

User Manual

iSolarCloud App

iSolarCloud



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2 About This Manual

Target Group

This manual is intended for retailers/installers, owners, and O&M personnel of the residential PV system, energy storage system, commercial system, and micro-grid.

Symbols in the Manual



NOTE indicates supplementary information, emphasis on specific points, or tips that might help to solve your problems or save your time.

Main Content

This manual gives instructions mainly on how to install, configure, and use the iSolarCloud App.



User interfaces presented in this manual come from V2.1.6.20230731 iSolarCloud App. Icons and data in the figures are for reference only, which may be different on the App you actually use.

This manual gives instructions on how to use the iSolarCloud App on an iOS device. These instructions also apply to Android devices, with only small differences in user interfaces. Please refer to the user interfaces actually shown on your device.

System Requirements

- Mobile OS: Android 5.0 or later, iOS 13.0 or later.
- The phone can connect to WLAN or 2G/3G/4G/5G network.
- The phone has sufficient storage space to install the App.
- The phone has sufficient battery power.

3 Intro to iSolarCloud

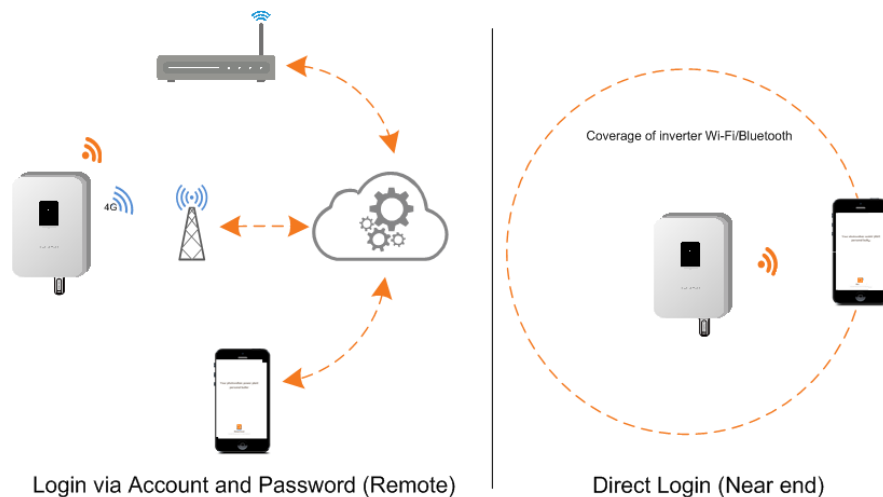
3.1 Platform Overview

About iSolarCloud

The iSolarCloud App is a mobile application used for power plant management. The App provides plant operation analysis service and enables intelligent mobile O&M. It is designed with functions such as plant operation data display, rapid plant access, remote parameter setting, quick fault location and notification, and power yield and revenue analysis. With iSolarCloud, convenient and efficient end-to-end plant O&M is allowed.

Connection Methods

Users can log in to the App via remote connection or local access for plant monitoring.



Login with an Account (Remote)

Establish communication between the communication module and the home router or base station to enable data exchange between the inverter and the cloud server. Users can check the inverter data or send commands to control the inverter on the App.

Login by Establishing a Direct Connection (Local)

Establish communication between the mobile phone and the WiFi wireless communication module or the inverter's built-in Bluetooth module to enable near-end maintenance of the inverter. Users can check the information about and set parameters for the inverter.



Login via Bluetooth connection is applicable only for SUNGROW inverters with built-in Bluetooth modules. Please consult your retailer/installer about whether the inverter is equipped with a Bluetooth module.

3.2 Account Type

There are two types of user accounts: **Owner** and **Retailer/Installer**.

The **Owner** can view the plant information, create a plant, set common parameters, and share a plant, etc.

The **Retailer/Installer** can assist the Owner in creating/managing a plant, manage users and organizations, and set grid-related parameters and advanced parameters, etc.

4 Common Operations

4.1 Install iSolarCloud

Prerequisite

This section introduces how to download and install the iSolarCloud App.

Steps

- Step 1** Search for **iSolarCloud** in App Store, Google Play, or other application stores, or scan the QR code below with a mobile phone and download the App by following the onscreen instructions.

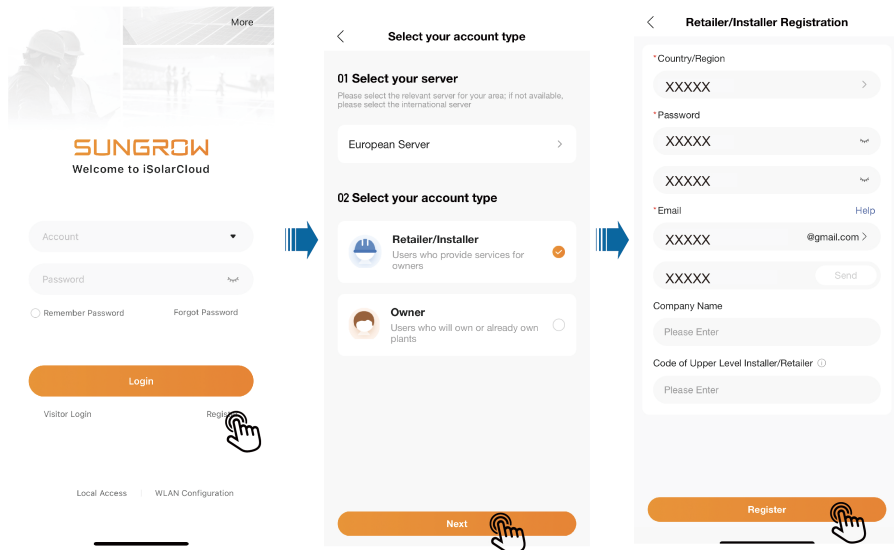


- Step 2** Tap the downloaded installation package and follow the onscreen instructions to complete the installation. The icon of iSolarCloud will then appear on the screen of your phone.



--End

4.2 Create an Account



Step 1 Tap **Register**.

Step 2 Select a **Server**, and choose to create a **Retailer/Installer** or **Owner** account according to the actual needs.



Users in mainland China may choose **Chinese Server** and can only create an Retailer/Installer account.

Users in Europe and Africa may select **European Server** and those in Australia may select **Australian Server**. Users in other countries/regions may select **International Server**. These users can create an Owner or a Retailer/Installer account.

Step 3 Complete the required information. Information required for registration include: **Country/Region**, **Password**, **Phone Number/Email**, **Verification Code**, **Company Name**, and **Code of Upper Level Installer/Retailer**. The Retailer/Installer may also set a **Username**, which is optional.



Register using your phone number if you select the **Chinese Server**.

Register using your email if you select the **International Server**, **European Server**, or **Australian Server**.

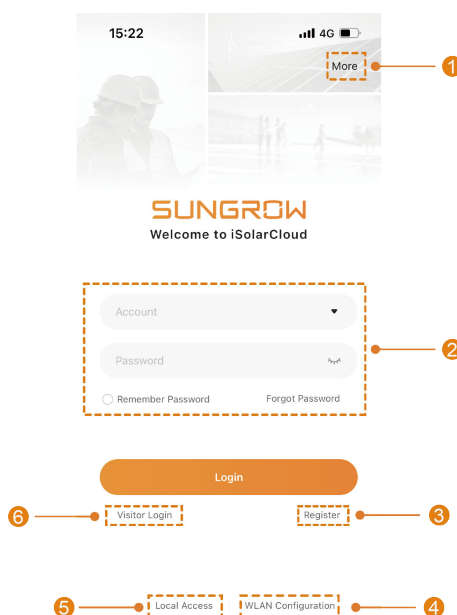
You can reach your upper-level retailer/installer for the "Code of Upper Level Installer/Retailer". Entering this code indicates that your organization is subordinate to an upper-level retailer/installer.

Step 4 Tap **REGISTER** to create an account.

--End

4.3 Log in to an Account

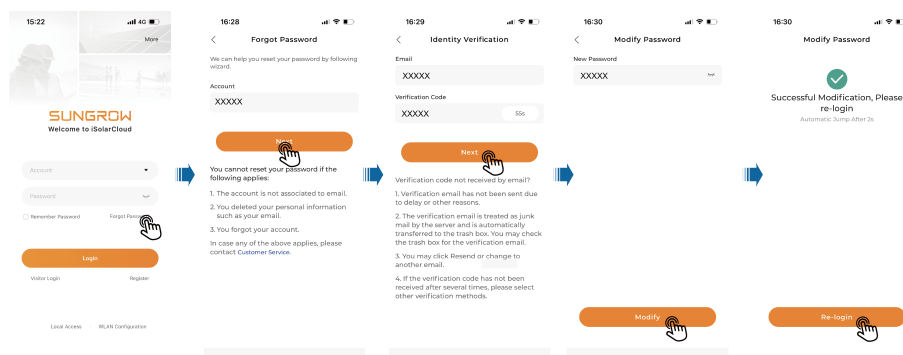
Open the iSolarCloud App. The login screen is shown as follows.



No.	Definition	Description
1	More	Select your server: Choose the server you have selected when creating the account. User Manual: User manual for the iSolarCloud App. FAQs: Frequently asked questions and answers with regard to the use of the iSolarCloud App. Terms of Service: Terms of Service for the iSolarCloud App. Privacy Policy: Privacy Policy for the iSolarCloud App. Language: Set the language of the App.
2	Account and password input box	Enter your account name and password, and tap Login to log in to the iSolarCloud App. By tapping Forgot Password, you can change your password. Please refer to 4.4 Reset Password for details. By selecting the Remember Password checkbox, you will not need to enter the password at the next login.
3	Register	Create a new account. Please refer to #unique_11 for details.

No.	Definition	Description
4	WLAN Configuration	Connect the communication device to the home network by completing WLAN Configuration, so as to enable data exchange between the inverter and the cloud server.
5	Local Access	Establish communication with the phone via WLAN or Bluetooth connection to enable near-end maintenance of the inverter. You can check the information about and set parameters for the inverter.
6	Visitor Login	Explore the App without logging in to an account.

4.4 Reset Password



Step 1 Tap **Forgot Password** on the login screen.

Step 2 Enter the account name, and tap **Next**.

You may not be able to reset your password if:

- The account is not associated with an email address or a phone number.
- You have deleted your personal information, e.g., your email address or phone number.
- You forgot your account name.

In case of any of the above problems, please contact Customer Service.

Step 3 Enter your email address, and tap **Send**. Enter the verification code you have received through email, and tap **Next**.

Step 4 Enter a new password. The password should be eight-character long at least and contain at least one letter and one number. Then, tap **Modify**.

Step 5 After changing the password, tap **Re-login** to go back to the login screen. You can now log in with your new password.

--End

5 Create a Plant

Prerequisite

This section gives instructions on how to create a plant on the iSolarCloud App.

User interfaces for creating a plant may differ slightly by the plant type, inverter type, or communication device. Please refer to the interfaces actually shown on the App.

Requirements

- Users have acquired the iSolarCloud account and password from their retailers/installers or SUNGROW.
- The inverter is properly connected to the SUNGROW communication device.

Background Information

To authorize the Retailer/Installer to manage the plant, the Owner needs to ask them for their retailer/installer code.

To assist the Owner in creating a plant, the Retailer/Installer needs to ask for the owner's phone number.

The following three steps are required to create a plant: [5.1 Complete Plant Information](#), [5.2 Add Communication Device](#), and [5.3 Set Tariffs](#).

5.1 Complete Plant Information

Log in to the iSolarCloud App, and tap  at the top of the screen to go to “Create Plant”. Then, choose **Plant Information**, and complete the following information.

Table 5-1 Parameters Required for Creating a Plant

Parameter	Description
Plant Name*	Enter the plant name.
Installed PV Power (kWp)*	Enter the installed power.
Plant Type*	Select the plant type.
Detailed Address*	The location of the plant, which can be set in the following two ways:

Parameter	Description
	- Manual setting: Enter the location of the plant in the input box. - Auto acquisition: Tap  to get the current location automatically.
City*	The city where the plant is located.
Postal Code	The postal code of the place where the plant is located.
Country/Region*	The country/region where the plant is located.
Time Zone*	The time zone of the place where the plant is located.
Module Model	The model of the PV module actually used in the plant.
Owner's email address*	Enter the owner's email address.
Grid-connection Type*	Set the grid-connection type for the plant.
Grid-connected Date	Shows the current date by default. You can tap  to set the grid-connected date.
Plant Image	Upload an image of the plant.



- * indicates required fields.
- Upon opening "Create Plant", detailed information about the plant location will be auto-filled.

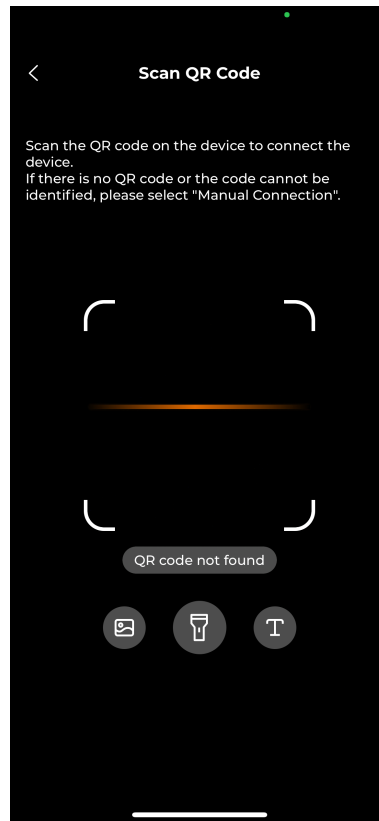
After completing the settings above, you can tap **Save and Continue** to add a device.

You can also tap **Save and exit** to save the settings and finish creating the plant.

5.2 Add Communication Device

Add Device

Communication devices can be added in either of the following ways.



1. Scan a QR Code

- Scan the QR code on the communication device, and check whether the information collected is correct. If so, tap **Confirm** to add the device.
- Tap  to scan a QR code from a picture on your device. Check whether the information collected is correct; if so, tap **Confirm** to add the device.

2. Add Manually

Tap , and select the communication device type. Find the S/N of the corresponding device by following the onscreen instructions. Enter the S/N manually and tap **Confirm**.

Device Check



You can add more than one communication device when creating a plant. Just tap **Add Device** and repeat the steps above. After you have finished, tap **Save and Continue** to proceed to the next step.

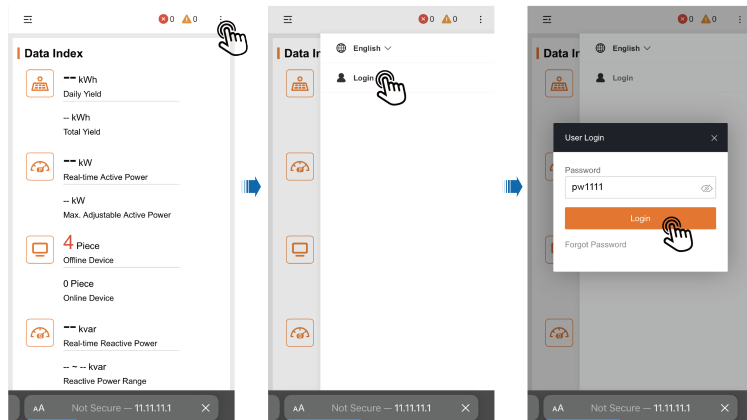
You can also tap **Save and exit** to save the added device in the system.

5.2.1 Network Configuration (Built-in Web)

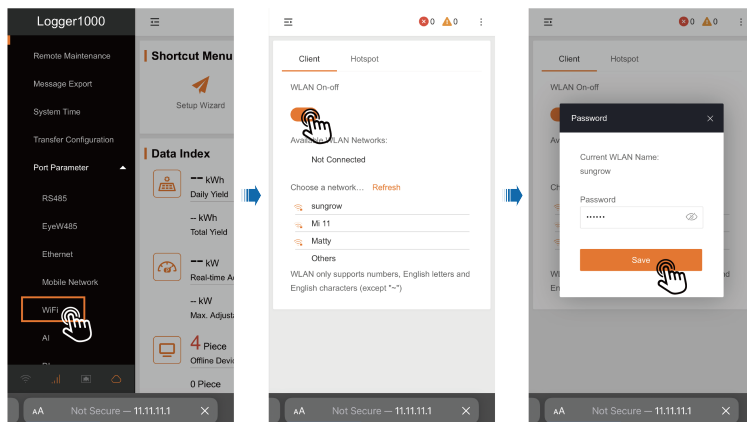


If the communication device supports 4G communication, and a 4G SIM card has been installed, you may go to “[5.3 Set Tariffs](#)” directly.

1. If Logger1000 or EyeM4 is used and the 4G SIM card is not installed, connect your mobile device to the communication device's hotspot after the device is added successfully.
2. Open a browser on your device and enter the website <http://11.11.11.1>.
3. Choose  > **Login**, and log in by entering your password.



4. Choose **System > Port Parameter > WiFi** to turn on WLAN. Then, select the WLAN name accordingly and enter the password. Once connected, you will see a success message.



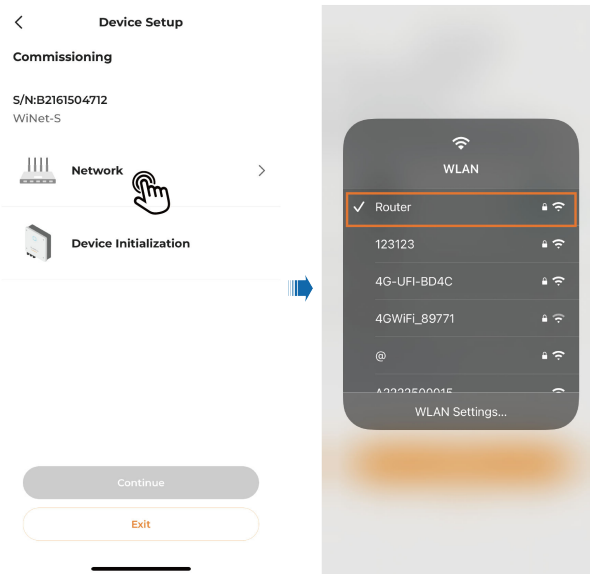
5. Go back to the App.

5.2.2 Network Configuration (iSolarCloud App)

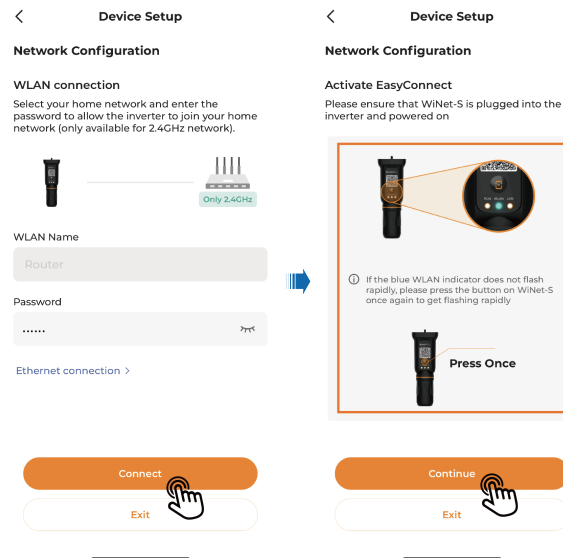
Network Configuration for WiNet-S/WiNet-S2/WiFi-P2

WLAN Connection

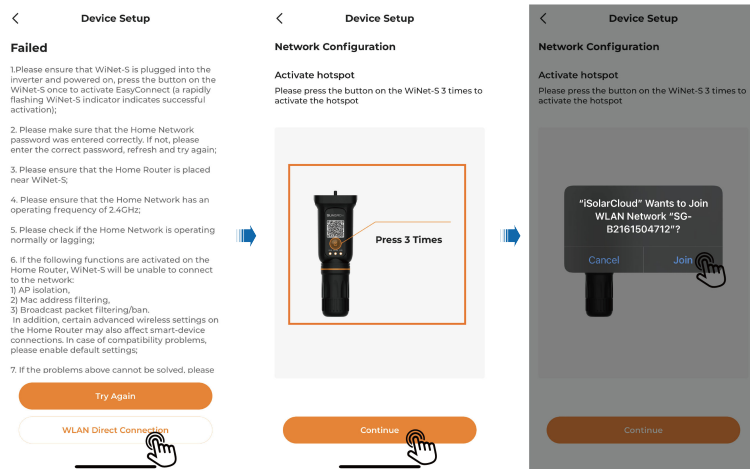
1. Go to **Commissioning** after adding a device.
2. Choose **Network** to go to "WLAN Settings". Turn on WLAN on the phone, and connect to the home router.



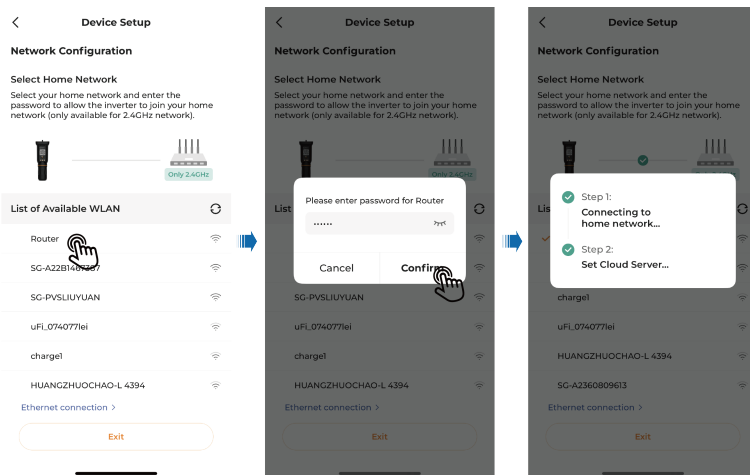
3. Return to **WLAN connection**, enter the home router's WLAN password, and tap **Connect**. Press the button on the device once, by following the onscreen instructions, to activate EasyConnect, and then tap **Continue**.



4. Wait for the module to connect to the home network and the cloud. Network configuration is now completed.
5. In case EasyConnect has failed, tap **WLAN Direct Connection** in the pop-up on the screen. Press the button on the device three times by following the onscreen instructions, and tap **Continue**. Then, tap **Join** in the confirmation dialog box shown on the screen.



6. Select the target WLAN, enter the password, and tap **Confirm**. Wait for the module to connect to the home network and the cloud. Network configuration is now completed.

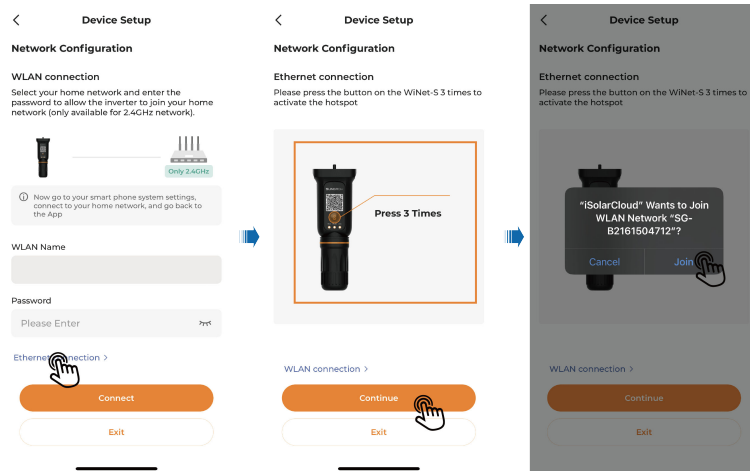


Ethernet Connection

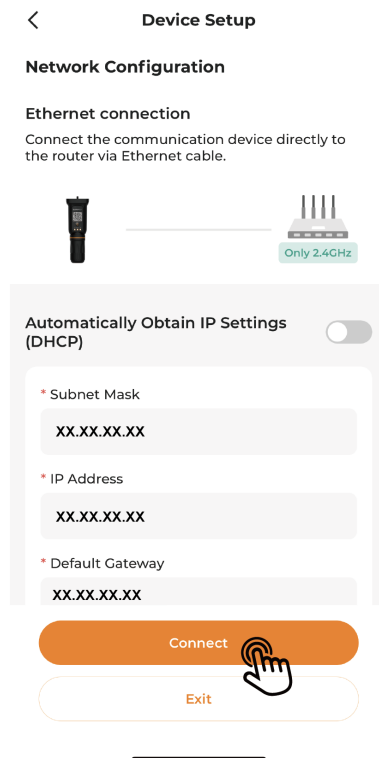


Ethernet connection is not available for Wi-Fi-P2.

1. Go to **Commissioning** after adding a device.
2. Choose **Network**, and tap **Ethernet Connection**. Press the button on the device three times by following the onscreen instructions, and tap **Continue**. Then, tap **Join** in the confirmation dialog box shown on the screen.

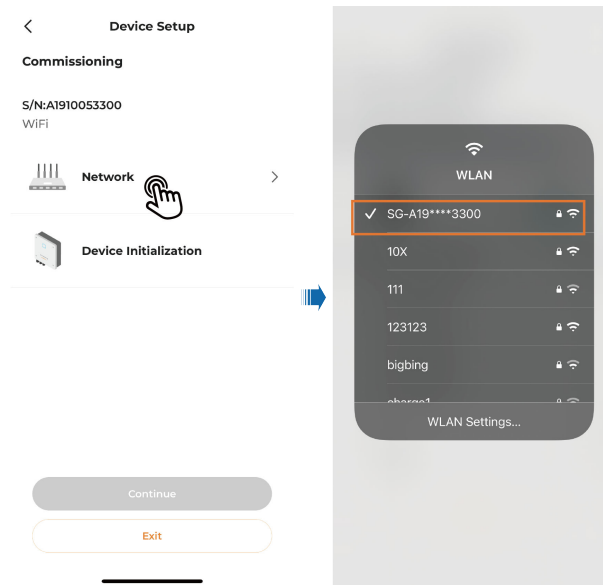


3. Complete the information required for Ethernet connection, and tap **Connect**. Wait for the module to connect to the home network and the cloud. Network configuration is now completed.

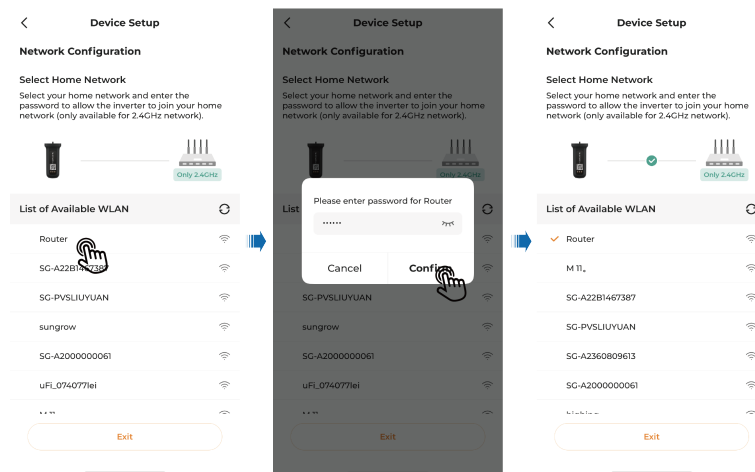


Network Configuration for WiFi Module

1. Go to **Commissioning** after adding a device.
2. Choose **Network**. Turn on WLAN on the phone, and connect to the WLAN named as "SG-WiFi module S/N". The S/N of the WiFi module can be found on the side of the module.



3. Choose the WLAN of the home router, enter the password, and tap **Confirm**.



4. Wait for the module to connect to the home network and the cloud. Network configuration is now completed.

5.2.3 Device Initialization

1. Complete network configuration.
2. Tap **Device Initialization**.
3. Go to **Device Setup**. Configure inverter parameter settings according to the local grid requirements, and tap **Continue**. After the settings are completed successfully, you will go back to the **Commission** screen.



Set "Country/Region" to the country or region where the inverter is located. Otherwise, the inverter may report a fault.

4. Tap **Continue** to complete device adding.

5.3 Set Tariffs

Prerequisite

Tariff is required for revenue calculation. Please contact your local power company for energy tariff if needed.

Step 1 Select a currency from the **Currency** drop-down list.

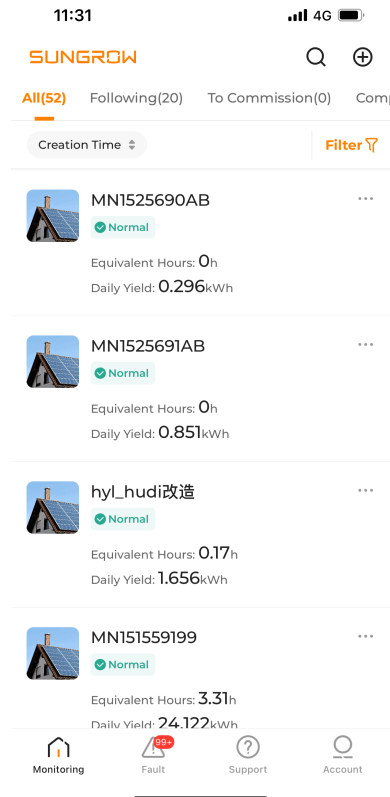
Step 2 Set **Feed-in Tariff** and **Consumption Tariff**, and select the **Tariff Type**.

