Contents [hide]

HYXiPOWER S30K Three Phase String Inverter

Specifications

- **Model:** S30K/S33K/S36K/S40K/S50K-T
- **Phase:** Three-phase
- **Max.Voltage Tolerance:** 1100V
- **Operating Environment:** Indoor/Outdoor

Product Usage Instructions

Installation Preparation

Before starting the installation process, conduct a site survey to plan equipment positions and wiring schemes based on the provided diagram.

Device Installation

Follow these steps for device installation:

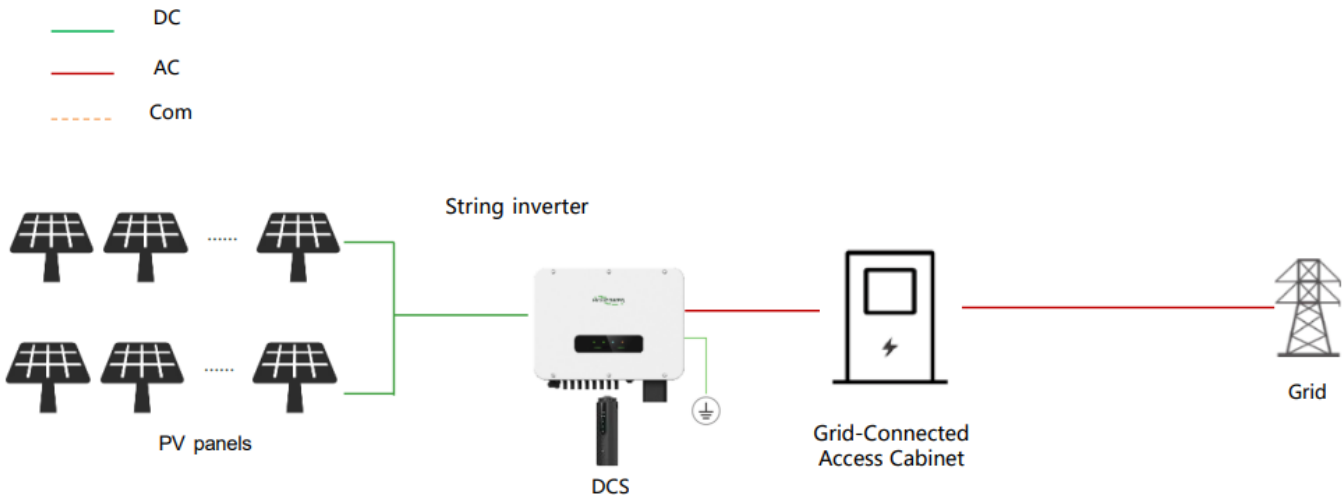
1. Mount the inverter securely using the provided mounting ear bracket.
2. Connect the DC input port from the photovoltaic panel to the inverter.
3. Ensure proper ventilation by keeping the breather valve clear.
4. Connect the AC output interface to complete the wiring.

App Configuration

For app configuration:

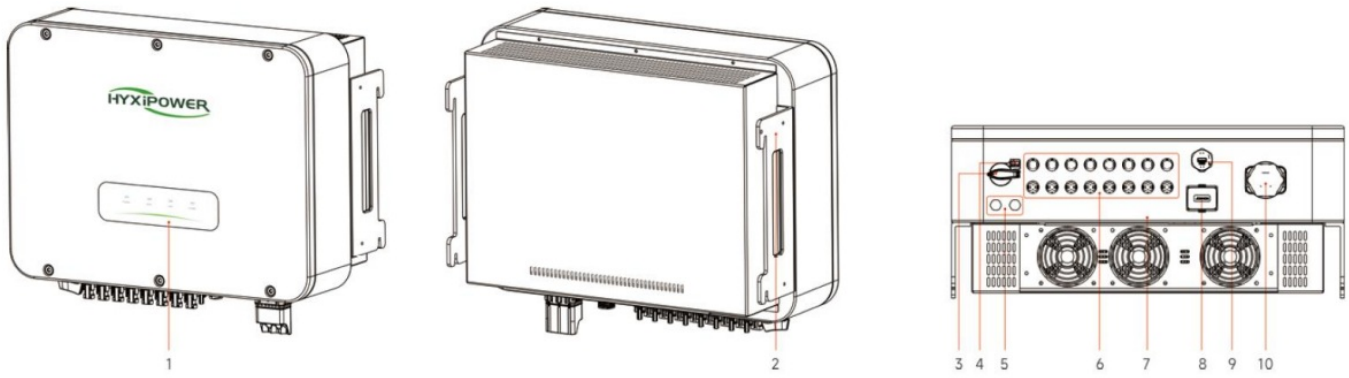
1. Use the Communication Interface(COM.2) for communication between the inverter and smart meter.
2. Configure the DCS Interface(COM.1) for DCS connection.
3. Utilize the LED Panel to monitor the inverter’s operating status.

Program Overview Solution



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

Inverter Introduction



No.	Name	Description
1	LED Panel	Displays the current operating status of the in verter

2	Mounting ear bracket	Secure the top of the inverter
3	DC switch locking hole	Reserved DC lock hole
4	DC Switch	Photovoltaic panel DC power input switch
5	Breather valve	Ventilation

6	DC input port	DC input port from the photovoltaic panel to the inverter
7	Cooling fan	Equipment cooling
8	Communication Interface(COM.2)	Communication port between the inverter and the smart meter
9	DCS Interface(COM.1)	DCS connection port
10	AC output interface	Inverter AC wiring port

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

Meter Introduction

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.

The DTSU666 three-phase energy meter

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.

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.

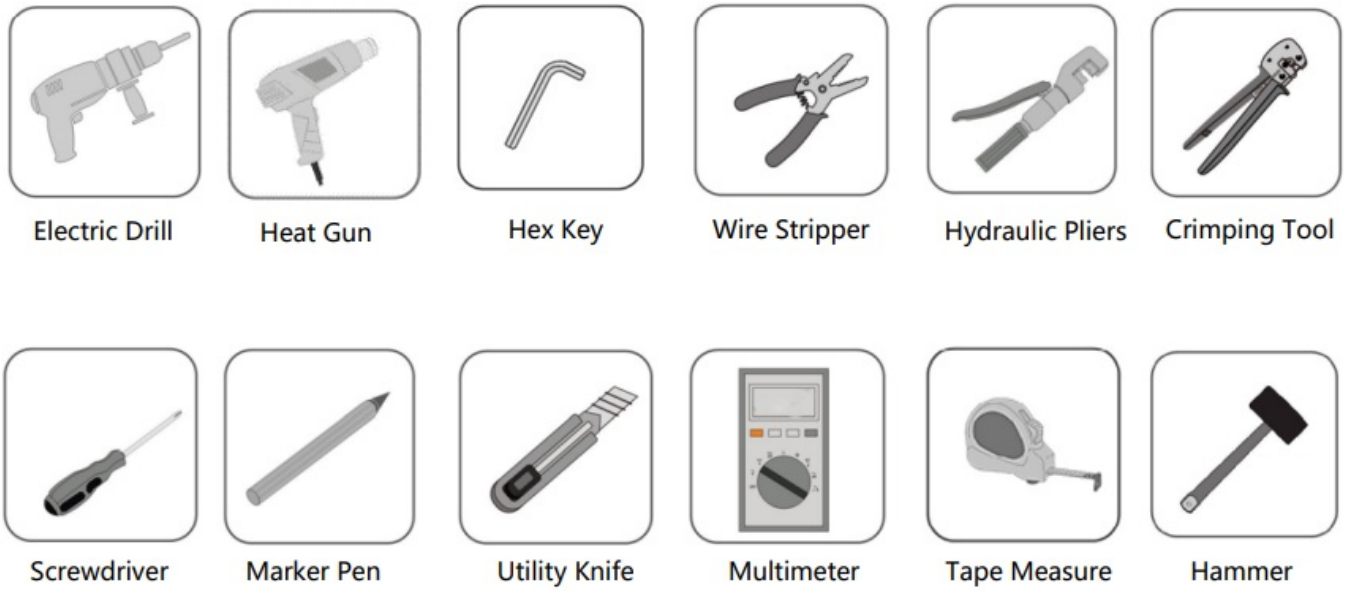
Important! ! The following cable products are not provided and need to be purchased separately.

