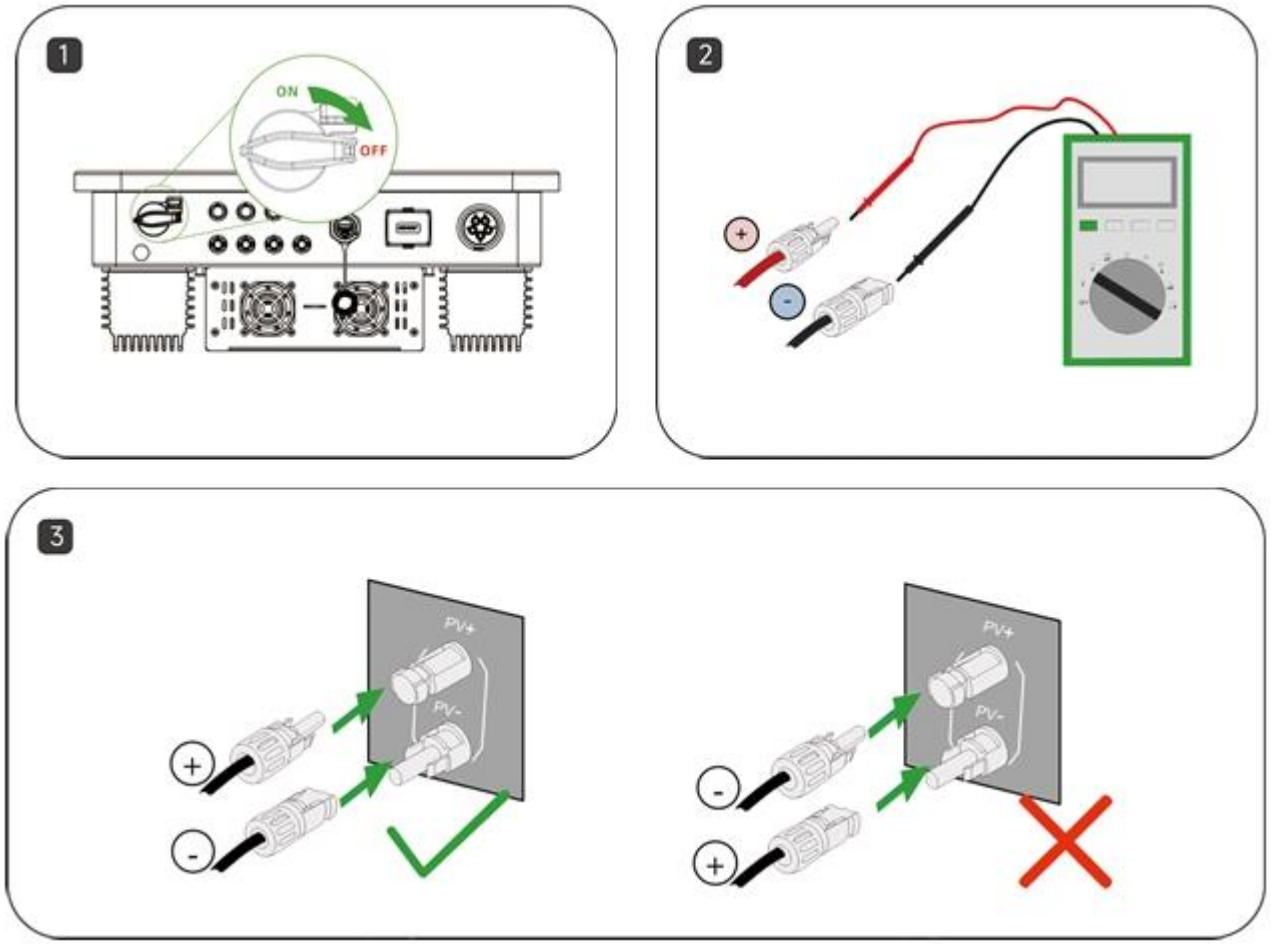
Step 2 : Pass the cable through the hot melt sleeve and insert it into the terminal block.

Step 3 : Use crimping pliers to tightly connect the terminal blocks and cables .

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

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

3.6 Device Installation-DC Connection



Step 1: Turn the DC switch to "OFF" manually.

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

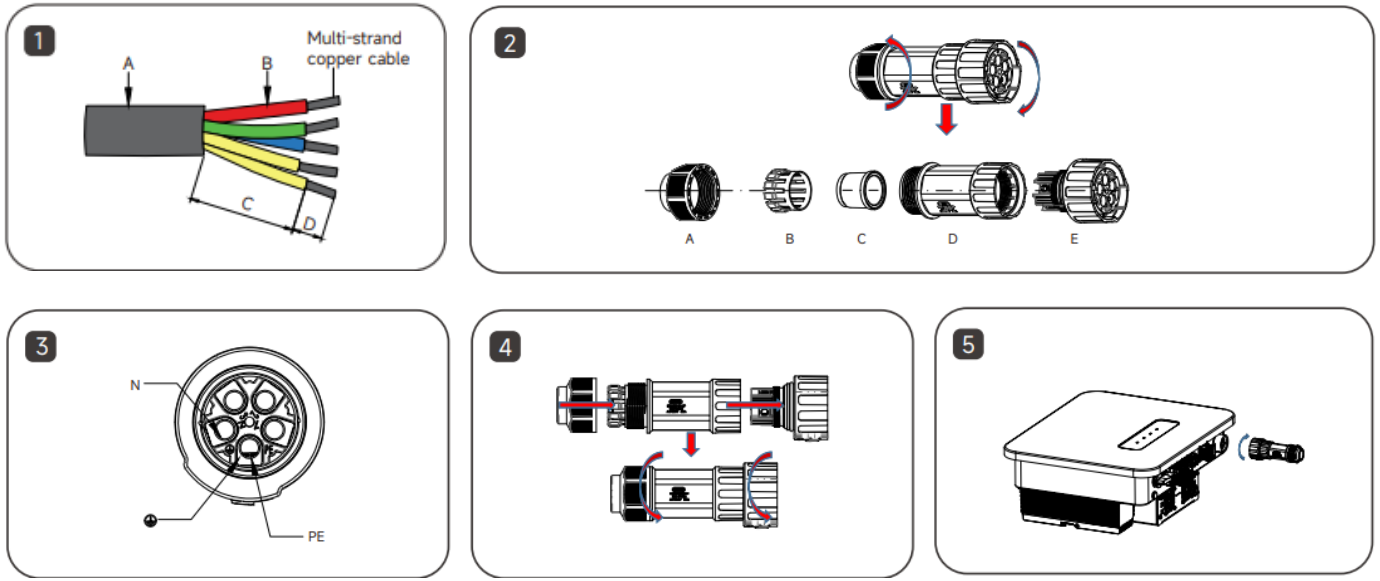
Step 3: Use crimping pliers to bundle the cable ends at the wiring terminals.

Step 4: Pass the cable through the cable gland, insert the insulating sleeve and fasten it. Use a force of 2.5~3N·m to tighten the gland and insulating sleeve.

Step 5: Check the PV string cable connections for correct polarity and make sure that the open circuit voltage does not exceed the inverter input limit of 1000V.

Step 6: Connect the PV connectors to the corresponding terminals until a click is heard and seal the vacant DC terminals with MC4 waterproof plugs.

3.7 Device Installation-AC Connection



Step 1: Connect the AC output power cable to the AC connector.

