



Sub-1G Microinverter Installation Guide

Zhejiang Hyxi Technology Co., Ltd.

Quality

Innovation

Efficiency

Win-win

Contents

1

Preparation

2

Microinverters Physical Installation

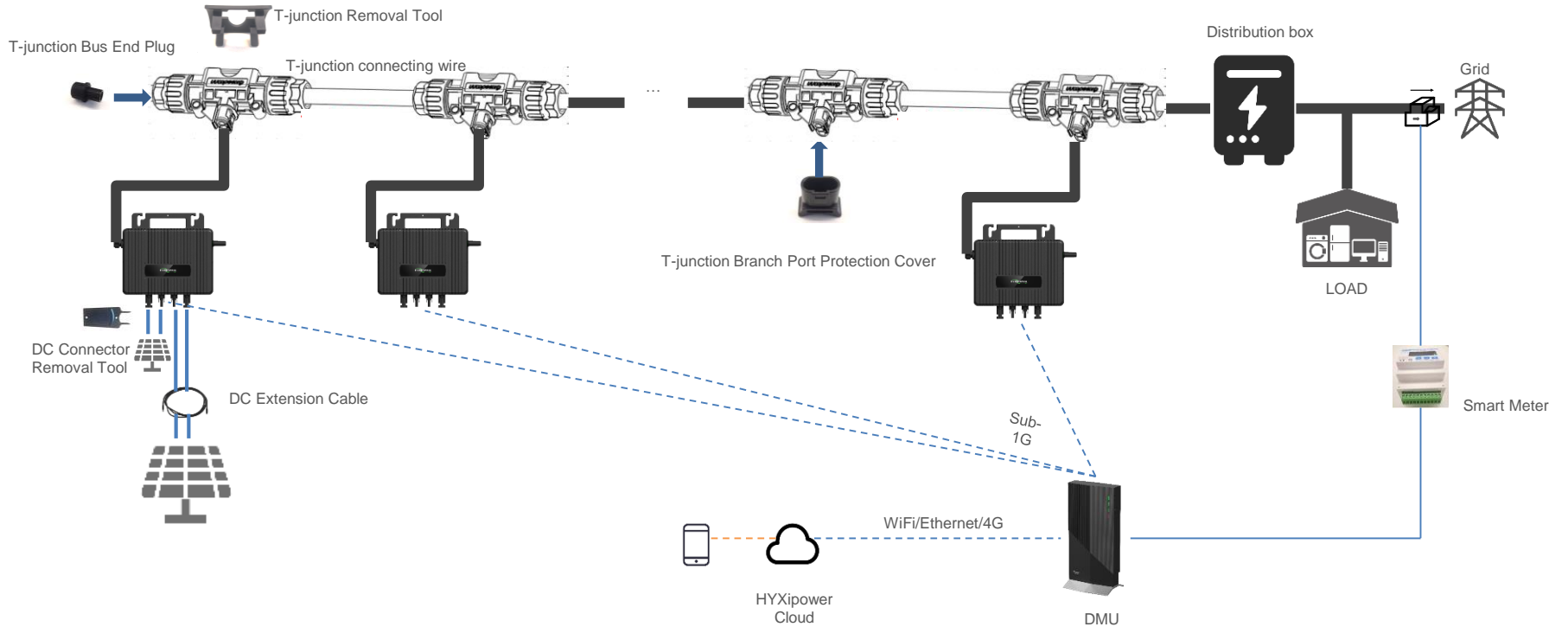
3

DMU Physical installation






4

APP configuration








Preparation 1 - Overall wiring diagram



Preparation 2 - Products included in the above diagram

No.	Product Name	Picture	Description
1	Microinverters		Equipment for generating electricity
2	DMU(Wi-Fi/4G)		Connect Microinverter and the Internet
3	Meter		Measure power generation. Connect DMU to transmit data
4	Wi-Fi External antenna (Long one)		DMU external antenna (If the DMU is installed inside a metal box, under a metal concrete roof, or in a complex installation environment that results in weak signal strength, it is recommended to add an external antenna to the DMU to increase signal strength)
5	Sub-1G External antenna (Short one)		

Preparation 3 - Products included in the above diagram

No.	Product Name	Picture	Description
6	DC Extension Cable		Used to extend the connection distance between micro inverters and photovoltaic modules
7	T-junction Bus End Plug		Used to protect unused bus connection ports on AC bus connectors at the end of AC branches
8	T-junction Branch Port Protection Cover		Used to protect unused branch connection ports on AC bus connectors
9	T-junction Removal Tool		Used to remove the upper cover of the AC bus connector for loading, unloading, or replacing the AC bus cable
10	T-junction Bus Connector		The AC bus connector is used to connect the AC output of the micro inverter to the AC bus
11	DC Connector Removal Tool		Used to disassemble the connection between the photovoltaic module and the input of the micro inverter
12	T-junction connecting wire		It can be used to connect the micro inverter to the distribution box for AC side convergence. The T-junction connecting wire is composed of T-junction bus connector and cables, and the spacing between the connectors on the bus is evenly distributed.

Preparation 4- Products that need to be purchased separately

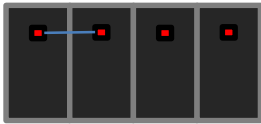


No.	Name	Description	Standard	Purchase Method
1	Screws	Used to fix Microinverter	M8*25	Buy from Local
2	RS 485 Communication Cable	Connect meter to DMU	RVVP double-core shielded wire, 0.5mm ²	Buy from Local
3	Ground wire	For equipment grounding use	4~10mm ²	Buy from Local
4	DC Extension Cable	Used to extend the connection distance between micro inverters and photovoltaic modules	DC-EC-1m	Buy from Hyxipower or Local

Preparation 5 - T-junction Installation Instructions

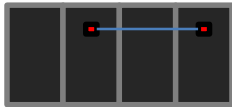
Single-row vertical installation

1-in-1 <1.6m



TJ-Cable-20T-19L-10AWG-1.6m-NA

2-in-1 <3m



TJ-Cable-13T-12L-10AWG-3m-NA

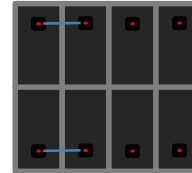
4-in-1 <5.7m



TJ-Cable-7T-6L-10AWG-5.7m-NA

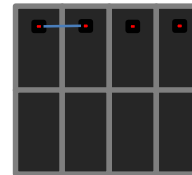
Double-row vertical installation

1-in-1 <1.6m



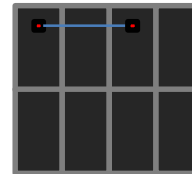
TJ-Cable-20T-19L-10AWG-1.6m-NA

2-in-1 <1.6m



TJ-Cable-20T-19L-10AWG-1.6m-NA

4-in-1 <3m



TJ-Cable-13T-12L-10AWG-3m-NA

Example: Microinverters



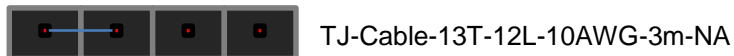
PV panels

AC cables

Preparation 6 - T-junction Installation Instructions

Single-row horizontal installation

1-in-1 <3m




2-in-1 <5.7m




4-in-1 <11m (almost no such installation)



Example:

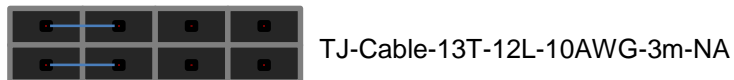
 Microinverters

 PV panels

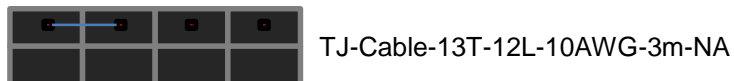
 AC cables

Double-row vertical installation

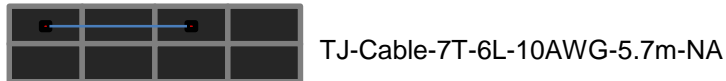
1-in-1 <3m



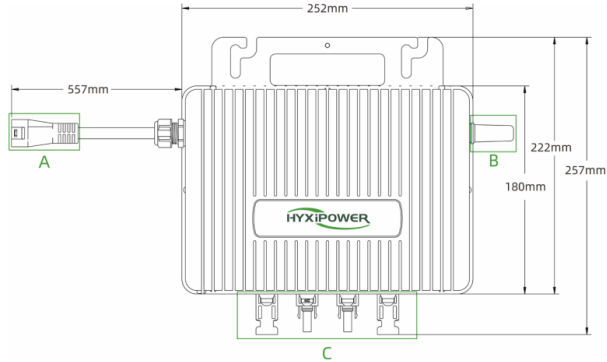
2-in-1 <3m



4-in-1 <5.7m



Preparation 7 - Microinverter Introduction

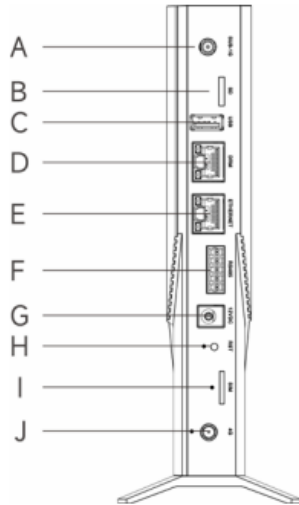


No.	Name
A	AC Branch Connector
B	Antenna
C	DC terminal



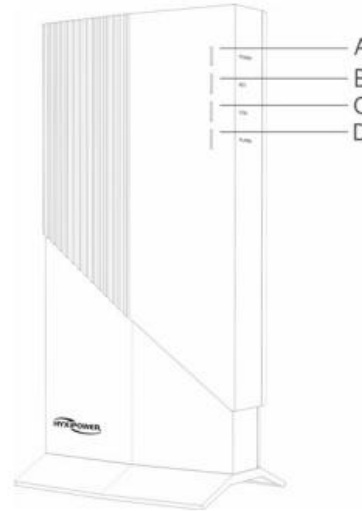
Light	Status	Meaning
Green	Fast flashes(1s gap)	Normal
	Fast flashes(3s gap)	Communication Fault
	Fast flashes(5s gap)	PV input fault
Red	Light on	Ground fault
	Fast flashes(1s gap)	Fault
	Fast flashes(1s gap)	AC fault