- **Fixed Tariff:** Rate charged for electricity consumed at different times of day is fixed.
- **Feed-in/Consumption Based Tariff:** You can set tiered rates for feed-in/consumption electricity during different time windows based on usage.
- **Time-of-Use Tariff:** You can set different rates for electricity consumed in different time windows of the day. The time windows cannot overlap.
- **Time-of-Use Tariff (Weekday+Weekend):** You may set rates for electricity consumed in different time windows of day, for the weekday and the weekend separately.

Step 3 Tap **Confirm**.

--End

6 Plant List



Once logged in, you will see the **All** tab. You can tap **Following**, **To Commission**, or **Completed** at the top of the screen to check plants in different states.

Search for a Plant

Tap  and enter relevant information to search for a plant or device.

- You can search for a plant by name.
- You can search for a device by S/N, or by scanning the QR code on the device. You can tap  to scan a QR code.

Filter

Filter

Plant status

All Normal

AbNormal Offline

Type of Plant

All Residential Storage

Commercial PV Residential PV

Microgrid Utility PV

Power 20kW-25kW

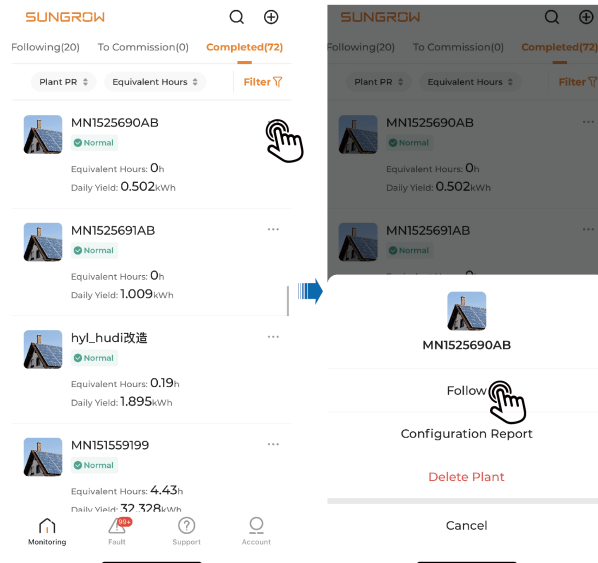
10 20 30 40 50 60 70 80 90 100

Reset Confirm

Tap **Filter**, select the **Plant Status**, **Plant Type**, **Equivalent Hours**, **Power**, or **Devices of the Plant**, and then tap **Confirm**. Plants that meet the search criteria will then be shown on the screen.

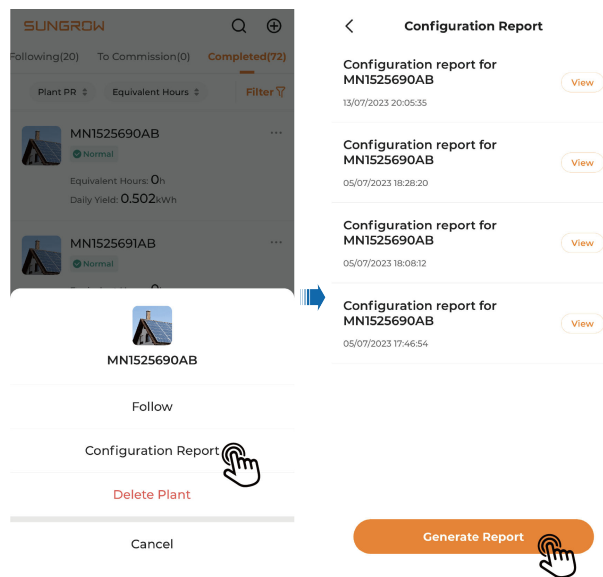
Follow a Plant

Tap ******* and choose **Follow**. An icon  will then appear to the right of the plant name. You may check the plants you have followed in the **Following** tab.

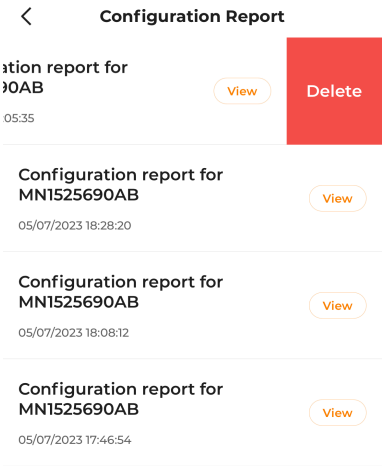


Configuration Report

- Generate a report: Tap **...** and choose **Configuration Report**. Tap **Generate Report** and wait for the report to be generated, which may take a while. When the report is ready, tap **View** to download the report in a browser.

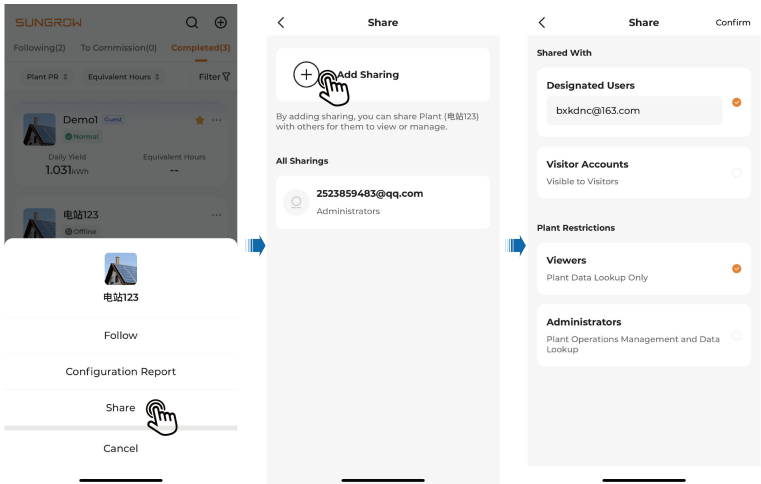


- Delete a report: Swipe left on the generated report, and tap **Delete** to delete it.



Generate Report

Share a Plant



1. Tap ******* and choose **Share**.
2. Tap **Add Sharing**. You can now complete the information about the user with whom you want to share the plant and assign permissions accordingly.

Table 6-1 Description of Permissions

Roles	Plant Restrictions	Description
Designated Users	Viewers	Plant data lookup only
	Administrators	Plant operation management and data lookup
Visitor Accounts	Viewers	Plant data lookup only

3. Tap **Confirm**. Your sharing will then be presented on the screen.



Only the Owner is allowed to share a plant. The Retailer/Installer can only be the one with whom a plant is shared.
To share the plant with a designated user, please enter the user's email address.

Delete a Plant



The Owner can delete their own plant and cannot delete a plant that is shared by other users.
The Retailer/Installer can delete all plants under their account. Deletion of more than 3 plants in a row requires identity verification.

1. Tap ******* and choose **Delete Plant**. A delete confirmation dialog box will appear on the screen.
2. Tap **Confirm deletion** to delete the plant.

7 Plant Management

7.1 Overview



Information shown on the user interfaces may vary by plant type. Please refer to the information actually shown on the App.

Tap the plant name on the **Monitoring** screen. You will then go to **Overview** by default.

If a fault message is shown on the top of the “Overview” screen, you can tap it to check more detailed information, or swipe left to ignore it.

7.1.1 Residential and Distributed PV Plant Operation Information

Power Flow: Information such as generated output and feed-in power of the PV system is shown here. Arrows between the icons indicate that there is energy flowing between the devices. The direction in which the arrow points indicates the direction of the energy flow.



Users granted access to live data can view the live data status:



Live data enabled



Live data not enabled

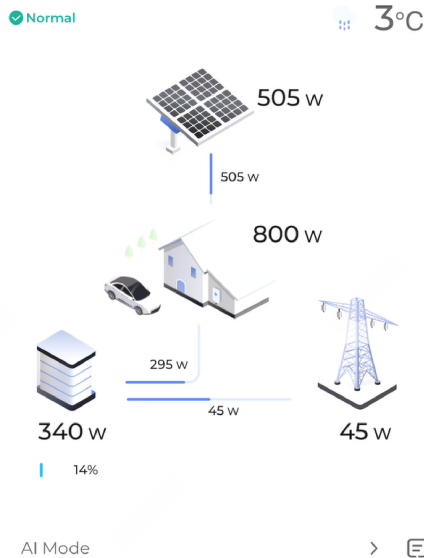


Enabling live data



The device does not support live data

View and set energy management mode



Tap the current energy management mode.

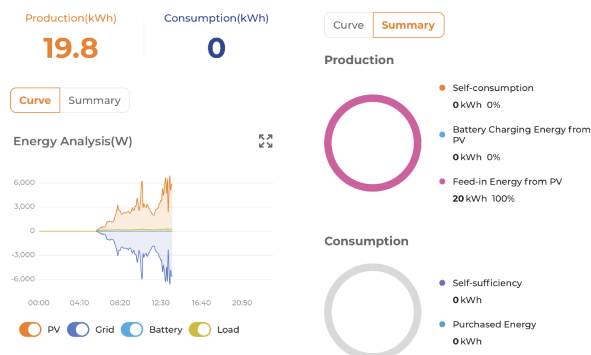
On the **Energy Management** screen, configure the energy management mode. For information about how to configure the energy management mode for Data Logger and Home Energy Manager, see [7.3.3 Energy Management by Logger](#) and [12.5.4 Energy Management by iHomeManager](#) respectively.

The Owner can view operation information of the plant such as **Yield Today** and **Revenue Today**.

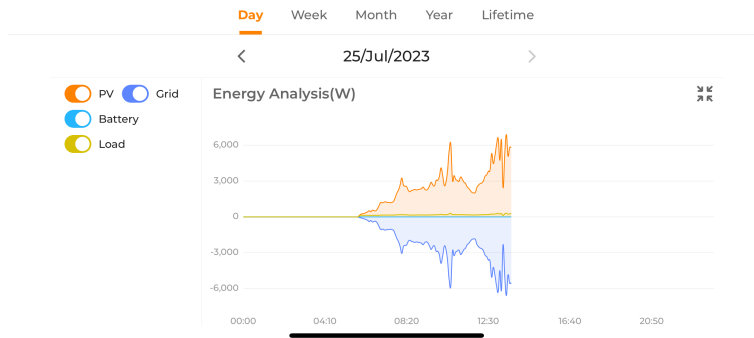
The Retailer/Installer can view operation information of the plant such as **Energy Analysis**, **Production** and **Consumption** of energy, and **Earnings**.

Take **Energy Analysis** as an example:

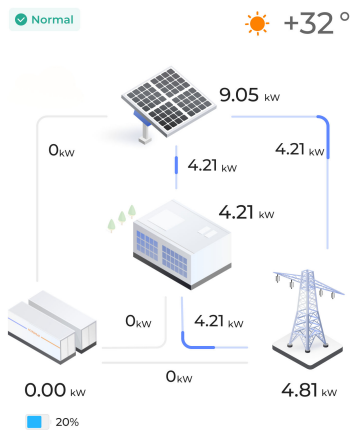
You can toggle between **Curve** and **Summary** to view the curve graphs and the production and consumption data.



Tap  in the upper right corner of the curve graph to view it in landscape mode.



7.1.2 Industrial & Commercial EMS Information



You can view operation information of the ESS equipment such as **Daily charge**, **Daily discharge**, and **SOC** here.

You can also view operation information of the PV equipment such as **Today yield** and **Total yield**.

Operation Status for Last Seven Days

Plant data of the last 7 days, including **PV yield**, **Energy storage charging**, and **Energy storage discharging**, are presented here.

Revenue Details

Tap **Revenue details**. You can then choose **Day**, **Week**, **Month**, **Year**, or **Lifetime**, and tap the arrows below to review revenue data from different time dimensions.

Energy Management Configuration

On the Overview page, tap the current charging mode to enter the Energy management page and set the energy management mode.



The control strategies that can be configured may vary by server. Refer to the actual strategies on the interface.

Server	
European server and International server	For details about how to set the energy management mode, see .7.1.3 Strategy Configuration
Australian server	For details about how to set the energy management mode, see .7.3.5 Common Parameter Settings of Energy Management System

Control Strategy (Cloud Side)

Tap **Control strategy (cloud side)**. You may then proceed as follows according to actual needs:

Tariff Scheme

View the tariff scheme uploaded by EMS300CP to the cloud. If you want to modify it, please scan the QR code below to view the EMS300CP user manual.



Production Plan

"Production Plan" is used to decide on the yield, charge/discharge, and load change of a device in the event of a PV installation servicing, ESS servicing, and load change.

- Tap **Add**. Then, set the **Production plan type**, **Device ID**, **Start time**, and **End time**, and tap **Confirm** to complete the settings.
- You may tap  and choose to **Change** or **Delete** the production plan.
- Upon completion of the production plan settings, tap **Send** in the upper right corner of the screen.

<
Production Plan
Send

<
19/07/2023
>

Energy Storage Service
⋮

Time Interval

15:42-18:06

Device Name

SC50HV_14

Add

Load Forecast

Check the **Predicted value** and **Actual value** of loads at different times.

Power Forecast

Check the **Ultra-short-term power forecast**, **Short-term power forecast**, and **Actual value** of loads at different times.



Ultra-short-term power forecast: Power output of the PV plant in the next 15 mins to 4 hours.

Short-term power forecast: Power output of the PV plant from 0:00 to 23:30 of the day.

Scheduling Management

This is used for management of plan data. You can check the **Predicted value** and **Actual value** of **Charging/discharging power** and **SOC** at different times.

7.1.3 Strategy Configuration

On the plant list, tap a plant name. You will go to the **Overview** page by default. In the **Advanced** section, select **Strategy configuration** to configure **Energy management**, **Power control**, and **System settings** for the plant.



- The **Strategy configuration** function is only applicable to **Commercial & Industrial ESS** plants. The default control strategies may vary by region. Please refer to the actual interface.
- For configurations in Japan's HV scenarios, refer to *iSolarCloud App User Manual (Japan's HV Scenarios)*.

Task list

1. Tap **Strategy configuration**. On the page that opens, tap **Task list** in the upper right corner to view task history.

7.1.3.1 Energy Management

7.1.3.1.1 Energy Management Mode

You can select appropriate control strategy to configure the charging and discharging power settings for different time periods based on electricity rates across different periods. The ESS will charge or discharge at the specified power within the specific time periods, thereby reducing electricity costs.

7.1.3.1.1.1 Self-consumption Function Logic

- When the PV output power is sufficient, the PV energy will be first supplied to the loads, with the excess stored in the battery. If, after this, there is still energy surplus, it will be fed into the grid.
- If the PV output power is not sufficient to meet the load demand, the system supplies the energy stored in the battery to the load. If the battery capacity is insufficient, the system purchases energy from the grid to fulfill the load demand.

See [7.3.3.1 Self-consumption](#).

7.1.3.1.1.2 Time Plan

The **Time Plan** mode is mainly used in the scenario of electricity transactions. You can set the time windows and power for battery charging/discharging manually, according to the on- and off-peak electricity prices, to maximize the economic benefits.

See [7.3.3.2 Time Plan](#).

7.1.3.1.1.3 Configure Time-of-Use Power Strategies

Time-of-use power management consists of two key steps:

- **Configure Time-of-Use Power Templates**
Define the charging and discharging schedule for the energy storage system across different periods of the day. The configured templates are stored in the template list for strategy configuration.
 1. Select **Time-of-use power** in **Working mode**.
 2. When you enable time-of-use power for the first time, a time-of-use power template must be created to define the charging and discharging schedule for different time periods. You can configure time periods with a minimum interval of 30 minutes.



The first created time-of-use power template is designated as the default template, which can be modified but not deleted.

- When you enter the **Time-of-use power** page for the first time, you are directed to the **Time-of-use power template settings** page.

- Enter a custom **Template name**.
- Select a time period, then press and hold, and drag the indented corner on either side of the selected period marked by a red rectangular box up or down to adjust its range.

< Time-of-use power template settin...

i The template must cover 24 hours with no overlaps. Configured templates cannot be d...
[View](#)

*Template name Please enter

00:00

01:00

02:00

02:30

03:00

03:30

04:00

05:00

06:00

07:00

08:00

Charging power: 0kW
02:30-03:30 (Tip)

Save



You can configure time periods with a minimum interval of 30 minutes.

- Tap the time period you want to configure to configure template settings for it.
- **Charging/discharging power settings:** Allow you to select a period type, perform charging/discharging mode switching, and set power.

< Charging/discharging power settings

*Select period Tip >

*Charging/discharging Charge >

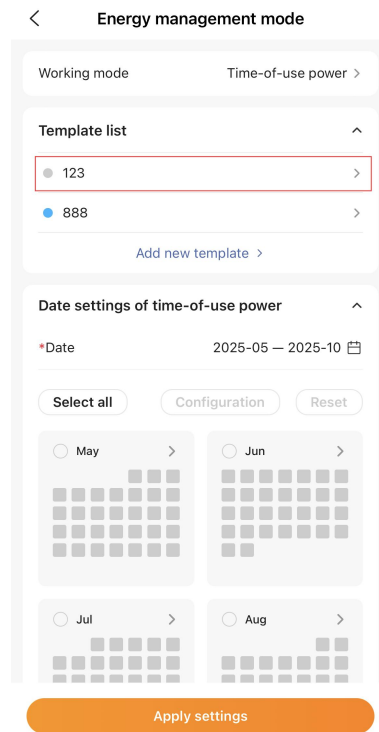
*Power(kW) 0
Range:[0.00-0.00]

Save

Parameter	Description
Select period	Tap to choose from Critical peak, Peak, Shoulder, Valley, and Deep valley.
Charging/discharging	Select a status for the period from Charge, Discharge, or No charging/discharging.
Power (kW)	Set the charging and discharging power based on actual needs.

Tap **Save**.

- **Delete:** Delete the selected time period.
- Repeat steps c to d until the entire 24-hour period is defined without overlaps.
- Tap **Save** to save the settings.
- The created template will appear in the Template list on the Energy management mode page.



3. (Optional) Add a time-of-use power template. If the existing time-of-use power templates do not meet requirements, a new template can be added.
 - a. Tap **Add new template** below the template list.

08:50 5G 59%

< Time-of-use power template settin...

i The template must cover 24 hours with no overlaps. Configured templates cannot be d...
[View](#)

*Template name Please enter

00:00

01:00

02:00

02:30

03:00 Charging power:0kW
02:30-03:30 (Tip)

03:30

04:00

05:00

06:00

07:00

08:00

Save

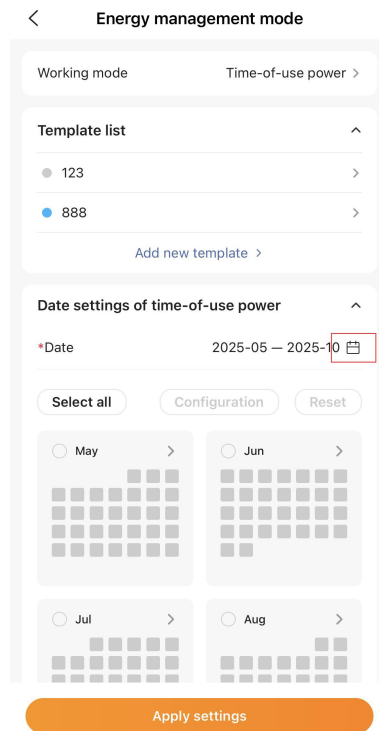
b. Configure the template following the steps outlined in 2.

c. The created template will appear in the Template list on the Energy management mode page.



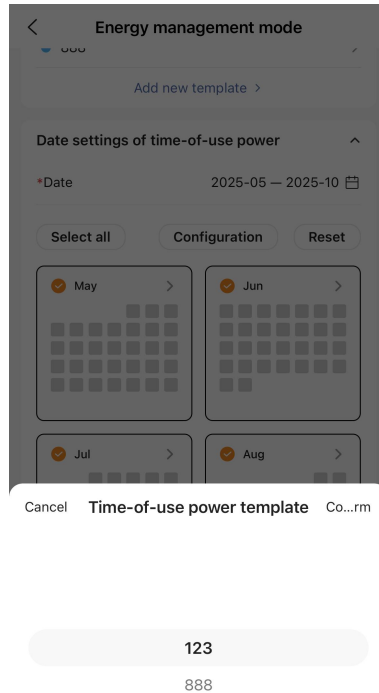
Up to 10 templates are supported.

4. (Optional) Edit an existing time-of-use power template. Tap the desired template to enter the template details page, where you can modify the charge/discharge information of the ESS for one day.
 5. (Optional) Delete a time-of-use power template. Tap the desired template to enter the template details page, then tap **Delete** in the lower left corner to delete the template.
- **Configure Time-of-Use Power Strategies**
 Select a time period and define the charging and discharging schedule for the energy storage system during that period.
 1. Select **Time-of-use power** in **Working mode**.
 2. Tap the calendar icon marked by the rectangular red box, as shown in the following figure, to select a target period (e.g., a specific month).



The system applies a default time-of-use power template initially. Modify or replace it as needed.

3. Choose an appropriate time-of-use power template to configure the time-of-use power strategy:
 - If the same strategy applies to all days in the selected period, select all dates using the **Select all** option, then tap **Configuration**. In the pop-up window, select the desired time-of-use power template and tap **Confirm**. The configured strategy will apply to all selected days.



- If different strategies apply to different days, tap the desired month, select the start time and end time, and then tap **Configuration**. In the pop-up window, select the desired time-of-use power template and tap **Confirm**. The configured strategy will apply only to the selected days.
- 4. Tap **Apply settings**. In the pop-up window, enter the **Task name**, set the **Instruction valid period**, and tap **Confirm**.
- 5. (Optional) Delete the time-of-use power strategy for a time period.
 - a. Tap the month that contains the time period you want to delete, then tap the start time and end time, and tap **Reset**.



After resetting, the time-of-use power strategy for that time period will restore to the default time-of-use power strategy.

- b. Tap **Apply settings**. In the pop-up window, enter the **Task name**, set the **Instruction valid period**, and tap **Confirm**.

7.1.3.1.1.4 VPP

In **VPP** mode, the system operates according to the feed-in power and battery charging/discharging commands from the VPP provider.

Energy management and scheduling will be conducted based on the external demands, to satisfy the needs and operational requirements of the grid and achieve efficient utilization and scheduling of external resources.

See [7.3.3.4 VPP](#).

7.1.3.1.1.5 Compulsory Mode

The **Compulsory Mode** is mainly used in battery O&M to control the battery and make it operate in compliance with the preset charging/discharging mode and power. Please restore the system to the previous working mode after maintenance work is completed.

See [7.3.3.3 Compulsory Mode](#).

7.1.3.1.1.6 Remote time-of-use power

Third-party scheduling units can allocate and adjust the output power in different time periods based on grid demand and power generation resources to ensure stable grid operation. On the **Remote TOU power** page, users can view power settings for each time period but cannot modify the parameters.

Step 1 Tap **Energy management mode**. Select **Remote TOU power** in **Working mode**.

Step 2 View power allocation information for each time period sent by the third-party dispatch unit on this page.

--End

7.1.3.1.1.7 Remote Fixed Value

This function is used to make the plant output active power according to the target value remotely set in Third party scheduling mode.

Step 1 Tap **Energy management mode**. Select **Remote fixed value** in **Working mode**.

< Energy management mode

Working mode

Remote fixed value >

Set value (remote)(MW)

0.010

Active power control dead zone(kW)

3.000

Range:[1.000~3.000]

Scheduled object

Energy storage system >

Control priority

Local first >

Apply settings

Step 2 Configure the following parameters.

Parameter	Description
Set value (remote) (MW)	Shows the remotely set active power when the scheduling mode is set to Third party scheduling.
Active power control dead zone (kW)	Set this parameter based on the actual power of the plant. It is recommended to set this parameter to 1% of the rated power. It defines the range within which the target active power value can fluctuate. For example, if the target active power of the grid-connected point is 10 KW, and the control dead zone is set to 5 KW, then the target active power of the grid-connected point can range from 5 KW to 15 KW.
Scheduled object	This parameter takes effect only when the Control priority is set to Schedule first. - Grid-connection point: The target power value set in active power control will be used to perform closed-loop control for the power of the grid-connection point. - Energy storage system: The target power value set in active power control will be used to perform closed-loop control for the power of the ESS.  This item is valid when active power control is enabled alone. If other control strategies such as overload protection are enabled, the target power value will be used to perform closed-loop control on the power of the grid-connection point.

Parameter	Description
Control priority	- Local first: When the power command from third-party scheduling conflicts with the local control strategy, the local control command will be prioritized. - Schedule first: When the power command from third-party scheduling conflicts with the local control strategy, the third-party scheduling command will be prioritized.

Step 3 Tap **Apply settings**. In the pop-up window, enter the **Task name**, Set the **Instruction valid period**, and tap **Confirm**.

--End

7.1.3.1.1.8 Cloud Scheduling

Step 1 If **Cloud scheduling** is selected, the ESS can receive scheduling commands from the cloud platform.

--End

7.1.3.1.2 Grid-connected Reactive Power

Step 1 Choose **Energy management > Grid-connected reactive power**.

Step 2 Tap  to set **Function enable/disable**.

- **Enable:** Enable the grid-connected reactive power function. Select one of the following modes and configure the relevant parameters.
 - **Optimized power factor control:**
Used to adjust the power factor to reduce the power factor adjustment charges. If you select this mode, configure the following parameters:

< Grid-connected reactive power

Plant parameters

Function enable/disable

Enable >

Mode selection

Optimized power factor control >

Grid-connected point PF target value

0.900

Range:[0.800~1.000]

Execute strategy only when ESS is discharging

No >

Apply Settings

Parameter	Description
Grid-connected point PF target value	Set the value according to actual conditions. If the power factor of the grid-connection point is less than the set target value, the target reactive power value of the grid-connection point can be calculated on the basis of the set target value and the active power value of the grid-connection point, and then the reactive power can be regulated by the ESS and PV system.
Execute strategy only when ESS is discharging	Set this parameter according to actual conditions. Default value: No. Yes: When the grid power factor decreases, the optimized power factor control strategy will only be executed during discharging of the ESS. No: When the grid power factor decreases, the optimized power factor control strategy will be executed during charging, discharging, and zero power output of the ESS.

- Remote fixed value:

This function is used to make the plant output reactive power according to the target value remotely set in Third party scheduling mode.

< Grid-connected reactive power

Plant parameters

Function enable/disable Enable >

Mode selection Remote fixed value >

Set value (remote) (Mvar) 0.000

Control dead zone(kvar) 1.000
Range:[1.000~3.000]

Apply Settings

Parameter	Description
Set value (remote) (Mvar)	Shows the remotely set reactive power when the scheduling mode is set to Third party scheduling.
Control dead zone (kvar)	Set the value according to actual conditions. It limits the range within which the target reactive power value can fluctuate. For example, if the target reactive power of the grid-connected point is 10 kvar, and the control dead zone is set to 5 kvar, then the target reactive power of the grid-connected point can range from 5 kvar to 15 kvar.

- **Disable:** Disable the reactive power control function.

Step 3 Tap **Apply settings**. In the pop-up window, enter the **Task name**, set the **Instruction valid period**, and tap **Confirm**.

--End

7.1.3.1.3 Fast Frequency Response

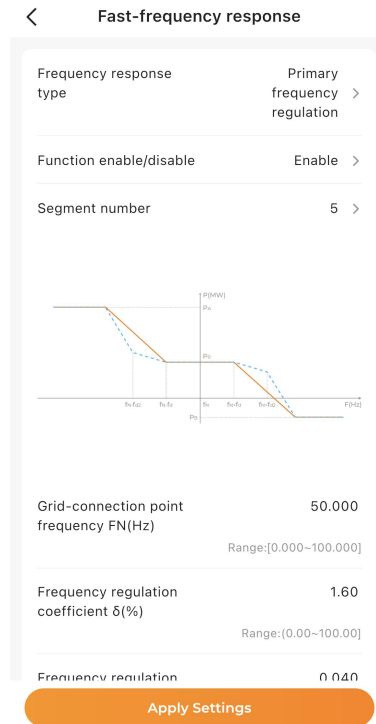
Fast frequency response is used to measure the frequency at the grid-connection point in real time and perform auto control accordingly to keep the frequency within a safe range.

Choose **Energy management > Fast-frequency response**.

7.1.3.1.3.1 Primary Frequency Regulation

Step 1 Tap  in **Frequency response type**. Select **Primary frequency regulation**.

Step 2 Set **Function enable/disable** and **Segment number**.



Fast-frequency response

Frequency response type: Primary frequency regulation

Function enable/disable: Enable

Segment number: 5

Grid-connection point frequency FN(Hz): 50.000
Range:[0.000~100.000]

Frequency regulation coefficient δ (%): 1.60
Range:(0.00~100.00]

Frequency regulation: 0.040

Apply Settings



The figure is for reference only. The actual user interface may differ.

Step 3 Configure the frequency regulation parameters. The descriptions of the parameters are shown below.

Parameter	Description
f_N	Rated frequency of grid-connection point
$\delta\%$	Frequency regulation coefficient ($\delta\% = -\Delta f(\%) / \Delta P(\%)$)
f_d	Frequency regulation dead zone
P_A	Maximum output active power
P_B	Maximum active power absorbed
α_1	Lower limit of active power limit coefficient

Parameter	Description
α_2	Upper limit of active power limit coefficient
δ_2^*	Frequency regulation II regulation coefficient
f_{d2}^*	Frequency regulation II dead zone

*Parameters required to be set when Segment number is set to 5.