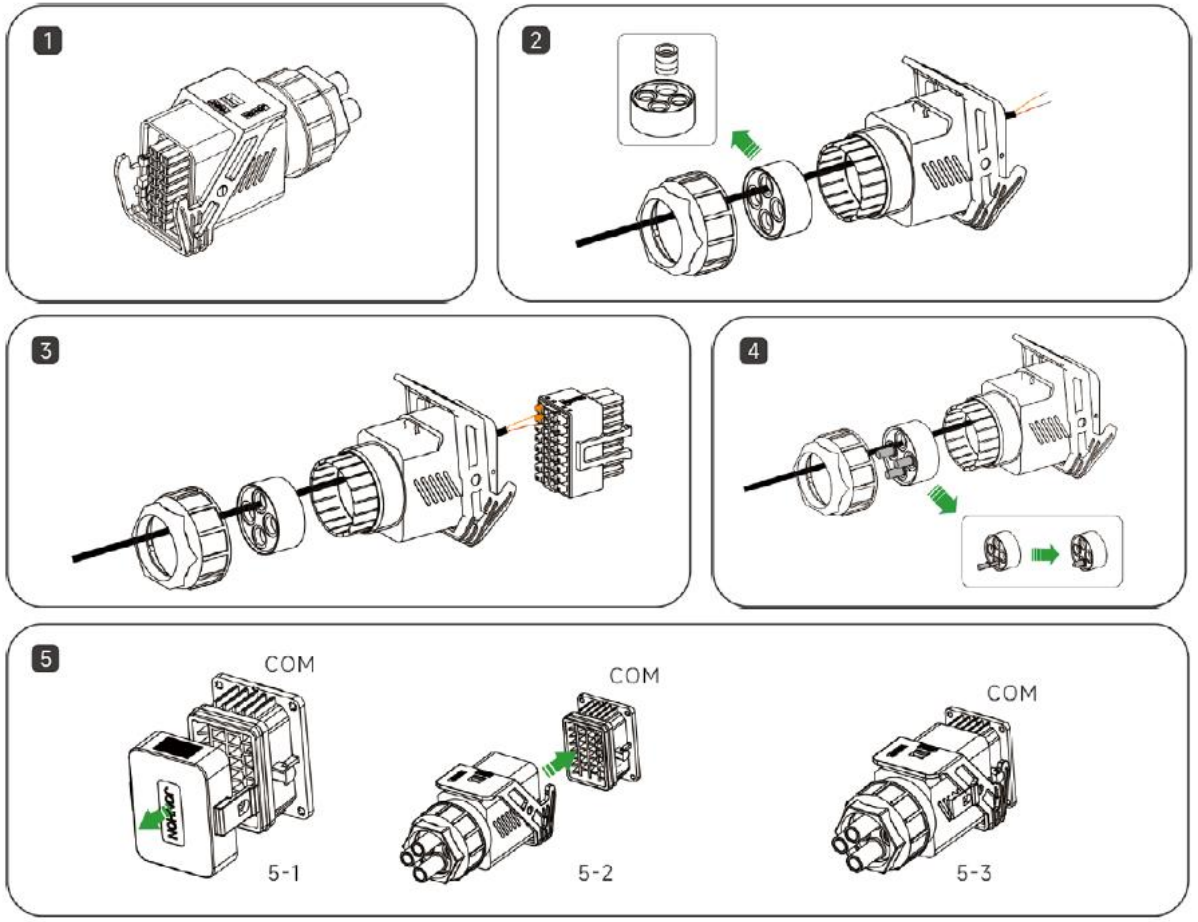
Step 2: Take out the AC connector from the accessory bag and twist the ends apart as shown; First, twist the main body shell D and the wire terminal socket E; Then twist the swivel nut away from the main body shell.

Step 3: Connect the AC cable to the AC connector. Refer to the stripping size in step 1, pass the cable through A, B, C, D, and insert the stripped wire into the corresponding screw crimping power pin to lock the screw. Insert corresponding terminals and tighten with allen wrench. Torque is 1.8~2.0N·m.

Step 4: Assemble the AC connector with the cable and tighten both ends, and screw the main body shell on the wire terminal socket; Then tighten swivel nut with 3~4N·m torque.

Step 5: Connect AC connector with inverter, then tighten AC connector for clockwise, until hearing a slight clicking sound indicates connection succeed.

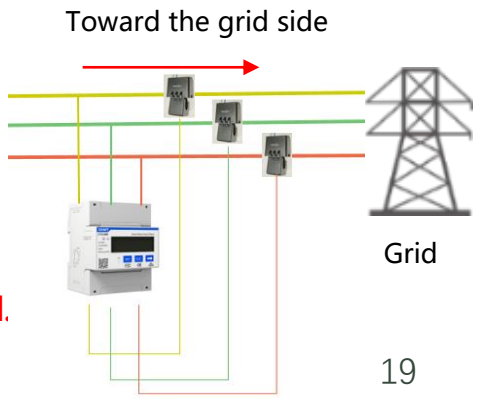
3.8 Device Installation- Meter Connection



Step 1: Pull the crimping assembly out of the communication terminal.
Step 2: Insert the meter's RS485 2-pin wires into the communication terminal as shown, then strip the wires.
Step 3: Crimp the stripped RS485 2-pin wires onto the crimping component (press the yellow button). Refer to Device Installation Step 9 for details.
Step 4: Insert the waterproof rubber plug into any unused ports.
Step 5: Remove the inverter's COM port cover, insert the communication terminal, and secure the latch.
Step 6: Connect the meter in parallel to the grid (refer to Device Installation Step 10).
Step 7: Install the three current transformers (CTs) by clamping their magnetic cores around each phase line (L1/L2/L3) between the circuit breaker and the grid. Ensure the arrow markings point toward the grid side (see diagram below).

Caution:

Only the meter models specified by HYXiPower shall be used.



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.)

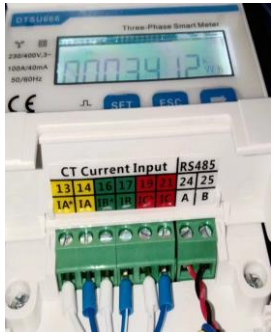
3.9 Device Installation- Meter Connection

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.

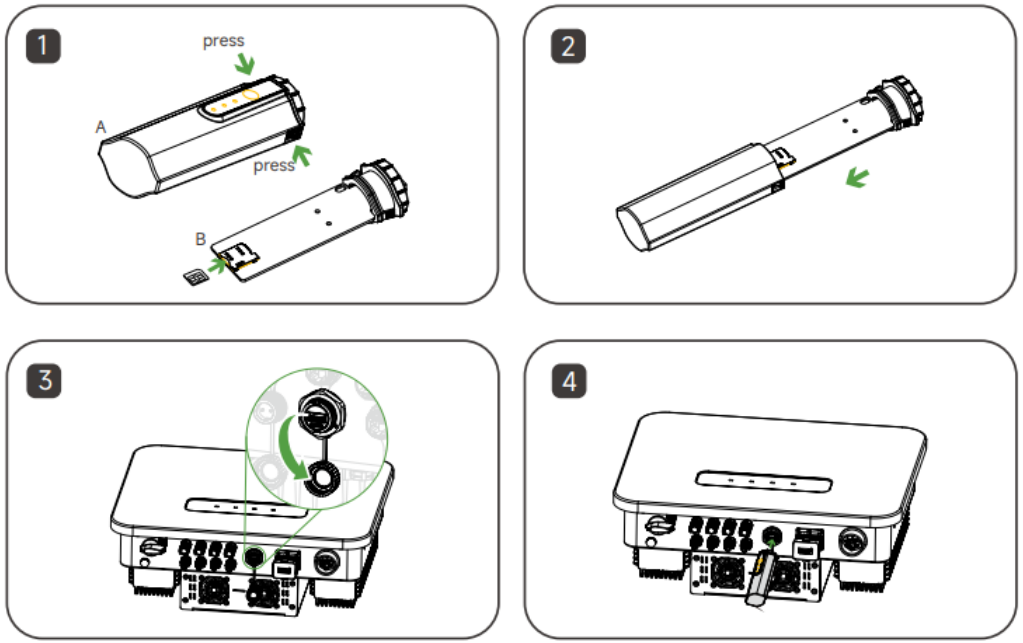


Wiring Diagram (Bottom Side of Electricity Meter)

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.