Interface Layout



No.	Description
A	External Sub-1G antenna interface
B	SD card slot
C	USB port
D	DRM port
E	Ethernet port
F	RS485
G	Power port
H	Reset Button
I	SIM card slot
J	External WiFi/4G antenna interface

Indicator Lights



Name	Description
POWER	Power indicator
NET	Network communication (connecting to the server)
COM.	Microinverter communication (connecting to microinverter)
FAULT	Fault condition

Normal State: A, B, C are always on, D is off

Preparation 9 - Tools Preparation



Wire stripper



Wire nippers



Tape measure



Cable tie



Screwdriver



Marker



Utility knife



Multimeter



Safety gloves



Hexagon wrench

Contents

1

Preparation

2

Microinverters Physical Installation

3

DMU Physical installation

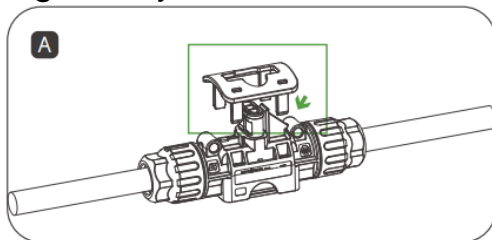
4

APP configuration

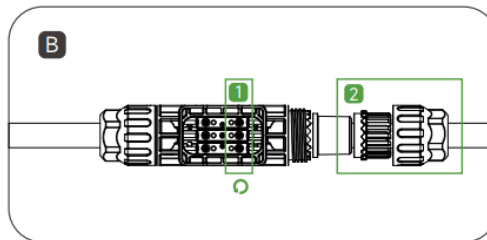
Microinverter installation 1 - Install T-junction

Step 1: Prepare several sections of T-junction connecting wires according to the number of Microinverters to be installed on site.

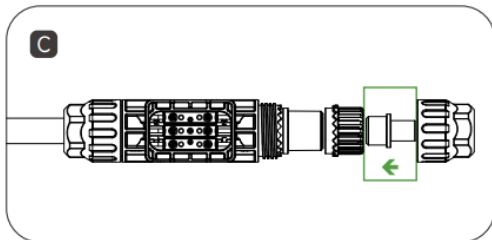
Step 2: Removing the T-junction cable at the end.



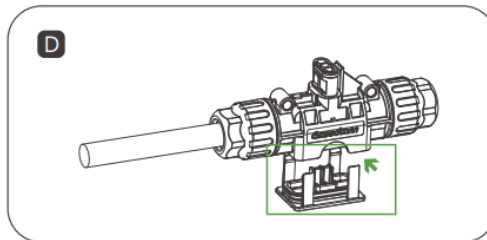
Use the T-junction removal tool to remove the lower cover.



Loosen the inner screw, unscrew the nut, and remove the cable.



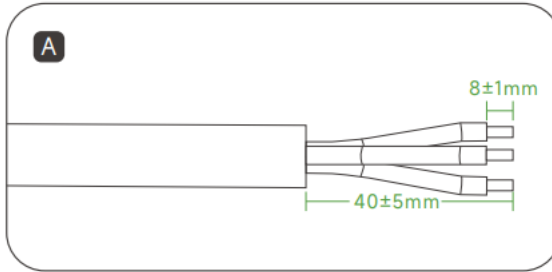
Install a T-junction bus end plug at the end of the T-junction.



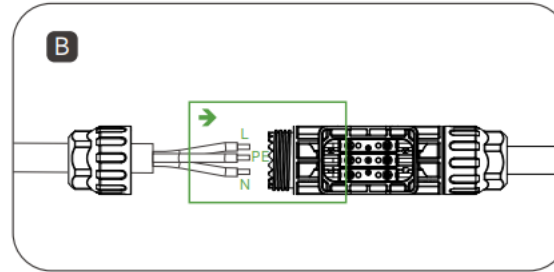
Insert the lower T-junction cover back into place and make sure it is secure.

Microinverter installation 2 - Install T-junction Bus cables

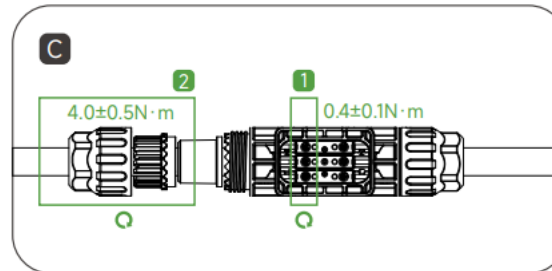
Step 3: T-junction and bus connection



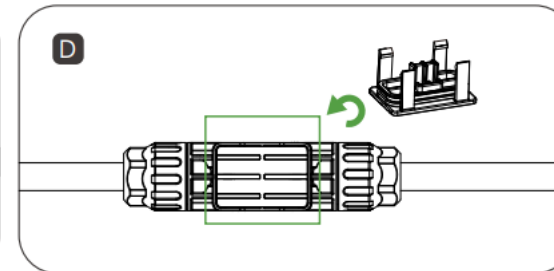
Prepare the AC cable by stripping the ends.



Insert the AC cable into the T-junction connector at the correct hole position.

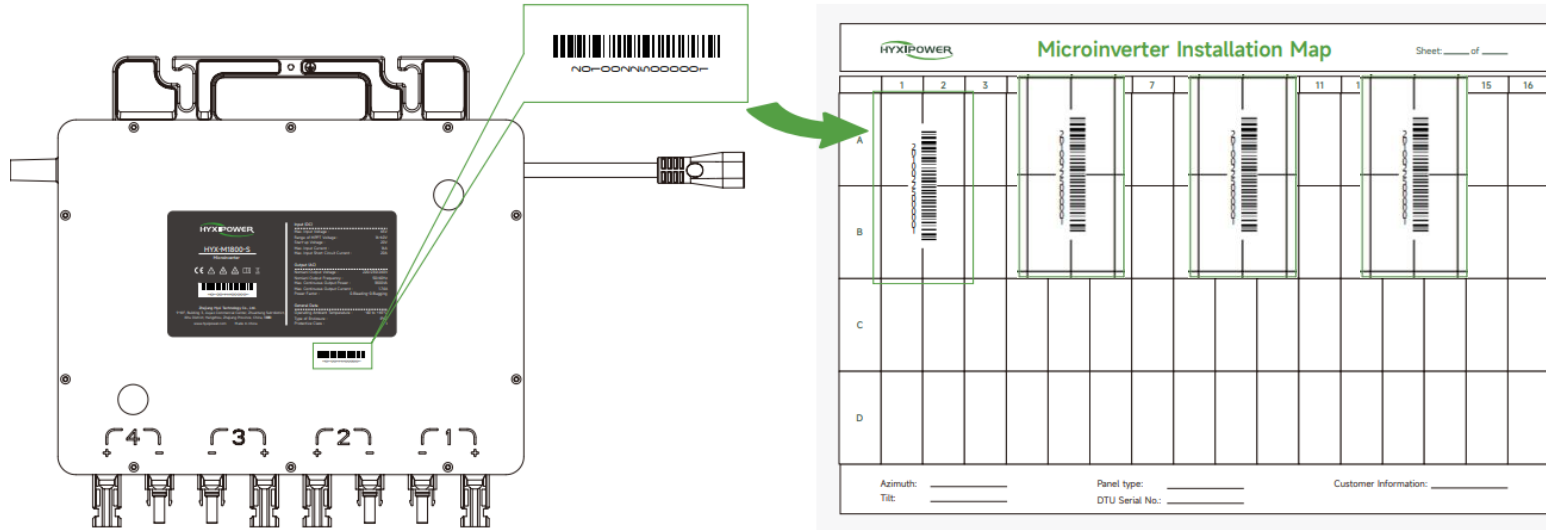


Tighten the screws, and then the nuts.



Insert the lower T-junction cover back into place, making sure it is secure.

Microinverter installation 3 - Draw Installation Map



Installation Map:

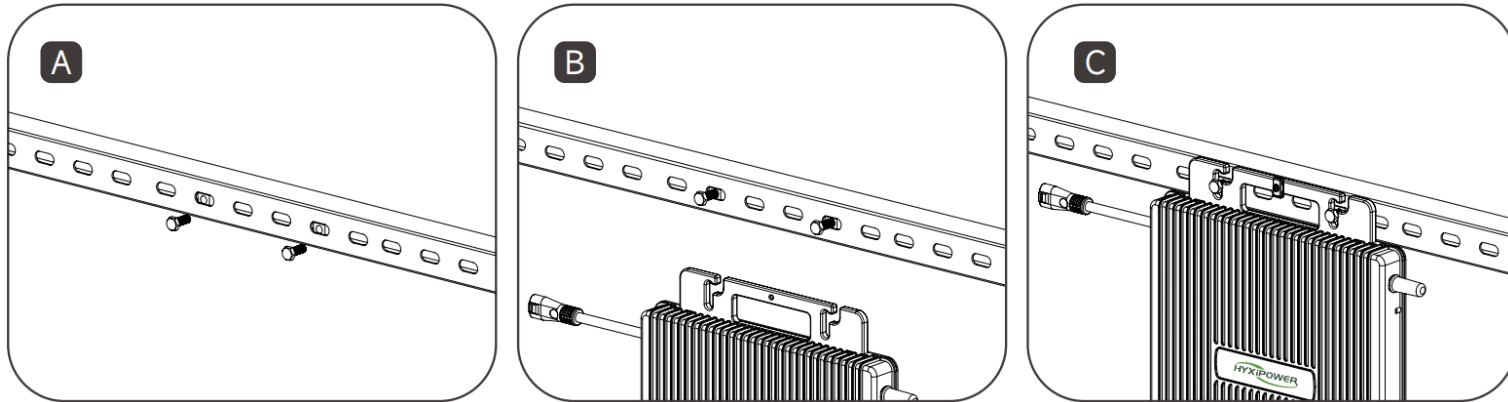
Step1: Record the location of the Microinverters to facilitate operation and maintenance

Step2: Facilitate the establishment of connection between DMU and microinverter

Microinverter Installation 4 - Microinverter Installation

Step 1: Mark the installation position of the Microinverter on the bracket according to the layout of the photovoltaic modules.