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 4~6mm^2 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- 35mm^2 copper-core cable /35~50mm^2 aluminum-core cable outer diameter of the cable 20-30mm
3	Ground wire	For equipment grounding use	conductor cross- sectional area≥ 16mm^2

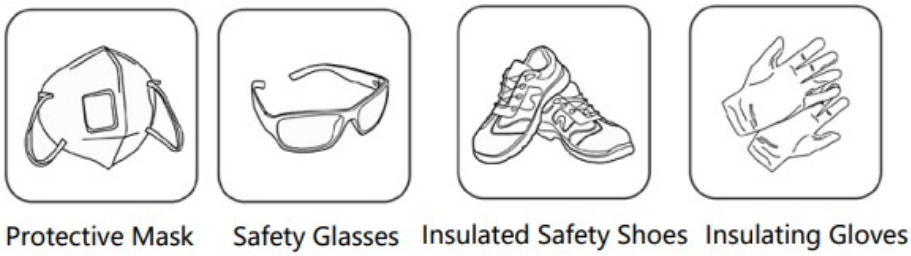
Existing equipment list

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)

Tool Installation



Protect Tool



Device Installation

Product Unboxing Inspection

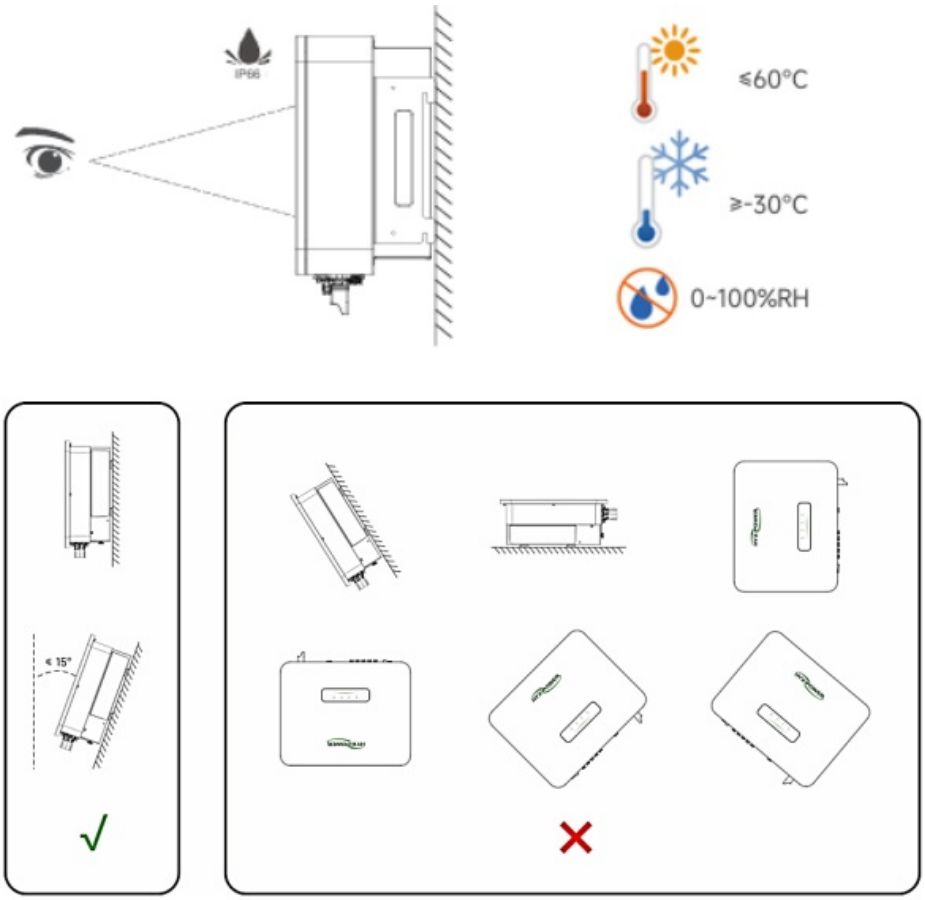
Inverter Unboxing Inspection:

- 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

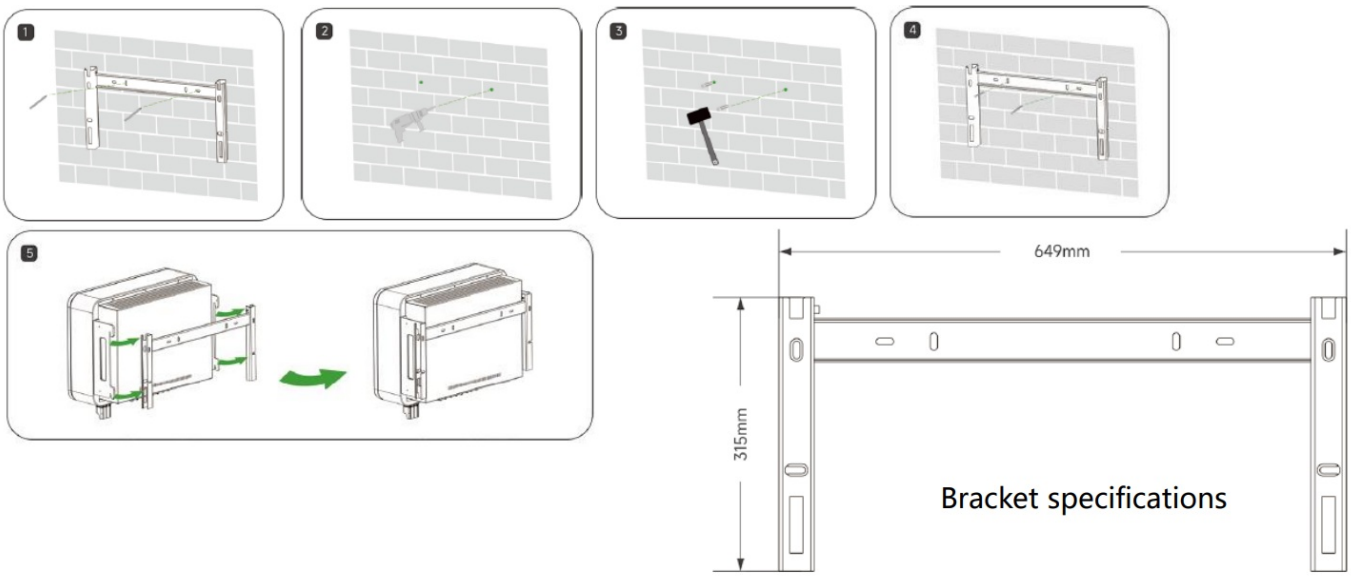
Environment Requirements

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.



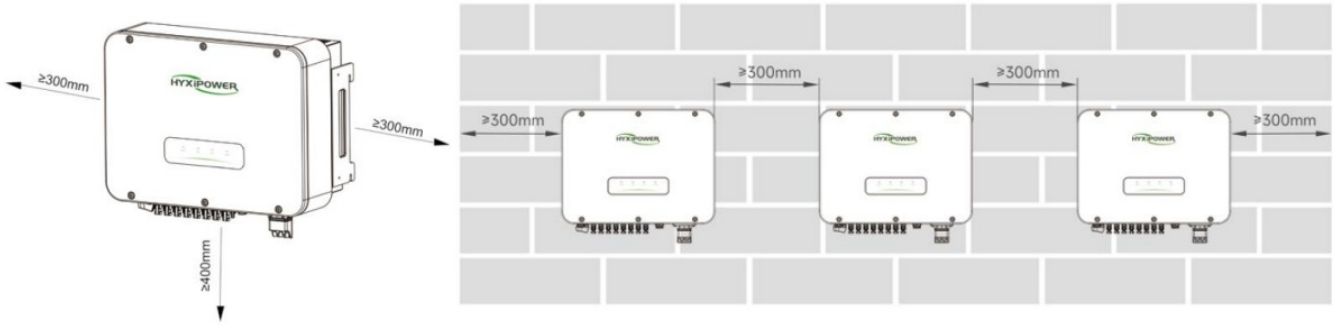
Inverter Installation

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



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.