The active power limit coefficient is the absolute value of the ratio of the active power output increment limit against the rated power of energy storage.

Step 4 Tap **Apply settings**. In the pop-up window, enter the **Task name**, set the **Instruction valid period**, and tap **Confirm**.

--End

7.1.3.1.3.2 FCAS

Step 1 Tap  in **Frequency response type**. Select **FCAS**.


Fast-frequency response

Frequency response type FCAS >

Function enable/disable Enable >

Segment number 3 >

Grid-connection point frequency FN(Hz) 50.000
Range:[0.000~100.000]

Contingency FCAS action deadband fd(Hz) 0.150
Range:(0.000~0.200]

Contingency FCAS maximum output active 50.00

Apply Settings

Step 2 Set **Function enable/disable**.

- **Enable:** Enable the function. Proceed to subsequent configurations.
- **Disable:** Disable the function.

Step 3 (Optional) Complete the secondary frequency regulation settings.

Parameter	Description
Secondary frequency regulation lockout	Default value: Disable. • Enable: Enable secondary frequency regulation. • Disable: Disable secondary frequency regulation.
Lockout error of secondary frequency regulation	Set this parameter when Secondary frequency regulation lockout is set to Enable. The default value is recommended. This parameter is used for coordinated control of primary and secondary frequency regulation. When the grid frequency deviation is less than the value of this parameter, secondary frequency regulation (i.e., receiving AGC commands) and primary frequency regulation will be combined, regardless of whether they are in the same or opposite directions. When the grid frequency deviation exceeds the value of this parameter, the secondary frequency regulation lockout strategy is executed, and combination will not be performed.

Step 4 Configure the frequency regulation parameters. The descriptions of the parameters are shown below.

Parameter	Description
f_N	Rated frequency of grid-connection point
f_d	Contingency FCAS action deadband
P_A	Contingency FCAS maximum output active power
P_B	Contingency FCAS maximum absorption active power
f_m	Contingency FCAS frequency deviation threshold for full-scale response

Step 5 Tap **Apply settings**. In the pop-up window, enter the **Task name**, set the **Instruction valid period**, and tap **Confirm**.

--End

7.1.3.1.4 Backup Operation

In the event of off-grid startup, if the PV system supplies power to both the ESS and the loads, you can set different PV active power values for different power supply scenarios.



This function is applicable to off-grid scenarios.

Step 1 Choose **Energy management > Backup operation**.

< **Backup operation**

Charging protection SOC(%)

Please enter

Range:[0.0~100.0]

Charging protection SOC dead zone setpoint(%)

Please enter

Range:[0.0~100.0]

SOC level 2 lower limit for stopping ESS(%)

Please enter

Range:[0.0~100.0]

Energy storage fast charging setting

Please enter

Range:[0.00~1.00]

Load factor k2

Please enter

Range:[0.00~1.00]

Apply settings

Step 2 Configure the following parameters:

Parameter	Description
Charging protection SOC (%)	Charging stops when the ESS SOC reaches this threshold. Default value: 90. Range: 0–100. One decimal place is supported.
Charging protection SOC deadband setpoint	It limits the range within which the target charging protection SOC value can fluctuate. Default value: 2. Range: 0–100. One decimal place is supported.

Parameter	Description
SOC threshold for stopping DG & starting ESS	When the ESS SOC reaches this threshold, the diesel generator will shut down. Default value: 80. Range: 0–100. One decimal place is supported.  This parameter is displayed only when diesel generators are connected to the plant.
SOC threshold for starting DG	When the ESS SOC reaches this threshold, the diesel generator will start. Default value: 15. Range: 0–100. One decimal place is supported.  This parameter is displayed only when diesel generators are connected to the plant.
SOC threshold for stopping ESS	When the ESS SOC is less than or equal to this threshold, discharging is prohibited. Default value: 10. Range: 0–100. One decimal place is supported.
Illuminance for starting PV (W/m²)	When the PV irradiance reaches this value, the PV equipment starts. Default value: 50. Range: 0–100. One decimal place is supported.
Energy storage fast charging setting	When the system supplies power to both the ESS equipment and the loads, PV active power = energy storage fast charging setting × current minimum charging power allowed by ESS equipment + load power. Default value: 0.8. Range: 0–1. Two decimal places are supported.
Load factor K2	When the ESS equipment is fully charged and power is supplied only to the loads, PV active power = K2 × load power. Default value: 0.98. Range: 0–1. Two decimal places are supported.
Regular load power (kW)	Set this parameter to the total power demand value of all electrical equipment and loads in the system except chargers. The default value is 10 kW. The maximum value cannot exceed the maximum discharge capacity of the ESS.

Parameter	Description
	Default value: 10. The set value must be greater than 0. One decimal place is supported.  This parameter is displayed only when chargers are connected to the plant.
SOC threshold to stop supplying power to charger (%)	Set this parameter to the product of the Regular load power and the expected power supply duration. The expected power supply duration is determined based on the needs of the user. When the SOC of the ESS (number of available energy storage units × remaining power of a single energy storage unit) falls below the value of this parameter, the system will stop supplying power to the chargers. Default value: 50. Range: 0–100. Only integers are supported.  This parameter is displayed only when chargers are connected to the plant.
ESS VSG frequency adjustment amount (Hz)	Default value: 0. Range: -0.3 to 0.3. Two decimal places are supported.  This parameter is displayed only when ATSS are connected to the plant.
Diesel generator startup timeout threshold	Default value: 5. Range: 0–15. One decimal place is supported.  This parameter is displayed only when ATSS and diesel generators are connected to the plant, and it takes effect only when diesel generators are controlled via DO ports.

The matrix of parameter settings and ESS SOC levels under the Backup operation control strategy is as follows:

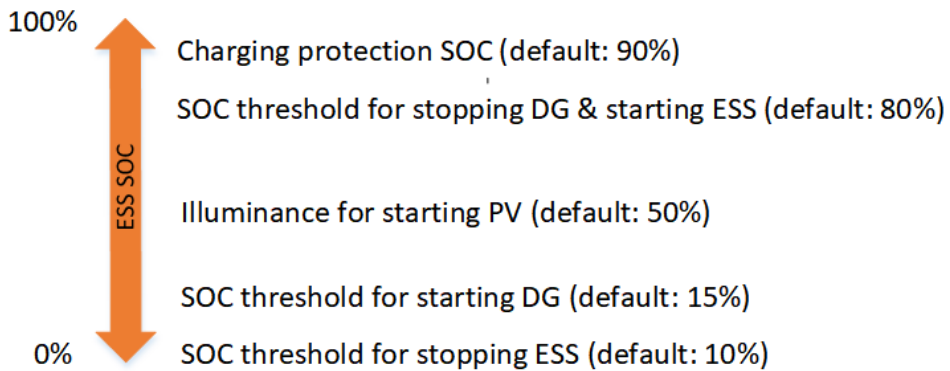


Figure 7-1

Step 3 (Optional) Configure **VSG parameter management**. After you configure the following parameters, the system can independently maintain stable voltage and frequency in off-grid mode, ensuring reliable power supply to the load.



- **VSG parameter management** is displayed only when ST200CS or ST255CS devices are connected to the plant.
- If you do not want to use this function in the plant, select **Disable**.

- **Enable:** Enable the function. Configure the following parameters. Then, the system will send the configured parameters to the LC.

Parameter	Description
Output voltage setpoint (V)	Default value: 340. Range: 340–440.
Output frequency setpoint (Hz)	Default value: 48. Range: 48–52.
Active power-frequency droop coefficient	Default value: 1. Range: 1.0–4.0.
Reactive power-voltage droop coefficient	Default value: 1. Range: 1.0–2.0.
Sent active power setpoint (kW)	Default value: 0. The maximum value cannot exceed the rated power of the LC.
Sent reactive power setpoint (kvar)	Default value: 0. The maximum value cannot exceed the rated power of the LC.

- **Disable:** Disable the function.

Step 4 Tap **Apply settings**. In the pop-up window, enter the **Task name**, set the **Instruction valid period**, and tap **Confirm**.

--End

7.1.3.2 Power Control

7.1.3.2.1 Grid-connection Power Regulation

To ensure electrical safety and regulatory compliance, users need to set a proper feed-in power limit based on the requirements of the local grid operator, preventing the feed-in power of the system from exceeding the allowable range. In addition, based on the rated specification of the household main switch, users need to accurately set the energy purchase power limit to effectively prevent tripping caused by power overload.

Step 1 In the **Energy purchase control method** drop-down list, select **No limit** or **Purchase energy with limited power**.

Step 2 If **Purchase energy with limited power** is selected, set a proper power limit in **Power limit for energy purchase** based on the rated current of the main power source equipment that is connected to the system.

Step 3 In the **Feed-in control method** drop-down list, select **No limit** or **Feed-in limited power**.

Step 4 If **Feed-in limited power** is selected, you need to select a unit for the target feed-in power. Options include **kW** and **%**.

Step 5 When the unit **kW** is selected, set a proper feed-in power value based on local regulatory requirements.

Step 6 When the unit **%** is selected, select a basis for limiting the grid-connected power from the **Feed-in power limit ratio calculation basis** drop-down list.

- **Nominal power:** The value of the schedule command is calculated based on the rated power of the inverter that is connected.
- **Installed PV power:** The value of the schedule command is calculated based on the installed PV power of the inverter that is connected. Please enter the **Feed-in power limit ratio calculation basis** based on the actual plant conditions.

Step 7 In the **Third-party power generation systems** drop-down list, select **Open** or **Close**.

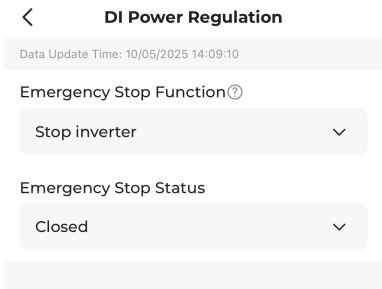
Step 8 If **Open** is selected in **Third-party power generation systems**, users can specify the rated power in **Rated power of third-party power generation systems (kW)**. Range: 0–99999999, unit: kW. The default value is 0.

--End

7.1.3.2.2 DI Power Control

This function regulates the inverter output power based on the external emergency stop signals.

Emergency Stop Modes



The interface shows a back arrow, the title 'DI Power Regulation', a data update time of '10/05/2025 14:09:10', a dropdown for 'Emergency Stop Function' currently set to 'Stop inverter', and another dropdown for 'Emergency Stop Status' currently set to 'Closed'.

Mode	Description
Close	Emergency stop control is disabled.
Stop inverter	When emergency stop is triggered, the inverter enters the emergency stop state.
Stop inverter and trip battery	When triggered, the inverter stops exporting power to the grid, and the battery ceases all interactions with the inverter or grid, neither charging nor discharging. Both the inverter and battery enter standby mode.

Step 1 Choose **Power control > DI power regulation**.

Step 2 In the **Emergency stop function** drop-down list, select **Close** to disable the function or choose a desired emergency stop mode to enable it.

Step 3 If **Stop inverter** or **Stop inverter and trip battery** is selected, select a trigger condition from the **Emergency stop status** drop-down list.

- **Disconnect:** Emergency stop will be triggered when DI opens.
- **Closed:** Emergency stop will be triggered when DI closes.

Step 4 Tap **Apply settings**.

--End

7.1.3.2.3 Demand Control

After you set the maximum demand threshold, the system will intelligently regulate the charging and discharging behavior of energy storage devices to ensure that the real-time power at the grid-connection point remains below this threshold. This effectively reduces demand charges.

- **Demand:** The average power over a specified time interval.
- **Maximum demand:** The maximum demand recorded within a specified period.

Step 1 Choose **Power control > Demand control**.

Step 2 Tap  to set **Function enable/disable**.

- **Enable:** Enable the demand control function. Proceed to subsequent configurations.

- **Disable:** Disable the demand control function.

Step 3 Set **Allow ESS to discharge or not**.

- **Yes:** The ESS is allowed to discharge to supply the load in addition to reducing the charging power in demand control.
- **No:** The ESS is allowed to reduce the charging power but not to discharge in demand control.



When **Allow ESS to discharge or not** is set to **No**, if the ESS is discharging and the demand control strategy is enabled, the strategy will not be executed.

Step 4 Select an option in **Select strategy**. Options include **Max. contract demand** and **Max. actual demand**.

- **Max. contract demand**

In ESS or PV+ESS scenarios, power is consumed in charging the ESS and supplying the load, which may cause the demand value to become excessively high. However, the EMS can reduce the charging power of the ESS based on the set static demand (Max. contract demand) value, to ensure that the static demand is not exceeded in planned charging of the ESS (e.g., when the time-of-use power control strategy is enabled). If the power at the point of common coupling (PCC) still exceeds the demand, the ESS can discharge to meet load consumption. In this case, set **Allow ESS to discharge or not** to Yes.

< Demand control

Function enable/disable	Enable >
Select strategy	Max. contract demand >
Max. allowable demand(kW)	0.0 Range:[0.0~9,999,999.0]
Allow ESS to discharge or not	No >

Apply Settings

- **Max. Actual Demand** (dynamic demand)

In ESS-only or PV+ESS scenarios, the EMS collects the real-time demand value from the PCC meter. (The value is dynamic and refreshed whenever the power drawn from the grid at the PCC exceeds the history maximum value.) The EMS controls the ESS to reduce the charging power, ensuring that the maximum demand is not exceeded in planned charging of the ESS. If the power at the PCC still exceeds the demand, the ESS can discharge to meet load consumption. In this case, set **Allow ESS to discharge or not** to Yes.

< Demand control

Function enable/disable Enable >

Select strategy Max. actual demand >

Lower limit for demand control(kW) 90.0
 Range:[0.0~9,999,999.0]

Allow ESS to discharge or not No >

Apply Settings

The descriptions of the demand control parameters are as follows.

Demand Control Strategy	Description
Max. actual demand	Set the value to the real-time demand of the gateway meter. You must also set the Lower limit for demand control (kW). If the meter's real-time demand value falls below the set Lower limit for demand control, the set Lower limit for demand control will be adopted as the maximum allowable demand. Range: 0.0-99999.0 kW. Default value: 100 kW.
Max. contract demand	Set the value to the maximum contract demand. In this case, you must also set Max. allowable demand (kW) to the maximum contract demand. Range: 0.0-99999.0 kW. Default value: 0.

Step 5 Tap **Apply settings**. In the pop-up window, enter the **Task name**, set the **Instruction valid period**, and tap **Confirm**.

--End

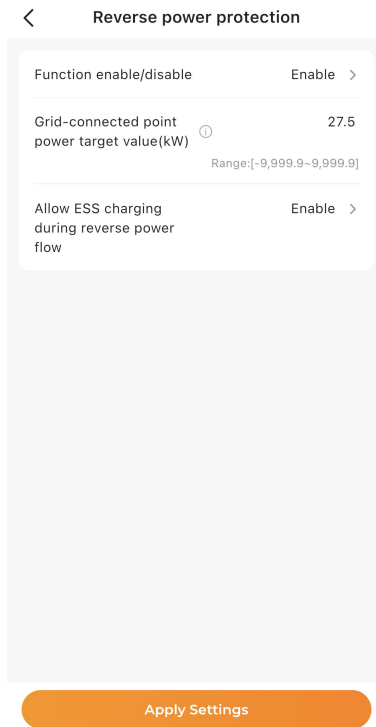
7.1.3.2.4 Zero Export

The zero export strategy prevents the PV-ESS system from feeding power into the grid. If the discharging power of the PV-ESS system exceeds the load power, the system will automatically reduce the PV output, lower the ESS discharging power, or charge to prevent power back-feeding.

Step 1 Choose **Power control > Zero export**.

Step 2 Tap  to set **Function enable/disable**.

- **Enable:** Enable the zero export function. Configure the following parameters.



Parameter	Description
Grid-connected point power target value (kW)	This value is ≤ 0 by default. It is recommended to set this value to -1% to -2% of the rated active power of the ESS. When the actual power of the grid-connected point exceeds the set target value, the system will automatically reduce the PV output or charge the ESS.

Parameter	Description
Allow ESS charging during reverse power flow	- Enable In ESS-only scenarios, when zero export is enabled, the EMS controls the ESS discharging power to be not higher than the actual load consumption power to prevent power back-feeding at the grid-connection point. In PV-ESS scenarios, when zero export is enabled, the EMS will appropriately limit the PV power output, and control the ESS to reduce discharge or switch to charging mode, ensuring that no power is fed into the grid at the grid-connection point. - Disable When PV power is output normally and the ESS is discharging, if power back-feeding is detected at the grid-connection point, the EMS enables the zero export function. In this case, the EMS will first reduce the ESS discharge power until power back-feeding is eliminated. If the ESS discharge power is reduced to 0 and power back-feeding persists, the EMS allows power back-feeding to exist and does not take further action.

- **Disable:** Disable the zero export function.

Step 3 Tap **Apply settings**. In the pop-up window, enter the **Task name**, set the **Instruction valid period**, and tap **Confirm**.

--End

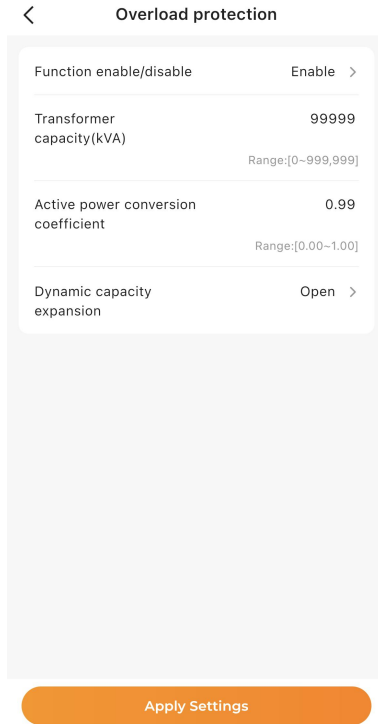
7.1.3.2.5 Overload Protection

Overload protection is used to regulate the charging power of the ESS, so as to ensure the power of the transformer at the grid-connection point does not exceed the rated capacity of the transformer, thus preventing overload.

Step 1 Choose **Power control > Overload protection**.

Step 2 Tap  to set **Function enable/disable**.

- **Enable:** Enable the overload protection function. Configure the following parameters.



Parameter	Description
Transformer capacity (kVA)	The capacity of the transformer at the grid-connection point. Set this parameter based on the actual situation.
Active power conversion coefficient	Range: 0 to 1.
Dynamic capacity expansion	- Enable: Allow the ESS to discharge. - Disable: Do not allow the ESS to discharge.

- **Disable:** Disable the overload protection function.

Step 3 Tap **Apply settings**. In the pop-up window, enter the **Task name**, set the **Instruction valid period**, and tap **Confirm**.

--End

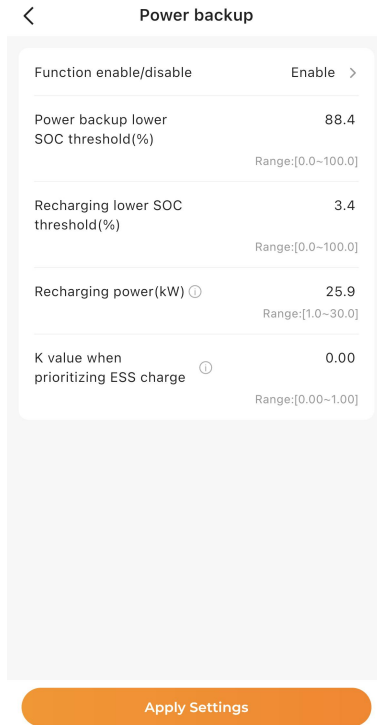
7.1.3.2.6 Power Backup

Power backup is used to protect the charge level of the ESS, so that the ESS operates within the set SOC range when connected to the grid, and some energy is reserved to supply the loads in the event of a grid outage.

Step 1 Choose **Power control > Power backup**.

Step 2 Tap  to set **Function enable/disable**.

- **Enable:** Enable the power backup function. Configure the following parameters.



Power backup

Function enable/disable Enable >

Power backup lower SOC threshold(%) 88.4
Range:[0.0~100.0]

Recharging lower SOC threshold(%) 3.4
Range:[0.0~100.0]

Recharging power(kW) ⓘ 25.9
Range:[1.0~30.0]

K value when prioritizing ESS charge ⓘ 0.00
Range:[0.00~1.00]

Apply Settings

Parameter	Description
Power backup lower SOC threshold (%)	50% by default. Set this parameter according to actual conditions. When the SOC of the ESS falls below this threshold, the ESS is not allowed to discharge.
Recharging lower SOC threshold (%)	When the SOC of the ESS drops to this threshold, the recharging mechanism is triggered to restore the SOC to the Power backup lower SOC threshold level, after which recharging stops.

Parameter	Description
Recharging power (kW)	Set this parameter according to actual conditions. When the SOC of the ESS falls below the Recharging lower SOC threshold, the ESS will be charged at this specified power.



SOC in the table refers to the percentage of the current battery power to the total capacity of the battery, namely, the actual available battery power.

- **Disable:** Disable the power backup function.

Step 3 Tap **Apply settings**. In the pop-up window, enter the **Task name**, set the **Instruction valid period**, and tap **Confirm**.

--End

7.1.3.2.7 SOC Protection

To ensure the safe and efficient operation of the ESS, you can configure the SOC protection thresholds to keep the system strictly within the specified SOC range during grid-connected operation. SOC balancing is used to better control the operation of DC/AC power converter units and keep the SOC of batteries across the entire plant in a healthy state. The purpose is to avoid damage to batteries caused by overcharging or overdischarging and extend the battery life.

Step 1 Choose **Power control > SOC protection**.

Step 2 Tap  in **SOC balancing**.

- **Enable:** Enable the SOC balancing function. Configure the following parameters.

<

SOC protection

Plant parameters

SOC balancing

Enable >

SOC upper limit(%)

55.6

Range:[0.0~100.0]

SOC lower limit(%)

66.0

Range:[0.0~100.0]

Energy storage unit
SOC parameter
synchronization

Enable >

SOC upper limit level 2
protection(%)

95.2

Range:[0.0~100.0]

SOC upper limit level 2
recovery(%)

94.3

Range:[0.0~100.0]

SOC upper limit level 1
protection(%)

95.1

Range:[0.0~100.0]

SOC upper limit level 1
recovery(%)

92.5

Apply Settings

Parameter	Description
SOC upper limit (%)	If the SOC reaches or exceeds the SOC upper limit, the system stops charging the battery. Default value: 97%.
SOC lower limit (%)	If the SOC reaches or drops below the SOC lower limit, the battery stops discharging. Default value: 5%.

- **Disable:** Disable the SOC balancing function.

Step 3 Tap  in **Energy storage unit SOC parameter synchronization**.

- **Enable:** Enable the energy storage unit SOC parameter synchronization function. Configure the following parameters.

Parameter	Description
SOC upper limit level 1 protection (%)	95% by default. Set this parameter according to actual conditions. When the SOC of the ESS is greater than or equal to this threshold, the ESS is prohibited from charging.
SOC upper limit level 1 recovery (%)	92% by default. Set this parameter according to actual conditions.

Parameter	Description
	If the SOC of the ESS is less than or equal to this threshold, the ESS resumes charging.
SOC lower limit level 1 recovery (%)	62% by default. Set this parameter according to actual conditions. If the SOC of the ESS is greater than or equal to this threshold, the ESS resumes discharging.
SOC lower limit level 1 protection (%)	60% by default. Set this parameter according to actual conditions. If the SOC of the ESS is less than or equal to this threshold, the ESS is prohibited from discharging.
SOC lower limit level 2 recovery (%)	7% by default. Set this parameter according to actual conditions. If the SOC of the ESS is greater than or equal to this threshold, the system goes back to the lower level 1 protection status, and discharging is prohibited.
SOC lower limit level 2 protection (%)	5% by default. Set this parameter according to actual conditions. If the SOC of the ESS is less than or equal to this threshold, the system is prohibited from discharging and carries out charging with the set Recharging power.
SOC upper limit level 2 protection (%)	97% by default. Set this parameter according to actual conditions. When the SOC of the ESS is greater than or equal to this threshold, the ESS is prohibited from charging.
SOC upper limit level 2 recovery (%)	96% by default. Set this parameter according to actual conditions. If the SOC of the ESS is less than or equal to this threshold, the ESS resumes charging.

- **Disable:** Disable the energy storage unit SOC parameter synchronization function.

Step 4 Tap **Apply settings**. In the pop-up window, enter the **Task name**, set the **Instruction valid period**, and tap **Confirm**.

--End

7.1.3.2.8 Anomaly Handling

Step 1 Choose **Power control > Anomaly handling**.

Step 2 Configure the following anomaly check settings as needed. If an anomaly occurs, the system will operate according to the configured **anomaly handling** method.

Parameter	Description
Communication interruption control	• Enable: Enable anomaly check for the device. • Disable: Disable anomaly check for the device.
Communication interruption counting period (s)	Anomaly handling can be triggered in the following two ways: • When a single communication interruption lasts for a period longer than the set Communication interruption counting period (s), the system triggers anomaly handling. • When the duration of a communication interruption exceeds the set Communication interruption time (ms), the system records a communication interruption event. If the number of communication interruptions occurring within the set Communication interruption counting period (s) reaches the set Communication interruption counts, the system triggers anomaly handling.
Communication interruption time (ms)	
Communication interruption counts	
Anomaly handling method	The available options for Anomaly handling method vary by device type. • For third-party scheduling device: Keep current value, Zero power output, and Full-plant shutdown are supported. • For ESS LC: Zero power output is supported. • For Logger Upper: Keep current value, Zero power output, and Full-plant shutdown are supported.
Control parameter	Default value: 60. Range: [0, 600]. Unit: s. The Control parameter settings vary by the Anomaly handling method: • Keep current value: There is no need to set the Control parameter. When an anomaly occurs, the system keeps the current value. • Zero power output: - If the Control parameter is set to 0, the system immediately sends a zero power output command. - If the Control parameter is set to a non-zero value, the system calculates the ramp-down rate based on the current power and sends a

Parameter	Description
	command to reduce power to zero within the time specified by the Control parameter. Full-plant shutdown: There is no need to set the Control parameter. When an anomaly occurs, the system executes the full-plant shutdown command.



The Communication interruption counting period (s), Communication interruption time (ms), and Communication interruption counts for third-party scheduling devices can be modified remotely.

Step 3 Tap **Apply settings**. In the pop-up window, enter the **Task name**, set the **Instruction valid period**, and tap **Confirm**.

--End

7.1.3.3 System Settings

Choose **Strategy configuration > System settings**.

7.1.3.3.1 Plant Parameters

Step 1 Choose **System settings > Plant parameters**.

<

Plant parameters

Debug mode

Disable >

Active power control dead zone(kW)

3.000

Range:[1.000~3.000]

Reactive power control dead zone(kvar)

3.000

Range:[1.000~3.000]

ESS parameters

Rated capacity of energy storage(kWh)

125000

Range:[0~9,999,999]

ESS connection point

After CT >

Apply settings

Step 2 Tap  in **Debug mode**, select **Enable** or **Disable**, and configure the following parameters:

Parameter	Description
Active power control dead zone (kW)	Set this parameter based on the actual power of the plant. It is recommended to set this parameter to 1% of the rated power. It defines the range within which the target active power value can fluctuate. For example, if the target active power of the grid-connected point is 10 KW, and the control dead zone is set to 5 KW, then the target active power of the grid-connected point can range from 5 KW to 15 KW.
Reactive power control dead zone (kW)	Set this parameter based on the actual power of the plant. It is recommended to set this parameter to 1% of the rated power. It defines the range within which the target reactive power value can fluctuate. For example, if the target reactive power of the grid-connected point is 10 KW, and the control dead zone is set to 5 KW, then the target reactive power of the grid-connected point can range from 5 KW to 15 KW.
Rated capacity of energy storage (MWh)	The default value is 0.100.
ESS connection point	After CT by default.
Energy storage data source	- Meter data: Select this option when the meter type is ESS electricity meter. In this case, the EMS collects ESS charge/discharge data from the ESS electricity meter. - Local controller data: The EMS collects ESS charge/discharge data from the LC.
Method to exit from strategy	- Keep current value: Maintain the current set value. - Apply "0" power: Issue a zero power output command.
PV installed capacity (MWp)	The actual PV installed capacity of the plant.
PV connection point	After CT by default.

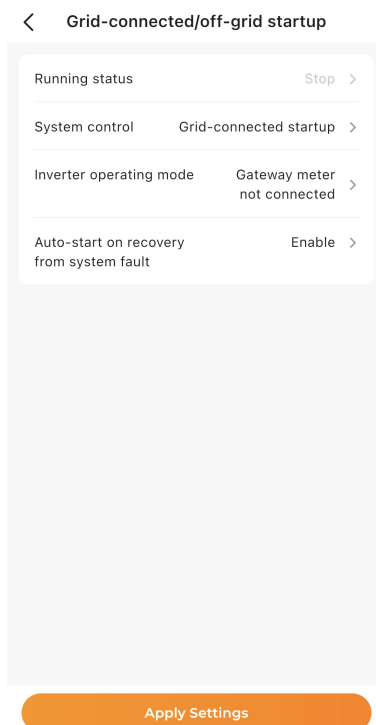
Parameter	Description
	A third-party PV device must be connected after CT.
Replacement percentage (%)	PV&ES replacement step = PV rated power × Replacement percentage
Total charger output power (offline) (W)	If the communication interruption between the system and the charger exceeds the Communication timeout , the charger will operate at this output power.
Communication timeout (s)	If the communication interruption between the system and the charger exceeds the Communication timeout , the charger will operate at the power specified by Total charger output power (offline) (W) .