3.10 Device Installation-DCS Installation



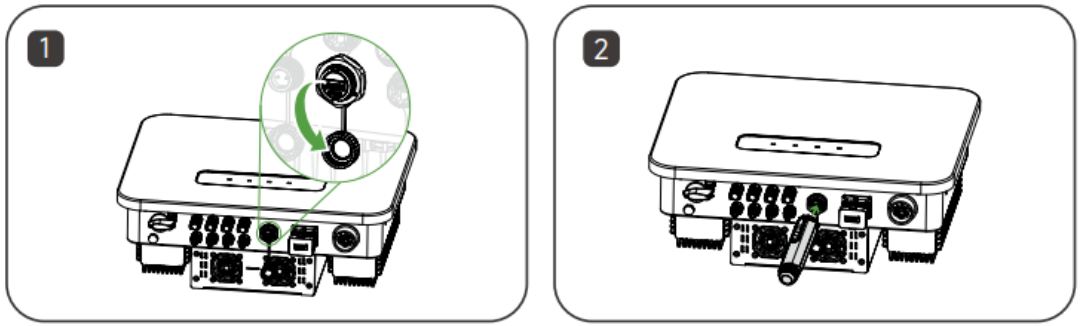
1、DCS Installation(4G Version)

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

Step 2: Install the waterproof cover of DCS;

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

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



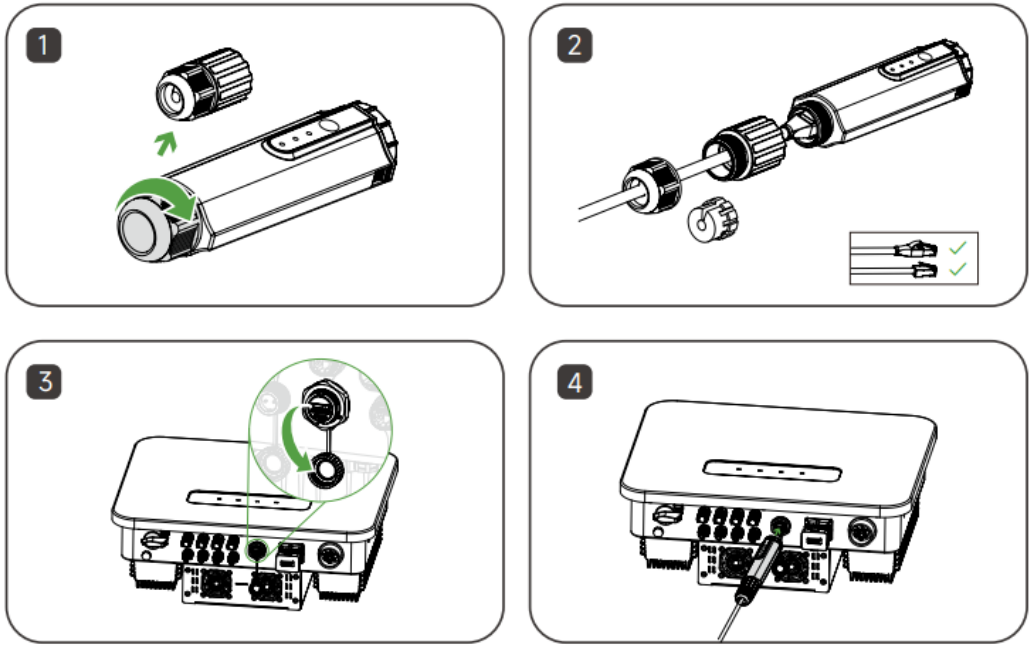
2、DCS Installation (The WiFi version does not require SIM card installation or removal.)

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

Step 2: Insert DCS into the corresponding communication terminal at the

bottom of the inverter and tighten it to ensure it is secure

3.10 Device Installation-DCS Installation



3 DCS Installation(WLAN module)
Step 1: Replace the bottom plug of DCS with the WLAN plug.

Step 2: Insert the network cable connector into the network junction.

Step 3: Remove the waterproof cover at the communication interface of the inverter.

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

3.11 Device Installation-Inverter Startup

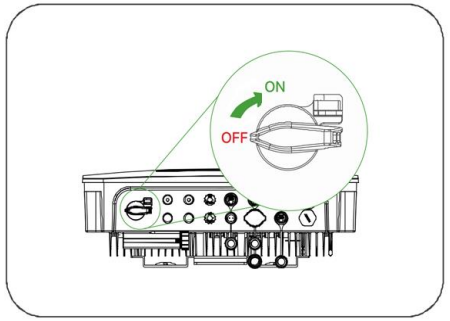


Figure1

Step 1: Open the circuit breaker on the AC side.

Step 2: Open the circuit breaker on the photovoltaic side.

Step 3: Turn on the DC switch on the inverter.

Step 4: Confirm the indicator light status of the inverter. The indicator light status in Figure 2 is normal.

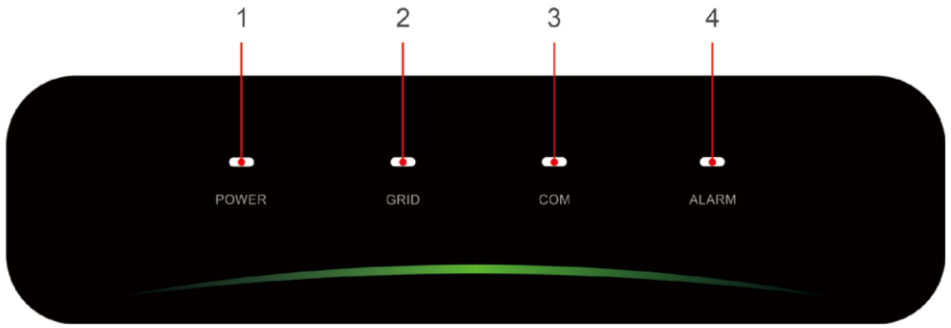
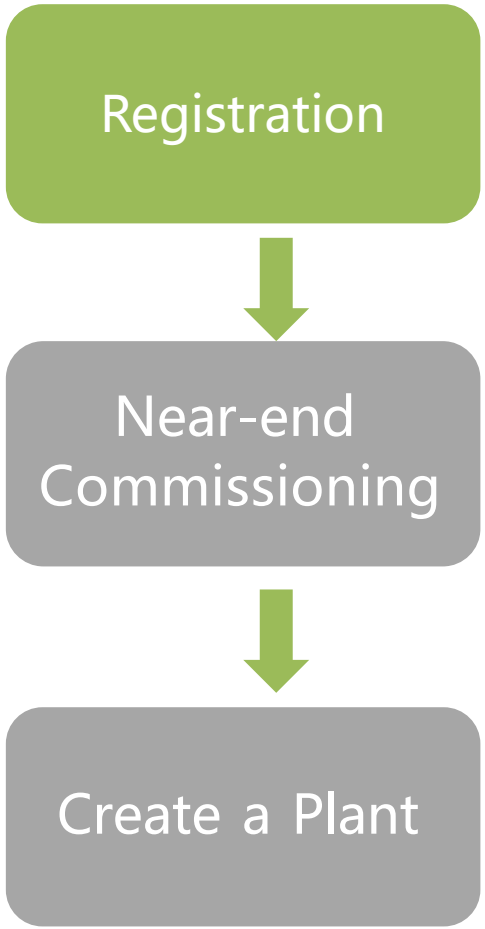