Step 2: Fix the Microinverter on the bracket with M8*25mm screw, then lock the screw.



Microinverter Installation 5 - Metal roof Scenario

Equipment installation height



The distance between Microinverters and the Metal roof is less than 3 inches



The distance between Microinverters and the Metal roof is bigger than 5 inches



Equipment antenna placement



The antenna is at the peak of the Metal roof



The antenna is between the two wave crests of the Metal roof



Cable grooming



Cables tangled haphazardly around the antenna



Keep cables organized and away from antennas

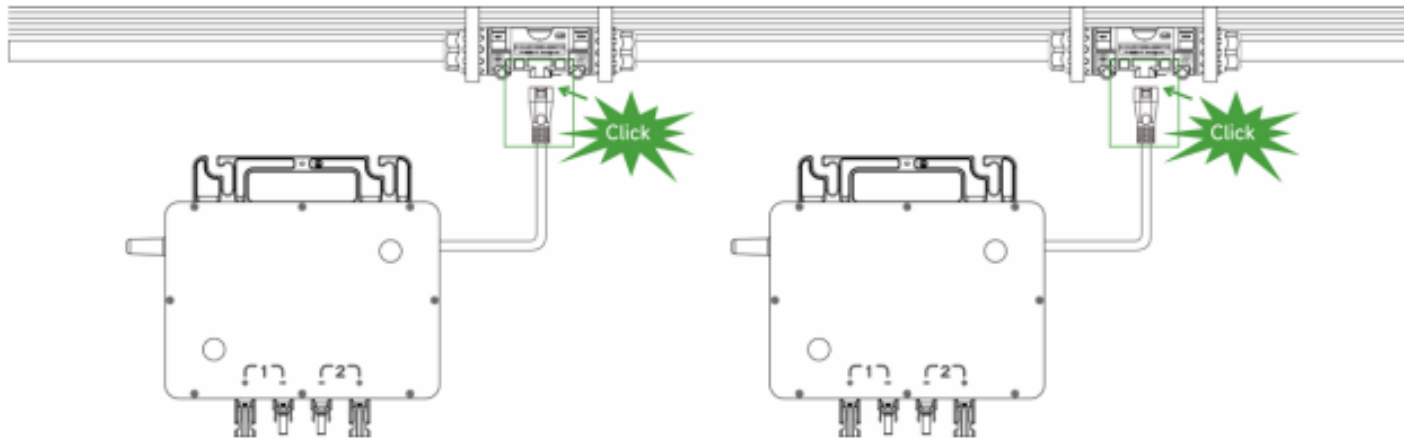


During the Microinverters installation process, you need to pay attention to the height between Microinverters and Roof > 5 inches, the antenna needs to be placed between the two wave crests; the cables need to be neatly sorted and kept as far away from the antenna as possible.

Microinverter Installation 6 - Connect Microinverter with T-junction

Connect Microinverter with T-junction

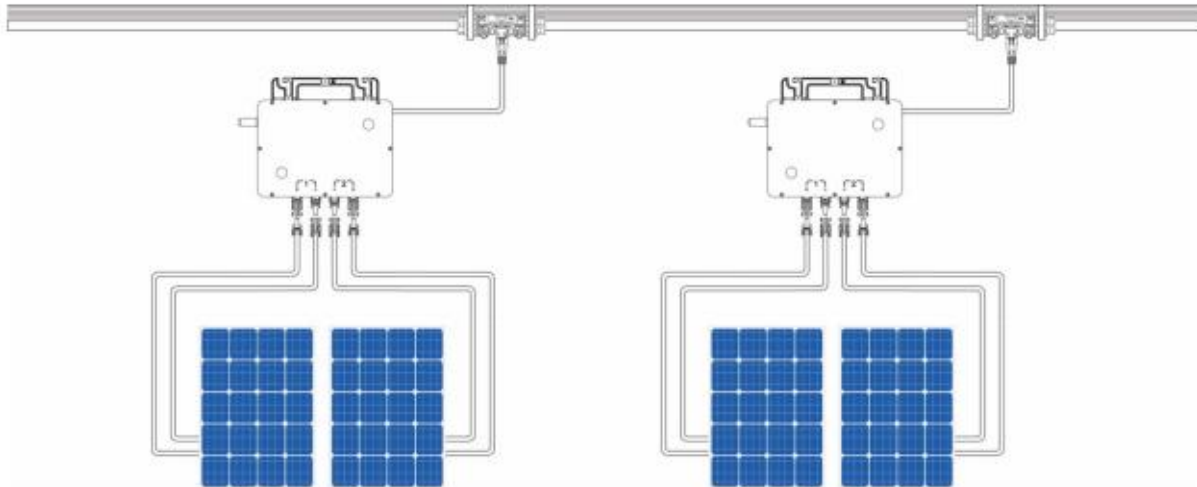
Insert the output AC feeder connector of the microinverter into the T-junction bus connector until hearing a 'click' sound. Ensure that the installation is tight.



Microinverter Installation 7 - Connect PV module

Connect PV module

1. Install the PV module above the microinverter.
2. Connect the DC output cable of the PV module with the input side of the microinverter.



Contents

1

Preparation

2

Microinverters Physical Installation

3

DMU Physical installation

4

APP configuration

DMU Installation 1 - Accessories display



No.	Name
1	Power adapter
2	Screws
3	Mount
4	Fixed base
5	Quick installation guide
6	Installation map
7	DMU

DMU Installation 2 - Under roof Scenario

Install on desktop



Wall-mounted






Installation video: https://webfile.hyxipower.com/soft/20240102/Installation-Video_HYX-DMU-4G_Ver1.0-202311.mp4

DMU Installation 3 - Metal Roof Scenario



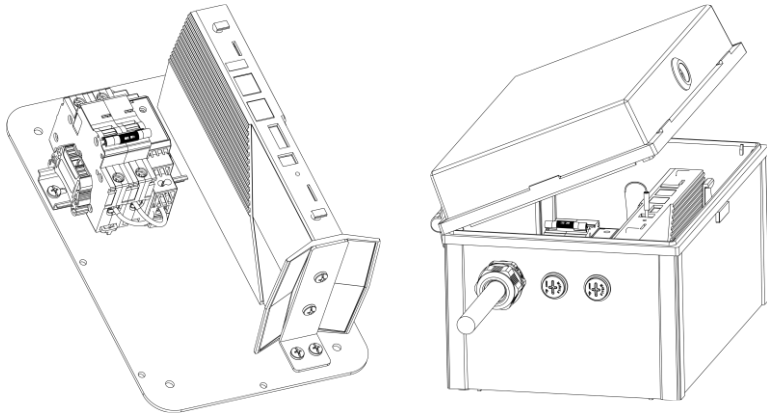
Example

-  Microinverters (under PV panels)
-  Photovoltaic panel
-  Waterproof box & DMU

Please note:

1. The installation angle of the Sub_1G antenna needs to be vertically upward, and there should be no metal obstructions around it.
2. In order to ensure the stability of the signal, the location of the DMU should be placed in the center of all Microinverters, if multiple DMUs need to be installed, each DMU should be placed in the center of its respective area (as shown in the picture above).
3. If the DMU signal in a single waterproof box cannot cover the Microinverters in all areas, need to consider install multiple waterproof boxes and DMUs in multiple locations to ensure the signal.

DMU Installation 4 - Metal roof Scenario



Place DMU in waterproof box on metal roof and use External antennas

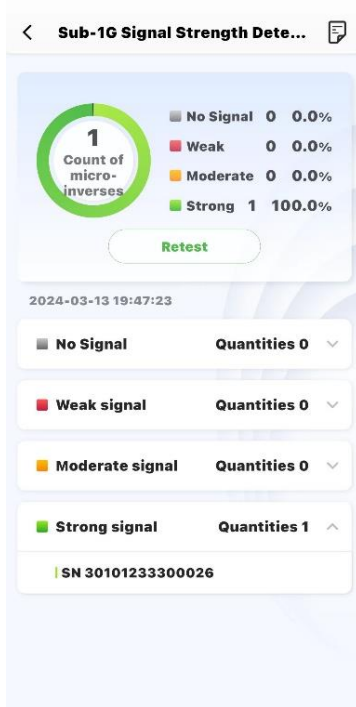


External antennas:

Short one: sub-1g antenna

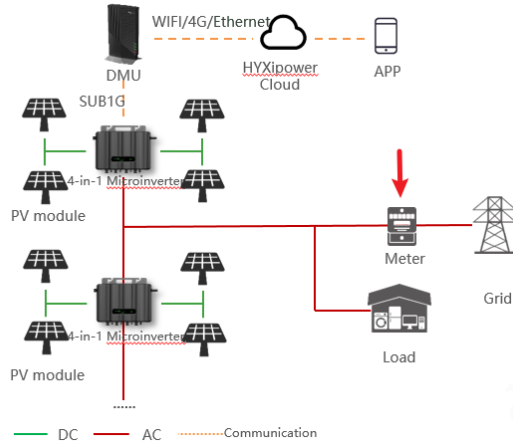
Long one: 4g/WiFi antenna

Press the reset button 5 times quickly
to switch modes (Internal to External)



1. Please do not fix the position of the DMU in advance if possible.
2. The signal values of the DMU and the microinverter can be detected during software configuration.
3. Check [page 44-45 “APP configuration 3 - Check Signal Strength”](#) for details.

Meter Installation (Optional)



Arrow points to the Grid.

Meter



DMU



Recommended specifications of the meter-DMU 2-pin 485 cable:
0.5 square mm RVVP shielded twisted pair wire.

Contents

1

Preparation

2

Microinverters Physical Installation

3

DMU Physical installation

4

APP configuration

Registration

1. Download HYXipower APP .
 2. Register the account of the person in charge of the organization.
-

Near-end Commissioning

- 1.Connect your phone to DMU
 - 2.Connect Microinverters to DMU
 - 3.Connect DMU to Internet
-

Check Signal Strength

Check signal strength between DMU and Microinverter

Create a Plant

Create a Plant for users

APP Configuration 1 - Download&Registration



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

Step 1: Download the APP and **register** .