Step 3 Tap **Apply settings**.

--End

7.1.3.3.2 Grid-connected/Off-grid Startup

Users can configure the start-up settings for the devices and start or stop the devices in the plant in one click.



Configure Startup Parameters

Step 1 Choose **System settings > Grid-connected/off-grid startup**.

Step 2 Select a startup method for devices in the plant from the **System control** drop-down list.

- When no ATS is connected, the **Startup method** can be set to **Off-grid startup** or **Grid-connected startup**.

- Off-grid startup

When the device is in the off-grid status, select **Off-grid startup** to start all the devices in the plant. After a successful startup, the **Running status** will show "Off-grid".

Configure the black start parameters before proceeding with the startup. Choose **System settings > Black start configuration**. The descriptions of the parameters are shown below.

Parameter	Description
Black start SOC threshold (%)	The default value is 46.
Minimum number of running units	Number of units with the minimum SOC.
Load rated power (kW)	Set this parameter based on the actual situation.
Startup mode	Select an option based on the actual situation. - VSG mode: Users can select VSG mode if there is one or more LCs. - Off-grid mode: Users can select off-grid mode if there is one LC only.
System waiting time (s)	Range: 0-100. Default value: 20.
System timeout (s)	Range: 0-200. Default value: 60.

- Grid-connected startup

When the device is in the grid-connected status, select **Grid-connected startup** to start all the devices in the plant. After a successful startup, will the **Running status** will show "Grid-connected".



At least one LC is needed to start the system. The system starts the LC first, and then the PV system.

- When ATSs are connected, the following options are available for **Startup method**:
 - ATS grid-connected startup: Ensure that the diesel generator circuit breaker QF2 is in the open state. Switch on the grid connection circuit breaker QF1 manually. Then, apply this startup method.
 - ATS off-grid startup (VSG mode): Ensure that the grid connection circuit breaker QF1 and diesel generator circuit breaker QF2 are in the open state. Then, apply this startup method.

Configure the black start parameters before proceeding with the startup. For details, refer to [□□□□](#).

- ATS off-grid startup (diesel generator): Ensure that the grid connection circuit breaker QF1 is in the open state. Switch on the diesel generator circuit breaker QF2 manually. Then, apply this startup method.
- ATS grid-connected startup (bypass switch on): Ensure that the diesel generator circuit breaker QF2 is in the open state. Switch on the grid connection circuit breaker QF1 manually. Then, apply this startup method.
- ATS startup (bypass switch on, diesel generator): Click **Diesel generator startup**. Switch on the diesel generator circuit breaker QF2 manually. Then, apply this startup method.

Step 3 Select the **Operation mode**.

Three operation modes are available, Gateway meter connected, Gateway meter not connected, and Auto on/off-grid switching. When the system is in Stop state, you can select Gateway meter connected or Gateway meter not connected for startup. After the system starts operating properly, the operation mode will automatically change to "Auto on/off-grid switching". In this mode, the system will switch between grid-connected startup and off-grid startup according to the voltage changes at the grid-connection point.

Step 4 Enable or disable **Auto-start on recovery from system fault**. This function is enabled by default. When this function is enabled, if a fault occurs in the system, the system will restart automatically after recovering from the fault.

Step 5 Tap **Apply settings**. In the pop-up window, enter the **Task name**, set the **Instruction valid period**, and tap **Confirm**.

--End

7.1.3.3.3 System Parameters

On the Settings page, you can configure the enabling status of the remote maintenance enable switch and remote device restart.

Step 1 Go to the **Settings** page.

Step 2 Configure the following parameters:

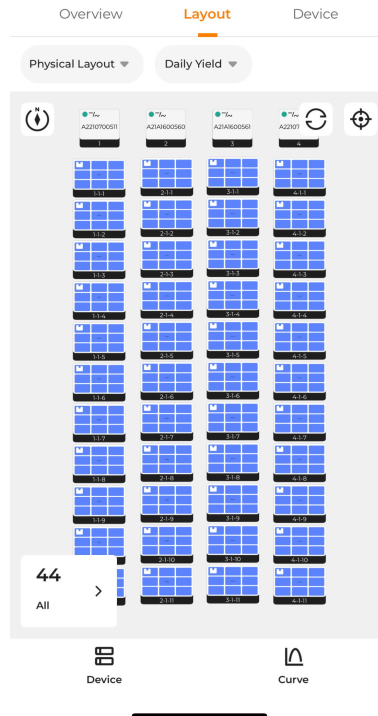
Parameter	Description
Remote maintenance enable switch	• Enable: Enable remote maintenance. • Disable: Disable remote maintenance.
Remote device restart	Select Enable to allow remote device restart.

Step 3 Tap **Apply settings**.

--End

7.2 View Optimizer/RSD Information

If the plant is equipped with an optimizer or RSD (rapid shutdown device), a  or  will be shown in the lower right corner of the plant image on the **Monitoring** screen. You can tap this plant and choose **Layout** at the top of the screen to view detailed information.



7.2.1 View Layout

- View device layout
Tap  at the upper left of the screen. You can choose **Physical Layout** or **Logical Layout** to check the corresponding layout.
- View power yield data
Tap  at the upper right of the screen. You can choose **Daily Yield**, **Monthly Yield**, **Annual Yield**, or **Total Yield** to check the yield of each PV module.
Tap  at the upper right view. Choose **Power** and enable Live Data. You can then choose  > **Live Data** to view the live data of this plant.

7.2.1.1 Check Device Status

- Check device quantity
Tap  in the lower left corner of the screen to check the status and number of optimizers or RSDs.

- Check device assignment

Tap **Device** at the lower left of the layout to check the S/N and No. of the optimizer or RSD attached to the inverter, and whether it has been assigned or not.

- Check device running status

- You can tell the status of the optimizer or RSD device based on the color of the corresponding PV module in the layout. The table below shows the relation between the PV module color and the device status.

Color	Status
	The device is operating normally
	There is a fault in the device
	There is an alarm with the device
	The device is offline

- The PV module is blue if the device is operating properly. The color shade of a module reflects its power generation efficiency. Darker blue indicates a higher power ratio and greater power generation efficiency.

Color Shade	Actual Power/PV Module Peak Power*100%
	80–100
	60–80

Color Shade	Actual Power/PV Module Peak Power*100%
 A22C30703 1-1-1	40–60
 A22C30703 1-1-1	20–40
 A22C30703 1-1-1	0–20

7.2.1.2 View Device Information

- View optimizer/RSD information

Overview
Layout
Device

Physical Layout
Daily Yield

Optimizer 2-4-8 ×

S/N

A2242201688

Data Update Time: 28/06/2023 16:25

Tilt Angle

0

Azimuth Angle

0

Running data

Total Yield(kWh)

83.698

Input Voltage(V)

28.4

Output Voltage(V)

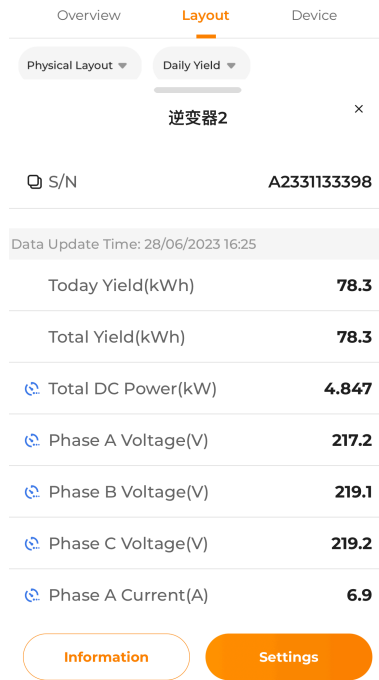
27.5

Input Current(A)

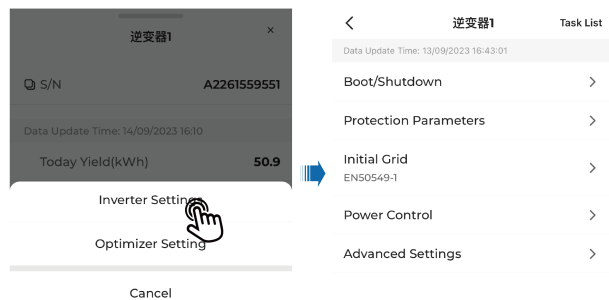
1.54

Settings

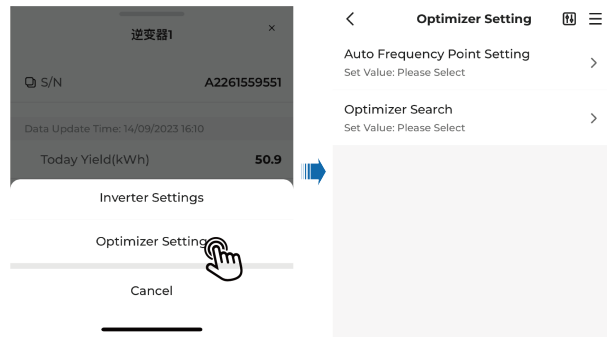
- Tap an optimizer or RSD in the layout to check its **Running Data** and **Device Information**.
 - Tap **Settings** to set **PV Module Total Yield Adjustment**.
- View inverter information



- Tap an inverter in the layout to check its yield data.
- Tap **Information** at the lower left of the screen to check the detailed device information such as **General Information**, **Faults**, **Curve**, **Settings**, and **Remote Signaling Status**.
- Tap **Settings** at the lower right of the screen, and choose **Inverter Settings** or **Optimizer Setting**.
 - By choosing **Inverter Settings**, you can set relevant parameters for the inverter.



- By choosing **Optimizer Setting**, you can set parameters such as the **Communication Frequency Point**, **Auto Frequency Point Setting**, and **Optimizer Search**.



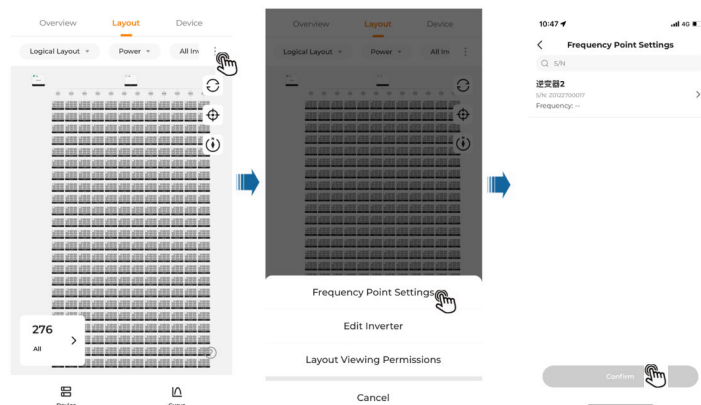
- View Curves

Tap **Curve** in the lower right corner of the screen. Choose a module, and tap **Curve** to view the power generation data presented in curve graphs.

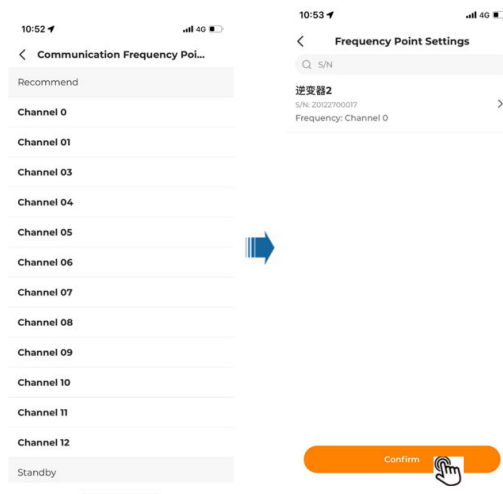
7.2.1.3 Inverter Settings

- Set the frequency point for the inverter

1. Choose **> Frequency Point Settings** at the top right of the “Layout” screen.



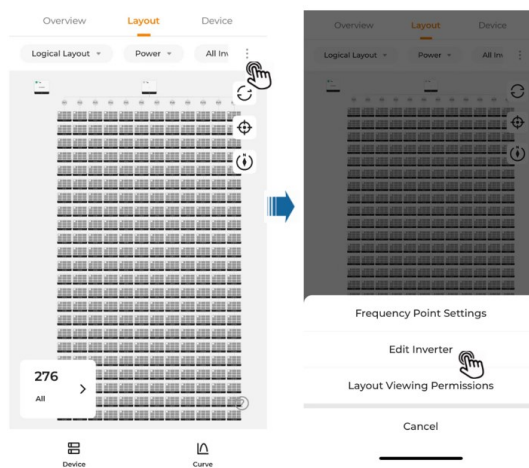
2. Tap **>** to the right of the inverter, select a new frequency point, and tap **Confirm**.



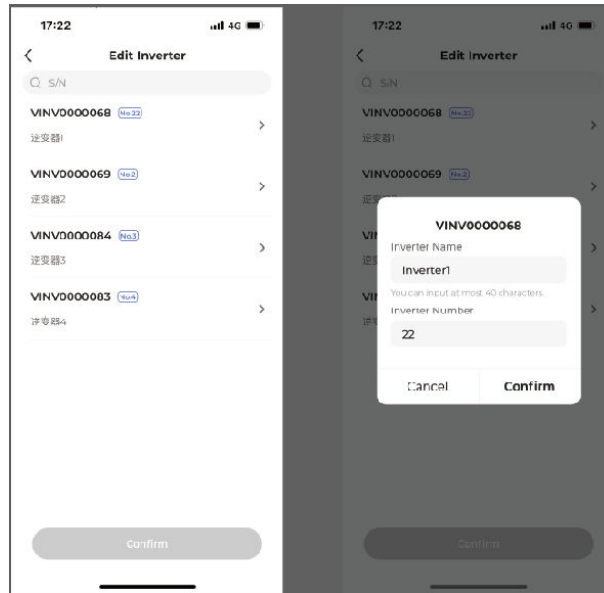
Prioritize the recommended frequency points when setting.
The frequency points set for inverters in the same plant cannot be the same.

- Change inverter name or number

1. Choose > **Edit Inverter** at the top right of the “Layout” screen.

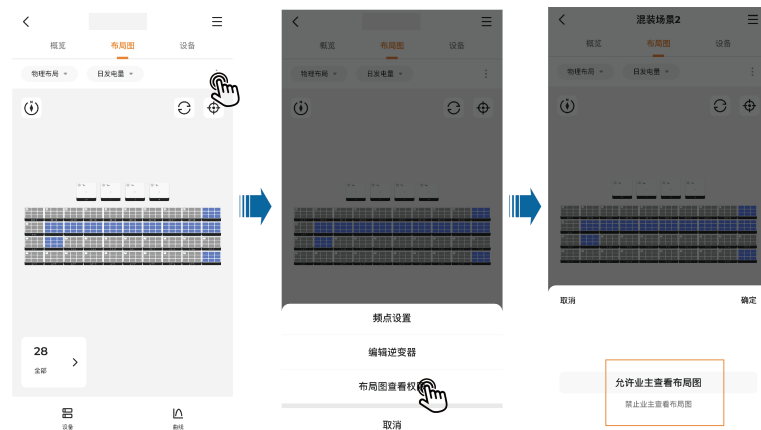


2. Tap to the right of the inverter to change the **Inverter Name** and **Inverter Number**.
3. Tap **Confirm**.



The numbers set for inverters in the same plant cannot be the same.

- Set layout viewing permissions



- Choose **Layout Viewing Permissions** at the top right of the "Layout" screen.
- Select **Allow users to view layout**, and tap **Confirm**. Then, users can view the layout of the plant using an Owner account.
Select **Disallow users to view layout**, and tap **Confirm**. Then, users will not be able to view the layout using an Owner account.



The Owner users may ask their upper-level retailer/installer to grant them layout viewing permission if needed.

7.2.2 Set up a Layout

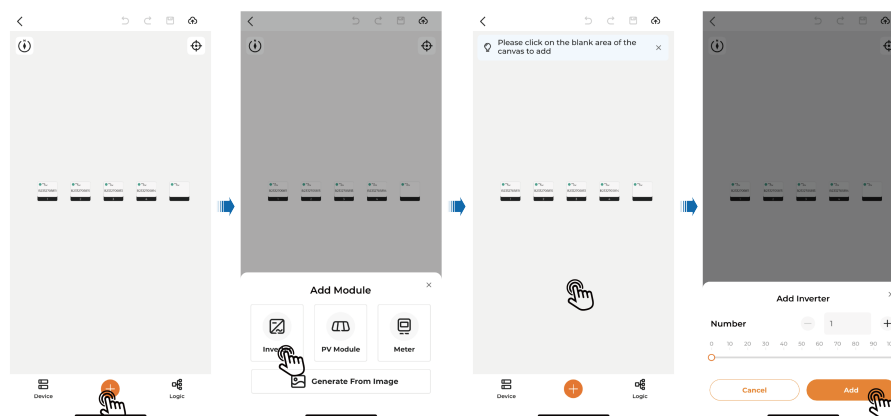
After optimizers or RSDs have been installed, you can set up the layout on the iSolarCloud App. Before proceeding with the layout setting, make sure you have completed the below steps:

1. Turn on all inverters' AC switches, and turn off all the DC switches.
2. Create a plant. See [5.1 Complete Plant Information](#) for details.
3. Add the communication device and complete the network configuration accordingly. See [5.2 Add Communication Device](#) for details.
4. Set inverter parameters. See [5.2.3 Device Initialization](#) for details.
5. Based on the actual number of inverters on the site, proceed with the layout setting by following the instructions specified in [7.2.2.1 Single-Inverter Scenario](#) or [7.2.2.2 Multi-Inverter Scenario](#).

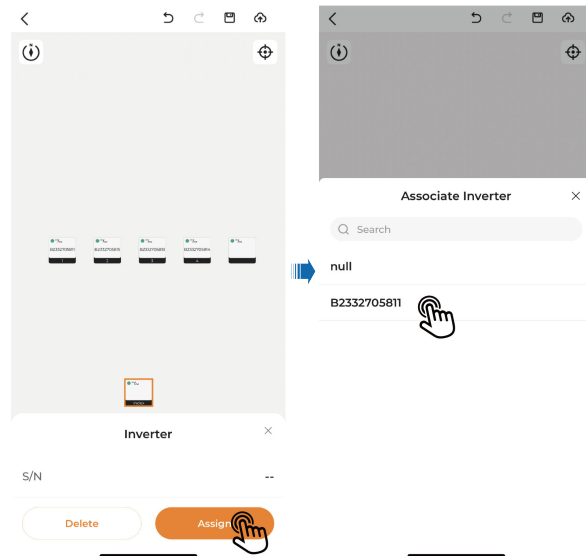
7.2.2.1 Single-Inverter Scenario

Step 1 Add an inverter:

- a. Choose the target plant, and tap  > **Layout Settings**. Then, tap  at the bottom of this screen.
- b. Choose **Inverter**, and tap the blank area of the canvas. Set the number of inverters, and tap **Add**.

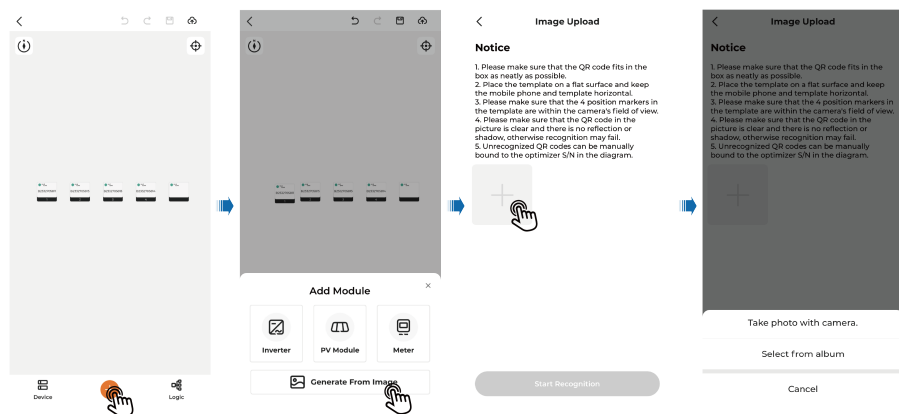


- c. Choose the inverter that has been added, and tap **Assign** to associate it with the corresponding S/N.



Step 2 Add a PV module:

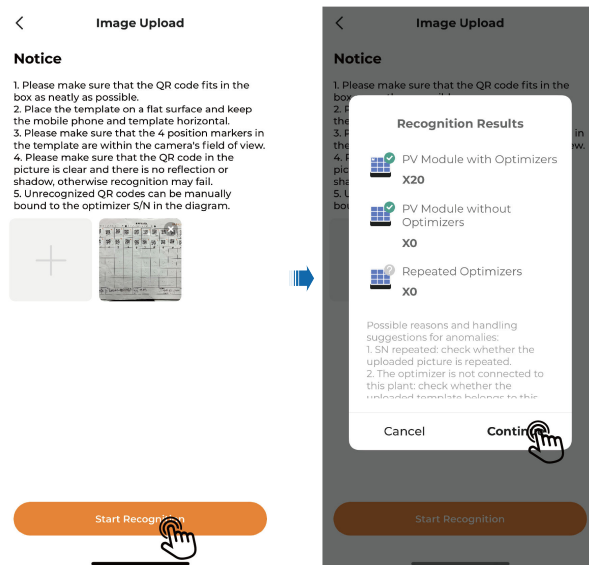
- Then, tap  at the bottom of this screen.
- Choose **Generate From Image**. Tap the add button in the middle of the screen, and choose **Take photo with camera** or **Select from album** to upload the physical layout template.



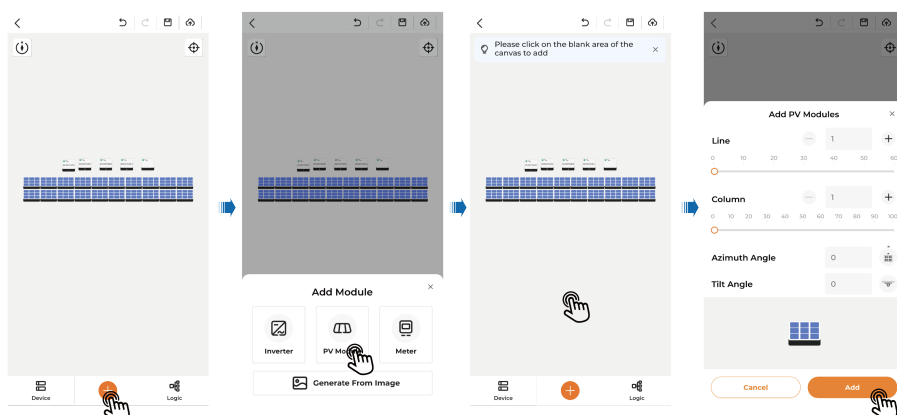
NOTICE

- Do not take photos of the physical layout template under strong light. Otherwise, the QR code may not be recognized due to reflection of light.
- Turn off the Live Photo function on the phone before taking photos. Upload a still photo to ensure the QR codes can be read successfully.

- Tap **Start Recognition**. Wait for the **Recognition Results** to pop up on the screen, and then tap **Continue**.



- d. Verify that the optimizers and RSDs have all been added successfully; you can add any devices that are missing manually. Tap at the bottom of the screen, and choose **PV Module**. Tap the blank area of the canvas, complete the required information, and tap **Add**.



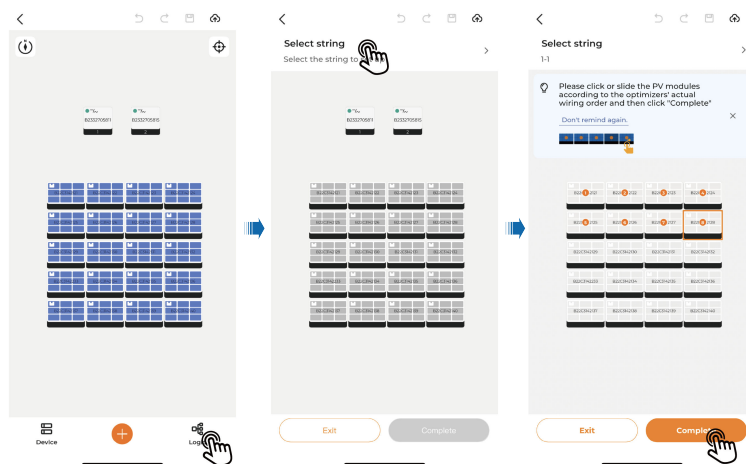
- e. Select the module that has been added, and tap **Assign** to associate it with the corresponding S/N.

Step 3 Add a Meter:

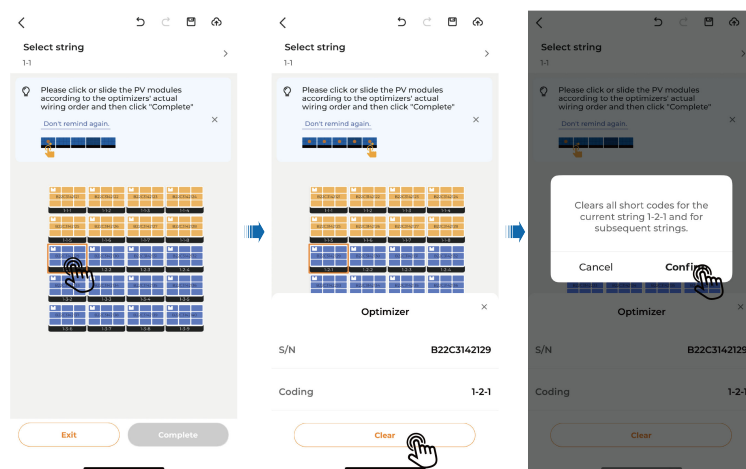
- Tap at the bottom of this screen.
- Choose **Meter**, and tap the blank area of the canvas. Then, set the number, and tap **Add**.
- Choose the meter that has been added, and tap **Assign** to associate it with the corresponding S/N.

Step 4 Set up the logical layout:

- a. Tap **Logic** in the lower right corner of the screen. Select the target string. Tap to drag the PV modules and arrange them in the correct order based on the actual wiring of the optimizers or RSDs. Then, tap **Complete**.



- b. Tap **Exit** after completing the logical layout setup for all optimizers or RSDs.
- c. In case modules are arranged incorrectly, you can choose a module, and tap **Clear** at the bottom of the screen. Then, tap "Confirm" to clear the short codes of the current and the subsequent modules.



Step 5 After completing the layout setup, tap  in the upper right of the screen to publish.



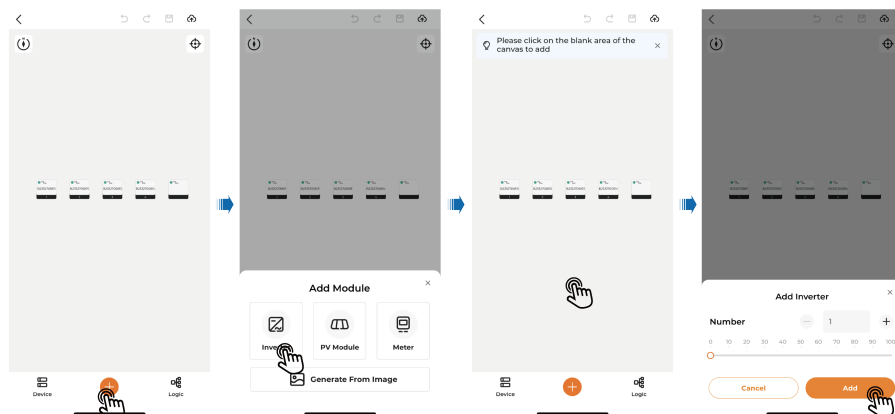
If the layout does not need to be published immediately, you can tap  in the upper right corner of the screen to save the layout settings.

--End

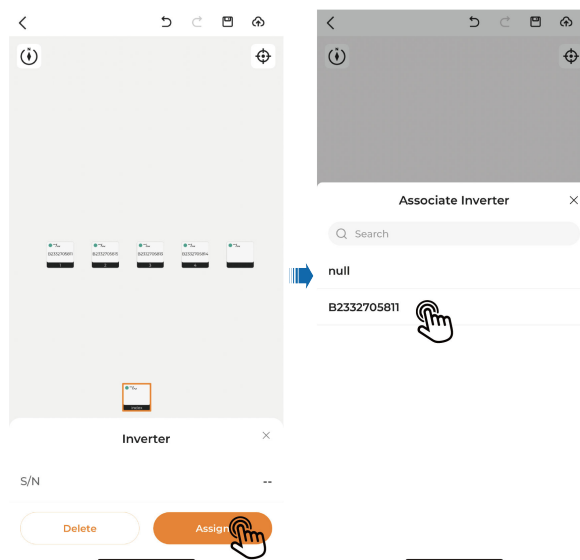
7.2.2.2 Multi-Inverter Scenario

Step 1 Add an inverter:

- Choose the target plant, and tap  > **Layout Settings**. Then, tap  at the bottom of this screen.
- Choose **Inverter**, and tap the blank area of the canvas. Set the number of inverters, and tap **Add**.