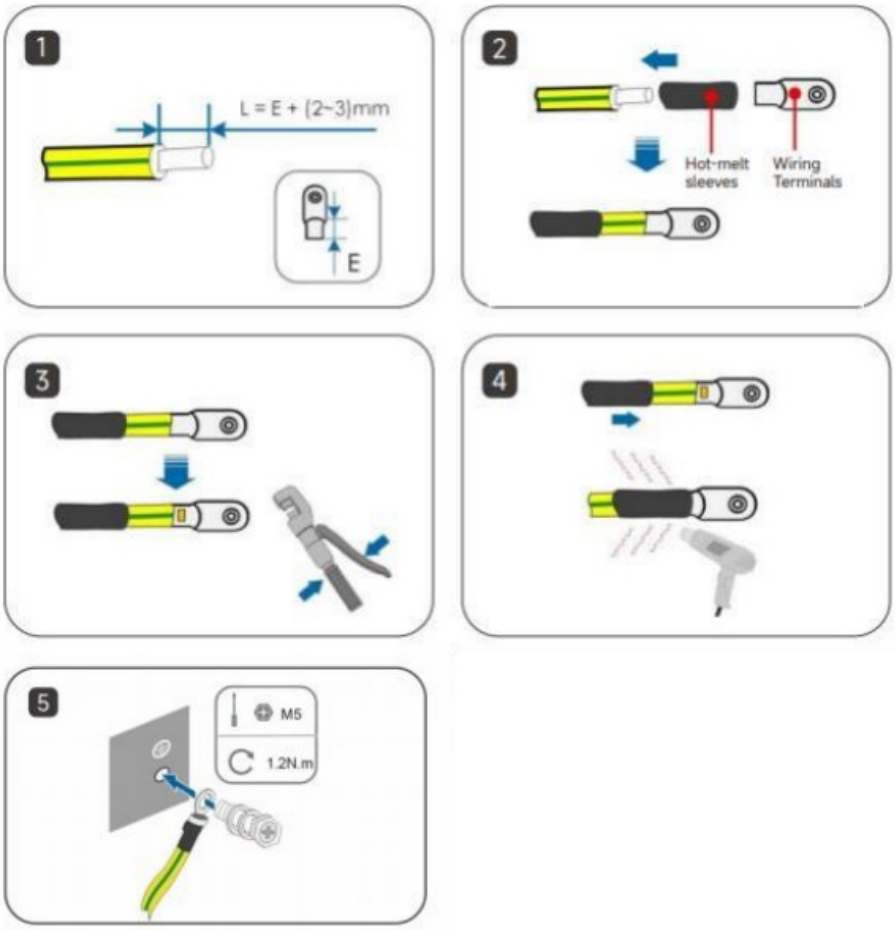
Step 1: Strip off a certain length of insulation L=E+(2-3)mm .

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.



PV-side connection

Step 1: Keep the switch on the inverter turned off.

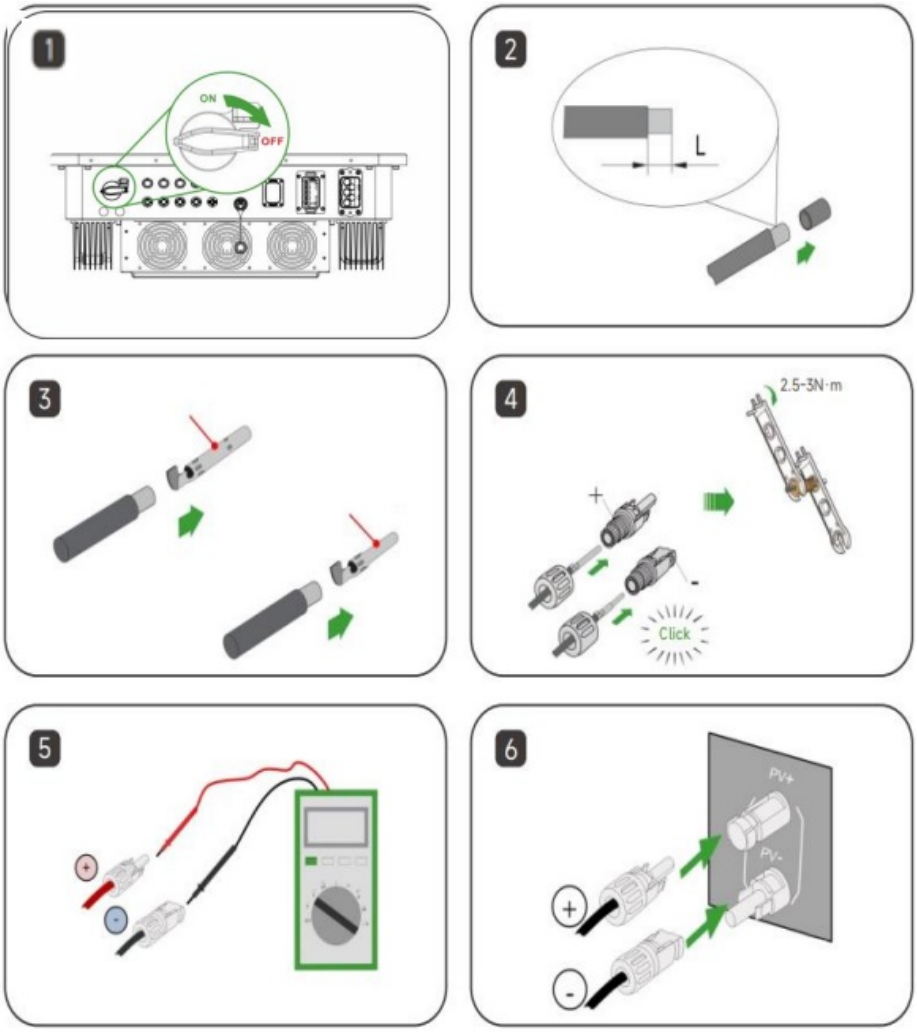
Step 2: Strip all DC cables insulation by approximately 7 mm.

Step 3: Use crimping pliers to bundle the cold-pressed terminals to the cables. Note that the positive and negative terminals are different and need to be distinguished.

Step 4: Insert the cable through the cable sealing sleeve, insert it into the insulating sleeve and fasten it, and pull the cable gently to make sure it is tightly connected. Use 2.5 ~ 3N-m force to tighten the sealing sleeve and insulation sleeve.

Step 5: Use a multimeter to check whether the polarity of the photovoltaic string connecting cable is correct.

Step 6: Connect the PV connector to the corresponding terminal on the inverter until you hear a “click” sound.



AC-side connection

Step 1: Use a T20 internal Torx screwdriver to tighten the locking plate screw with a torque of 1.2 ± 0.1 N·m. Step 2: Insert the stripped wires into the corresponding wiring holes according to the wiring sequence.

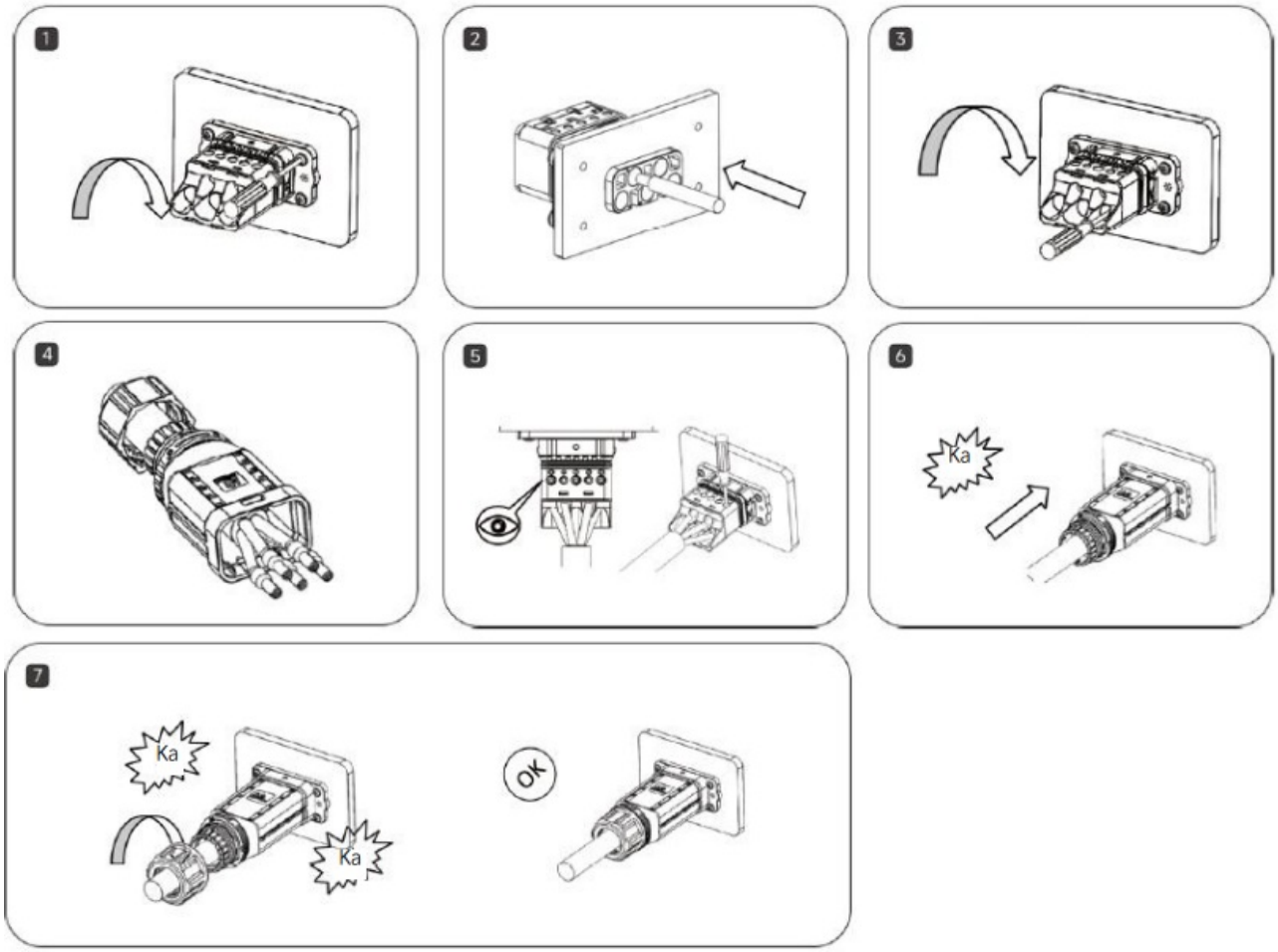
Step 3: Use a T8 internal Torx screwdriver to crimp the wires, with a torque of 1.2 ± 0.1 N·m.