Figure2

No.	Indicator	Status	Description
1	POWER	ON	Inverter Powered ON
		OFF	Inverter Powered OFF
2	GRID	ON	Grid Normal
		Blink 1	Grid Abnormal
		Blink 2	Grid Disconnected
3	COM.	ON	COM. Normal
		Blink 1	Meter COM. Fault
		Blink 2	COM. Fault With BMS
		OFF	Fault Both Meter&BMS
4	ALARM	OFF	Normal
		Blink 1	Inverter Internal Alarm
		Blink 2	Other Alarms

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

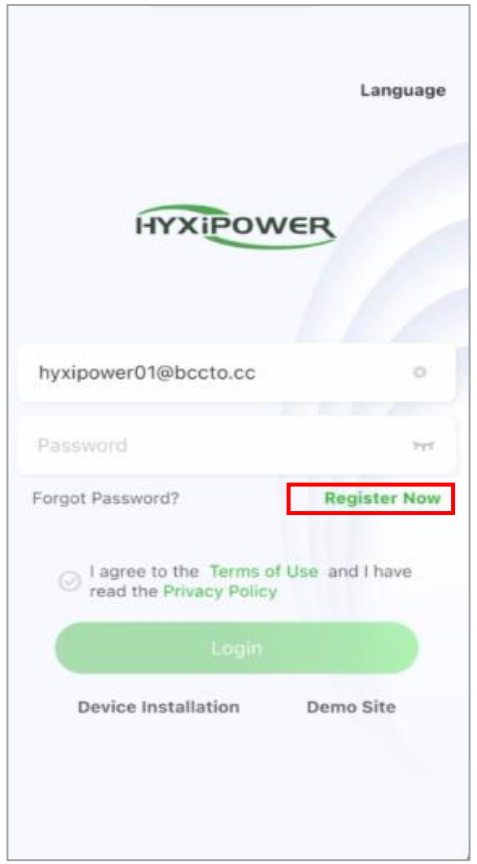
· APP store (IOS)

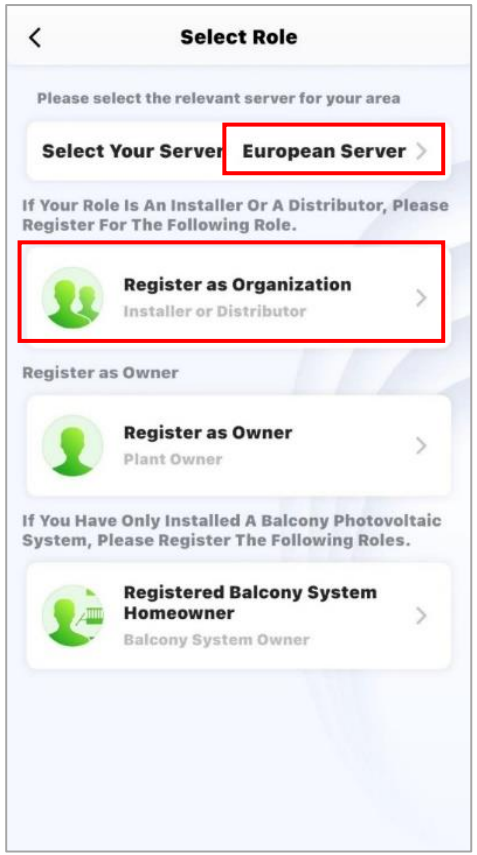
· Google play

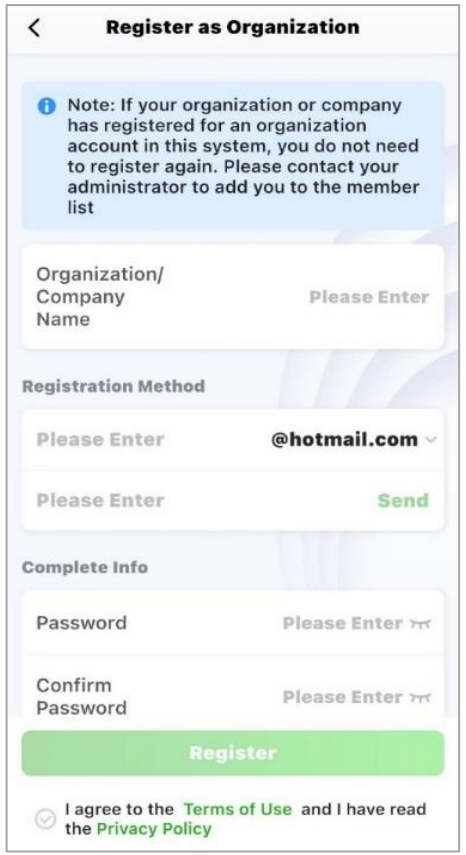
Method 2

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.