- Choose the inverter that has been added, and tap **Assign** to associate it with the corresponding S/N.



Step 2 For the multi-inverter scenario, turn on the DC and AC switches of Inverter 1, and turn off the DC and AC switches of the other inverters.

If the DC and AC switches of multiple inverters have already been turned on at the same time by mistake at the site, you can delete the abnormal optimizers or RSDs that have the String No. of 200 or greater in the optimizer or RSD list. The String No. is the number in the middle of the optimizer or RSD code, as shown in the figure below.



< Inverter1

Search

Optimizer(160)

+ Add Optimizer

☐ A23426G6668(1-1-1)

Replace

See [Delete Optimizer or RSD](#) for how to delete the optimizer or RSD.

Step 3 See Steps 2 to 4 in [7.2.2.1 Single-Inverter Scenario](#).

Step 4 After completing the layout setup, tap in the upper right of the screen to publish.

Step 5 Set **Auto Frequency Point Setting** to **Disable**, and modify the communication frequency point for Inverter 1.

Step 6 Complete layout settings for the other inverters by referring to Steps 2 to 4 specified in this section.

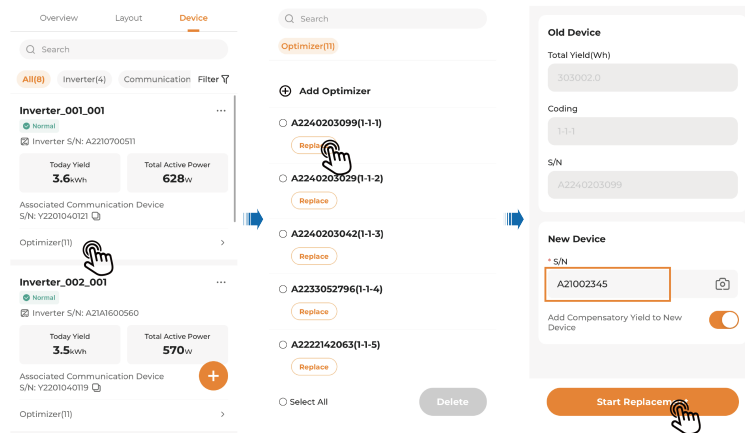


Every time you configure the layout settings, switch off the DC and AC switches of the inverters that have not been set. The frequency point set for each inverter should be different, with the set values going from high to low. For instance, the frequency point set for Inverter 1 is 490 kHz, the frequency set for Inverter 2 is 460 kHz, and so on.

--End

7.2.3 Replace/Delete/Add Optimizer or RSD

Replace Optimizer or RSD

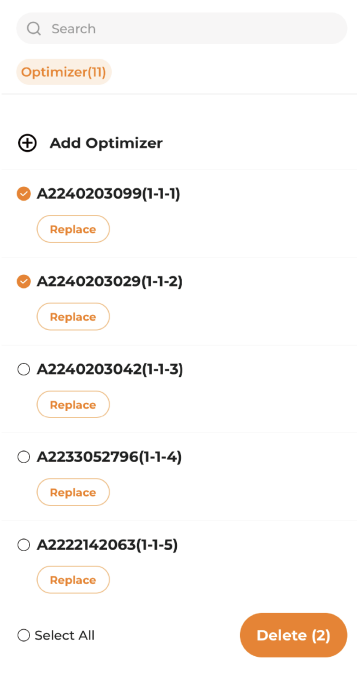


1. Go to “**Device**”, and tap “Optimizer” or “RSD” at the bottom of the inverter card.
2. Find the S/N of the optimizer or RSD to be replaced, and tap **Replace**.
3. Enter the S/N of the new device, or tap  on the right to scan the QR code on the device. Then, tap **Start Replacement**.



After replacement, the new device will take the place of the old device in the layout automatically and thus does not need to be added again.

Delete Optimizer or RSD



Q Search

Optimizer(11)

⊕ Add Optimizer

☒ A2240203099(1-1-1)
Replace

☒ A2240203029(1-1-2)
Replace

☐ A2240203042(1-1-3)
Replace

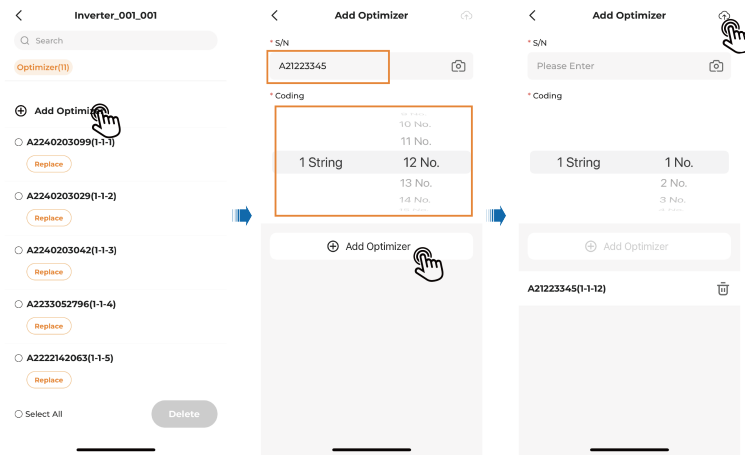
☐ A2233052796(1-1-4)
Replace

☐ A2222142063(1-1-5)
Replace

☐ Select All Delete (2)

Select the optimizers or RSDs to be deleted from the optimizer or RSD list, and tap **Delete** in the lower right of the screen.

Add Optimizer or RSD



In the optimizer or RSD list, tap **Add Optimizer** or **Add RSD**. Then, enter the device S/N, set the coding, and then tap **Add Optimizer** or **Add RSD** at the bottom. After the device is added, tap  in the upper right corner of the screen to publish.

7.3 Device Management

Select a plant from the plant list and tap its name to go to “**Overview**”. You can choose the **Device** tab to view all the devices deployed in the plant.

Search for a Device

You can search for a device by entering its name or S/N in the search box, or by scanning the QR code on the device.

Edit Device Name

Tap  on the right of the device name, and choose **Modify** to edit its name.

Device Replacement

Tap  on the right of the device name, and choose **Device Replacement** to replace the current device. Please refer to [7.5 Device Replacement](#) for details.

Delete a Device

1. Tap  on the right of the device name, and choose **Delete**. A delete confirmation dialog box will pop up on the screen.
2. Tap **Delete** to delete this device.

Add a Device

1. Tap  at the lower right of the screen. You can scan the QR code on the communication module, upload a QR code image, or enter the module S/N manually.
2. A confirmation dialog will then pop up on the screen. Check that the S/N, captured by the software or entered manually, is correct. Then, tap **Confirm**.



After the communication device is added successfully, wait 1–10 minutes for communication to be established.

7.3.1 View Device Information

You can tap a device on the **Device** screen to check its information.

General Information

You will go to **General Information** by default. Information shown for different devices are listed as follows:

Device Type	General Information
Inverter	• S/N • Status • Overview • DC information • AC information • Device information
Hybrid inverter	• S/N • Status • Overview • DC information • AC information • Loads • Battery information • Grid information • Device information
EV charger	• S/N • Status • Overview • Device information
Battery	• S/N • Status • Overview • Device information

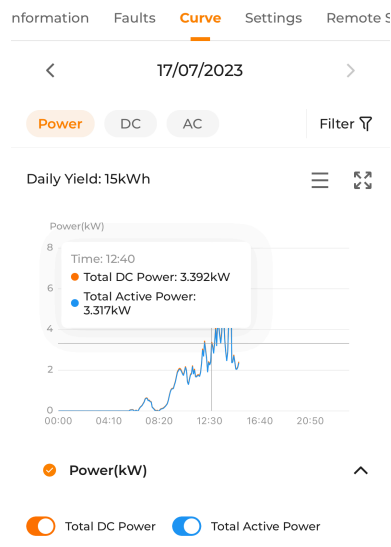
Device Type	General Information
Communication module	• S/N • Status • Signal information • Device information
Data logger	• S/N • Status • Loads • Device information
Meter	• S/N • Status • Loads • Other information • Device information

Fault

Choose the **Faults** tab to check the pending and historical faults of the device.

Curve

Choose the **Curve** tab to check the **Power**, **DC**, and **AC** curves of the inverter.



Tap  in the upper right corner of the curve graph to check the power, current, and voltage data of the inverter at different times.

Parameter Setting

Choose the **Settings** tab to set parameters as needed. For detailed instructions, see [7.3.1.1 Parameter Settings](#).



Configurable parameters may vary by device model. Please refer to the information actually shown on the screen.

Remote Signaling Status

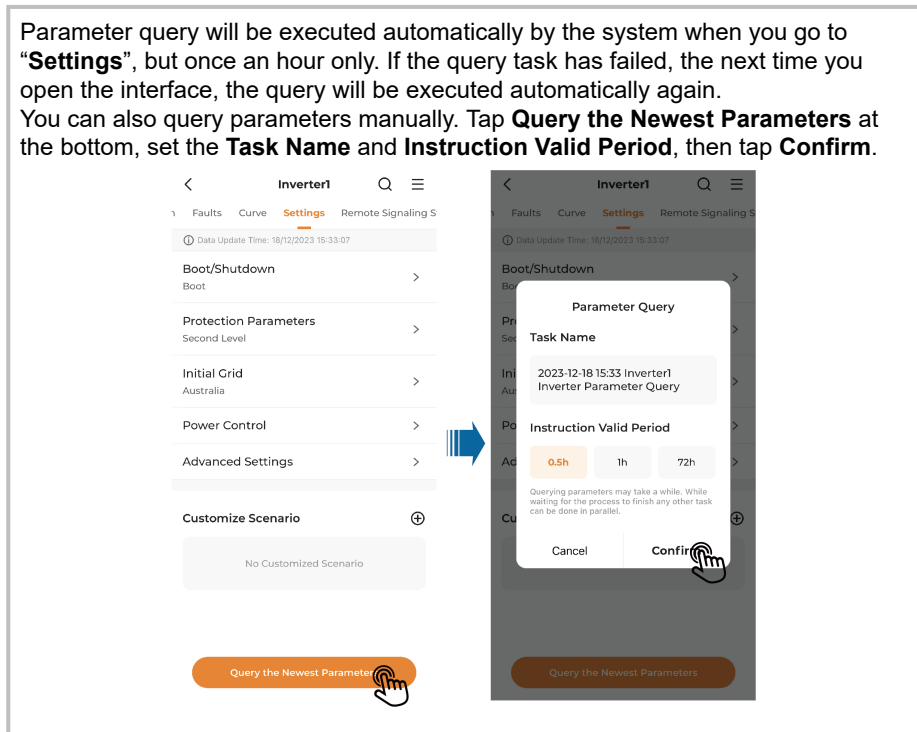
Choose the **Remote Signaling Status** tab to check the device's remote signaling status.

7.3.1.1 Parameter Settings

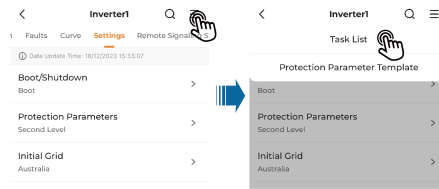
You can query the latest parameters or complete the settings of the relevant parameters in “Settings”.

Query Parameters

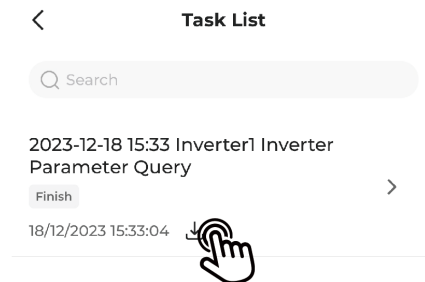
Parameter query will be executed automatically by the system when you go to “**Settings**”, but once an hour only. If the query task has failed, the next time you open the interface, the query will be executed automatically again. You can also query parameters manually. Tap **Query the Newest Parameters** at the bottom, set the **Task Name** and **Instruction Valid Period**, then tap **Confirm**.



1. After the query task has been completed, a notification message will show on the screen. You can tap **Have a Look** in the dialog to go to the **Task List**, or choose > **Task List**, to view the details of the task.



2. Tap on a task name and check the parameter settings in detail.
3. Tap  in **Task List** to download the query results in a browser.

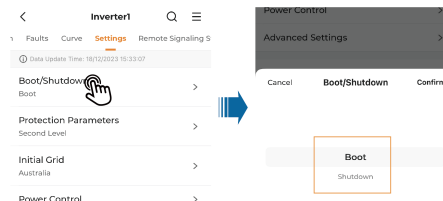


Search for a Parameter

1. Go to “**Settings**” and tap  in the upper right corner. Then, enter a parameter name and tap **Search**.
2. Tap on the target parameter to go to the interface where it is shown.

7.3.1.1.1 Boot/Shutdown

Boot/Shutdown is used to start/stop the inverter manually by sending a boot/shutdown command.

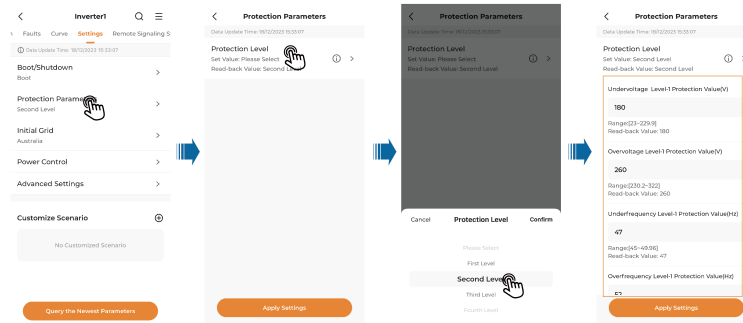


1. Tap **Boot/Shutdown** in “**Settings**”, and choose **Boot** or **Shutdown**.
2. Tap **Confirm**.

7.3.1.1.2 Protection Parameters

You can set different protection parameters for the inverter to protect it against accidental damage. Please complete protection parameter settings based on your actual needs.

Set Protection Level

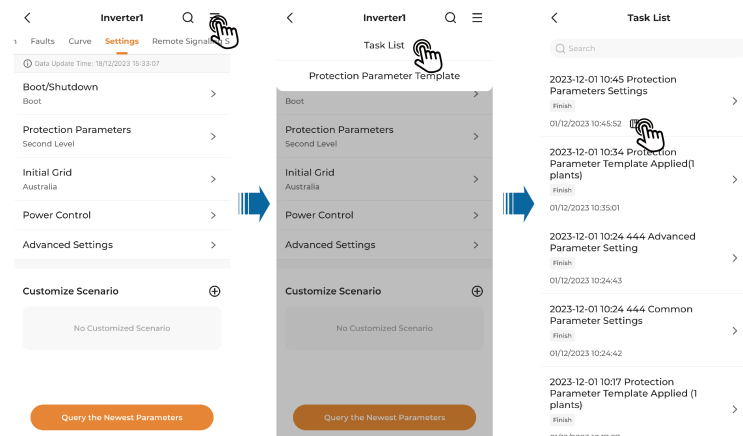


1. Tap **Protection Parameters** in “Settings”, and set the **Protection Level**.
2. Tap **Confirm**.
3. Complete the settings of protection value, protection time, and other related parameters.



You can only proceed with the protection value and time setting after setting the **Protection Level**.

Add a Protection Parameter Template

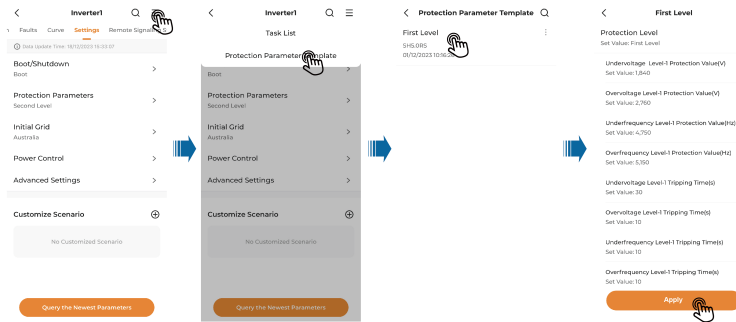


1. Go to “Settings”. Choose > **Task List** in the upper right corner of the screen, and select a successful task.

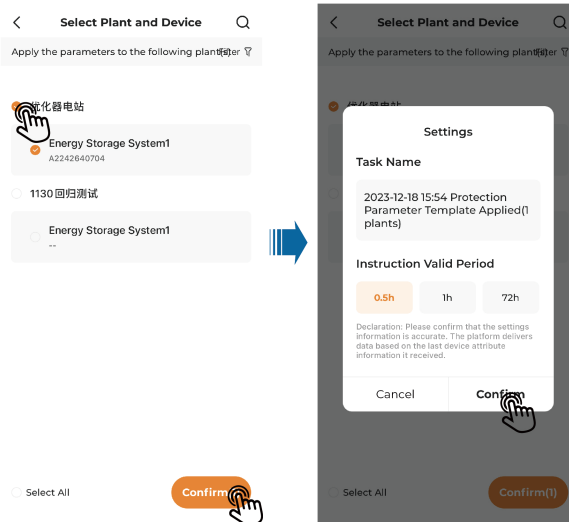
2. Tap after the task to save the template.

Apply a Protection Parameter Template

1. Go to “Settings” and choose > **Protection Parameter Template**.
2. Tap a template. Check that the parameter values are correct and tap **Apply**.



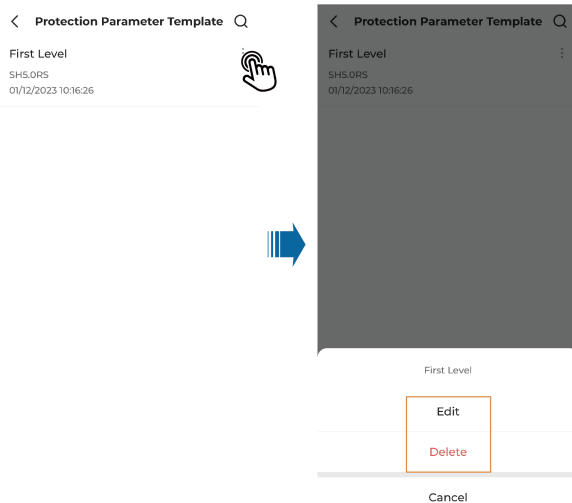
3. Select the target plants or devices, and tap **Confirm**.
4. Set the **Task Name** and **Instruction Valid Period**, then tap **Confirm**.



5. Tap **Confirm** to apply the settings.

Edit a Protection Parameter Template

1. Go to “**Settings**”, and choose > **Protection Parameter Template**. You will see the list of protection parameter templates.
2. Tap to the right of the template, then you can:
 - Choose **Edit** to change the template name.
 - Choose **Delete** to delete the template.



7.3.1.1.3 Initial Grid

You can set the “Country/Region”, “Grid Type”, and other model-specific parameters for the inverter in “Initial Grid”.

< Initial Grid

Country/Region
China >

Grid Type
Not a Plant >

Feed-in Limitation
Set Value: Please Select ⓘ >

Backup Mode
Set Value: Please Select ⓘ >

Apply Settings

1. Tap **Initial Grid** in “**Settings**”.
2. Tap **Country/Region** and choose the country or region where the inverter is connected to the grid.
3. Set **Power Company**, **Grid Type**, **Feed-in Limitation**, **Backup Mode**, and other model-specific parameters.

7.3.1.1.4 Power Control

<
Power Control

Data Update Time: 01/12/2023 10:14:13

Connecting Time(s) (i)

Please Enter

Range:[10~900]
Read-back Value: 20

Reconnecting Time(s) (i)

Please Enter

Range:[0~3,600]
Read-back Value: 20

Total PV Yield Adjustment(kWh)

Please Enter

Range:[-200,000,000~200,000,000]
Read-back Value: 0

Total PV Feed-in Energy Adjustment(kWh)

Please Enter

Range:[-200,000,000~200,000,000]
Read-back Value: 0

Apply Settings

1. Tap **Power Control** in “**Settings**”.
2. Complete parameter settings based on the actual conditions of the plant.



Parameters shown in “**Power Control**” may differ by inverter model.

7.3.1.1.5 Energy Management Parameters

“Energy Management Parameters” is available for hybrid inverters only. It is used to set the battery-related parameters.

< Energy Management Paramete...

Data Update Time: 01/12/2023 10:14:13

Battery Use Time of Weekday1

Start TimeEnd Time

14:00 ×15:00 ×

Battery Use Time of Weekday2

Start TimeEnd Time

16:55 ×18:55 ×

Weekend Discharging

Set Value: Please SelectRead-back Value: Enable

Forced Charging

Set Value: Please SelectRead-back Value: Disable

DO Configuration

Set Value: Please SelectRead-back Value: Close

Apply Settings

1. Tap **Energy Management Parameters** in “**Settings**”.
2. Set the **Start Time** and **End Time** of battery discharging on weekdays.



- The **Start Time** and **End Time** cannot be the same.
- The **Start Time** must be earlier than the **End Time**, and these two fields cannot be empty.
- **Battery Use Time of Weekday 1** and **Battery Use Time of Weekday 2** cannot be the same.

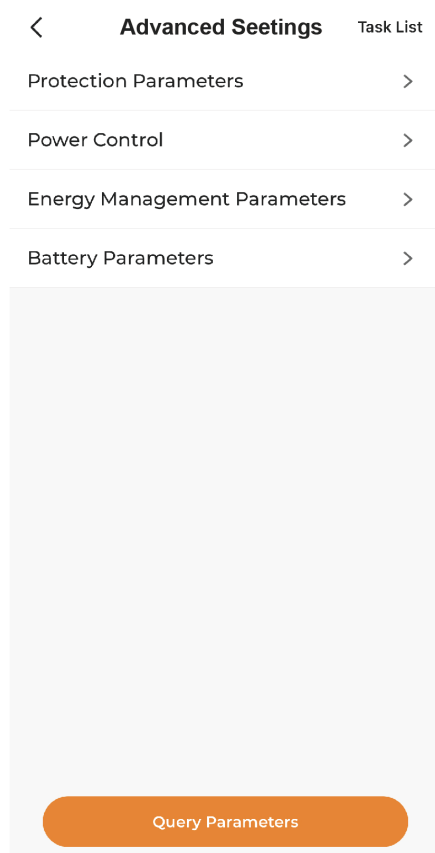
3. Set **Weekend Discharging**.

- a. Tap > on the right.
- b. Choose **Enable**, and set the **Start Time** and **End Time** of battery discharging on weekends.

4. Set other relevant parameters.

7.3.1.1.6 Advanced Settings

Parameters in **Advanced Settings** can only be viewed and set by users granted such permission.

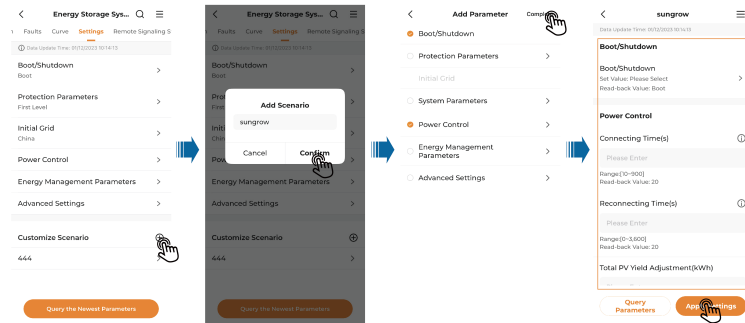


1. Tap **Advanced Settings** in “Settings”.
2. Choose **System Parameters**, **Protection Parameters**, **Power Control**, **Energy Management Parameters**, or **Battery Parameters**.
3. Set the relevant parameters, then tap **Apply Settings**.
4. Set the **Task Name** and **Instruction Valid Period**, then tap **Confirm**.
5. Tap **Confirm** to apply the settings.

7.3.1.1.7 Add a Custom Scenario

You can add a custom scenario to complete the settings of the frequently used parameters via one click.

Add a Scenario



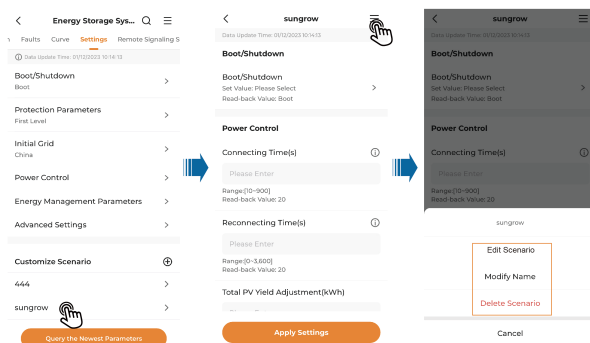
1. In **Settings**, tap  to the right of **Customize Scenario**.
2. Name the new scenario, and tap **Confirm**.
3. Select parameters in **Add Parameter**.



- If a parameter is selected, its child parameters (if any) will be selected too.
- You can tap  to check the child parameters of the corresponding parameter and make selection as needed.

4. Tap **Complete** in the upper right corner. The selected parameters will then be shown on the screen.
5. Tap **Query Parameters** in the lower left corner of the screen to query the newest parameters of the current device.
6. Complete the settings of the selected parameters, and tap **Apply Settings**. Then, set the **Task Name** and **Instruction Valid Period**, and tap **Confirm**.

Edit a Scenario



1. Tap a scenario in **Settings** to go to the details screen.
2. Tap  in the upper right corner of the screen, then you can:
 - Choose **Edit Scenario** to re-select parameters.
 - Choose **Modify Name**, enter a new name, and tap **Confirm** to change the name of the scenario.

- Choose **Delete Scenario > Delete** to delete the scenario and its parameter settings.

7.3.2 View Charger Information

Tap the plant name, go to **Device**. You can tap a charger to view its charging information of and set the charging mode.



Only the Owner is granted access to the charging function.

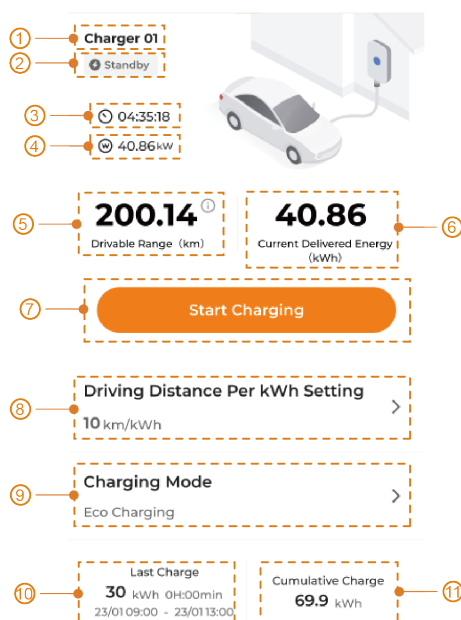


Table 7-1 Parameter Description

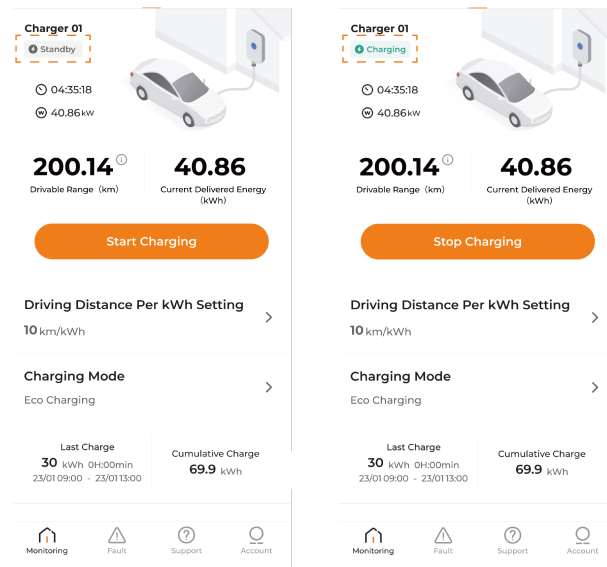
No.	Parameter	Description
1	Charger Name	Name of the charger that has been connected.
2	Charger Status	Indicates the running status of the charger: Unplugged, Standby, Charging, Charging Suspended, Fault, Complete.
3	Charging Hours	Indicates the time from the moment the charging is started to the current time.
4	Charge	Indicates the power delivered from the moment the charging is started to the current time.
5	Drivable Range	Indicates the current driving range of the EV.
6	Energy Charged Until Now	Indicate the energy delivered from the moment the charging is started to the current time.

No.	Parameter	Description
7	Start/Stop Charging	Tap the button to start or stop charging. If the button shows grey, it is currently unavailable. See 7.3.2.1 Start/Stop Charging for details.
8	Driving Distance Per kWh Setting	The parameter "driving distance per kWh" indicates how far a car can travel on 1 kWh of energy. It depends on the actual road conditions, the vehicle model, the weight of the vehicle and the load it carries, and the speed of the vehicle.
9	Charging Mode	Set the charging mode for the charger. See 7.3.2.2 Charging Mode for details.
10	Last Charge	Information about the last charging task.
11	Cumulative Charge	Indicates the total energy delivered since the first time the charger is used for charging.

7.3.2.1 Start/Stop Charging

Only the Owner is granted access to the charging function. Please log in as Owner to proceed with the following operations.