Step 4: Pass the stripped wires through the locking nut in sequence; for the main body (flexible wires), crimp insulated terminals.

Step 5: Insert the cables into the rubber core according to the wiring sequence, check through the inspection hole to ensure the cables are in place, then tighten the crimping screw with a torque of 4 ± 0.1 N·m.

Step 6: Insert the main body into the rubber core and listen for a “click” sound.

Step 7: Use an open-end wrench to tighten the nut with a torque of 10.0 ± 0.1 N·m; the installation is complete after hearing “click, click” sounds.



Meter Connection

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

Step 2: Insert the meter’s RS485 2-pin wire into the communication terminal as shown, then strip the wires.

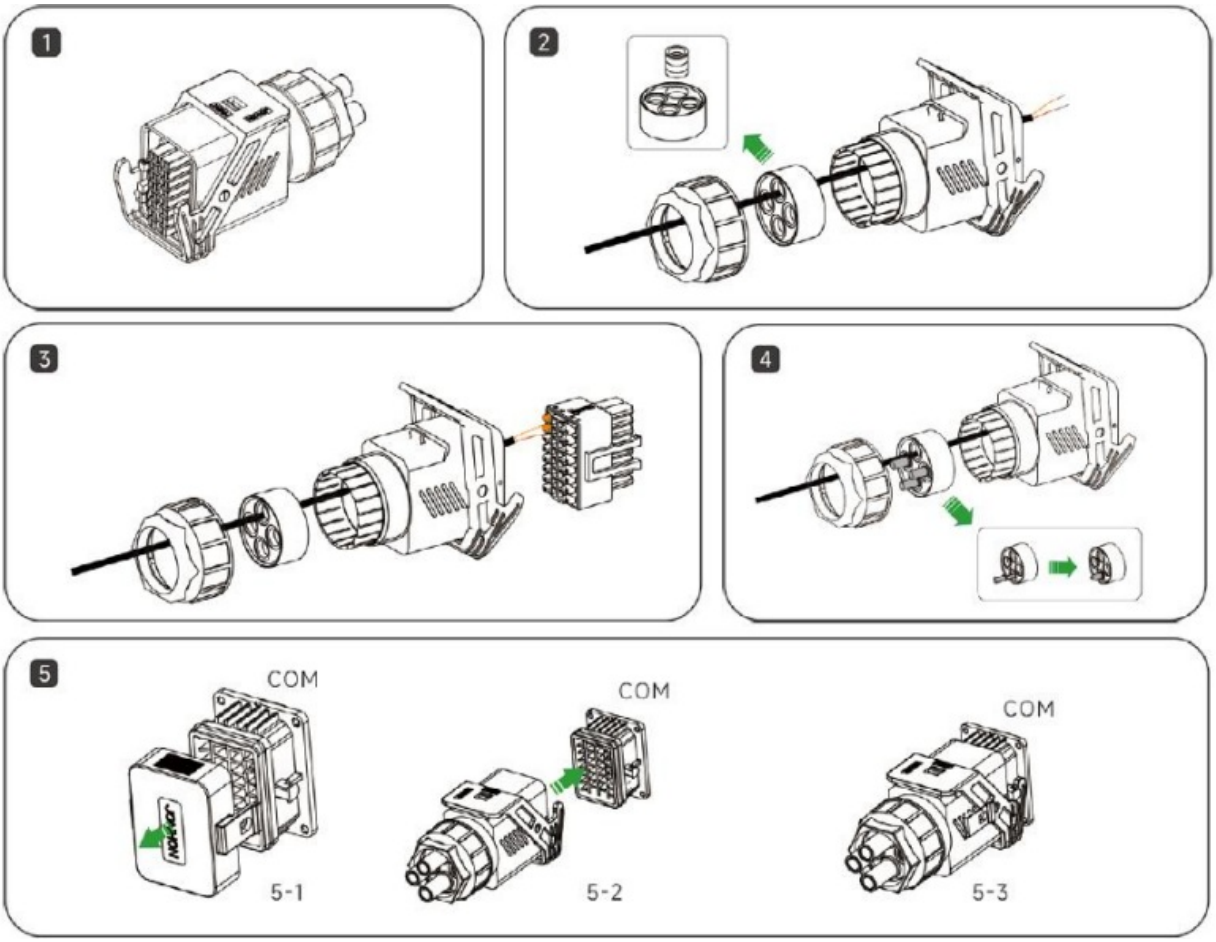
Step 3: Crimp the stripped RS485 2-pin wires onto the crimping component (press the yellow button). Refer to Device Installation Step 9 for details.

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).

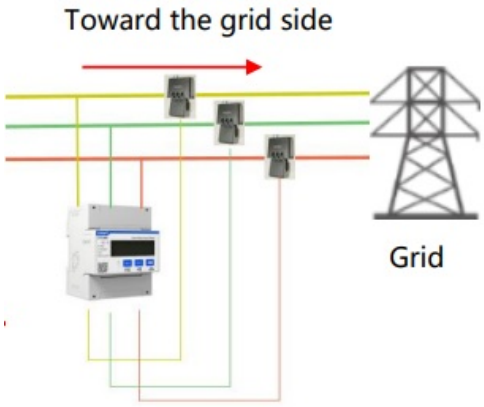
Step 7: Install the three current transformers (CTs) by clamping their magnetic cores

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.



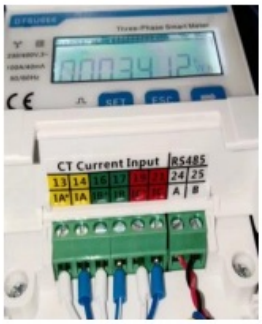
COM Communication Port (Close-up View)

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.)

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

Wiring Diagram (Top Side of Electricity Meter)



Wiring Diagram (Bottom 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.

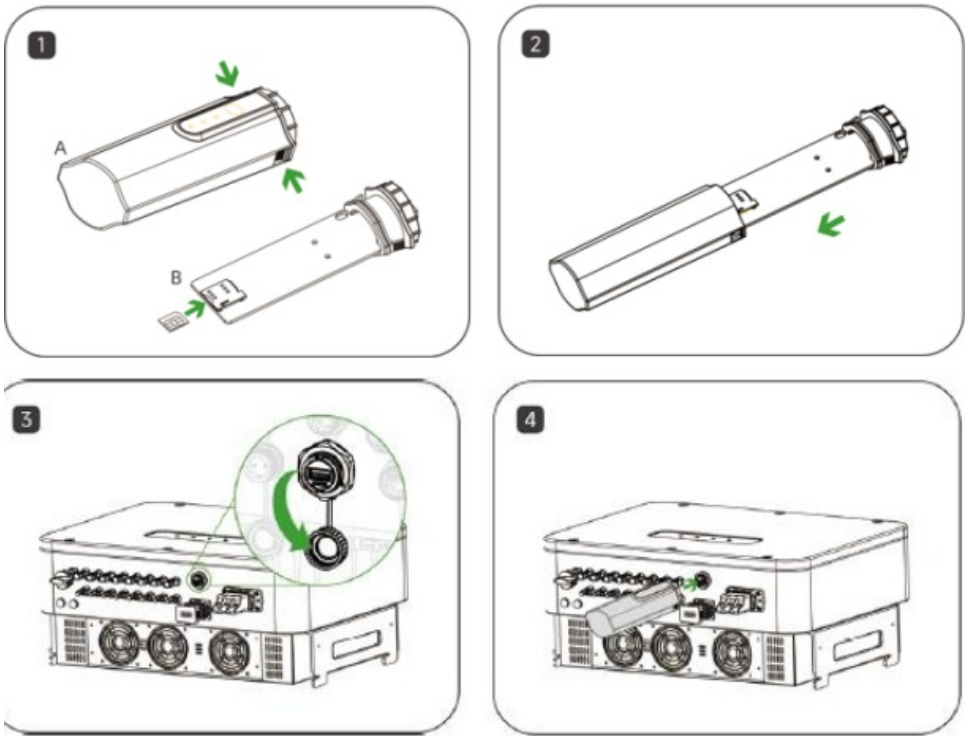
Wiring Diagram (Bottom Side of Electricity Meter)

- 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.