Step 2 : According to the country or region, select **server**, select **organization** , fill in the relevant information and **register**.

Method 1

Search "Hyxipower " in the App Store

- APP store (IOS)
- Google play

Method 2

Scan the QR code download the APP



More ▾

HYXiPOWER

Email/Phone No.

Password

Forgot Password? **Register Now**

I agree to the [Terms of Use](#) and I have read the [Privacy Policy](#)

Log In

Experience

Select Role

Please select the relevant server for your area

Select Your Server **European Server** >

If Your Role Is An Installer Or A Distributor, Please Register For The Following Role.

Register as Organization >
Installer or Distributor

Register as Owner

Register as Owner >
Plant Owner

If You Have Only Installed A Balcony Photovoltaic System, Please Register The Following Roles.

Registered Balcony System Homeowner >
Balcony System Owner

Select Role

Register as Organization

Note: If your organization or company has registered for an organization account in this system, you do not need to register again. Please contact your administrator to add you to the member list

Organization/Company Name Please Enter

Registration Method

Please Enter **@hotmail.com** ▾

Please Enter **Send**

Complete Info

Password Please Enter

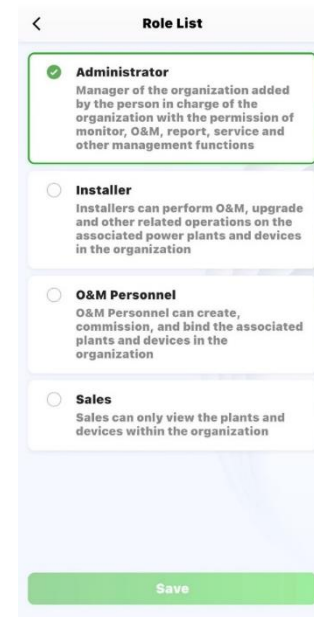
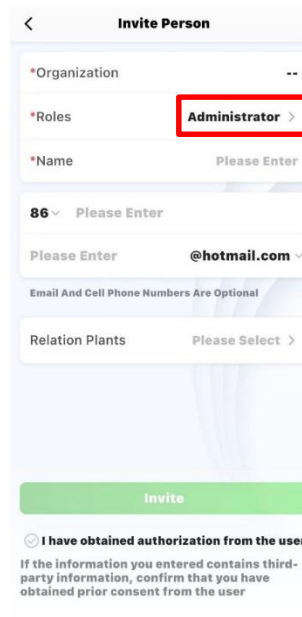
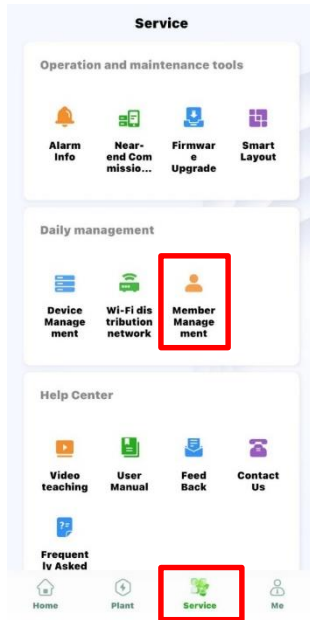
Confirm Password Please Enter

Register

I agree to the [Terms of Use](#) and I have read the [Privacy Policy](#)

APP Configuration 1 – Download&Registration - Admin registration

Step 3 : Log in to your account , select **Service - Member Management** , and then select " + " Invite members . It is recommended to choose **the administrator** role.



APP configuration 2 - Near-end Commissioning



Registration

1. Download HYXipower APP .
 2. Register the account of the person in charge of the organization.
-

Near-end Commissioning

1. Connect your phone to DMU
 2. Connect Microinverters to DMU
 3. Connect DMU to Internet
-

Check Signal Strength

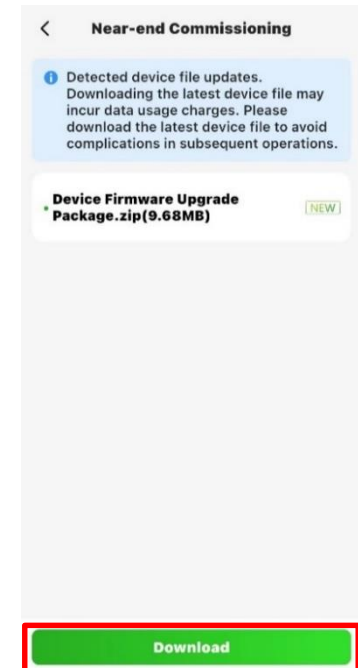
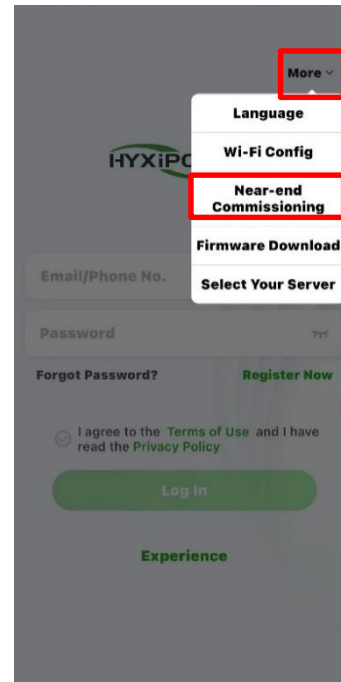
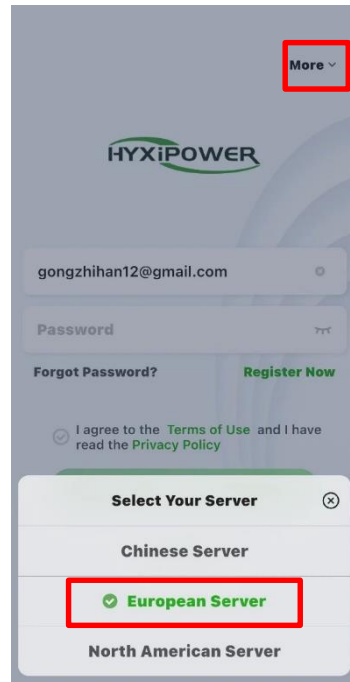
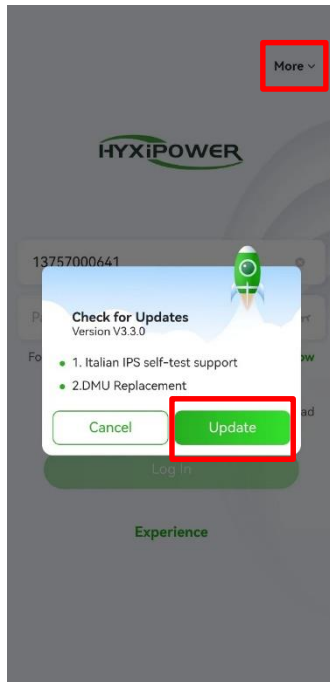
Check signal strength between DMU and Microinverter

Create a Plant

Create a Plant for users

APP configuration 2 - Connect Phone to DMU

Step 1: Open the APP. Please **update APP** before debugging if there is one. Select **More** and choose your local server. Then choose **Near-end Commissioning**. It will take few seconds **download the latest firmware**. The file will be stored in the phone as a backup. If the phone has the latest firmware package, this step will be skipped.

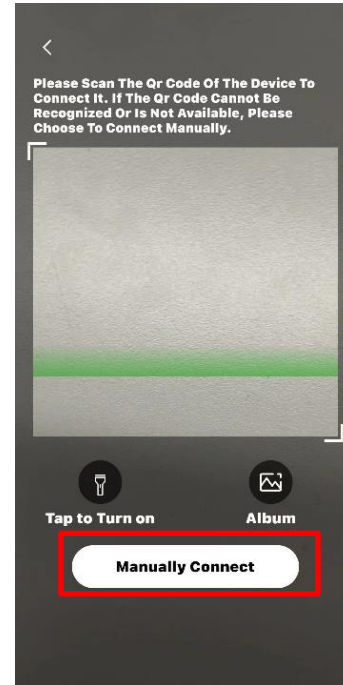
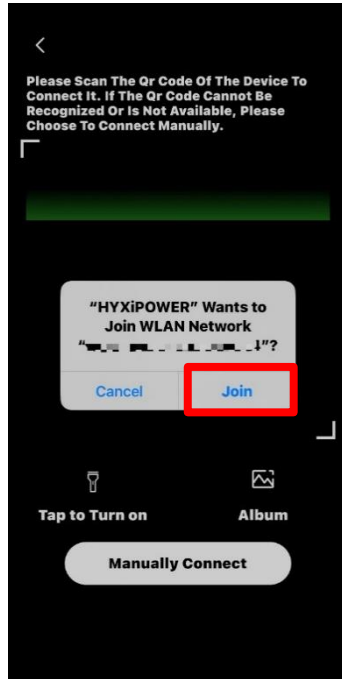
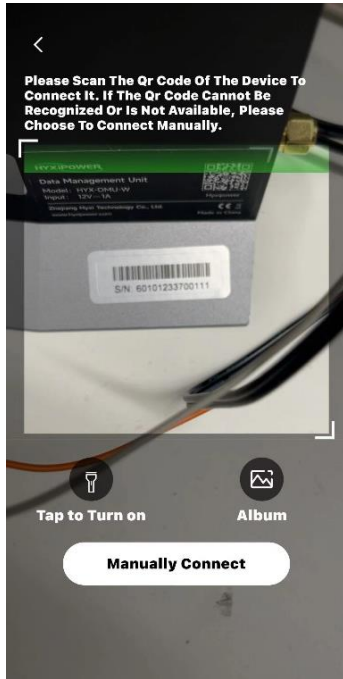


APP configuration 2 - Connect Phone to DMU



Step 2: Scan the barcode of the DMU, Join WLAN network DMU-XXXXXXXXXXXX.