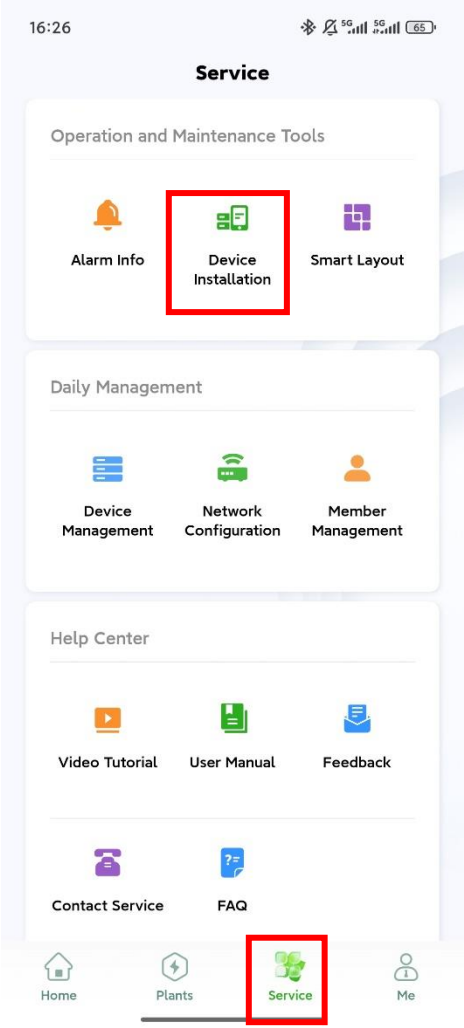
Create a Plant

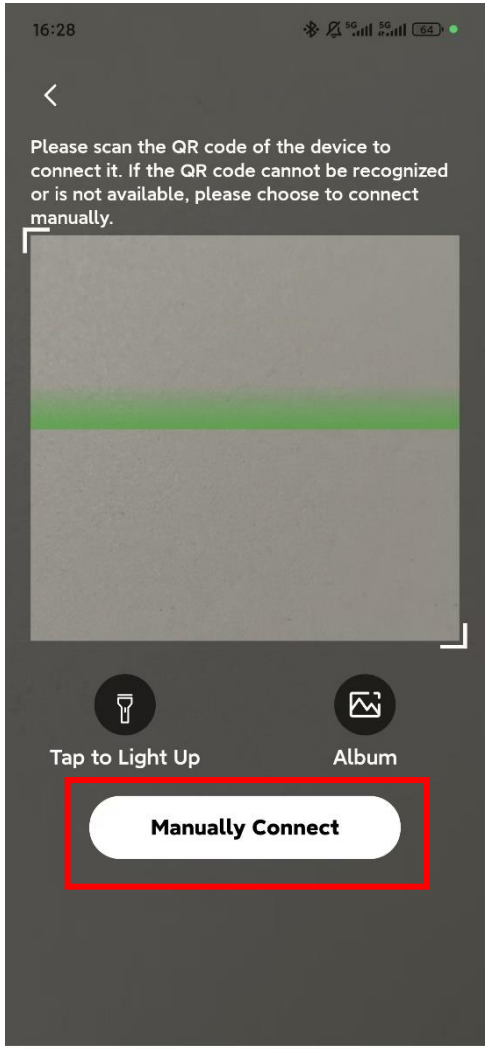
Create a power station for users

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

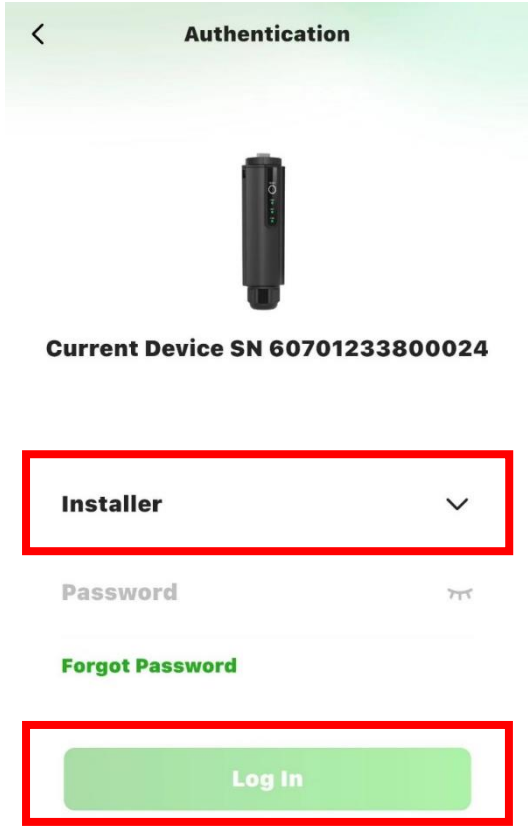
Step1: Click **Device Installation** in **Service** interface.
Then scan the QR code of the Data Communication Stick. If failed ,click the Manually Connect.





4.2 APP Configuration-Near-end Commissioning

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



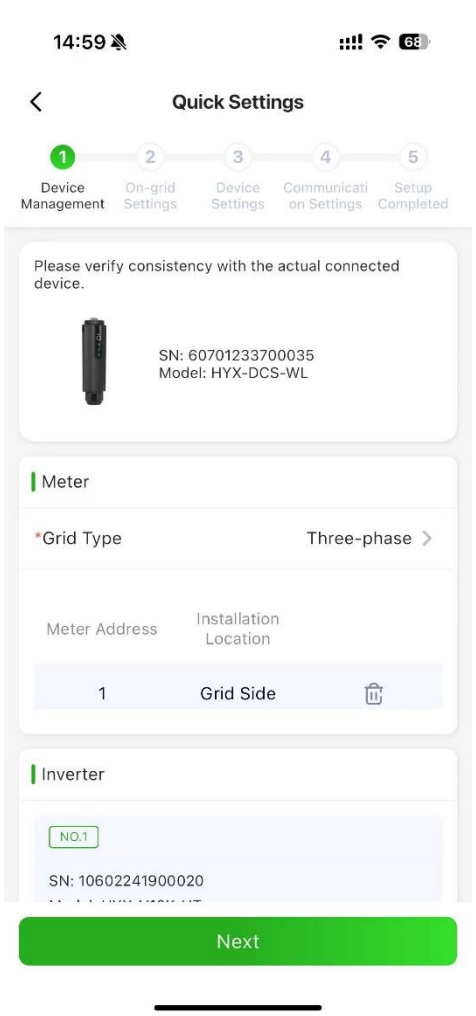
If you forgot the password, quickly press the RESET button on the DCS four times to restore factory settings

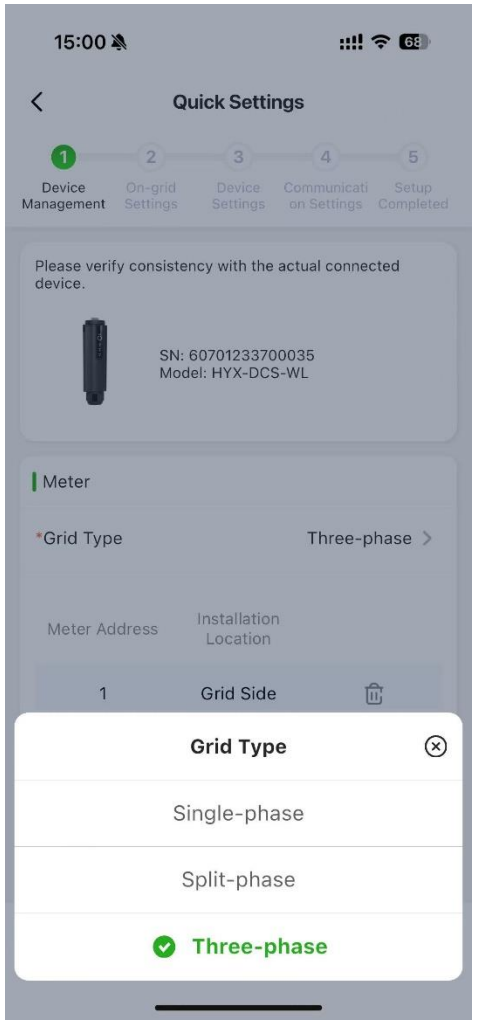
4.2 APP Configuration-Near-end Commissioning

Step3: Quick Settings

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

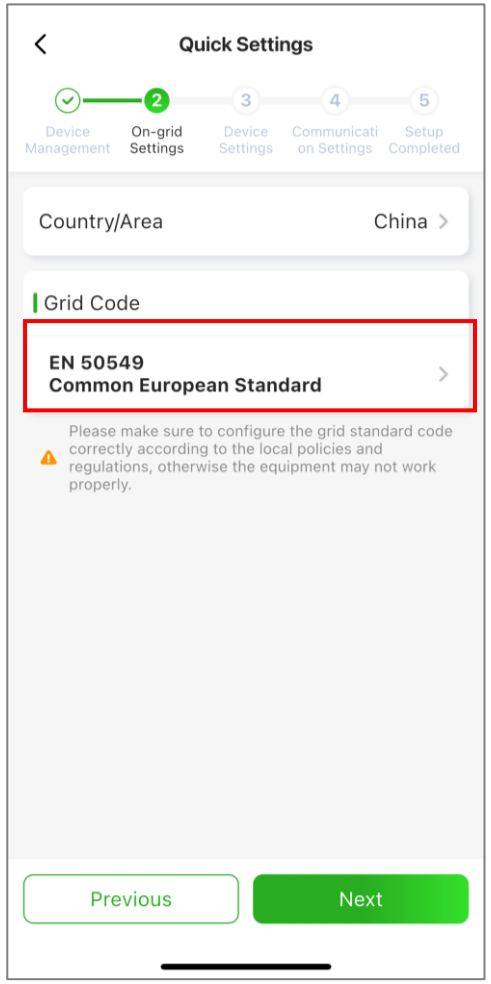
Meter settings**:** 1. Grid type—Three-phase; 2. Configure meter—default address 1, install on grid side.