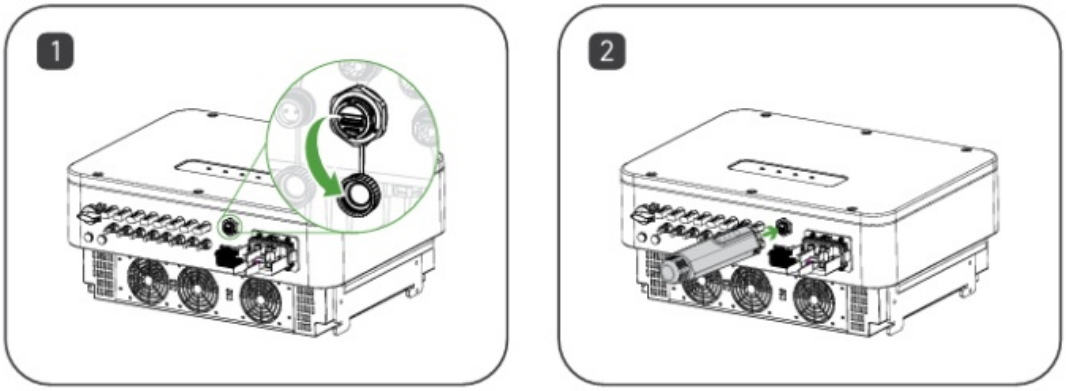
Device Installation

DCS Connection

1. DCS Installation(4G Version)
    - **Step1** Remove the DCS protective cover and insert the SIM card.
    - **Step2** Install the DCS waterproof cover
    - **Step3** Remove the waterproof cover from the inverter communication interface.
    - **Step4** Insert the DCS into the corresponding communication terminal at the bottom of the inverter and tighten it to ensure a secure connection.



2. DCS Installation (The WiFi version does not require SIM card installation or removal.)
   Step1 Remove the waterproof cover from the inverter's communication interface.
   Step2 Insert the DCS into the corresponding communication terminal at the bottom of the inverter, tighten it, and ensure it is securely connected.
   Note: For the WiFi version, if the on-site signal is weak (below -60 dBm), it is recommended to add a WiFi repeater to enhance the network signal. Otherwise, there is a risk that device data may fail to upload to the platform.



Inverter System Startup

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.

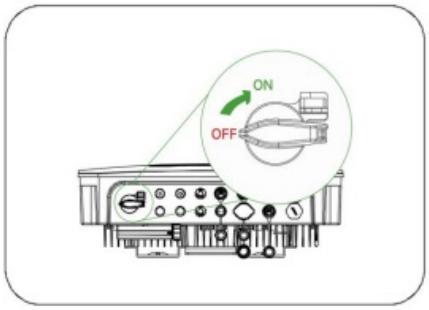


Figure1

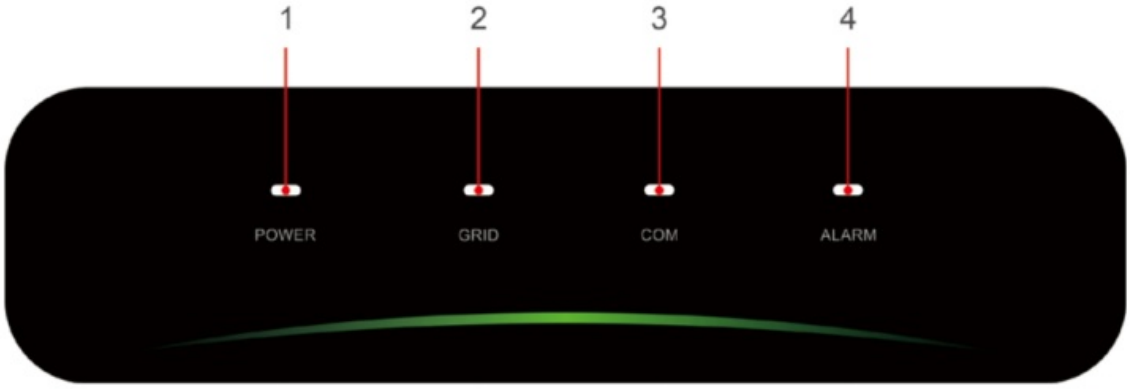


Figure2

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

APP Configuration

Registration

1. Download HYXipowerAPP
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 power station and check the equipment status, system power generation and usage, etc.

The entire process requires 2 email accounts: Organization and Owner. Step 2: Download the APP and register

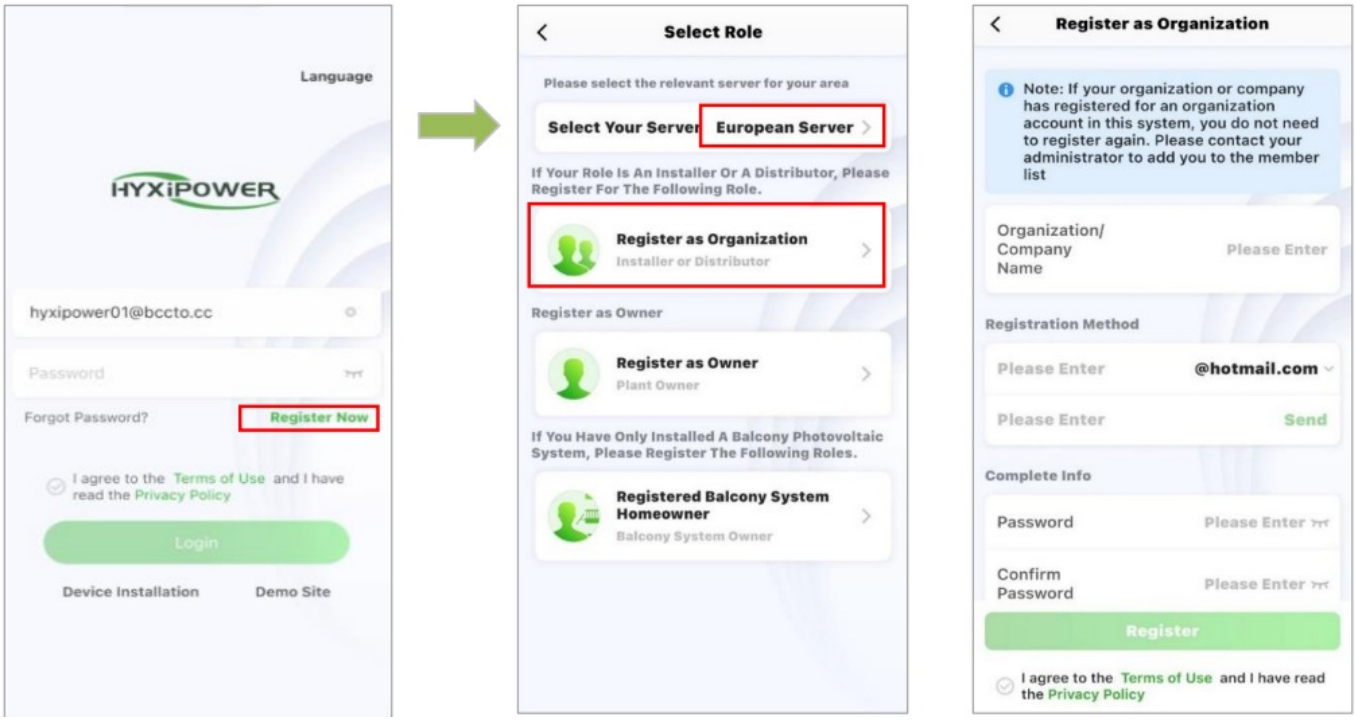
Method 1

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.