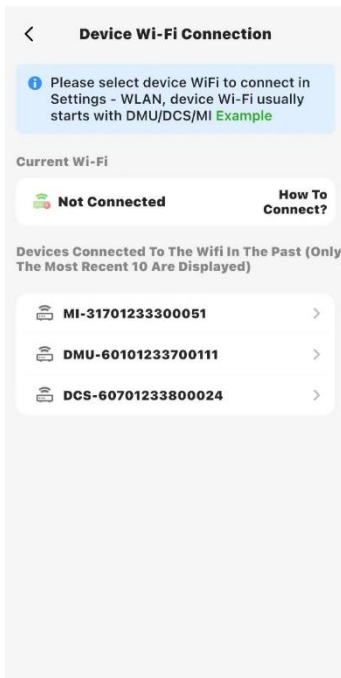
Step 3: If the barcode cannot be recognized, You can also choose to **connect manually**.



APP configuration 2 - Connect phone to DMU

IOS

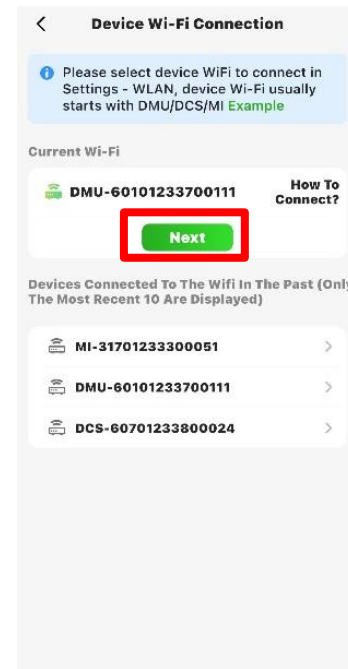
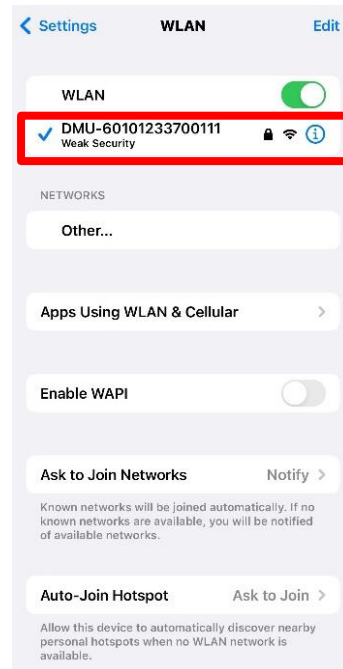
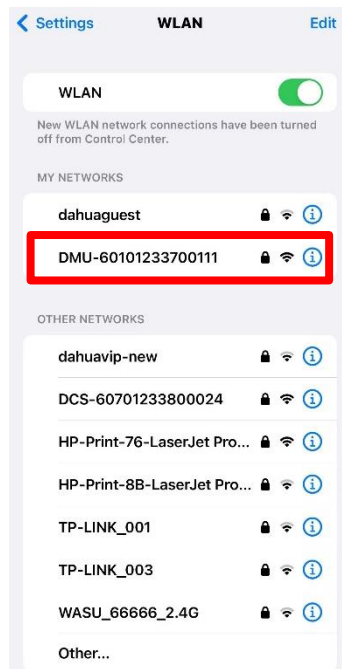
Find the WIFI in settings of phone starting with DMU and connect: DMU-XXXXXXXXXXXXX;
Password is **hyxi0607** or **12345678**, after connected, **return** to the "Hyxipower" APP and select **Next**.



Keep the APP running in the background and enter the WiFi settings page **manually**.

Enter the WiFi password.

Then return to the APP.

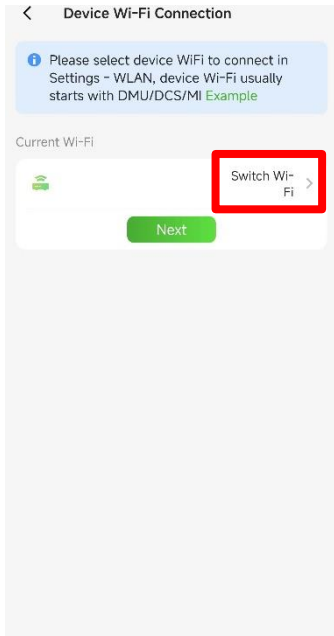


APP configuration 2 - Connect Phone to DMU

Android system :

Find the WIFI in settings of phone starting with DMU and connect: DMU-XXXXXXXXXXXXX;
Password is **hyxi0607** or **12345678**, after connected, **return** to the "Hyxipower" APP and select **Next**.

APP

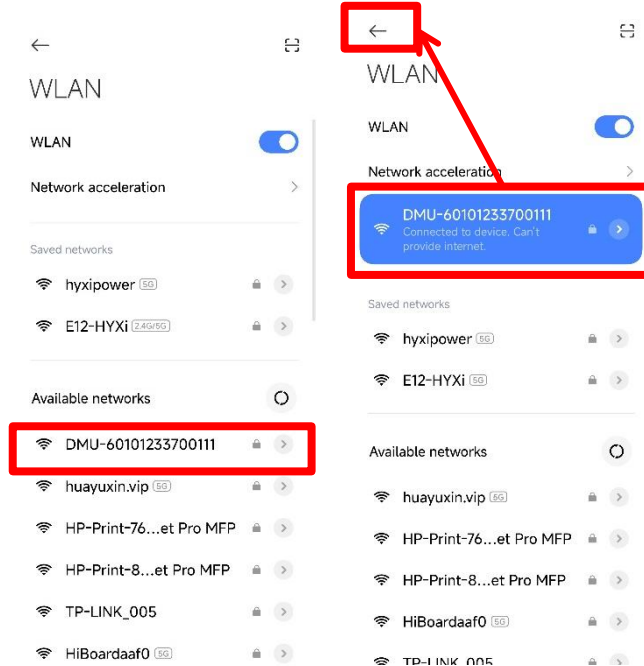


Keep the APP running in the background and enter the WiFi settings page **manually**.

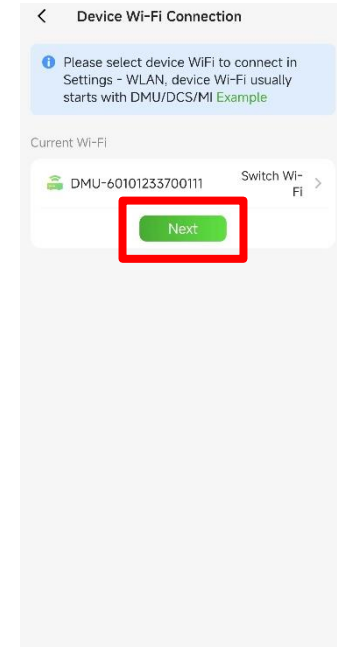
Enter the WiFi password.

Then return to the APP.

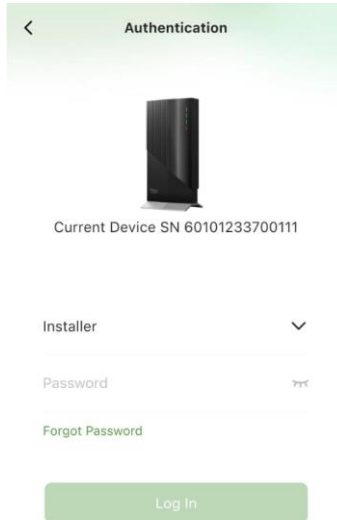
WIFI setting interface



APP



APP configuration 2 - Connect Phone to DMU



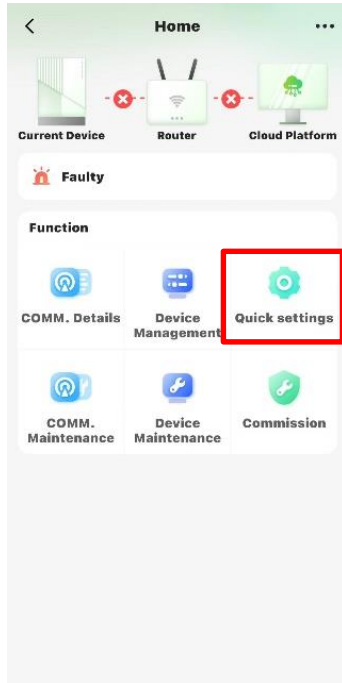
Step 4: Scan DMU's barcode and log in device : select Installer or Owner, Initial default password: hyxi0607 or 12345678

If you forget the password, you can quickly press the DCS RESET button 4 times to reset password.

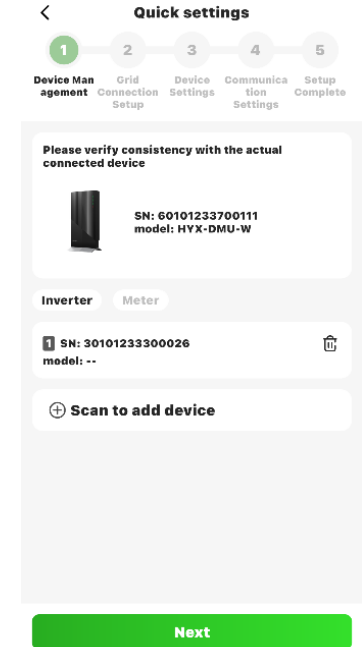
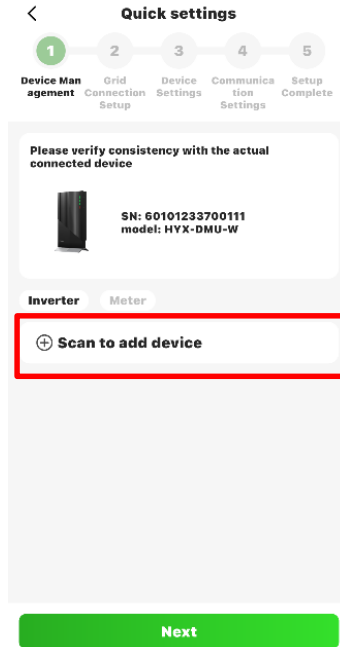
APP configuration 2 - Connect DMU to Microinverters