Start Charging



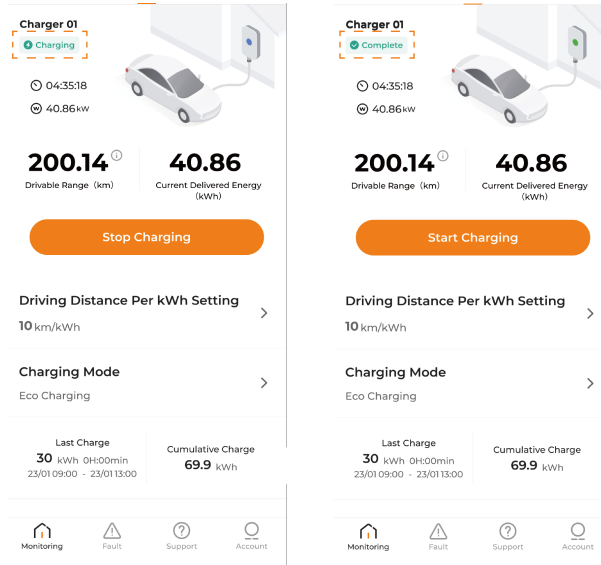
1. Plug the charging connector into the charging port on the EV.
2. Set the [7.3.2.2 Charging Mode](#).
3. The charger status will switch to **Standby**.
4. Tap **Start Charging**. The charger status will then display "**Charging**".

5. Unplug the charging connector after finishing charging.



If the charger status shows **Unplugged** after the [7.3.2.2 Charging Mode](#) is set, the charging connector may not be plugged into the EV correctly. In this case, check the connection, or pull out and plug the charging connector again.

Stop Charging



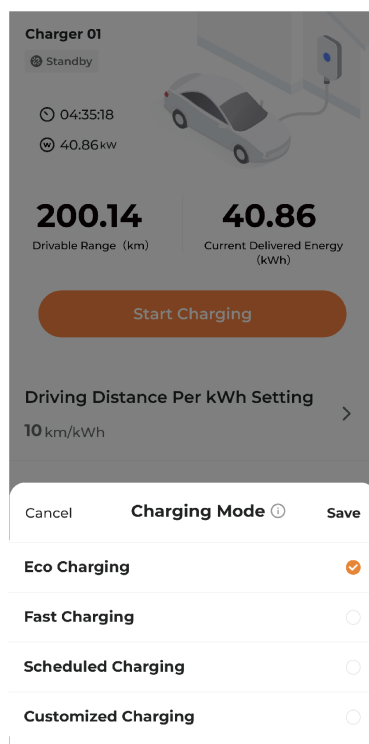
1. Tap **Stop Charging** in the middle of a charging process.
2. The charger status will then switch to **Completed**.



You can start or stop charging on the iSolarCloud App or using a charging card. Please start or stop charging in the same way for the same charging session.

7.3.2.2 Charging Mode

Four charging modes are available: **Eco Charging**, **Fast Charging**, **Scheduled Charging**, and **Customized Charging**.



Eco Charging

Eco Charging is the most economical charging mode. In this mode, the charger will first choose PV power to charge the EV, without affecting the energy consumption of other home appliances. If the output of the PV installation falls below the minimum charging power of the charger, energy from the battery and grid will be used to charge the EV.

Fast Charging

In Fast Charging mode, the charger charges the EV at the maximum available power, without affecting the energy consumption of other home appliances. In this mode, the EV may be charged with energy from the PV modules, the battery, the grid, or all of the above. You may choose this mode for emergency charging.

Scheduled Charging

In Scheduled Charging mode, the system will balance between Eco Charging and Fast Charging based on the preset charging target and time to pick up the car. Charging will be completed at the lowest cost before you pick up your car.

Choose **Scheduled Charging**, and tap  to go to **Add Preset Conditions**. Then, specify the charging target and the time to pick up the car, and tap **Save**.

< **Add Preset Conditions**

Need to Use Vehicle at

17:55 >

Charging Target (kWh)

20

Save

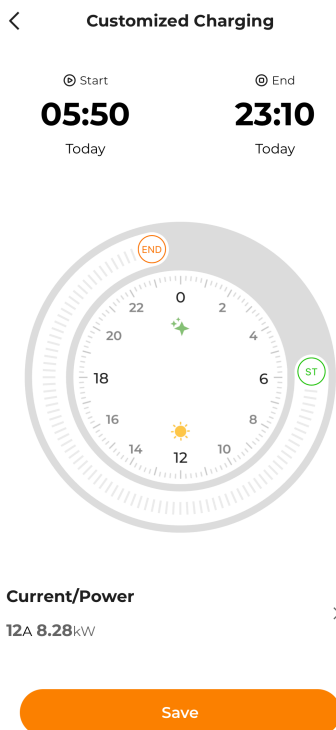


- Charging will stop once the charging target is reached, even if the predefined pickup time has not yet arrived.
- If the charger cannot meet the charging target before the pickup time, the screen will display "unable to complete the charging target before you pick up the vehicle". You can tap **Confirm** to save the above settings or tap **Cancel** to go back to "Add Preset Conditions" and set the parameters again.

Customized Charging

The "Customized Charging" mode allows users to define the start time and end time for a charging task and the maximum charging current. The EV can be charged with energy from the PV modules, the battery, the grid, or all of the above.

Choose **Customized Charging**, and tap . Set the start time, end time, and charging current on the **Customized Charging** screen, and then tap **Save**.



- In this mode, the charger will charge the EV automatically in the preset time duration.
- Within the preset time window for charging, if the charging connector has been plugged into the charging port of the EV, after tapping **Save** on the Charging Mode screen, the charger will start charging the EV immediately.

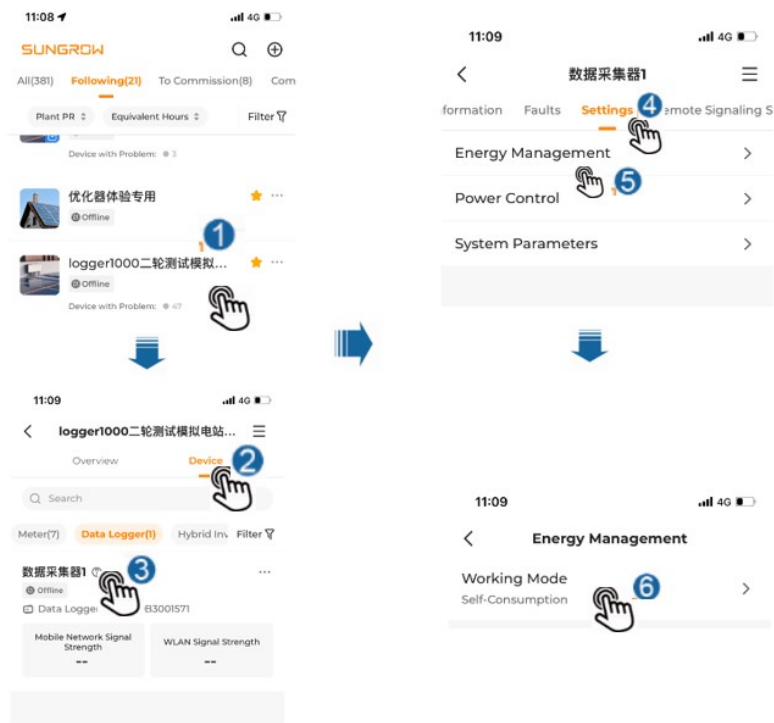
7.3.3 Energy Management by Logger

The Logger1000 enables users to manage system energy effectively. Users can select the energy management mode, adjust power through digital input signals, or directly set limits on the grid-connected power.

Logger1000 supports the following working modes:

Mode	Description
Self-consumption	The Self-consumption mode maximizes the utilization of PV output and battery energy to power the loads, thus minimizing the consumption of grid energy. Users can allow the battery to discharge or force the battery to charge in specific time periods, based

Mode	Description
	on electricity prices at different times, to lower the overall electricity costs.
Time Plan	The Time Plan mode is mainly used in the scenario of electricity transactions. You can set the time windows and power for battery charging/discharging manually, according to the on- and off-peak electricity prices, to maximize the economic benefits.
Compulsory Mode	The Compulsory Mode is mainly used in battery O&M to control the battery and make it operate in compliance with the preset charging/discharging mode and power.
VPP	In the VPP mode, the system operates according to the feed-in power and battery charging/discharging commands from the VPP provider. Energy management and scheduling will be conducted based on the external demands, to satisfy the needs and operational requirements of the grid and achieve efficient utilization and scheduling of external resources.



Select the plant where the Logger1000 is deployed. Choose the **Device** tab and select Logger1000. Go to “**Settings**”, tap **Energy Management Parameters**, and set the **Working Mode**.

7.3.3.1 Self-consumption

Function Logic

- When the PV output power is sufficient, the PV energy will be first supplied to the loads, with the excess stored in the battery. If, after this, there is still energy surplus, it will be fed into the grid.
- If the PV output power is not sufficient to meet the load demand, the system supplies the energy stored in the battery to the load. If the battery capacity is insufficient, the system purchases energy from the grid to fulfill the load demand.

Steps

1. Set the **Working Mode** to **Self-consumption**.
2. Set the **Threshold on Power Purchase (Demand Control)** and **Threshold on Power Feed-in (Demand Control)**.
 - **Threshold on Power Purchase (Demand Control):** When the power imported from the grid exceeds the set threshold, the excess demand is covered by the battery.
 - **Threshold on Power Feed-in (Demand Control):** When the power fed into the grid exceeds this threshold, the excess will be used to charge the battery.
3. Enable **Custom Season**. For details, see [7.3.3.1.1 Custom Season](#).



If **Custom Season** is disabled, the battery is allowed to discharge all day (0–24h) without charging.

4. Tap **Apply Settings**.

7.3.3.1.1 Custom Season

In the **Self-consumption** mode, users can set a battery charging/discharging plan to optimize the energy usage and management. With properly set battery charging/discharging windows, the system maximizes the use of PV output during on-peak hours and reduces the energy purchased from the grid during off-peak hours, thus lowering the electricity costs.

Function Logic

- **Allow Discharging:** Allow the battery to discharge to serve the loads in a specific time period. All-day by default (0–24h).
- **Forced Charging:** Charge the battery at the maximum allowable power in a specific time period until the target SOC is reached. If the PV output cannot meet the battery

charging power demand, the system is allowed to charge the battery with energy from the grid.



Battery discharging and charging windows can overlap. If a time window allows both battery discharging and forced charging, forced charging will be executed first.

Steps

1. Turn on **Custom Season**.
2. Select months for the current season. Users can set different seasons according to the energy demand and seasonal changes of each quarter.
3. Select the days on which the battery charging/discharging windows apply.
You can apply the charging/discharging plans to every day, or set different charging/discharging plans for weekdays and weekends respectively. The plan applies to every day by default.
 - **Every Day:** The set charging/discharging plan applies on all days. This mode is suitable for scenarios where the daily energy demand is relatively stable.
 - **Weekdays & Weekends:** Set different charging/discharging plans respectively for weekdays and weekends.
4. To add more seasons, tap  to the right of the default season name and select **Add**.

Custom Season



Season 1



You can select a season and tap  to modify its name or delete it.

5. Tap a time period on the **Allow Discharging** column, a new discharging window will be created (1 hour by default). Then, drag up and down to adjust the length of time, and tap on the window again to add it.
6. Tap a time period on the **Forced Charging** column, a new charging window will be created (1 hour by default). Then, drag up and down to adjust the length of time, and tap on the window again to add it.
Tap on a time window that has been added, and choose **Set Target SOC** to set a charging target.

7.3.3.2 Time Plan

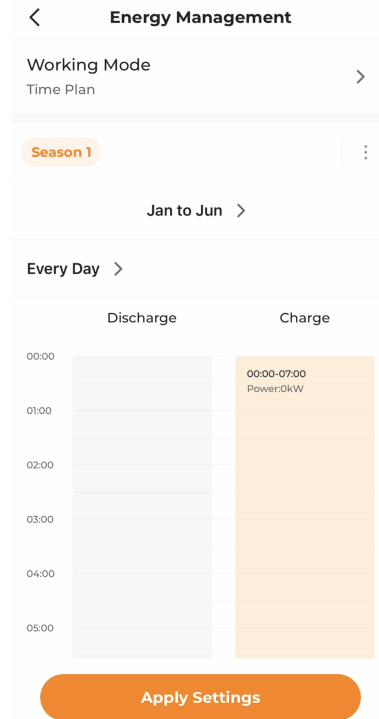
The **Time Plan** mode is mainly used in the scenario of electricity transactions. You can set the time windows and power for battery charging/discharging manually, according to the on- and off-peak electricity prices, to maximize the economic benefits.

It is recommended to allow the battery to discharge during on-peak hours (electricity prices are higher) and charge during off-peak hours (electricity prices are lower).

Function Logic

- **Discharging window:** The battery discharges at the predefined discharging power within the set time period until it is fully discharged.
- **Charging window:** The battery charges at the predefined charging power within the set time period until it is fully charged.

Steps



1. Choose **More > Energy Management**.
2. Set the **Working Mode** to **Timed Plan**.
3. Select months for the current season. Users can set different seasons according to the energy demand and seasonal changes of each quarter.
4. Select the days on which the battery charging/discharging plan applies.
You can apply the charging/discharging plan to every day, or set different charging/discharging plans respectively for weekdays and weekends. The plan applies to every day by default.
 - **Every Day:** The set charging/discharging plan applies on all days. This mode is suitable for scenarios where the daily electricity price is relatively consistent.
 - **Weekdays & Weekends:** Set different charging/discharging plans respectively for weekdays and weekends.
5. To add more seasons, tap  to the right of the default season and select **Add**.



You can select a season and tap to modify its name or delete it.

6. Tap a time period on the **Discharge** or **Charge** column, a new discharging or charging window will be created (1 hour by default). Then, drag up and down to adjust the length of time, and tap on the window again to add it.



The discharging and charging windows cannot overlap.
The battery will not discharge in a time period with no settings. If the PV output is insufficient, the system purchases energy from the grid to meet the load demand, and allows the battery to charge from the excess PV energy.

7. Tap on an added window, choose **Set Power**, and set the discharging or charging power.
8. Tap **Apply Settings**.

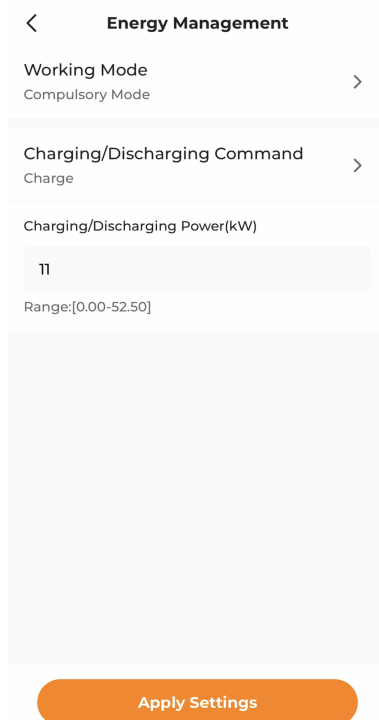
7.3.3.3 Compulsory Mode

The **Compulsory Mode** is mainly used in battery O&M to control the battery and make it operate in compliance with the preset charging/discharging mode and power. Please restore the system to the previous working mode after maintenance work is completed.

Function Logic

- Forced Charging: The battery charges at the preset charging power until it is fully charged.
- Forced Discharging: The battery discharges at the preset discharging power until it is fully discharged.

Steps



1. Choose **More > Energy Management**.
2. Set the **Working Mode** to **Compulsory Mode**.
3. Set the **Charging/Discharging Command**.
 - **Charge**: Force the battery to charge at the preset charging power until the battery SOC upper limit is reached.
 - **Discharge**: Force the battery to discharge at the preset discharging power until the battery SOC lower limit is reached.
 - **Stop**: Stop battery charging or discharging manually.
4. If **Charge** or **Discharge** is selected, set the target charging or discharge power in **Charging/Discharging Power**.
5. Tap **Apply Settings**.

7.3.3.4 VPP

In **VPP** mode, the system operates according to the feed-in power and battery charging/discharging commands from the VPP provider.

Energy management and scheduling will be conducted based on the external demands, to satisfy the needs and operational requirements of the grid and achieve efficient utilization and scheduling of external resources.

Steps

1. Choose **More > Energy Management**.
2. Set the **Working Mode** to **VPP**.

3. Tap **Apply Settings**.

7.3.3.5 DI Power Regulation

The adoption of "Ripple Control" dry contact control is supported for DI power regulation. If an emergency stop device is connected, users can also configure the emergency stop function.

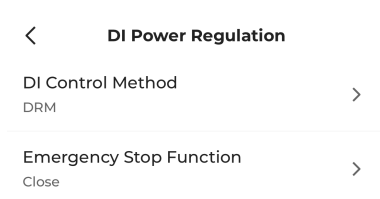


If the DI power regulation is not needed, set **DI Control Method** to "OFF".

7.3.3.5.1 DRM

DRM is a power control method that responds to external demands. In this context, power regulation is carried out according to the received external DRM signals.

Steps



1. Choose **More > Power Control > DI Power Regulation**.
2. Set **DI Control Method** to **DRM**.
3. Complete the settings for **Emergency Stop Function** by referring to [7.3.3.5.3 Emergency Stop Function](#).
4. Tap **Apply Settings**.

7.3.3.5.2 Ripple Control

In the "Ripple Control" mode, the system receives control signals from the grid in the form of dry contact signals, and perform power regulation as required.

If the "Ripple Control" mode is selected, the grid operator will convert the grid schedule signal into the dry contact signal and send it out. A total of 16 DI combinations are available, each with a specific power ratio. Please set the DI combination for the system so that it can receive and respond to grid signals properly.

Table 7-2 DI Interface Status

Icon	Description
	This DI interface is in the open state.
	This DI interface is in the closed state.



DI combinations cannot be repeated.

Steps

< **DI Power Regulation**

DI Control Method
Ripple Control >

Inverter Output Power Limit Ratio
Calculation Basis
Nominal Power >

No.	DI1	DI2	DI3	DI4	P%	
01	☐	☐	☐	☐	0	

+ Add DI Combination

Note: ☐ Disconnect ☒ Closed Range:0%-100...

Emergency Stop Function
Close >

1. Choose **More > Power Control > DI Power Regulation**.
2. Set the **DI Control Method** to **Ripple Control**.
3. Select DI ports, and set a power ratio in a range of 0%–100%.



Set DI combinations based on the control signals sent from the grid operator.

Example

If the control signal received is converted into the DI combination of 1100, which indicates a power limit ratio of 80%, set as follows:

No.	DI1	DI2	DI3	DI4	P%	
01	☒	☒	☐	☐	80	

4. Tap **Add DI Combination** to add other DI combinations.
5. Tap **Apply Settings**.

7.3.3.5.3 Emergency Stop Function

The emergency stop function allows users to stop the inverter immediately in case of an emergency.



The emergency stop function is available for SUNGROW inverters only.

Table 7-3 Emergency Stop Modes

Mode	Description
OFF	Emergency stop control is disabled.
Stop Inverter	When emergency stop is triggered, the inverter enters the emergency stop state.

Steps

< **DI Power Regulation**

DI Control Method
Close >

Emergency Stop Function
Stop Inverter >

Emergency Stop Status
Closed >

1. Choose **More > Power Control > DI Power Regulation**.
2. Open the **Emergency Stop Function** drop-down list. You can decide whether to enable the emergency stop function and select the emergency stop mode based on actual needs.
3. If **Stop Inverter** is selected, select a trigger condition in the drop-down list of "Emergency Stop Status".
 - **Open**: Emergency stop will be triggered when DI opens.
 - **Closed**: Emergency stop will be triggered when DI closes.
4. Tap **Apply Settings**.

7.3.3.6 Grid-connection Power Regulation

The energy management mode allows users to set power limits on energy purchase and feed-in.

Steps

1. Choose **More > Power Control > Grid-connection Power Regulation**.
2. In the **Energy Purchasing Control Method** drop-down list, select **Unlimited** or **Purchase Energy With Limited Power**.
 - **Unlimited**: There is no power limit for purchasing energy from the grid.
 - **Purchase Energy With Limited Power**: There is a power limit for purchasing energy from the grid.
3. If **Purchase Energy With Limited Power** is selected, set a proper power limit in **Power Limit for Energy Purchase** based on the rated current of the main power source equipment (e.g., household air circuit breaker) that is connected in the system.

< **Grid-connection Power Regula...**

Energy Purchase Control Method
Purchase Energy With Limited Power >

Power Limit for Energy Purchase

100 kW

Range:[0.00-600.00]



The value of **Power Limit for Energy Purchase** should not be lower than the total load connected in the system.

4. In the **Feed-in Control Method** drop-down list, select **Unlimited** or **Feed-in Limited Power**.
 - **Unlimited:** There is no power limit on energy feed-in.
 - **Feed-in Limited Power:** There is a power limit on energy feed-in.
5. If **Feed-in Limited Power** is selected, set a proper power limit in **Feed-in Limitation Ratio** for energy feed-in according to the local laws and regulations. The unit of the power limit is user-definable, "%" by default.

Feed-in Control Method ⓘ >
Feed-in Limited Power

Feed-in Limitation Ratio

80 % ▾

Range:[0.0-100.0]

6. In the **Third-Party Power Generation Systems** drop-down list, select **Disable** or **Enable**.
 - **Disable:** There is no power output from third-party power generation facilities.
 - **Enable:** There is power output from third-party power generation facilities.
7. If **Enable** is selected, provide the rated power of such power generation equipment in **Rated Power of Third-Party Power Generation Systems**.

Third-Party Power Generation... >
Open

Rated Power of Third-Party Power Generation Systems

30 kW

Range:[0.00-600.00]



This parameter should be set if a third-party inverter is connected to the device.

8. Tap **Apply Settings**.

7.3.4 Energy Management by iHomeManager

Step 1 On the **Device** tab, tap an **iHomeManager** to enter the details page.

Step 2 Choose **Settings > Energy management**.

Step 3 Tap **Operating mode** and select an energy management mode. For detailed descriptions and configurations of energy management modes, see [12.5.4 Energy Management by iHomeManager](#).

--End

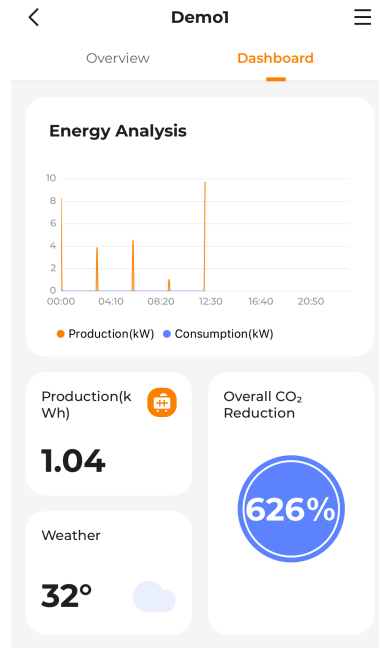
7.3.5 Common Parameter Settings of Energy Management System

On the Device page of the plant, tap **Energy management system**, select the target energy management system, and tap **Settings** to configure parameters.

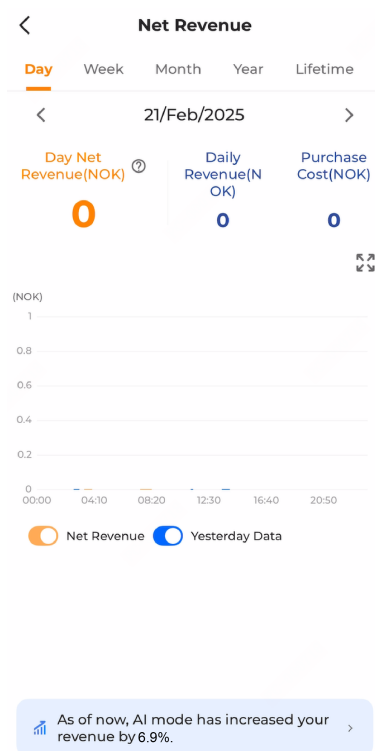
See [7.1.3 Strategy Configuration](#) for details.

7.4 Dashboard

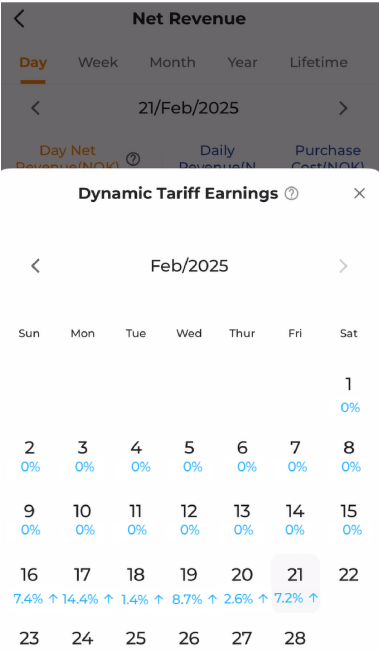
Only the **Owner** account is granted access to **Dashboard**. Information such as production, consumption, net revenue, energy analysis, and carbon emission goal is displayed here.



Tap **Net Revenue** to view the revenue for different time periods.

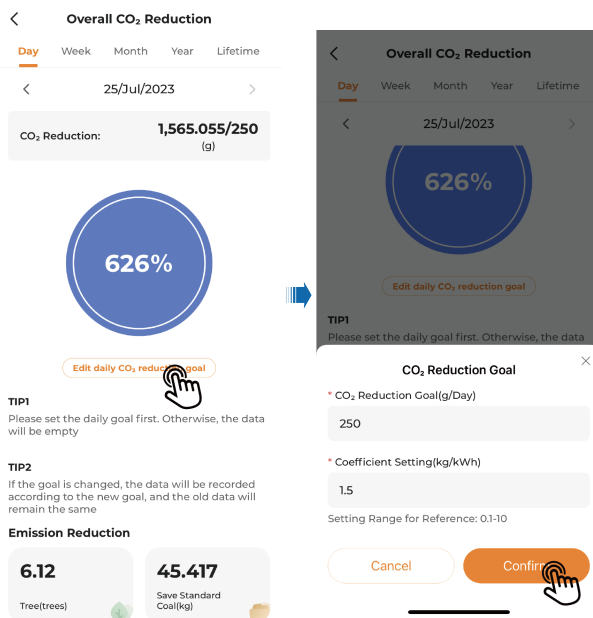


- Tap **Day**, **Week**, **Month**, **Year**, or **Lifetime**, or tap **Custom** and specify a time period to view the revenue gained by the plant.
- When the tariff mode is set to Dynamic Tariff and the AI Mode is enabled, the revenue increase rate driven by AI Mode is displayed on the page. You can tap to view the revenue increase details in a pop-up window.



The displayed revenue increase rate is calculated by iSolarCloud based on its algorithms and may differ from the actual data.

Tap **Overall CO₂ Reduction**. Tap **Edit daily CO₂ reduction goal** to set **CO₂ Reduction Goal** and **Coefficient Setting**, and then tap **Confirm**.



7.5 Device Replacement

In case any device in the plant has been damaged or replaced, please proceed as follows to replace the device on the iSolarCloud App.

You can go to “Device Replacement” and replace a communication device or an inverter.

Before replacement, please make sure that:

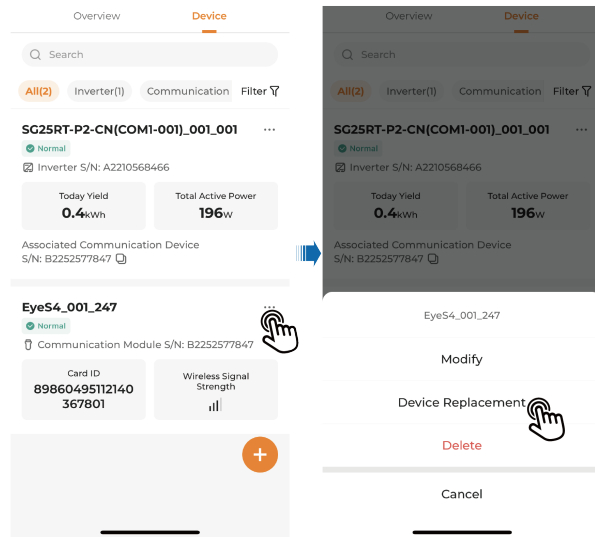


- The total yield of the new device has been zeroed out.
- The on-site device in the plant has already been replaced.

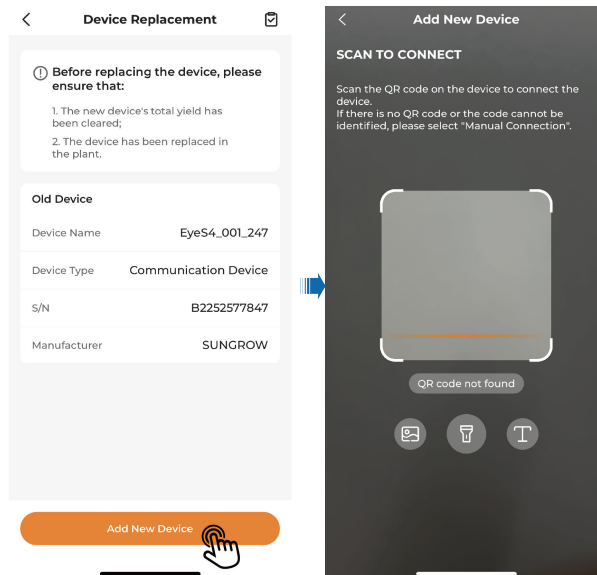
Steps for replacing a device on the iSolarCloud App are shown as follows, with a communication device as an example.