Near-end Commissioning

Registration

1. Download HYXipower APP .
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Near-end Commissioning

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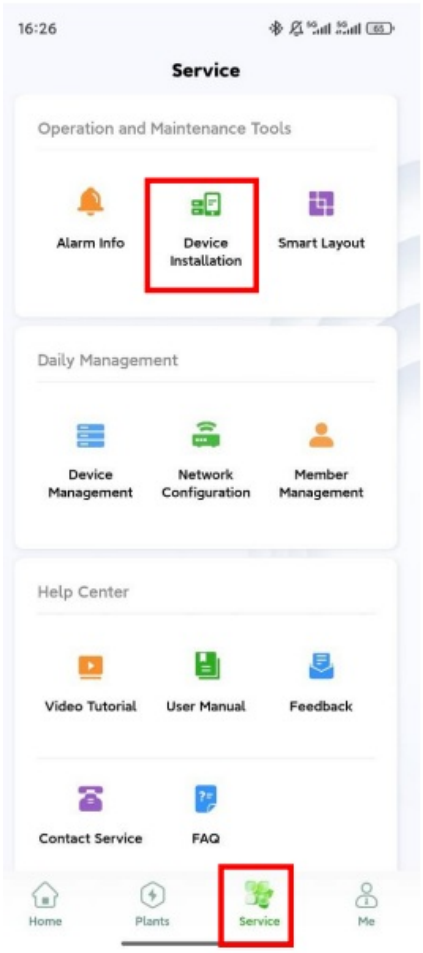
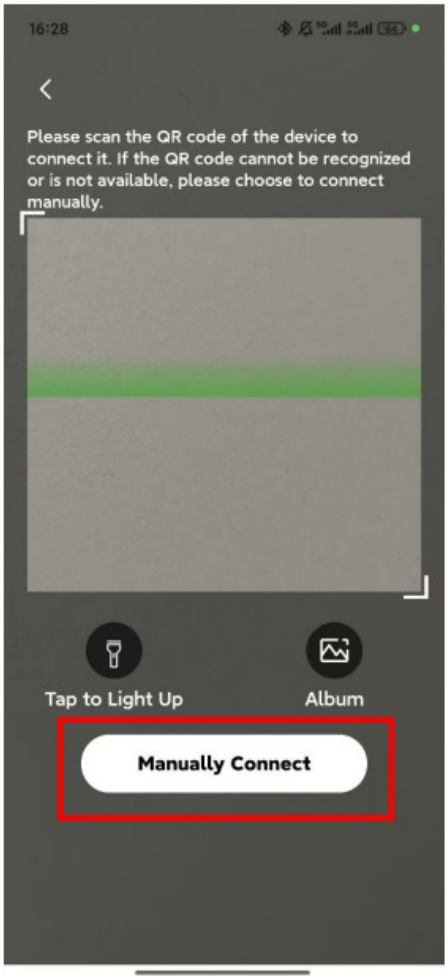
Near-end Commissioning

Step1:Click Device Installation in Service interface.

Then scan the QR code of the Data Communication Stick. If failed ,click the Manually Connect.



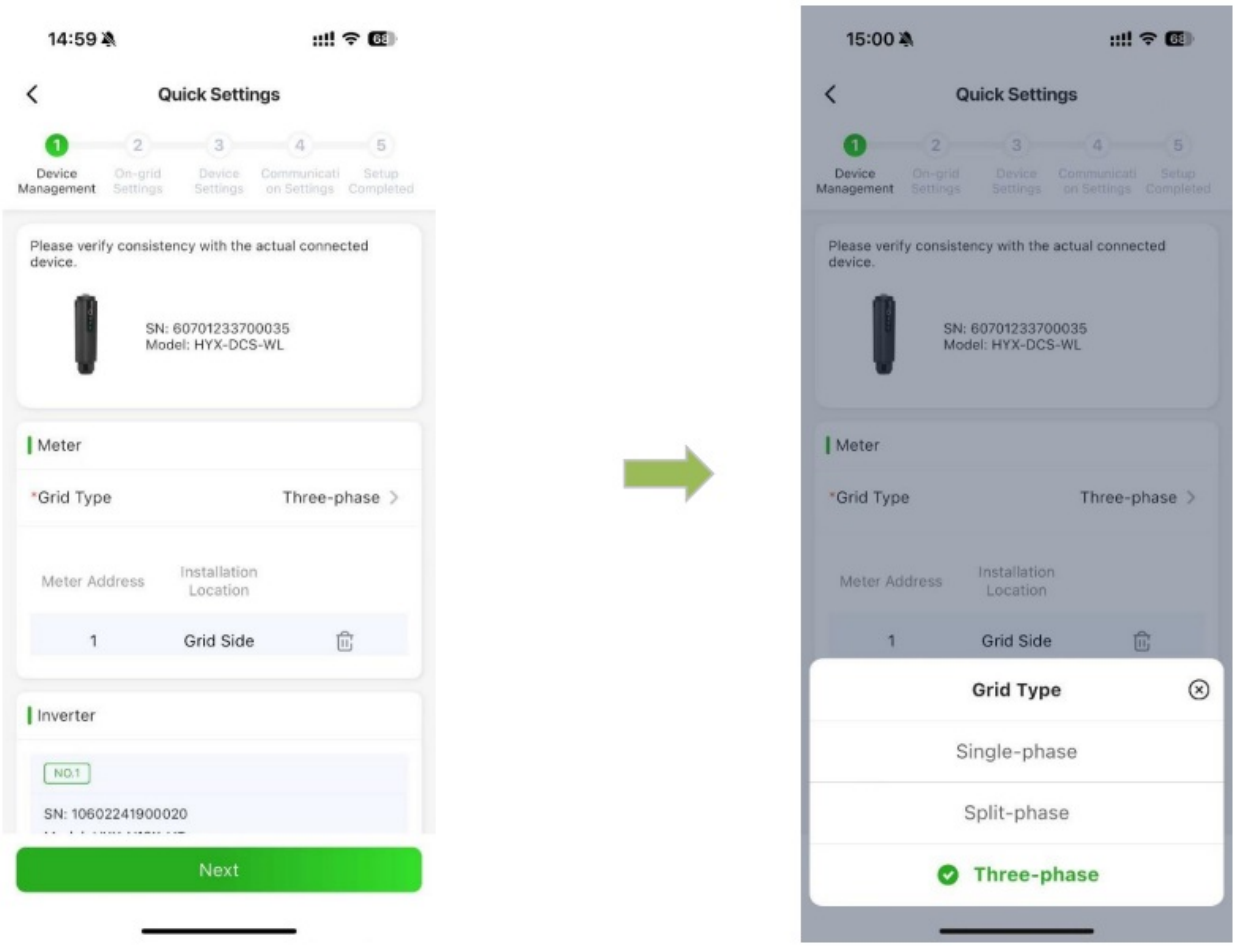


Step2 Device login, initial password: hyxi0607. Log in and change the password, then save it.