Step 5: Enter quick settings

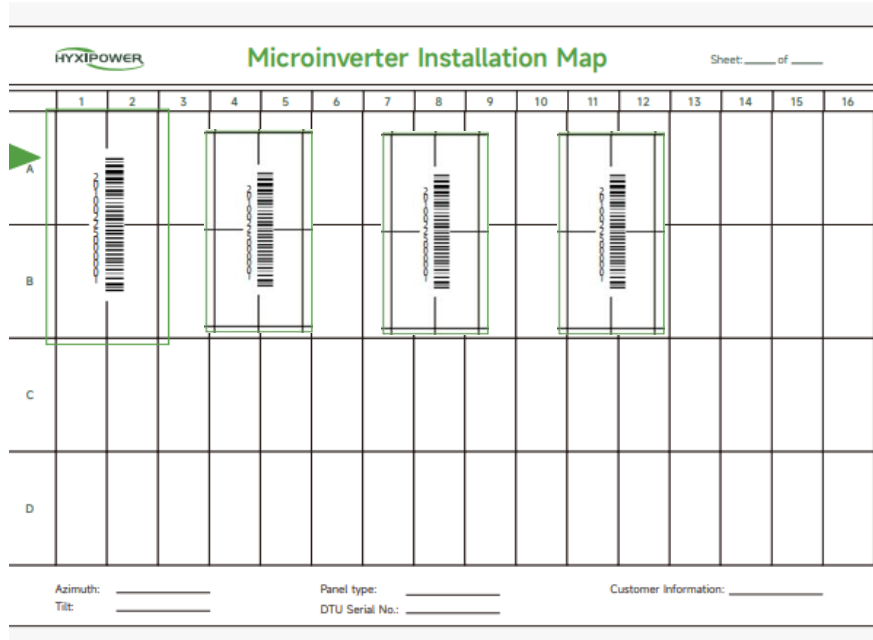


Step 6: Select "Inverter" and scan the barcode of the Microinverters to connect them to DMU.



APP configuration 2 - Connect DMU to Microinverters

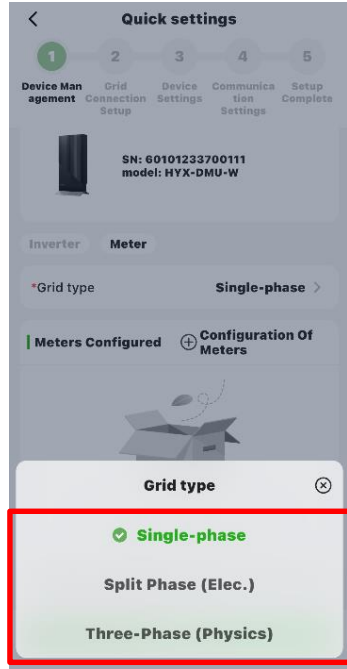
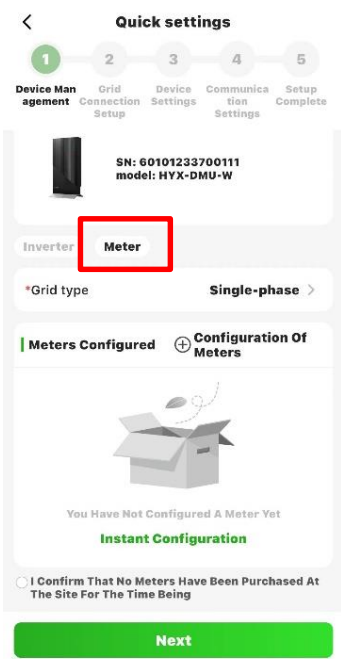
Add Microinverters to the certain DMU by scanning the barcode on the installation map.



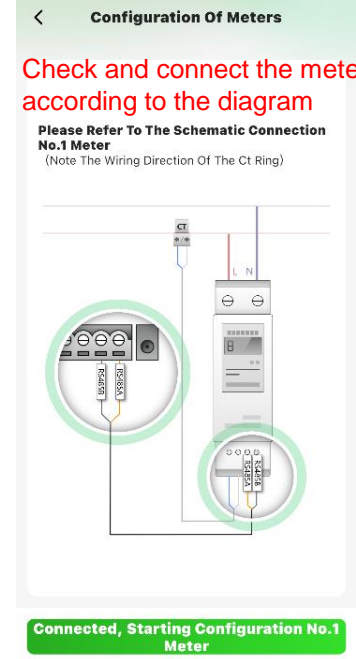
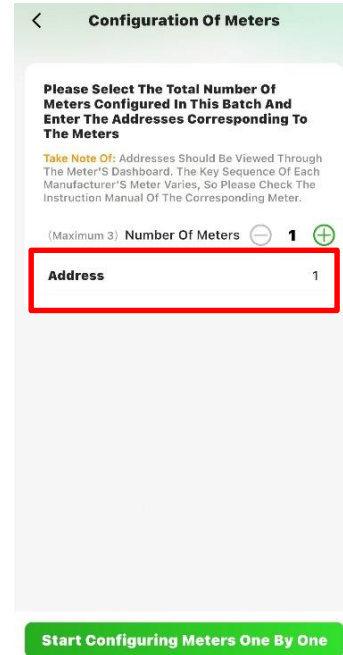
APP configuration 2 - Meter



Step 8: Click meter and select "Grid type"

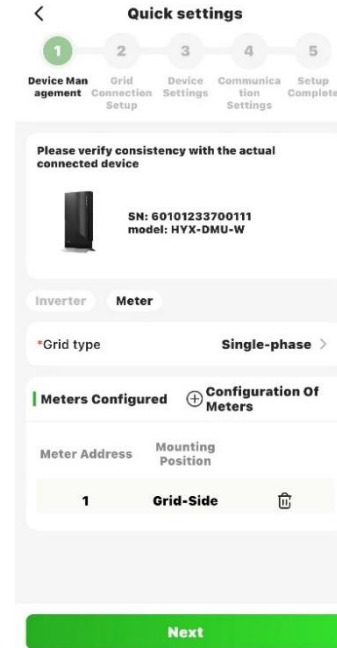
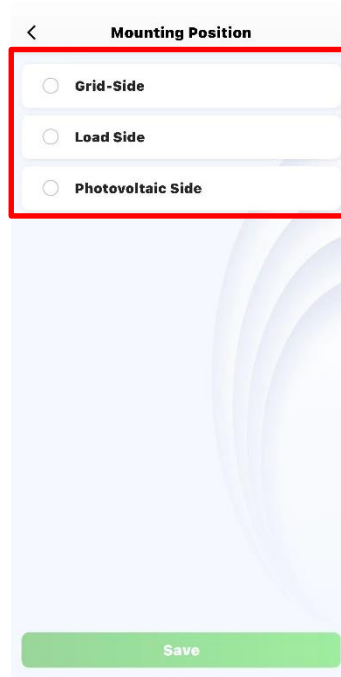


Step 9: Click "Configuration of Meters" , fill in the number of meters (Usually 3) and address of meters(The default address is 1)



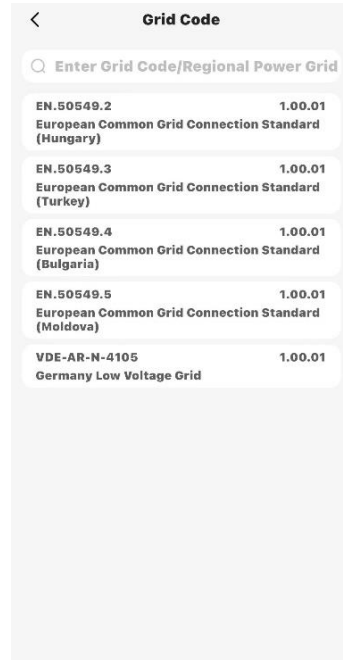
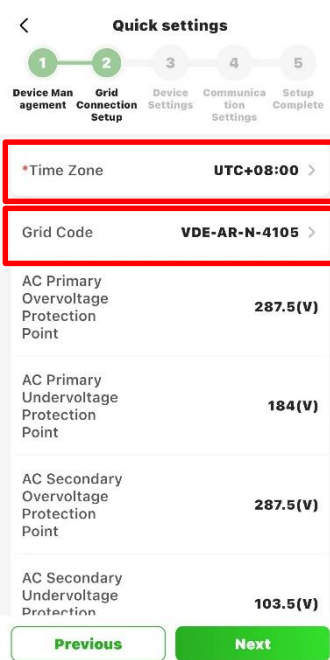
APP configuration 2 - Meter

Step 10: Select the “**Mounting position**” for the current meter, and select the address of the **current meter**, and the APP will automatically assign an address to the current meter.

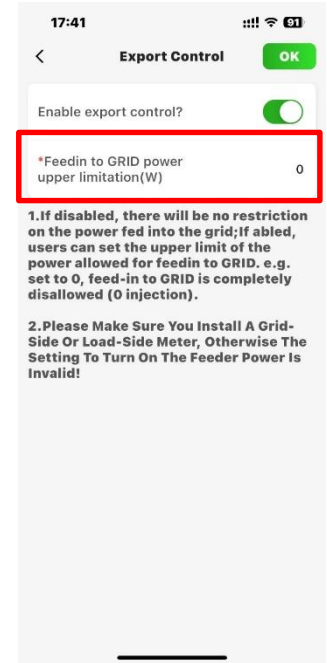
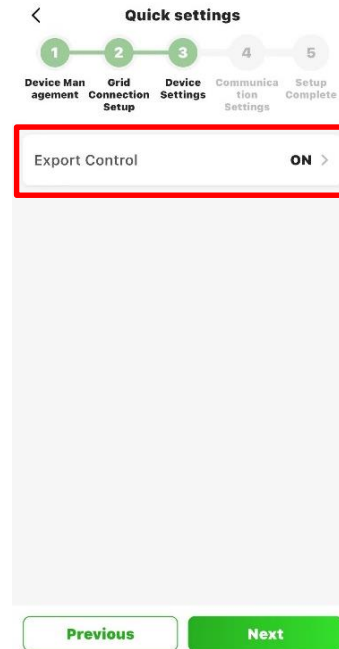


APP configuration 2 - Setup Time Zone and Grid code

Step 11: Enter the grid connection Setup and set the time zone and grid code according to local regulations