Step 1 Tap a plant on the screen of plant list to go to the **Overview** tab.

Step 2 Choose the **Device** tab. Tap **...** and choose **Device Replacement**.



Step 3 Check that the information about the old device is correct, then tap **Add New Device**. You can



- Scan the QR code on the new device.
- Tap  to upload a picture with the QR code of the new device.
- Tap . Then, select the device type, enter the S/N of the new device, and tap **Continue**.

Step 4 Check that the information about the new device is correct, and tap **Start Replacement**. Device replacement will then be completed.



When replacing an inverter, you can select **Add Compensatory Yield to New Device** to add the total yield of the old device to that of the new device as compensatory yield.

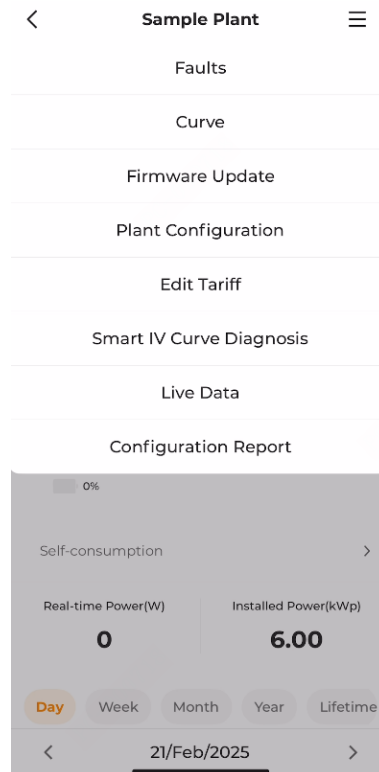
--End

7.6 Other Functions

You can explore more functions on the details screen such as Faults, Curve, Firmware Update, Plant Configuration, Edit Tariff, Smart IV Curve Diagnosis, Live Data, Configuration Report, and Layout Settings.



Functions available may vary by account type. Please refer to the information actually shown on the App.



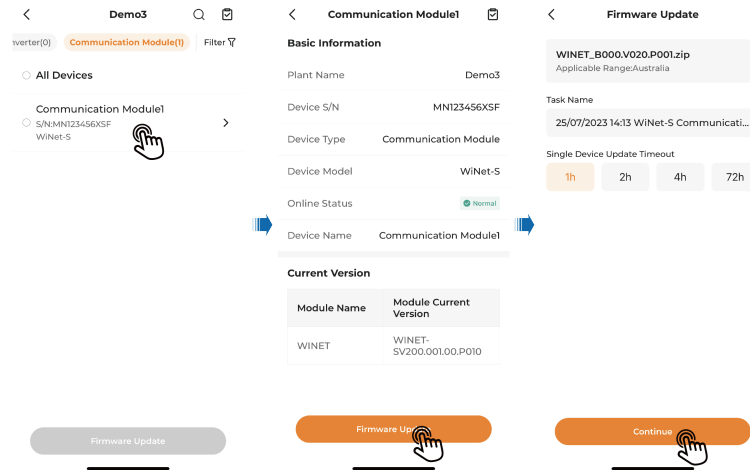
Faults

1. Choose > **Faults** to view the fault information about the plant.
2. See [8 Faults](#) for details.

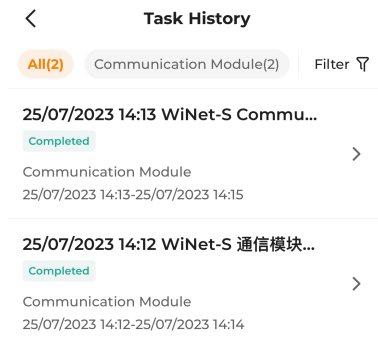
Firmware Update

1. Choose > **Firmware Update** to go to the corresponding screen.

2. Tap the device name to check its information and version. Then, tap **Firmware Update**, set the **Single Device Update Timeout**, and tap **Continue**. The firmware update will begin once the online update package has been validated.



3. Tap  in the upper right corner of the screen to view the device update history in **Task History**.



Plant Configuration

1. Choose  > **Plant Configuration**. You will go to the **Plant** tab by default.
2. You can check the **Basic Information**, **Owner Information**, and **Other Information** of the plant on this screen.
3. Tap **Edit** at the bottom of the screen to modify the plant information.

Edit Tariff

1. Choose  > **Edit Tariff** to go to the corresponding screen.
2. See [7.6.1 Edit Tariff](#) for details.

Smart IV Curve Diagnosis

1. Choose  > **Smart IV Curve Diagnosis** to go to the corresponding screen.
2. See [9.4 IV Curve Online Diagnosis](#) for details.

Live Data

1. Choose  > **Live Data** to go to the corresponding screen.
2. See [9.3 Live Data](#) for details.

Configuration Report

1. Choose  > **Configuration Report** to go to the corresponding screen.
2. See [Configuration Report](#) for details.

Set up a Layout

1. Choose  > **Layout Settings** to go to the corresponding screen.
2. See [7.2.2 Set up a Layout](#) for details.

7.6.1 Edit Tariff

Step 1 Select a currency from the **Currency** drop-down list.

Step 2 Set the tariff mode. Options include **Dynamic Tariff** and **Fixed/TOU tariff**.



Currently, only users in certain countries can set dynamic tariffs when purchasing iHomeManager. The function availability is subject to the actual page display. If you wish to expand the countries to which the dynamic tariff function is applicable, contact Sungrow Customer Service at any time.

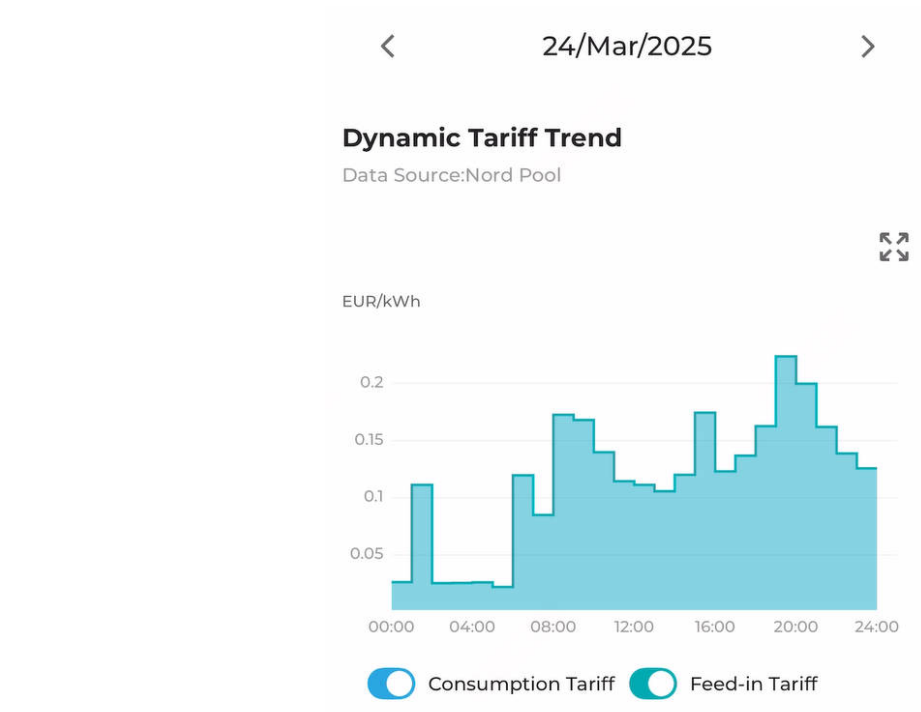
- Dynamic Tariff



Make sure you have signed dynamic tariff plans with the electricity retailer. Otherwise, the revenue may be inaccurate.

- a. Configure the **Tariff Source** and **Bidding Zone**.

After the configuration is complete, the dynamic tariff trend of the bidding zone will be displayed on the screen.



- b. If needed, turn on **Taxes & Markup**, and set the **VAT** and **Surcharge** to adjust the **Consumption Tariff** and **Feed-in Tariff**.

Taxes & Markup ? ☒

Consumption Tariff

VAT(%) 0

Additional Fee(EUR/kWh) 0

Feed-in Tariff

VAT(%) 0

Additional Fee(EUR/kWh) 0



Calculation formula for the electricity taxes and markup:
 $(1 + \text{VAT}) \times (\text{spot price} + \text{surcharge})$

VAT: Additional charge applied as a percentage of the total electricity fee for a billing period.

Surcharge: All the extra fees you need to pay per kWh (e.g. grid fees, taxes and levies, service fees, renewable energy surcharges).

Example: Quickly set electricity tariffs

Table 7-4 Electricity Tariffs of a Power Company (Excluding Tax)

Item	Price	Remarks
Electricity Tariff	Hourly spot price set by the power exchange	Excluding tax
Grid Consumption Fee	0.24 NOK/kWh	
Energy Tax	0.32 NOK/kWh	
VAT: 25%		

Enter 25 in **VAT (%)** based on the VAT, and enter 0.56 in **Surcharge (NOK/kWh)** based on the sum of the grid consumption fee and energy tax.

- Fixed/TOU tariff

Set the Tariff Type and Tariff respectively for **Feed-in Tariff** and **Consumption Tariff**.

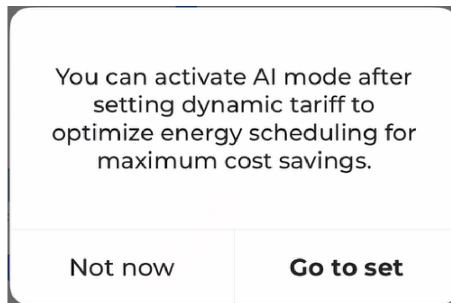
- Fixed tariff: Rate charged for electricity consumed at different times of day is fixed.
- Feed-in/Consumption Based Tariff: You can set tiered rates for feed-in/consumption electricity during different time windows based on usage.
- Time-of-Use Tariff: You may set different rates for electricity consumed in different time windows of day. The time windows cannot overlap.
- Time-of-Use Tariff (Weekday+Weekend): You may set rates for electricity consumed in different time windows of day, for the weekday and the weekend separately.



By selecting the **Reset Revenue** checkbox, you can reset the revenue since the plant was first connected to iSolarCloud.

Step 3 Tap **Confirm**.

If the communication equipment includes iHomeManager and the current energy management mode is not AI Mode, when you set the tariff mode to **Dynamic Tariff** and tap **Confirm**, the following prompt is displayed.



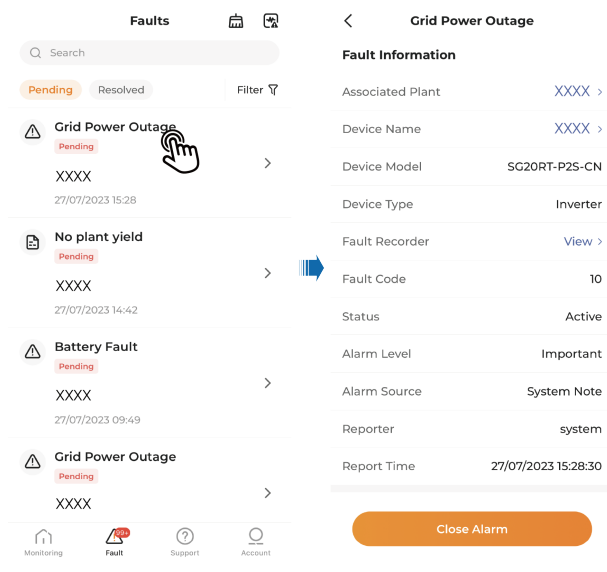
To activate AI Mode now, click **Go to set** to jump to the **Energy Management** page for configuration. For detailed instructions, see [12.5.4.6 AI Mode](#).

--End

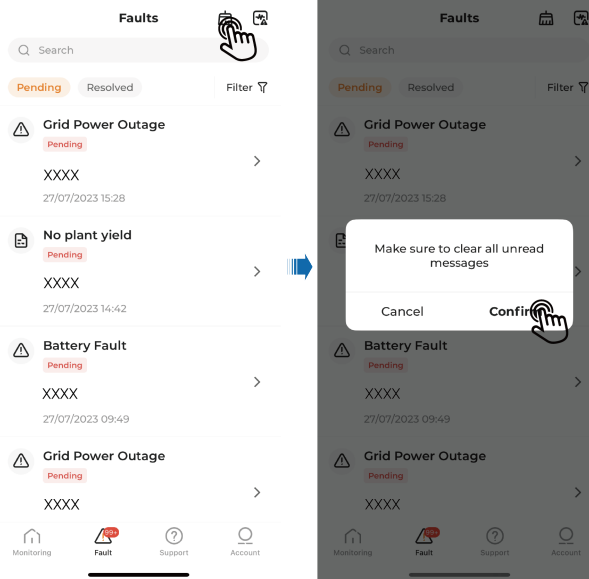
8 Faults

Log in to the iSolarCloud App, then tap **Fault** in the bottom navigation bar to go to the fault list. Faults in the **Pending** state will be shown by default. You can choose **Resolved** to view faults that have already been closed.

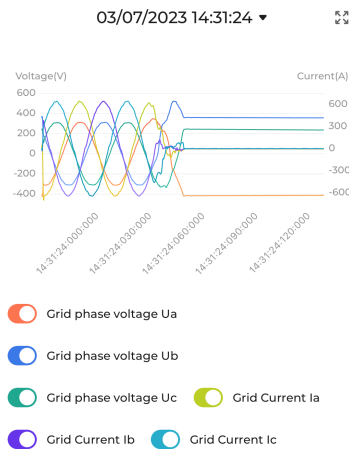
- Tap the fault name to view the detailed information.



- Enter **Fault Code** or **Fault Classification** in the search box at the top of the screen to search for the relevant fault information.
- Tap  in the upper right corner of the screen to dismiss the unread fault messages.



- Tap  in the upper right corner of the screen to check the **Fault Recorder**. You can:
 - Enter a task name in the search box at the top of the screen to search for the relevant fault recording task.
 - Choose the **Successful** tab, and tap the task name to view the data captured in a successful fault recording task.



- Tap , select the **Plant**, **Date**, **Sort**, or fault type, and then tap **Confirm**. The list of faults that meet the query criteria will then be shown on the screen.

Faults

Filter

×

Plant

All Plants >

Date(Start Time)Date(End Time)

17/07/2022 >17/07/2023 >

Sort ^

Start with the latestStart with the oldest

Fault ▾

Alarm ▾

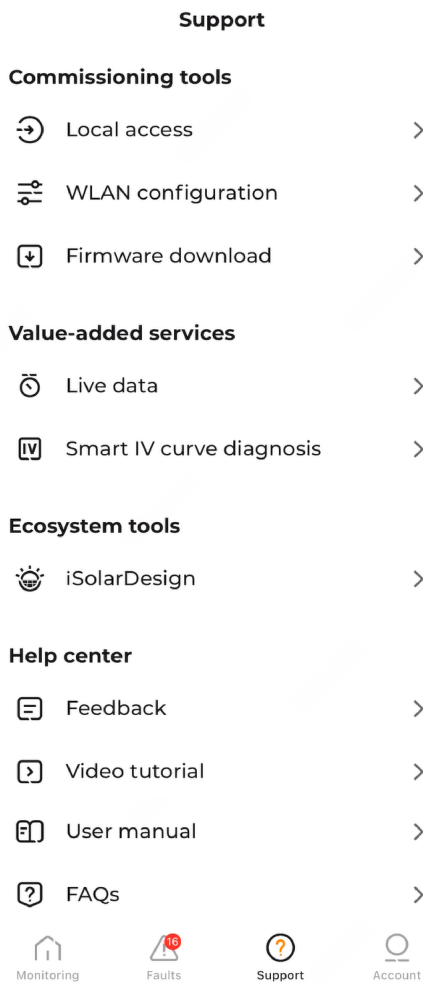
Prompt ▾

Advice ▾

ResetConfirm

9 Support

Log in to the iSolarCloud App, and tap **Support** at the bottom of the screen.



Functions available for the Retailer/installer and the Owner are different. Please refer to the information actually shown on the App.

Table 9-1 Function Description

Function	Description
Local access	Establish communication with the phone via WLAN or Bluetooth connection to enable local maintenance of the inverter. You can

Function	Description
	check the information about and set parameters for the inverter. See the following sections for details: Versions earlier than V2.1.6.20250218: 11.1 Login via WLAN Connection (Local) and 11.2 Login via Bluetooth Connection (Local). V2.1.6.20250218 and later versions: 12.1.2.1 Connection by Scanning QR Code (WLAN) and 12.1.3.1 Connection by Scanning QR Code (Bluetooth).
WLAN configuration	Connect the communication module to the home network to enable data exchange between the inverter and the cloud server. See 9.1 WLAN Configuration for details.
Firmware download	Download an update package. You can choose Local access > More > Firmware update to update the firmware using the downloaded package. See 9.2 Firmware Download for details.
Live data	Quickly obtain the real-time device data. See 9.3 Live Data for details.
Smart IV curve diagnosis	See 9.4 IV Curve Online Diagnosis for details.
iSolarDesign	Generate reports quickly by configuring parameters, without the need for 3D design. See 9.5 iSolarDesign for details.
Feedback	Report problems you have encountered with regard to the use of the devices or iSolarCloud App. See 9.6 Feedback for details.
Video tutorial	Videos on how to create a plant and perform device commissioning and troubleshooting, etc.
User manual	User manual for the iSolarCloud App.
FAQs	Frequently asked questions and answers with regard to the use of the iSolarCloud App.

9.1 WLAN Configuration

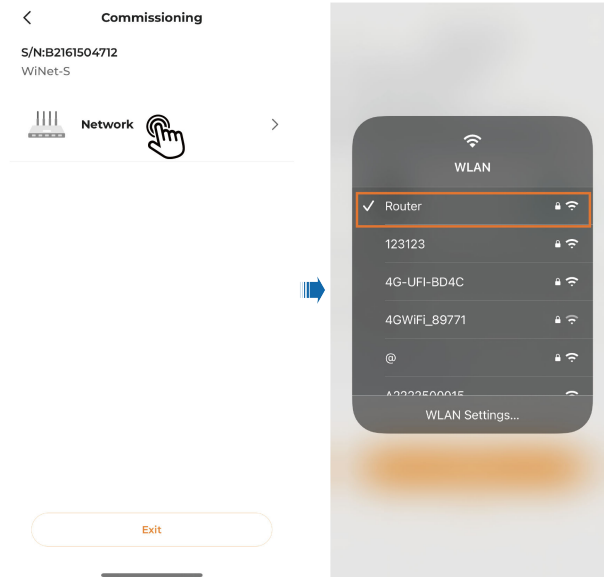
By completing the **WLAN Configuration**, you can access the wireless communication module to the home network, thus enabling data exchange between the inverter and the cloud server. You can then view the inverter data or send commands to control the inverter on the App.

Requirements

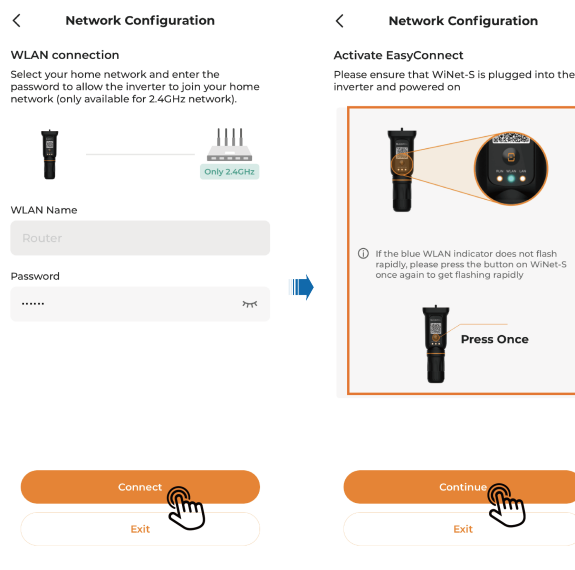
- The wireless communication module has been plugged into the inverter.
- You have acquired the WLAN name and password of the home network.

Network Configuration for WiNet-S/WiNet-S2/WiFi-P2

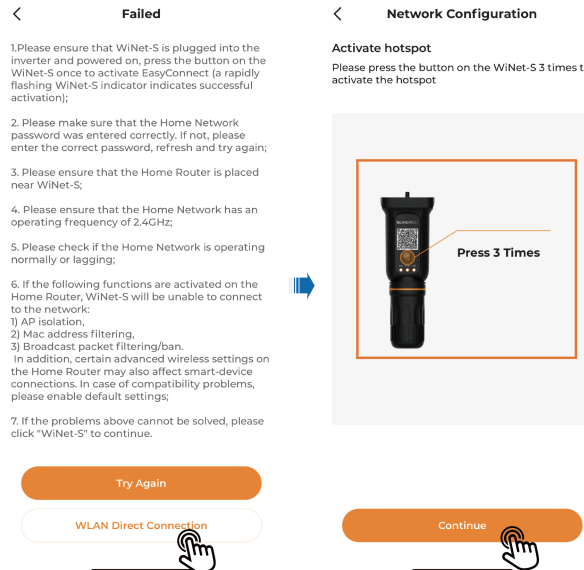
1. Tap **WLAN Configuration**, and scan the QR code on the WiNet-S/WiNet-S2/WiFi-P2 module.
2. Tap **Network**. Turn on WLAN on the phone, and connect to the home router.



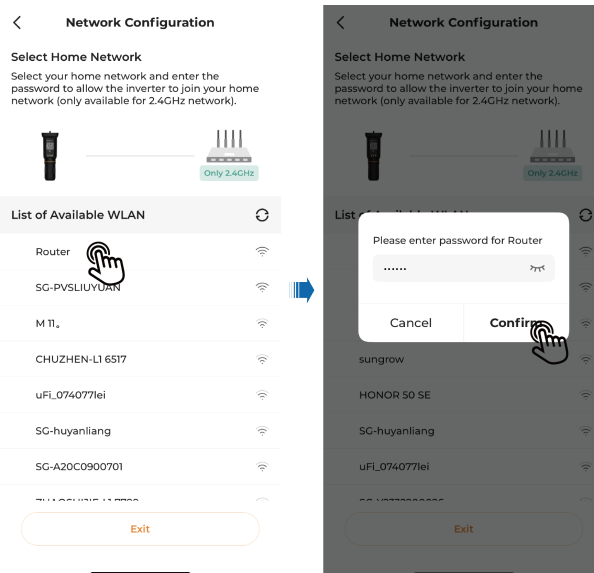
3. Go back to "Network Configuration", enter the WLAN password, and tap **Connect**. Then, press the button on the device once by following the onscreen instructions to enable EasyConnect, and tap **Continue**.



4. Wait for the module to connect to the home network and the cloud. Network configuration is now completed.
5. In case the EasyConnect has failed, tap **WLAN Direct Connection** in the pop-up on the screen. Next, press the button three times by following the onscreen instructions, and tap **Continue**. Then, tap **Join** in the confirmation dialog box shown on the screen.



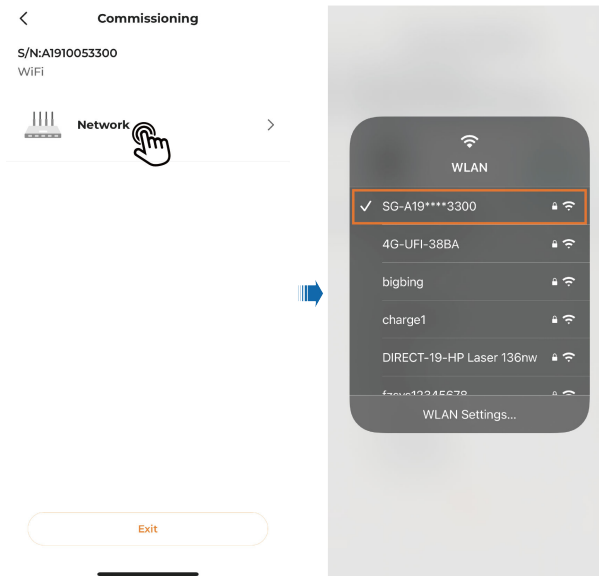
6. Choose the target WLAN, enter the password, and tap **Confirm**. Wait for the module to connect to the home network and the cloud. Network configuration is now completed.



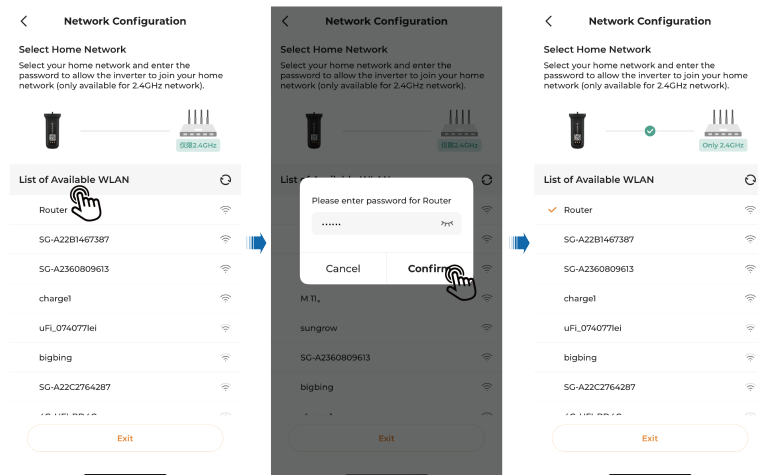
Network Configuration for WiFi Module

1. Tap **WLAN Configuration**, and scan the QR code on the WiFi module.

2. Choose **Network**. Turn on WLAN on the phone, and connect to the WLAN named as "SG-WiFi module S/N". The SN of the WiFi module can be found on the side of the module.



3. Select the home WLAN, enter the password, and tap **Confirm**.



4. Wait for the module to connect to the home network and the cloud. Network configuration is now completed.

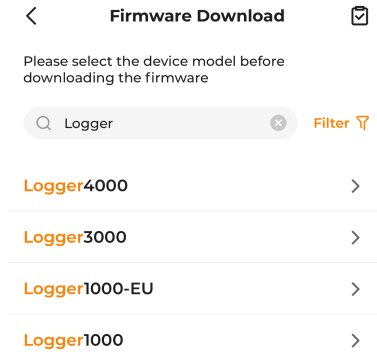
9.2 Firmware Download

Users can access **Firmware Download** under **Service** to download a firmware update package.

Step 1 Tap **Firmware Download**. You will then see a device list.

Step 2 All available devices will be displayed on the screen. You can search for the device to be updated in the following ways:

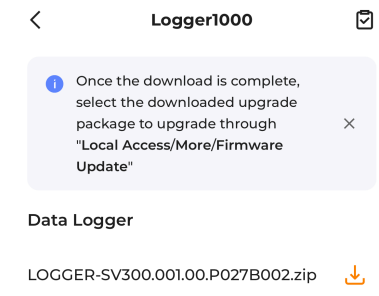
- a. Option 1: Specify the **Device Model** in the search box at the top of the screen to search for the specific device.



- b. Option 2: Tap . Select a device type and confirm to search for this specific type of devices.



Step 3 Tap the device name to go to the screen for firmware download. Tap  to start downloading the update package.



Step 4 Tap  in the upper right corner of the screen to view the downloaded update packages under **Downloaded**.

Step 5 You can delete one or more update packages, or remove them all at once.

- a. Delete a single or multiple packages: Select one or more packages in **Downloaded** and tap **Delete** to remove them from the system.



- b. Delete all packages: Tap **Delete All** at the bottom of the **Downloaded** screen and then tap **Confirm** in the confirmation dialog to remove them from the system.

--End

9.3 Live Data

Users granted access to “Live Data” can quickly acquire real-time device data and thus grasp the operating status of the devices.

Requirements

The “Live Data” function is currently available for your account.

Step 1 Tap Live Data.

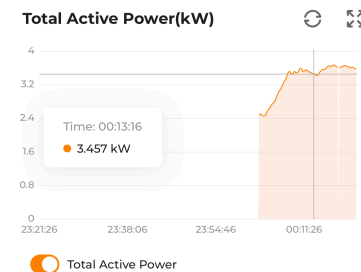
Step 2 Select the plant you want to check on the **Live Data** screen. You can also enter the plant name in the search box at the top of the screen to look for a plant.

Step 3 Live data status:

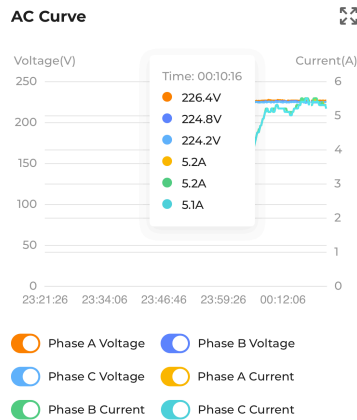
- : Live data enabled
- : Enabling live data
- : Live data cannot be enabled, as the device went offline or a fault has occurred
- : The device does not support live data

Step 4 View the live data

- Tap the device. You will go to “**Main Measuring Point**” by default. On this screen, you can view the device’s **AC Information**, **Overview**, **Battery Information**, **Grid Information**, and **Load Information**.
- Tap  next to the measuring point to view its curve.



- Choose **AC Curve** to check the voltage and current curves of different phases.



- If the measuring point has an icon  with it, it indicates that the live data of this measuring point is not available for this device.