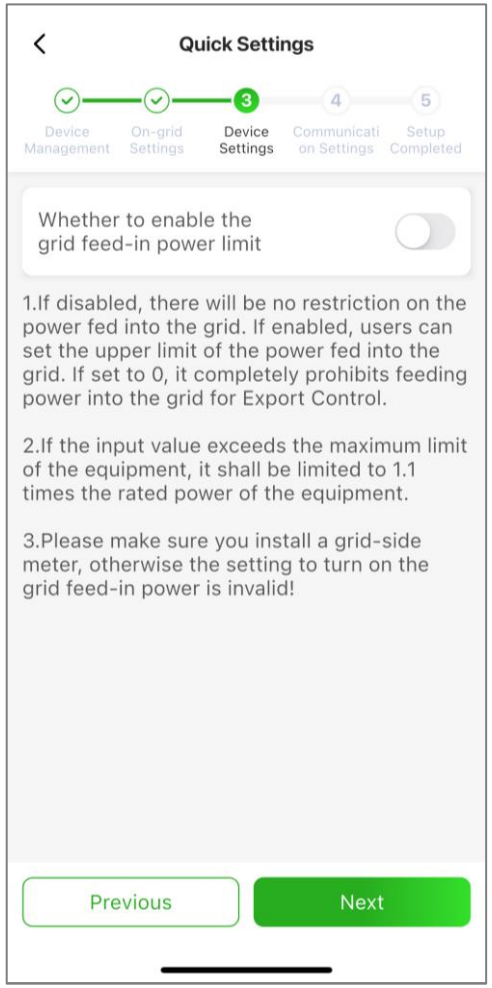


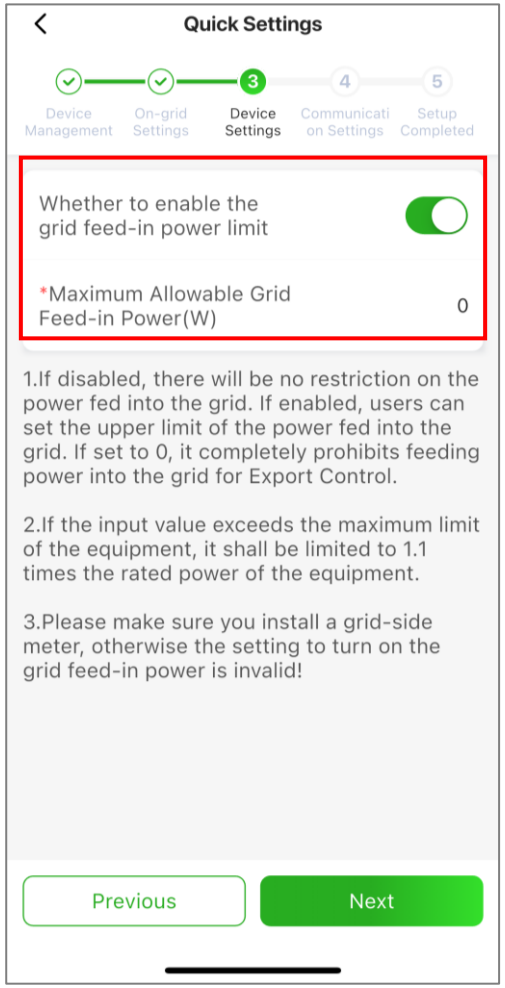
4.2 APP Configuration-Near-end Commissioning

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).





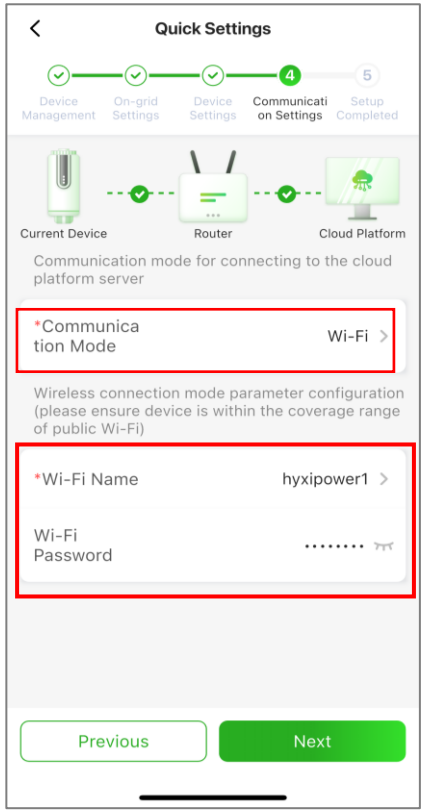
4.2 APP Configuration-Near-end Commissioning

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

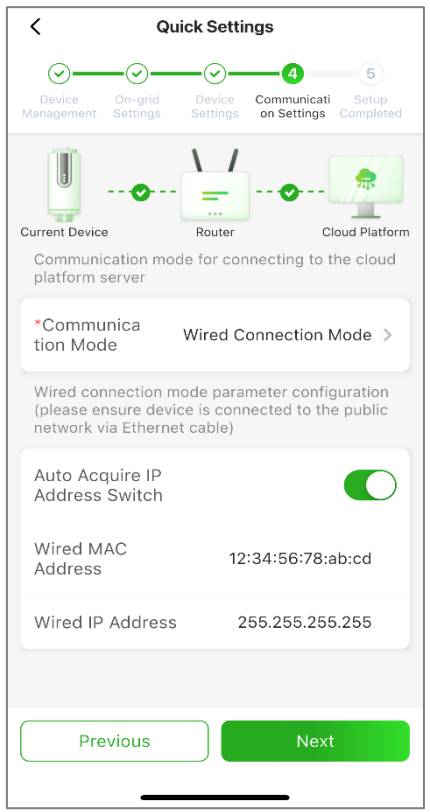
Wired Mode: Ensure automatic IP acquisition is enabled.