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

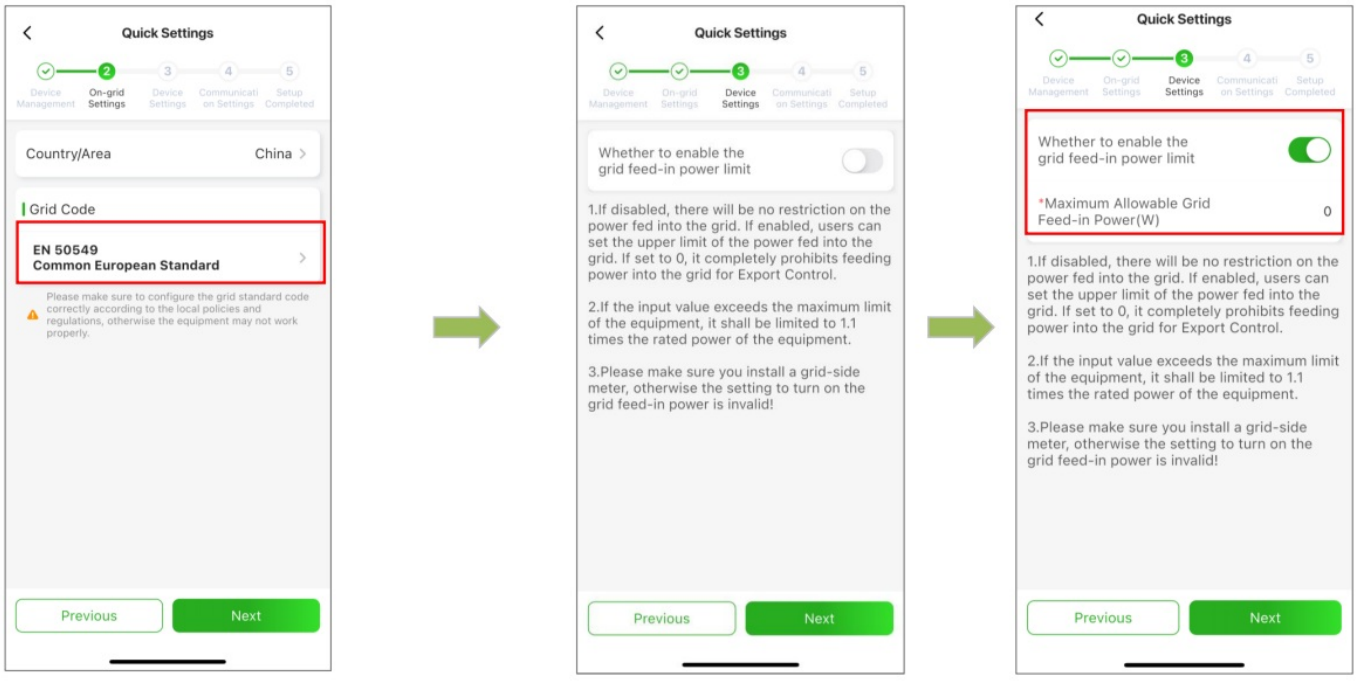
Step3: Quick Settings

- **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.



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

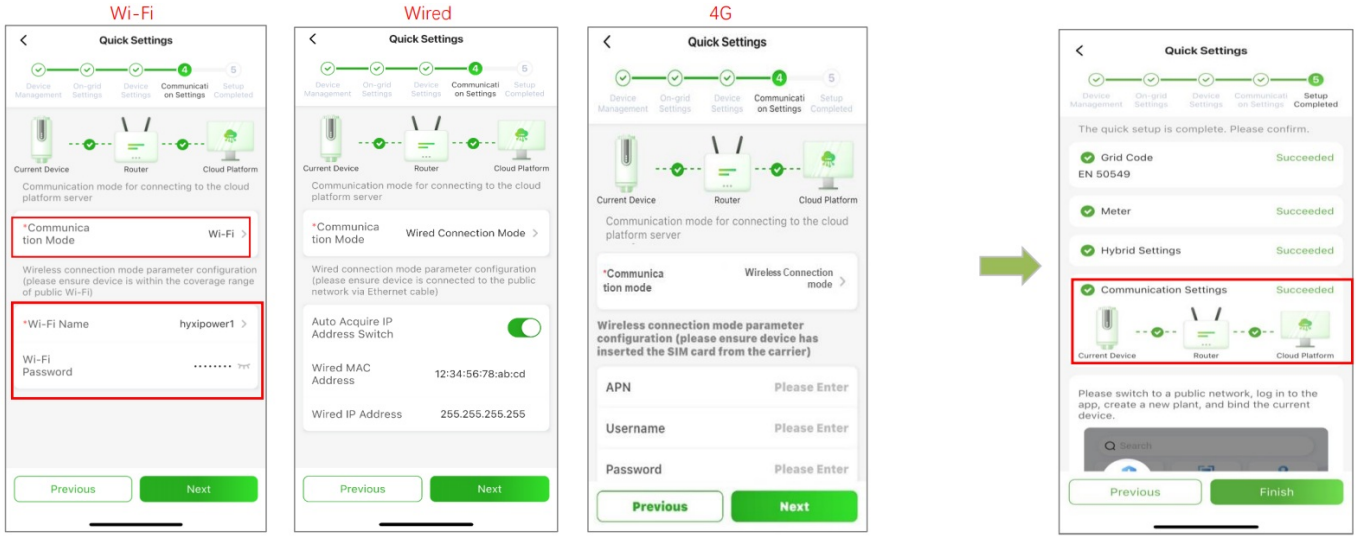
Step 5 ③ Device Settings – Set feed-in power limit (enable and set to 0 to stop feeding grid).



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.



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Create a Plant

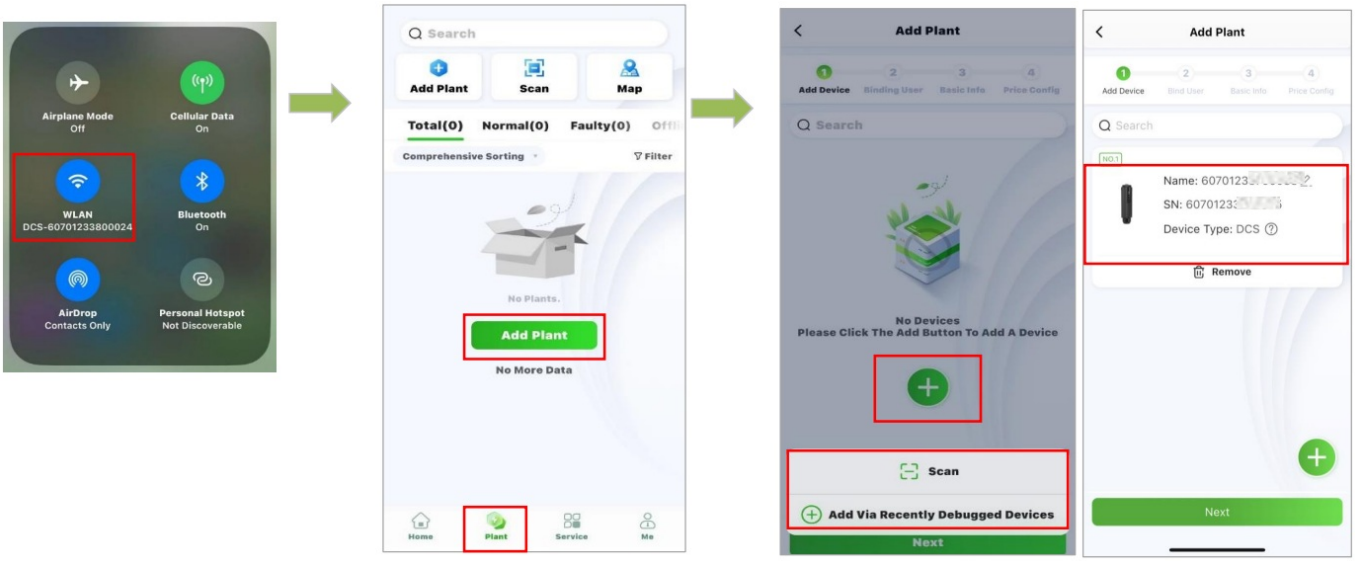
Create a power station for users

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

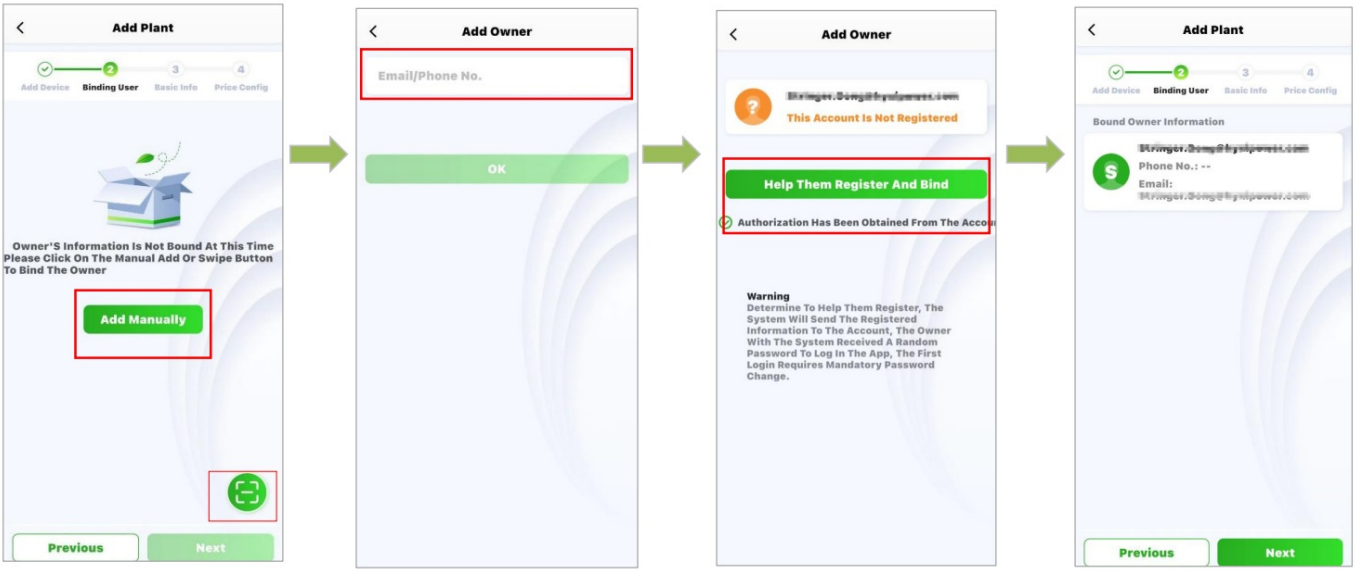
Step 1: Disconnect the phone from the DCS's WiFi. Make sure your phone has Internet access