Step 12: Setup Export Control, Choose whether to feed power to the grid

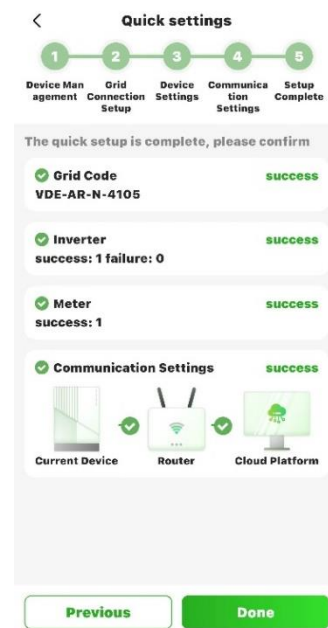
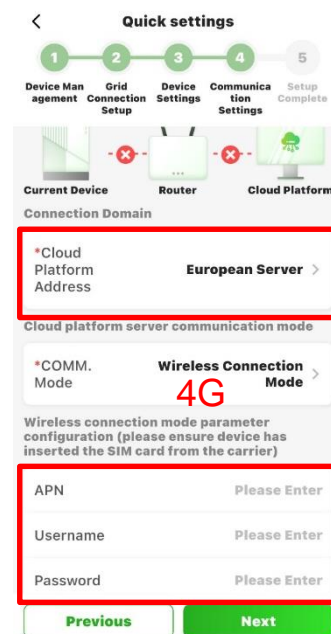
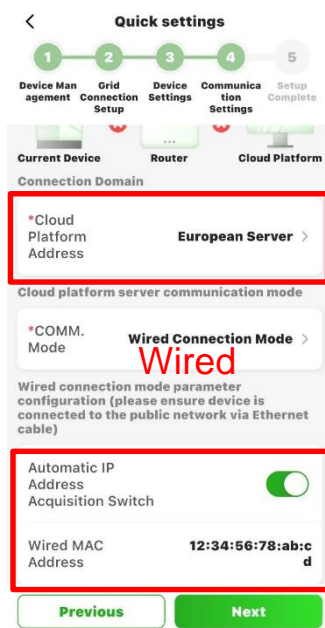
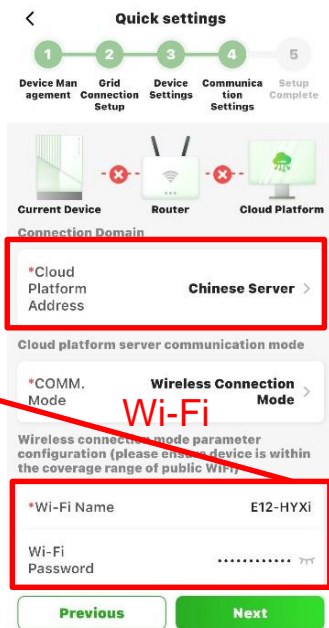
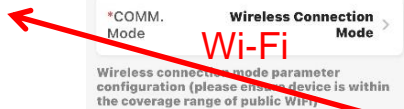


APP configuration 2 - Connect DMU to Internet

Step 13: Communication settings, Choose your local server, fill in the **Wi-Fi name and password** for wireless mode. Confirm the automatic IP acquisition switch is **ON** for wired connection mode. No need to fill in the **APN, username and password** for the **4G version wireless mode**. The next step is to wait for the device to connect to the Internet.

Android users can automatically obtain the corresponding wifi name

IOS users need to manually input the WiFi name



APP configuration 3 - Check Signal Strength



Registration

1. Download HYXipower APP .
 2. Register the account of the person in charge of the organization.
-

Near-end Commissioning

- 1.Connect your phone to DMU
 - 2.Connect Microinverters to DMU
 - 3.Connect DMU to Internet
-

Check Signal Strength

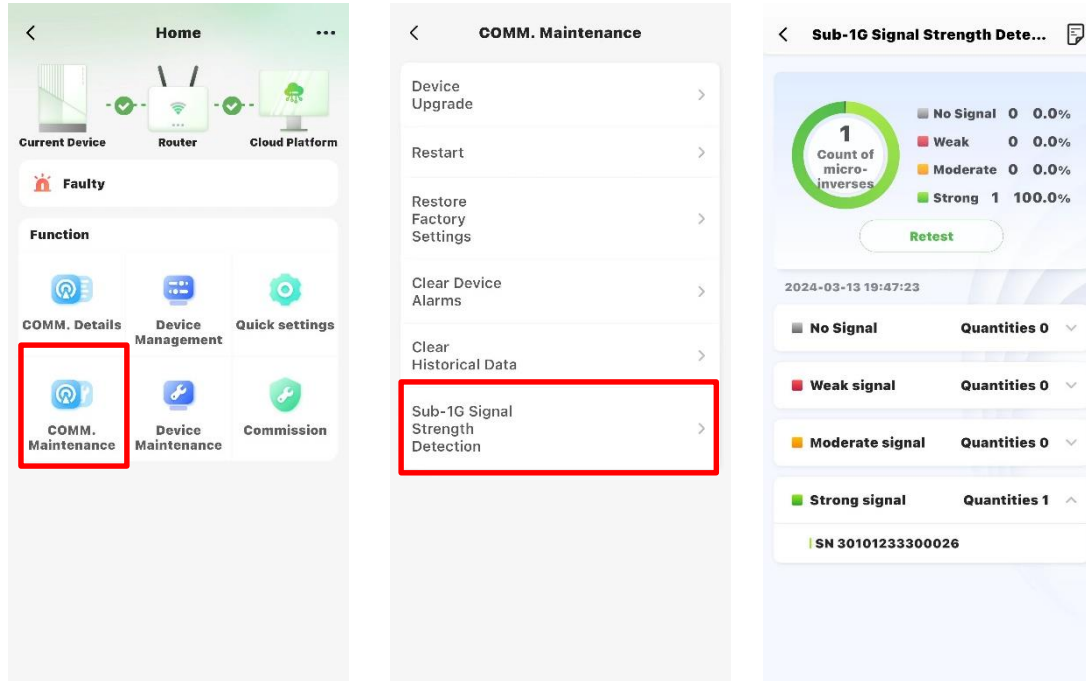
Check signal strength between DMU and Microinverter

Create a Plant

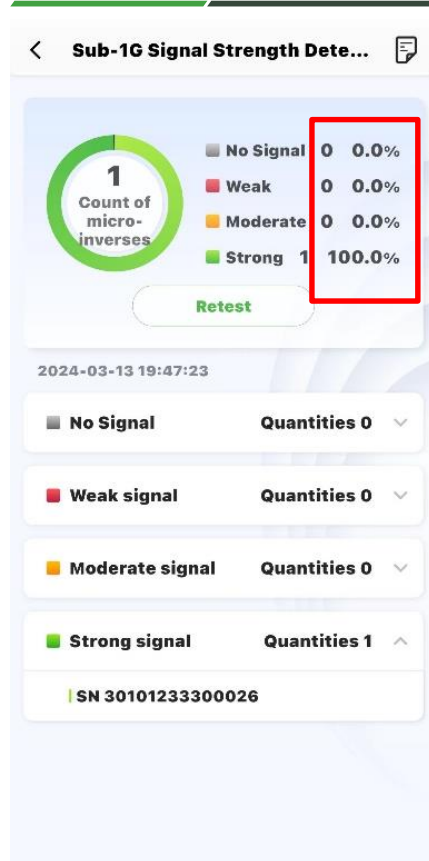
Create a Plant for users

APP configuration 3 - Check Signal Strength

Step 1: Check the sub-1g signal between microinverters and each DMU through **COMM.Maintenance**



APP configuration 3 - Check Signal Strength



The current proportion of different signal equipment.

Step 2: Check the microinverters with “No Signal” and “Weak Signal”, and adjust the installation method of the Microinverter and the installation position and quantity of DMU to ensure that the signals of all devices are above “Moderate Signal”.

Step 3: See pages 17 and 23 for details.

APP configuration 4 - Create a Plant for Owner



Registration

1. Download HYXipower APP .
 2. Register the account of the person in charge of the organization.
-

Near-end Commissioning

1. Connect your phone to DMU
 2. Connect Microinverters to DMU
 3. Connect DMU to Internet
-

Check Signal Strength

Check signal strength between DMU and Microinverter

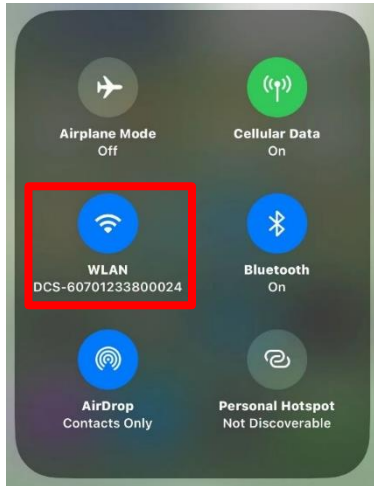
Create a Plant

Create a Plant for users

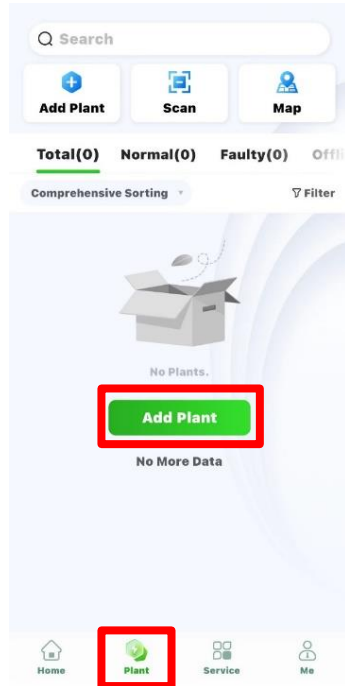
APP configuration 4 - Create a Plant for the owner

Step 1: Disconnect the phone from the DMU's WiFi.