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

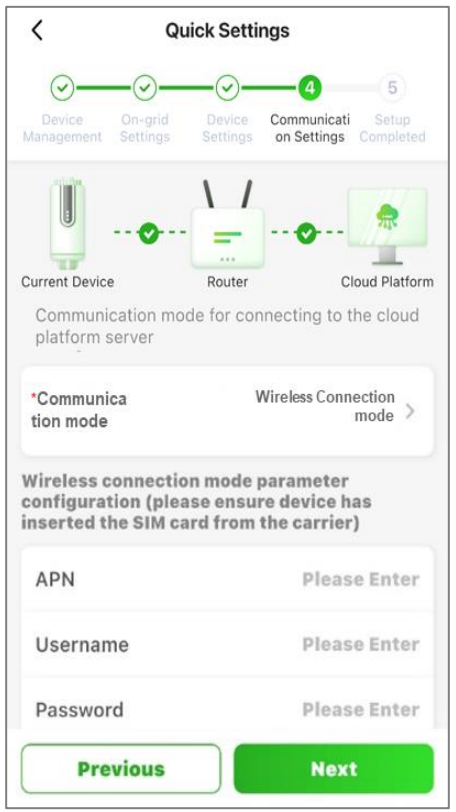
Wi-Fi

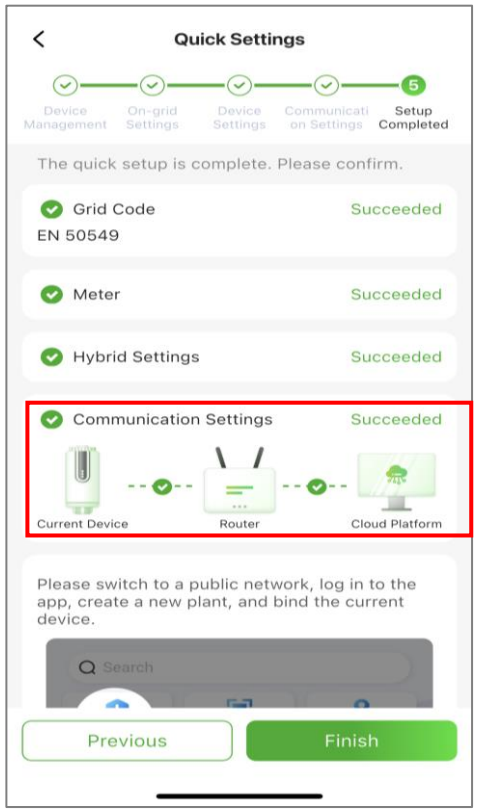


Wired



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

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.

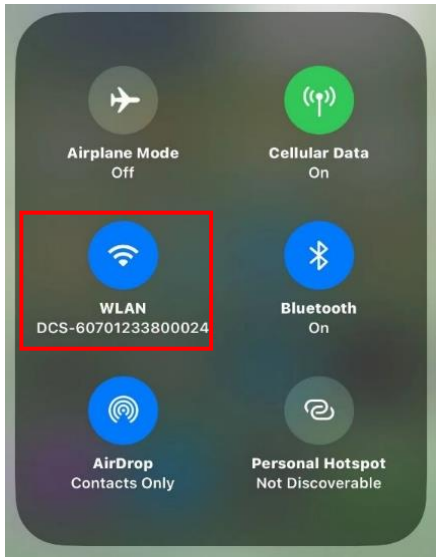
Create a Plant

Create a power station for users

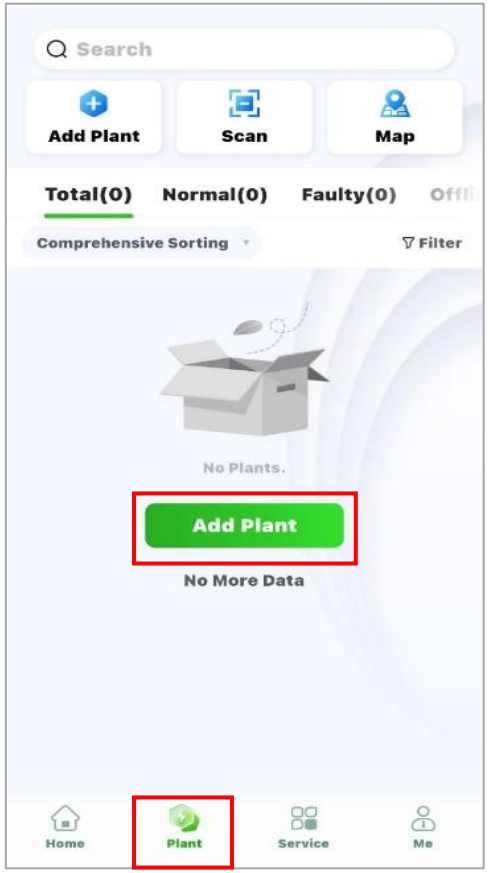
You can manage the equipment through the Plant and check the equipment status, system power generation and usage, etc.

4.3 APP Configuration-Create a Plant

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



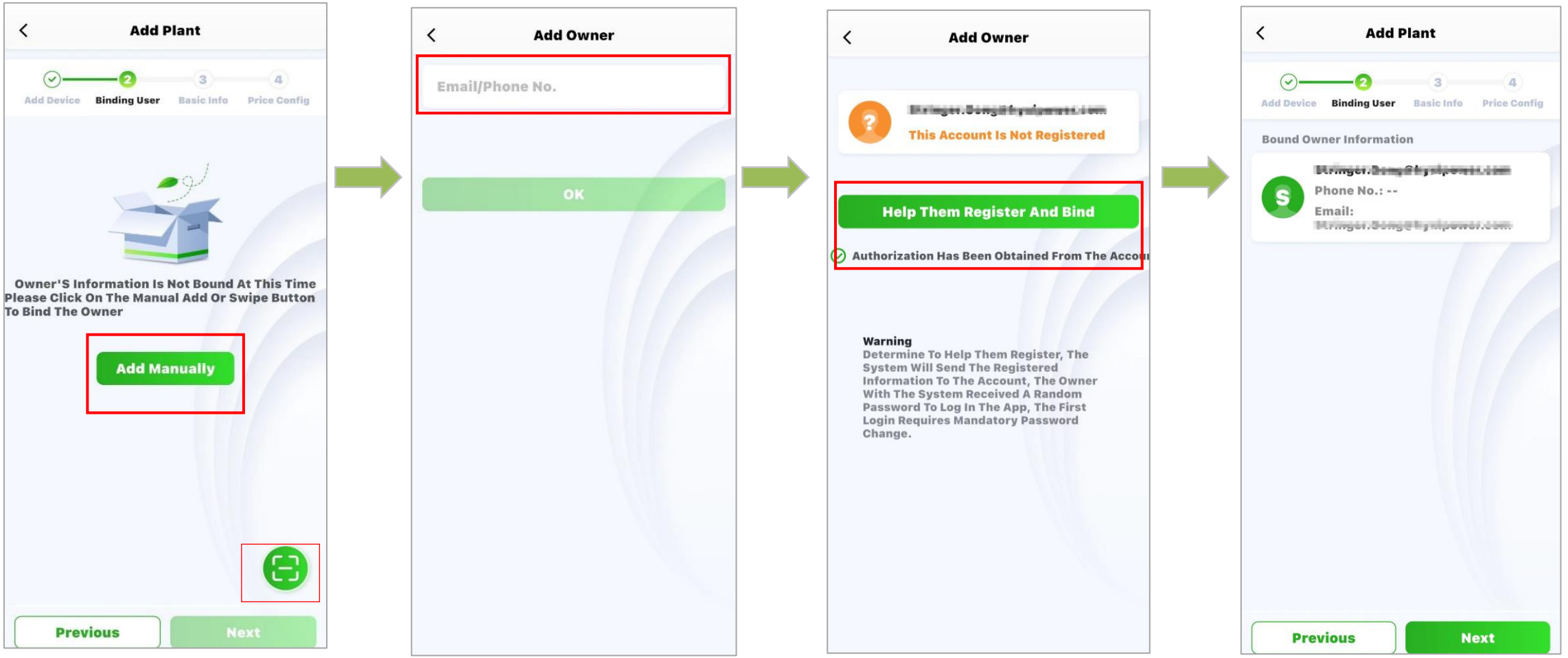
Step 2: Log in to the organization account, click "Add Plant"