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

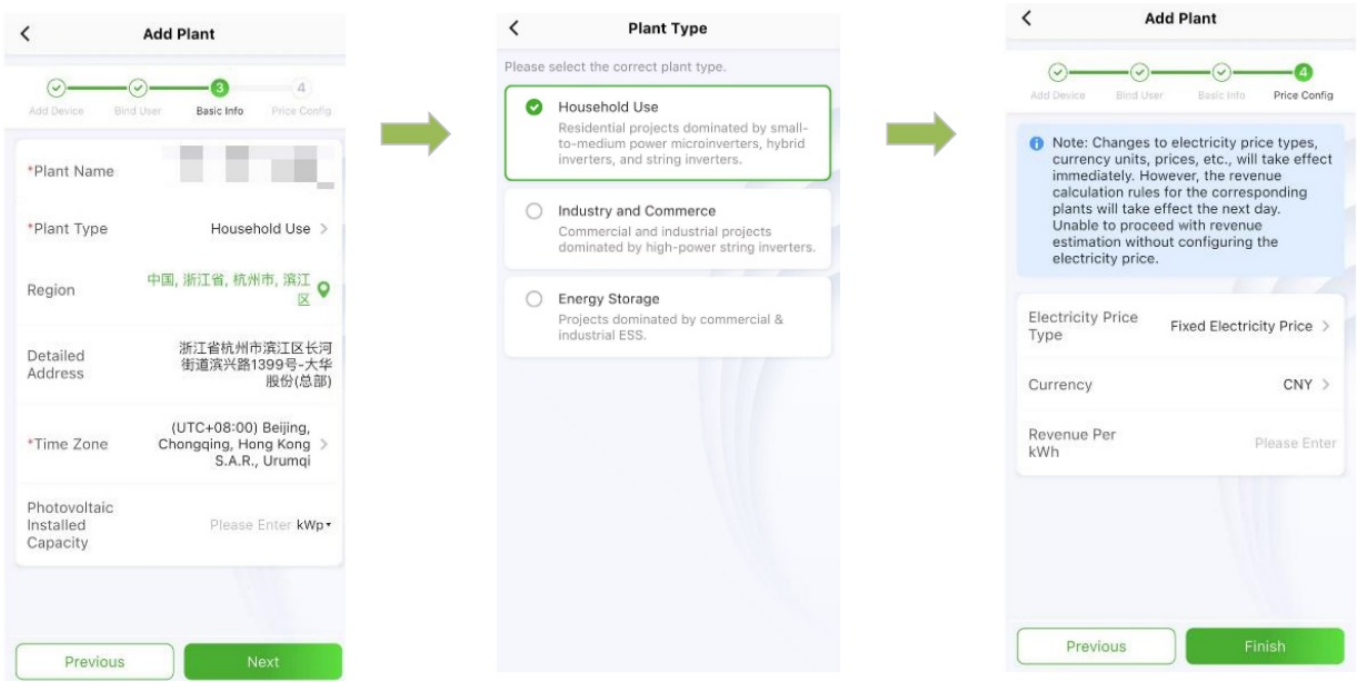
Step 3: Scan the QR code of the DCS or add it through Recently Debugged Device



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



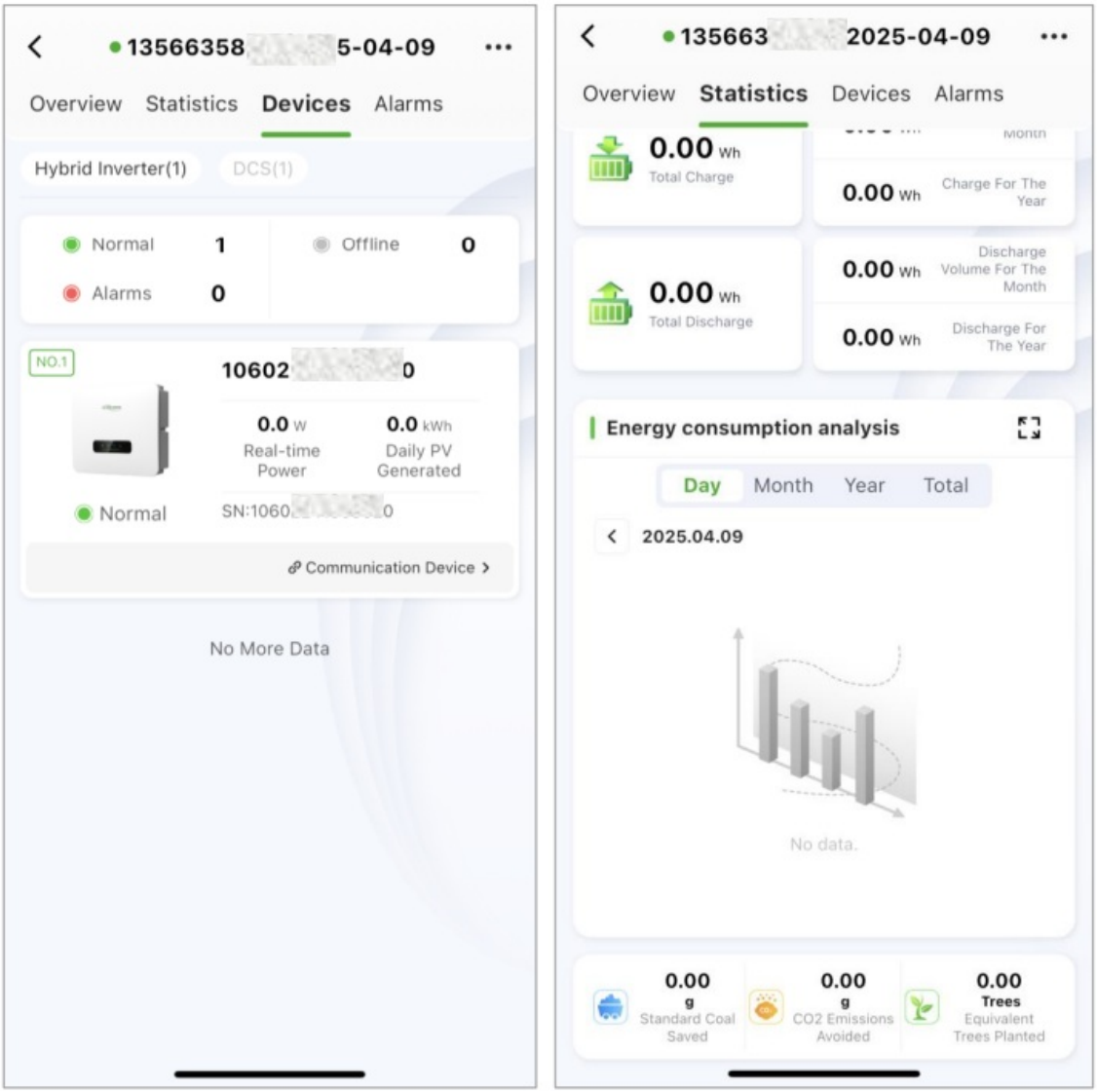
Step 5: Fill in basic information including Plant name, Plant type(Household Use), Region, Time Zone, and More information including Photovoltaic Installed Capacity, etc.



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!



THANKS

Delivery and Service Center

FAQ

What type of cables are required for installation?

PV Cable: Multi-core photovoltaic cables with a maximum voltage tolerance of 1100V.

How can I reset the inverter?

Press the RESET button as follows Press 2 times to restart. Press 3 times to enable local configuration (AP mode). Press 4 times to restore factory settings (within 1 second between pressing).

Documents / Resources

	HYXiPOWER S30K Three Phase String Inverter [pdf] Installation Guide S30K, S33K, S36K, S40K, S50K, S30K Three Phase String Inverter, S30 K, Three Phase String Inverter, Phase String Inverter, String Inverter

References

- User Manual

HYXIPOWER

HYXIPOWER, Phase String Inverter, S30K, S30K Three Phase String Inverter, S33K, S36K, S40K, S50K, String Inverter, Three-Phase String Inverter

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