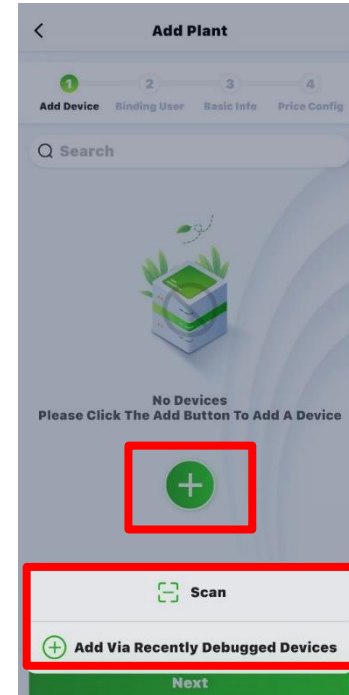
Make sure your phone has Internet access



Step 2: Log in to your **organization account**, click the **Add Plant** button

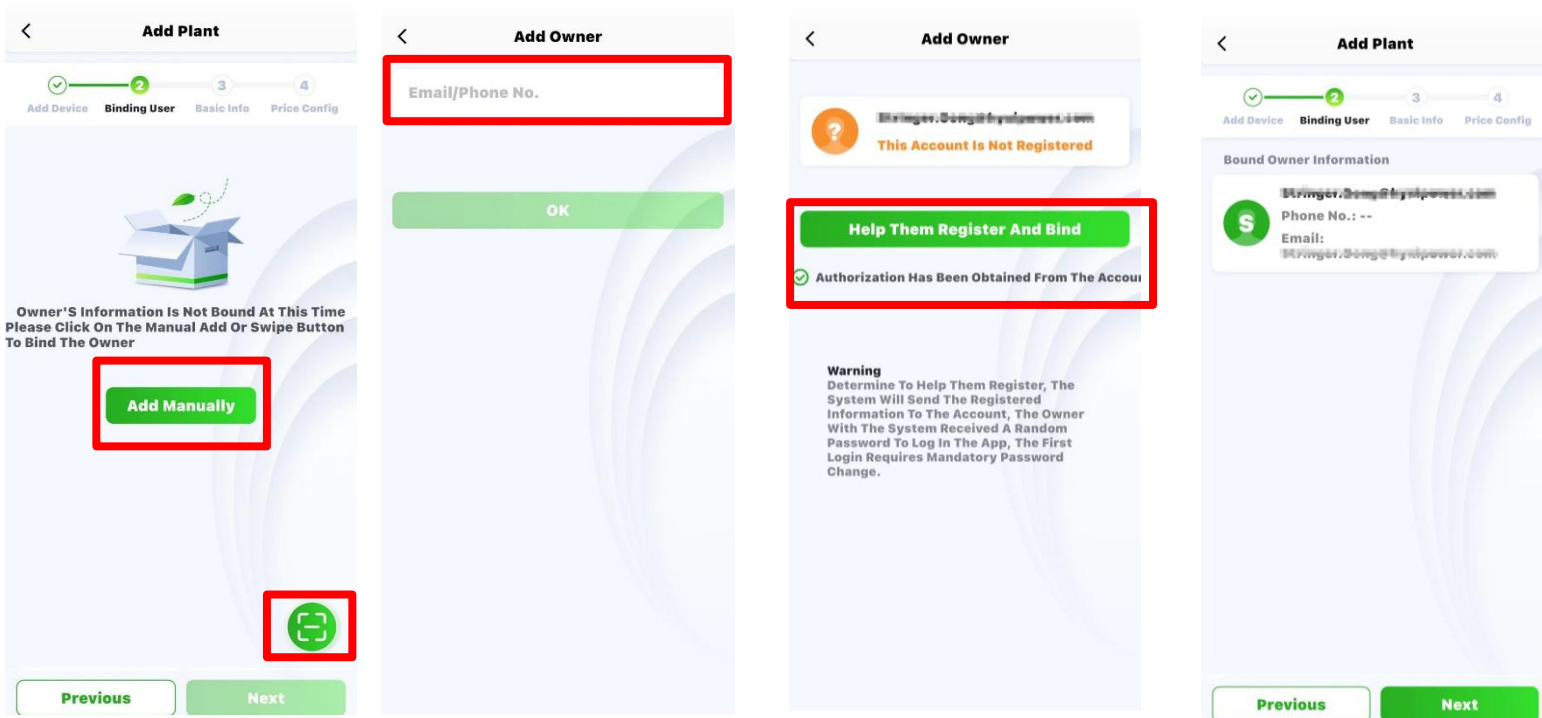


Step 3: Scan the QR code of the DMU or add it through the Recently debugged device



APP configuration 4 - Create a Plant for the owner

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



APP configuration 4 - Create a Plant for the owner

Step 5: Plant name-Plant type(House hold Use)-
Region-Time Zone

Add Plant

1 2 3 4

Add Device Binding User Basic Info Price Config

*Plant Name recoderag@163.com20
24-04-10

*Plant Type Household Use >

Region 中国浙江省杭州市滨江区

Plant Address 浙江省杭州市滨江区长河
街道滨兴路1399号-大华
股份(总部)

*Time Zone (UTC+08:00) Beijing,
Chongqing,Hong
Kong,Urumqi >

More Info

Previous Next

Plant Type

Please select the correct power station type

Household Use
For small and medium-sized projects, typically under 100 kW, dominated by microinverters, residential energy storage, and string systems

Industry and Commerce
For large-scale commercial and industrial projects, typically under 100 kW, dominated by high-capacity household energy storage and high-capacity string systems

Energy Storage
For projects dominated by commercial and industrial energy storage cabinets, typically over 100 kW

Step 6: More Info-Next.

Add Plant

1 2 3 4

Add Device Binding User Basic Info Price Config

*Plant Name recoderag@163.com20
24-04-10

*Plant Type Household Use >

Region 中国浙江省杭州市滨江区

Plant Address 浙江省杭州市滨江区长河
街道滨兴路1399号-大华
股份(总部)

*Time Zone (UTC+08:00) Beijing,
Chongqing,Hong
Kong,Urumqi >

More Info

Previous Next

Add Plant

1 2 3 4

Add Device Binding User Basic Info Price Config

Photovoltaic installed capacity Please Enter kWp *

Number of Strings Please Enter

Grid Connection Type Feed All to Grid >

Contribution Type Full Payment by Owner >

Contact Phone No Please Enter

Remarks Please Enter

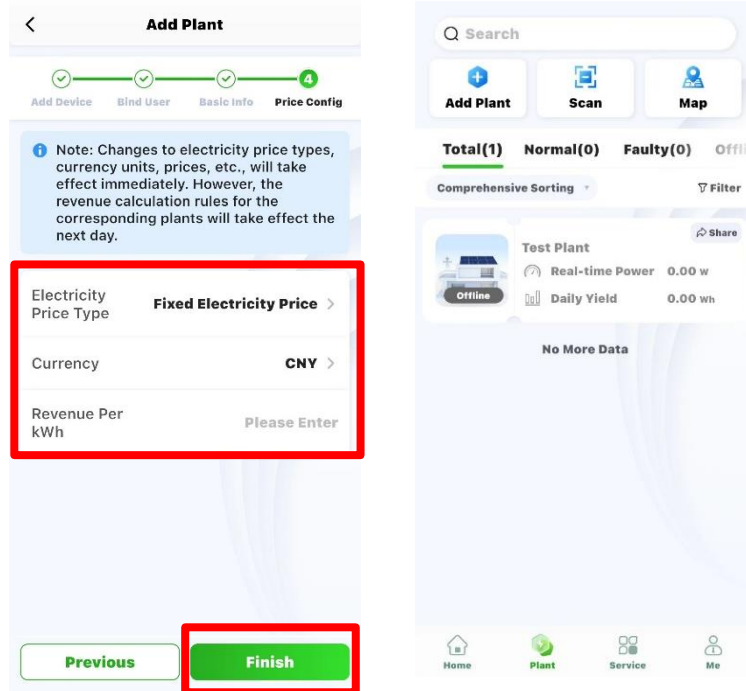
Plant Image +
Upload

Show Less

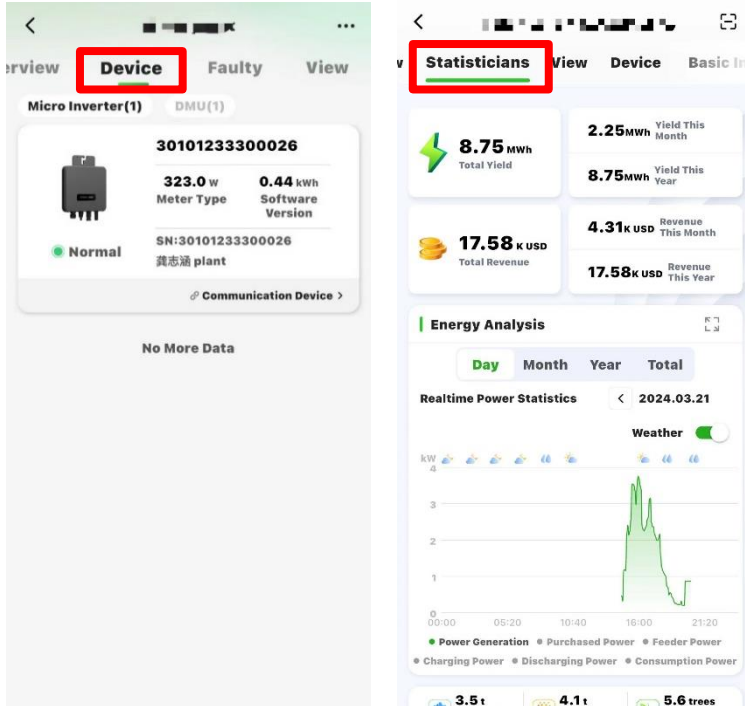
Previous Next

APP configuration 4 - Create a Plant for the owner

Step 6: Fill in Electricity Price Type, Currency and Revenue per kWh, select Finish, and the Plant is successfully created.



Installation Acceptance



Step 1: Select **Plant - User's Plant - Device**, and ensure that the online state of device is correct.

Step 2: After installation is completed, continuously monitor for more than half an hour, select **Statistics - Energy Analysis**, view the realtime power statistics curve, and ensure that the Plant has started generating electricity normally.

After confirming that all the above are normal, it indicates that the device installation and configuration is successful!



THANKS

Zhejiang Hyxi Technology Co., Ltd.

Quality

Innovation

Efficiency

Win-win