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

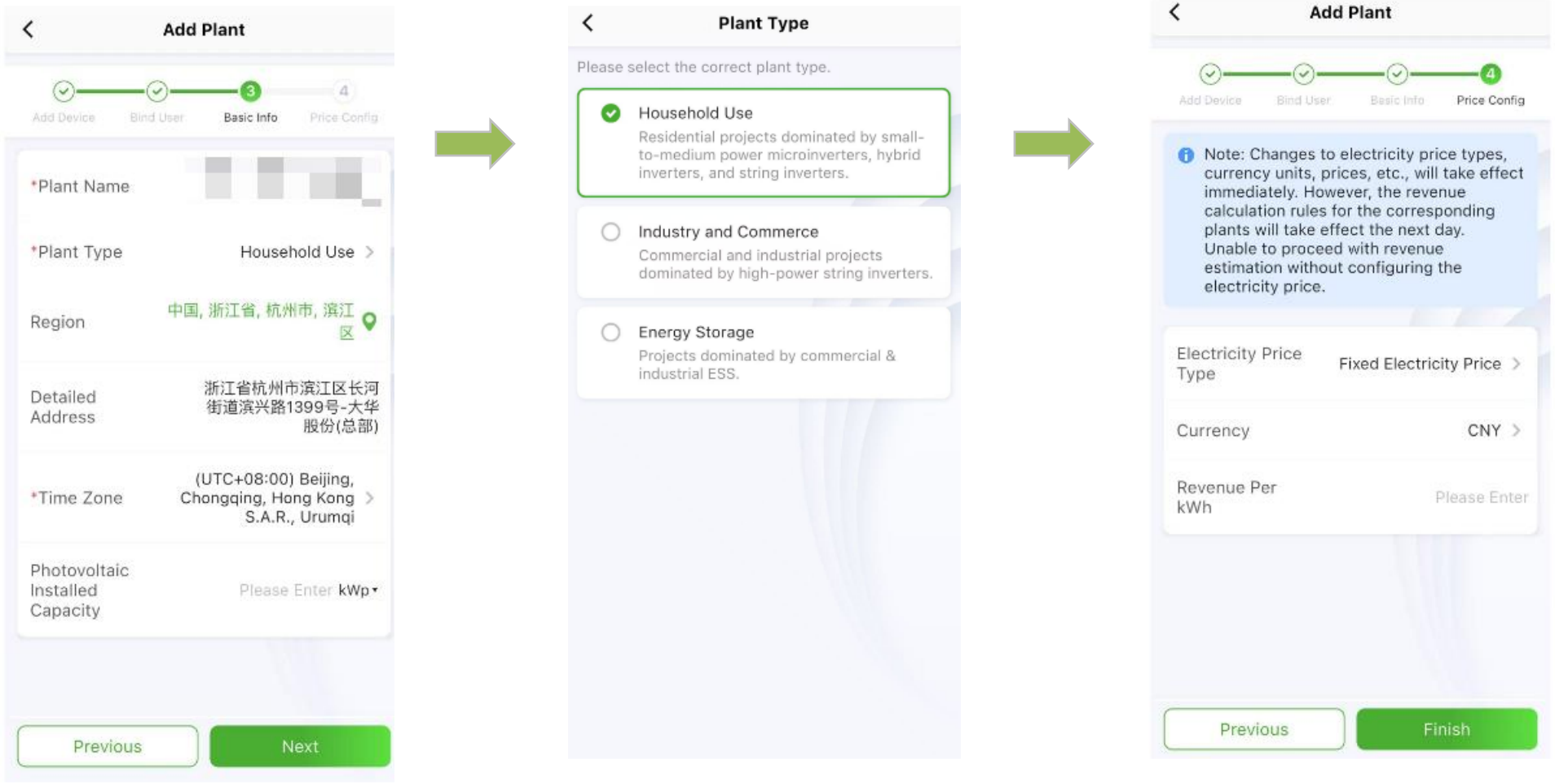
4.3 APP Configuration-Create a Plant

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

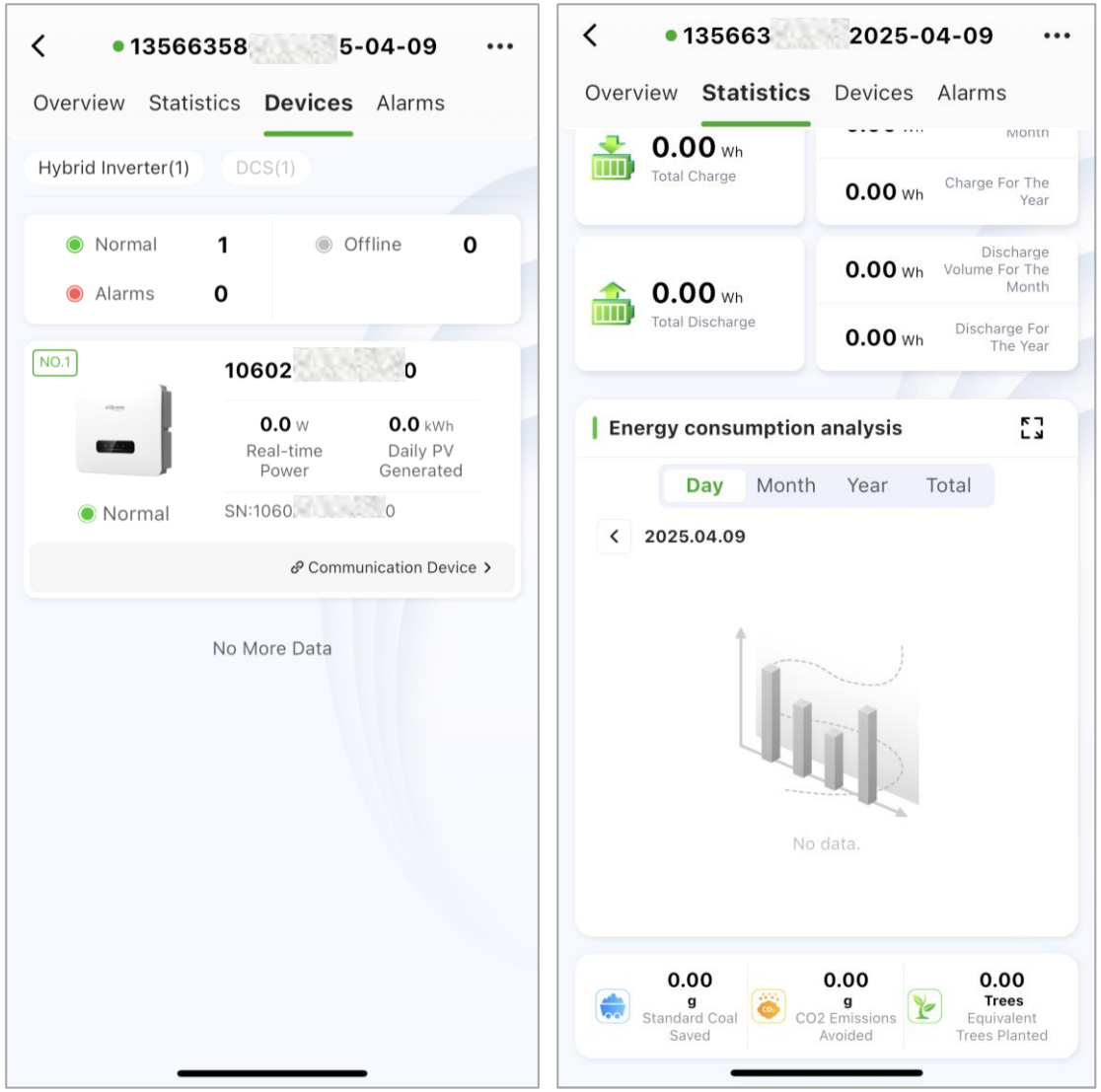


4.3 APP Configuration-Create a Plant

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
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THANKS

Delivery and Service Center

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