--End

9.4 IV Curve Online Diagnosis

This function is used to perform online IV curve scanning of PV modules. By applying the diagnosis algorithm and through analysis, it automatically identifies faulty modules and generates a diagnosis report along with recommendations for operations and maintenance (O&M). This process enhances O&M efficiency and increases the plant's yield.

This section gives an introduction about how to perform online IV curve scanning on PV modules, check the IV curve diagnosis and analysis results, set plant and inverter parameters, and view the diagnosis history.

Requirements

The Smart IV Curve Diagnosis function is available for your account.

9.4.1 Parameter Settings

Settings of **Plant Parameter** and **Inverter Parameters** should be completed before using the IV curve diagnosis function for the first time.

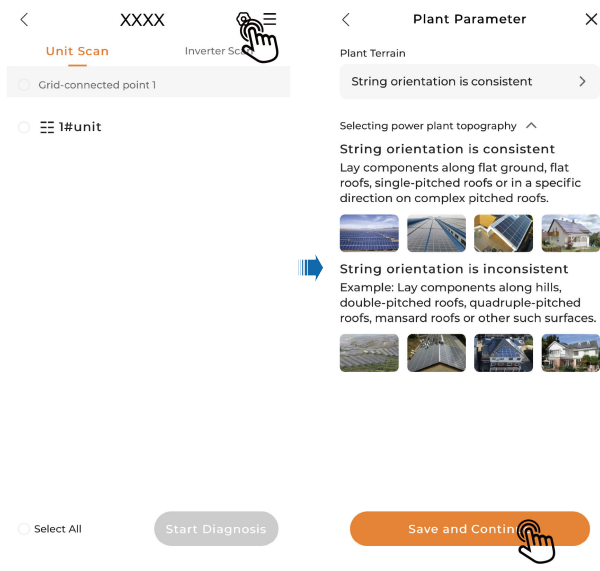
Step 1 Tap **IV Curve Online Diagnosis**.

Step 2 Select the plant on which you want to perform IV curve scanning from the list.

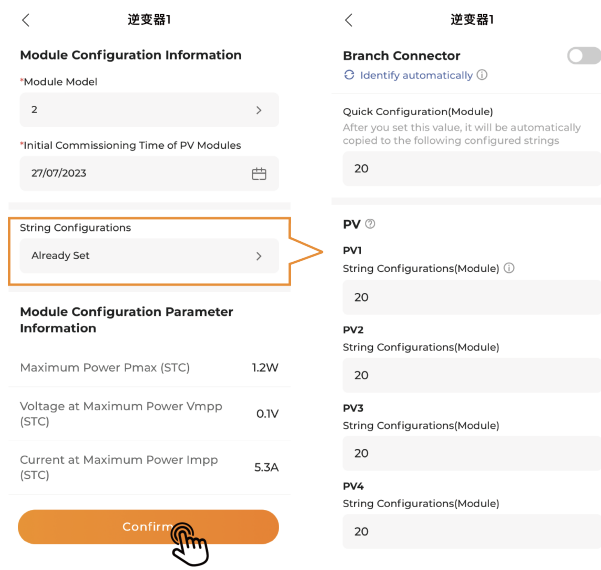
Step 3 Tap  in the upper right corner of the screen to go to **Settings**.

Step 4 Proceed as follows based on the actual situation.

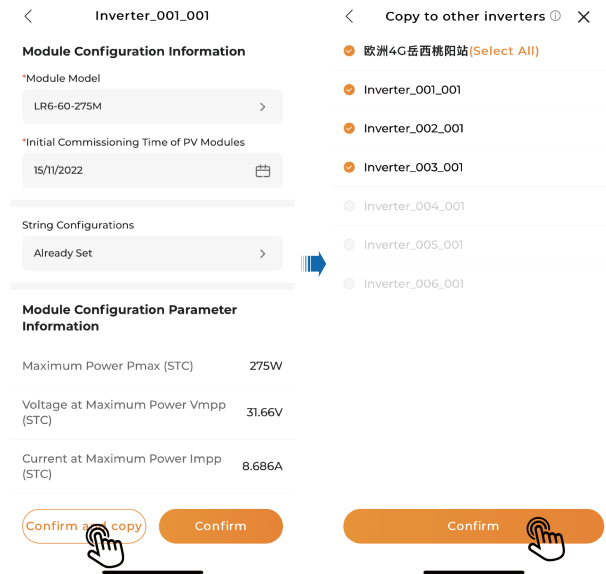
- Set **Plant Parameter**: Set **Plant Terrain** to **String orientation is consistent** or **String orientation is inconsistent**. Then, tap **Save and Continue**.



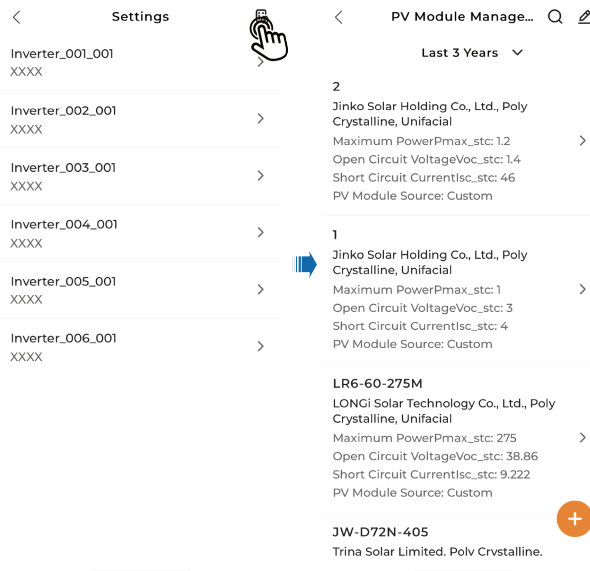
- **Set Inverter Parameters:** Select the inverter.
 - Set one inverter: Set **Module Model**, **Initial Commissioning Time of PV Modules**, and **String Configurations**, then tap **Confirm**.



- Set inverters in batch: After completing settings for one inverter, tap **Confirm** and **copy**. Select the inverters that apply same settings, and tap **Confirm**.



- Tap  in the upper right corner of the screen, and you will then go to **PV Module Management** screen. You can search for, add, delete, edit, and view the module information.



You can only delete and modify the information about the module added by yourself.

- Search for a module: Tap  in the upper right corner of the screen, and enter the manufacturer or the model of the module. Then, choose **Last 3 Years** or **All** based on the actual needs. Modules that meet the query criteria will then be shown.

- Add a module: Tap  in the lower right corner of the screen, complete the information about the module, and tap **Confirm**.
- Delete a module: Tap  in the upper right of the corner. Select a module, tap **Delete**, and double-confirm the deletion in the dialog box to delete it. Click **Confirm**.
- Edit and view module information: Tap the module, and you will then go to “**PV Module Information**”. You can edit and view the detailed information about the module on this screen.

--End

9.4.2 Unit Scan

Step 1 Tap **Smart IV Curve Diagnosis**.

Step 2 Select the plant, on which you want to perform IV curve scanning, from the list.



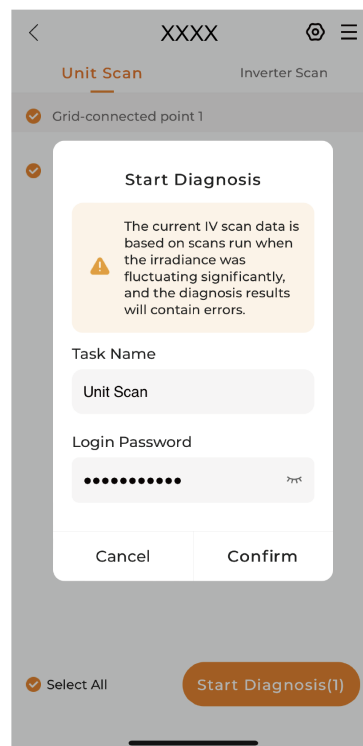
You cannot perform IV curve scanning on an offline plant.
Unit scan is not available for residential PV plants and residential energy storage plants.

Step 3 You will go to **Unit Scan** by default. Inverters in the plant will all be scanned by default.

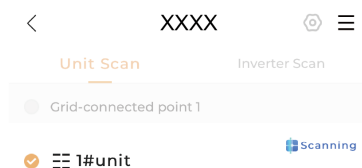
Step 4 Select devices, and tap **Start Diagnosis** in the lower right corner of the screen. The system will verify whether settings of device parameters have been completed. If not, a notification dialog box will appear; tap **Complete Them Now** to complete the settings. You may refer to [9.4.1 Parameter Settings](#) for details.



Step 5 The **Start Diagnosis** dialog box will pop up. Enter **Login Password**, and tap **Confirm**.



Step 6 Once the command is sent out, the scanning status will be refreshed in real time, with diagnosis progress showing at the bottom of the screen.



Step 7 Upon completion of scanning, tap  in the upper right corner of the screen, and you will see the **Task List**.

Step 8 Tap the task name to check the diagnosis results.

Step 9 Select the report type and the device, and tap **New Report** at the bottom of the screen. You will then go to the **Report List**.

Step 10 You can choose a diagnosis report and tap  to preview the report, and tap  to copy the link and open it in a browser to download the diagnosis report.

--End

9.4.3 Inverter Scan

Step 1 Tap **Smart IV Curve Diagnosis**.

Step 2 Select the plant, on which you want to perform IV curve scanning, from the list.



You cannot perform IV curve scanning on an offline plant.

Step 3 You will go to the **Unit Scan** tab by default.

Step 4 Choose **Inverter Scan**. You can have one or multiple inverters scanned.

Step 5 Select the inverter, and tap **Start Diagnosis** in the lower right corner. The system will verify whether settings of device parameters have been completed. If the parameters have not been set, a prompt will show up. In such a case, tap **Complete Them Now** to complete the settings. For details, see [9.4.1 Parameter Settings](#).

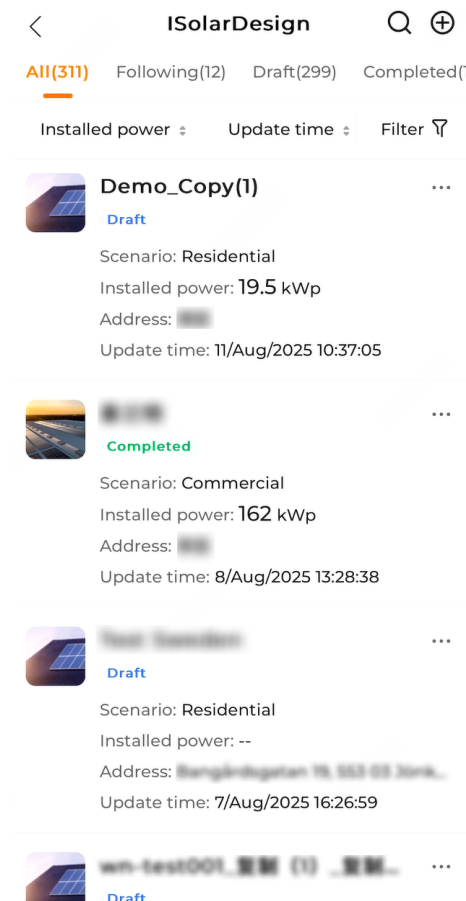
Step 6 Refer to **Step 5** to **Step 10** in [9.4.2 Unit Scan](#).

--End

9.5 iSolarDesign

9.5.1 Project List

After logging in to the iSolarCloud App, choose **Support > iSolarDesign**. The page displays all quick design projects under the current account.



Projects are listed in descending order of update time and can be filtered by the project statuses at the top.

The following operations are supported:

- Search for Project

Tap  in the upper right corner. Enter a project name in the search bar to search for the project.

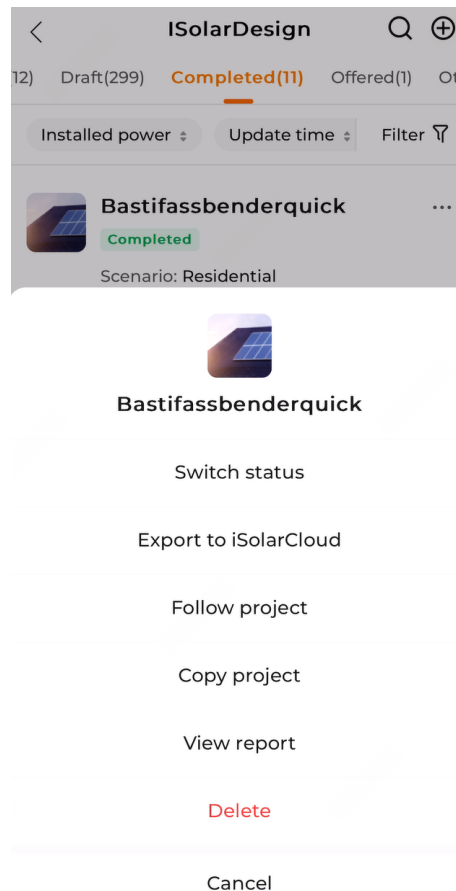
- Create Project

Tap  in the upper right corner. See [9.5.2 Project Creation](#) for details.

- Filter Project

Tap **Filter**, select the target scenario and last update date, then tap **Confirm** to view the projects that match the conditions.

Tap  to the right of a project name to perform the following operations:



- Switch status: Tap to select a status in the pop-up window, then tap **Confirm**.



You can switch status for only projects with the status **Completed**. The status can only be switched from **Completed** to **Offered** or **Others**.

- Export to iSolarCloud: Tap to export the plant information of the current project to the iSolarCloud App and jump to the iSolarCloud plant creation process.

- Follow project: Tap to follow the project. The  icon will appear to the right of the project name. Tap the icon again to unfollow.
- Copy project: Tap to copy the current project. The copied project name defaults to “Project name_Copy(X)”.
- View report: Tap to go to the **Design report** page, where you can view the project's general information, electrical data, bill of materials (BOM), yield and system PR forecast, string information, PV array parameters, and emission reduction data. Tap **Download** to save the report locally.
- Delete: Tap to delete the project.

9.5.2 Project Creation

Tap  in the upper right corner of the page to complete a quick design for a project.

The workflow of quick design is shown below:

- Complete project information by referring to [9.5.2.1 Project Information](#).
- Configure PV modules by referring to [9.5.2.2 Configure PV Modules](#).
- Perform electrical design by referring to [9.5.2.3 Electrical Design](#).



The supported scenarios vary by server. For details, see the following table.

Supported Scenario	International Server	European Server	Australian Server
Residential	✓	✓	✓
Commercial and industrial	✓	✓	✓
Microinverter	✗	✓	✗
Optimizer	✓	✓	✗
RSD	✓	✗	✗

9.5.2.1 Project Information

Step 1 Fill in general information.

1

Project info

2

3

Project info

*Project name

2025-08-26 20:10 Plan

Available area(m²)

Please enter

*Project address

Search address

*Longitude (°)

Please enter

*Latitude (°)

Please enter

*Ambient temperature(°C)

Please enter - Please enter

*Project type

Residential

Commercial

*Grid type ?

Please select

✓

Annual

Monthly

Consumption(kWh)

Please enter

Continue

Save and exit

Parameter	Description
Project Name*	A default name in the format of " <i>Date + Time + Project name</i> " is generated. The name can be modified.
Available area (m ²)*	Area of the site where the PV modules are installed.
Project address*	Detailed location of the project.
Latitude (°)*	Auto-filled with the latitude of the project location.
Longitude (°)*	Auto-filled with the longitude of the project location.
Ambient temperature (°C)*	The minimum and maximum ambient temperature at the project site. Enter values in the ranges of -40 to 30 and 0 to 60, respectively.
Project scenario*	Select Residential or Commercial as needed.
Grid type*	Select an option based on the actual number of phases and the voltage. For the voltage parameters, refer to the rated AC voltage of the specific inverter model.
Consumption (kWh)	Select Annual or Monthly , and set the electricity consumption for the project.



Parameters marked with * are required.

To configure a project with microinverters, set the Project scenario to Residential, and ensure the selected Grid type is within the range supported by the microinverters, such as 1ph 220V.

Step 2 Tap **Continue** or **Save and exit** to save the project information.

--End

9.5.2.2 Configure PV Modules

Step 1 Select a module manufacturer from the **Manufacturer** drop-down list. Select a module model from the **Model** drop-down list. Tap to view module details.

< Create project

✓

2 Configure PV modules

3

PV modules

* Manufacturer

Jinko Solar Holding Co., Ltd. >

* Model

Tiger Neo 78HL4-BDV 625-6... >



For projects involving microinverters, modules with the following power ranges are recommended:

- S1600S/S800S/S450S: 375 W–570 W modules.
- S1000S: 375 W–650 W modules.

Step 2 Enter the number of modules in **Modules**.

Step 3 Select a mounting type. Options include: **Flush mount**, **Tilt**, and **Dual tilt**.

If **Tilt** is selected, set the **Roof azimuth(°)** and **Roof tilt(°)**.

If **Dual tilt** is selected, set the **Ridge direction** and **Relative tilt**.

✓ — **2 Configure PV modules** — 3

PV array 1 ✎ ^

* Modules

40

* DC power(kW)

26

Mounting type



**Flush
mount**

11

Tilt

1

Dua

Roof tilt (°)

0

Roof azimuth (°)

0



⊕ Add PV array

Continue

Save and exit

Step 4 If there are multiple PV arrays, tap **Add PV array** and refer to steps 2–3 for parameter configuration.

Step 5 Tap **Continue** or **Save and exit** to save the module configurations.
--End

9.5.2.3 Electrical Design

Electrical design includes electrical configuration and plan configuration.

Step 1 Electrical configuration: Based on site conditions, select **Configure microinverter**, **Configure optimizer**, **Configure RSD**, or **Configure battery**, and set the **Target DC/AC ratio**.

< **Electrical configuration**

Configure microinverter ☒

Configure optimizer ☐

Configure RSD ☐

Configure battery ☐

***Target DC/AC ratio**

1
⌂

Actual ratio
1.13

Generate plan

Save and exit

- If **Configure microinverter** is selected, other options cannot be selected simultaneously, and the **Target DC/AC ratio** is 1:1 by default.
- If **Configure optimizer** is selected, set the **Optimizer type** and **Optimizer model** according to the project.
- If **Configure battery** is selected, enter the **Total capacity (kWh)**. The system will recommend an actual capacity based on the **total capacity**.



Total capacity (kWh) is a required parameter. To ensure energy balance and system stability, the recommended actual capacity may differ from the target capacity. If this does not meet your requirements, you can manually adjust the plan.

Step 2 Tap **Generate plan** to enter the **Plan configuration** page.

Step 3 Plan configuration: Based on project conditions, select a system-recommended plan or customize the plan according to actual inventory or preferences.

<

Plan configuration

i

The following is a default solution recommended by the available inventory system. You may customize it based on actual stock or your preferences.

[Don't remind again.](#)

×

Plan 1

Precise
DC/AC
ratio

Plan 2

Most
economical

Plan 3

Maximize
string use

Closest match to target ratio

✎

DC/AC ratio	Inverters	Module quantity
1.19/1.2	1	40/40

☒

SG17RT

DC/AC ratio: 1.19 Modules: 40

×
☰
▼

Generate report

Save and exit

- Precise DC/AC ratio: Closest match to the target DC/AC ratio.
- Most economical: Reduce inverter cost and avoid capacity waste.
- Maximize string use: Maximize PV modules' output power.
- Customize: Tap ✎ for any recommended plan to perform a custom design. You can modify, delete, add, or clear configurations.

[<](#) **Edit**

Custom

Make it your own

DC/AC ratio	Inverters	Module quantity
1.19/1.2	1	40/40

Model1 - SG17RT ^

*Inverter model

SG17RT
v

*Number of inverters

1

Modules

Automatic stringing ?
Generate

Confirm

Clear all



- The applicability of system recommended plans is affected by module quantity and inverter power. If the number of modules or inverter power exceeds the upper limit, no recommended plan will be provided, and you can create a custom design.
- If no inverters are compatible with the current configuration, please modify the configuration list: country, grid type, PV configuration, and electrical settings.

Step 4 Tap **Generate report** or **Save and exit** to save the current design.

--End

9.5.2.4 Generate Report

Step 1 After completing electrical design by referring to [9.5.2.3 Electrical Design](#), tap **Generate report** to enter the **Design report** page.

The report displays the following information of the project:

- General information

<

Design report



General information

Name

Scenario

Residential

Address

Munich Germany

Designer

Vector

Design time

16/Aug/2025 16:40:24

Download

Save and exit

- Data overview

Data overview		
Total AC power	Total DC power	
4.8 kVA	5.4 kWp	
DC/AC ratio	PV module	Annual yield
1.13	12	1.97 MWh

- Bill of materials (BOM)

Bill of materials (BOM)

Precautions

Expand 

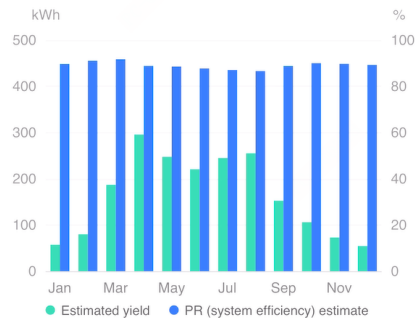
Microinverter	× 3
SI600S SUNGROW	
PV module	× 12
Tiger Neo 54HL4R-(V) 435-460W_450W	
Jinko Solar Holding Co., Ltd.	
Microinverter accessory list	× 7
T-type AC bus - 2.8m	× 3
MEC-2.8T01 SUNGROW	
AC male connector	× 1
MC-M01 SUNGROW	
T-type connector	× 1
MIC-T32A01 SUNGROW	
T-connector sealing cap	× 1
MC-EC01 SUNGROW	
Terminal removal tool	× 1
MIT-DT01 SUNGROW	



If microinverters are configured, the BOM also includes microinverter accessories.

- First year yield & system PR forecast

First year yield & system PR forecast



- String information and PV array parameters

String information ^

☒ S1600S ×1	^
DC/AC ratio: 1.13 Module quantity: 4	
☒ S1600S ×1	^
DC/AC ratio: 1.13 Module quantity: 4	
☒ S1600S ×1	^
DC/AC ratio: 1.13 Module quantity: 4	

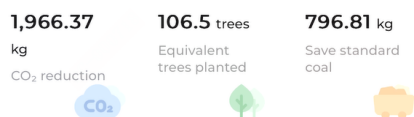
PV array parameters ^

PV array 1

Mounting type	Flush mount
Module number	12
DC power(kW)	5.4
Roof tilt	12
Roof azimuth	35

- Emission reduction

Emission reduction



Step 2 Tap **Download** to save the report locally.

--End

9.6 Feedback

Tap **Feedback**, and complete the following information.

Item	Description
Product Type (Required)	Hardware: Feedback on the device used in the plant. iSolarCloud: Feedback on the iSolarCloud App. Others: Other feedbacks.
Plant	Choose the plant about which you want to report a problem.
Device Type	Select a device that has been added in the plant.

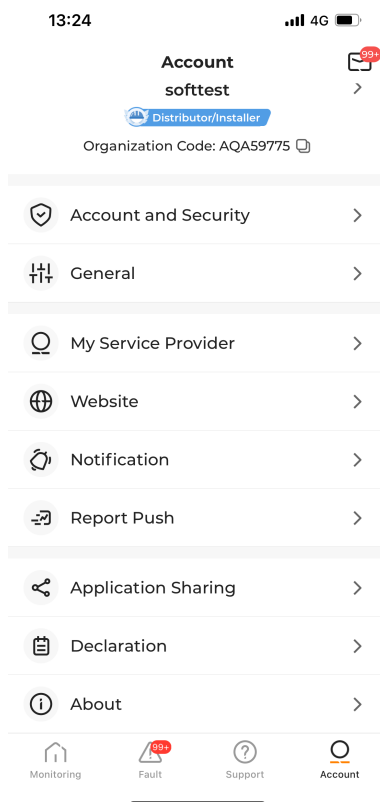
Item	Description
Device S/N	Enter the S/N of the abnormal device.
Problem Description (Required)	Please describe your problem in more than 10 words so that we can provide better assistance.
Attachment	Take or upload a picture.
Contact information	Provide your phone number or email address so that we can provide better assistance.

My Feedback

1. Tap  in the upper right corner of the screen to check your feedback history. You will go to **All** by default. You can choose **Pending**, **Processing**, or **Closed** to view feedbacks in different states.
2. Tap on a feedback to view its detailed information. Tap **Close** if the problem has been resolved. If the problem has not been resolved, tap **Reply** to submit another feedback ticket.

10 Account

Log in to the iSolarCloud App and choose **Account**. On this screen, you can edit the account and security and general settings, share the App, and view the system messages, legal notice, and software information.



Check System Messages

Tap  in the upper right corner to go to the **System Message** screen. You can:

1. Tap  to clear the unread messages on this screen.
2. Tap , select messages, and tap **Delete** to delete them all.
3. Swipe left on a system message and tap **Delete** to delete it.

Modify Your Account Information

1. Tap the avatar at the top of the screen to check account information such as **General Information**, **Organization Information**, and **Upper Level Organization Information**.
2. You can change your avatar, nickname, username, country/region, and time zone.

Account and Security Settings

1. Tap **Account and Security**, you can add an **Email** to your account or change the current one, set **Account Password**, or **Delete Account**.
2. Tap **Email**, enter an email address, and tap **Send**. Then, enter the verification code you have received through email, and tap **Assign** to link the email address to your account.
3. Tap **Account Password**. You can enter the original password and new password, double-confirm the new password, and tap **Confirm** to change your account password.
4. In case you forgot your password, tap **Forgot Original Password**. You can reset your password after verifying your identity via email.
5. Tap **Delete Account** to delete your account.

CAUTION

Please note that deleting an account will also permanently delete all the information associated with the account, and the account cannot be restored. Please proceed with caution.

General

1. Tap **General**. You can set the **Default Language** of the App and the unit of **Radiation** and **Temperature** on this screen.
2. Tap **System**. You will be directed to the Settings of your device, where you can manage the App permissions.
3. Enable **Novice Guide** to allow for in-App guidance prompts. The icon of this feature will be shown on the "Monitoring" screen.

My Service Provider

Tap **My Service Provider** to view the information about the service provider.

Website

Tap **Website** to go to the official website of SUNGROW. You can find more information about SUNGROW on this website.

Notification

1. Tap **Notification**, and enable **Notifications**.
2. By enabling **Smart Notification**, you can set the **Frequency of Notification**, **Content**, and **Method** as needed.

Function	Description
Frequency of Notification	Once per day, Once per 3 day(s), or Once per 7 day(s).
Content	Abnormal Plant: Shows the number of plants with faults or alarms.

Function	Description
	Offline for More Than 3 Days: Shows the number of plants that have been put into power generation before yet stay offline for more than 3 days.
Method	App Email: If you add an email address here, the system will send a confirmation email to this address. After confirmation, you can receive reports through email.

Report Push

1. Tap **Report Push**, and tap **Add** to add an email address.
2. Select the types of reports: **Daily Report**, **Weekly Report**, **Monthly Report**, **Annual Report**, **Overall Report**, or **Customized Report**. Then, tap **Confirm**.

Application Sharing

Tap **Application Sharing** to invite someone else to download the iSolarCloud App.

Declaration

Tap **Declaration** to view the Declaration of the iSolarCloud App.

About

Tap **About** to check the App version, service terms, and privacy policy.

Logout

Tap **Logout** to log out and go back to the [4.3 Log in to an Account](#).

11 Device Commissioning Prior to V2.1.6.20250218

11.1 Login via WLAN Connection (Local)

A SUNGROW WiFi wireless communication module is required to log in to the iSolarCloud App via WLAN connection.

By establishing communication with the mobile phone via WLAN connection, mobile maintenance of the inverter is allowed. Users can check the inverter information and set parameters.



Parameters shown on the App may vary by the model of the inverter connected, please refer to the information actually shown on the screen. This section gives an introduction to the detailed operation with a PV inverter as an example.

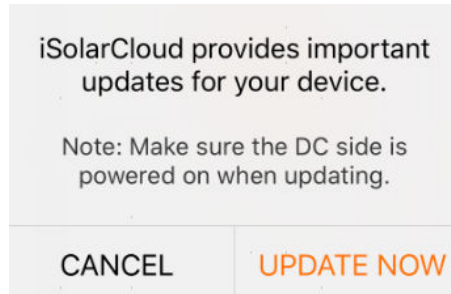
11.1.1 Login

Requirements

- The AC and DC sides or the AC side of the inverter has been powered.
- WLAN has been enabled on your mobile device (e.g., mobile phone).
- The mobile device is positioned within the wireless coverage of the WiFi module.

Login Procedure

- QR Code Connection
 1. Tap **Local Access** at the bottom of the screen. Scan the QR code on the device, and connect the device.
 2. A prompt titled **Activate hotspot** will appear on the screen. Tap "Activated".
 3. Connection status
 - a. If the connection is established successfully, you will go to the identity verification screen, where you need to enter your account name and password.
 - b. In case of connection failure, you can repeat the steps above, or turn to manual connection.
 4. Tap **Verification**. If there is no latest update package in the system, you will go to Step 9 directly. If the latest update package is available, you will see the dialog below.



5. Tap **Update Now**, there will be a prompt noticing you to connect your mobile device to the Internet. To ensure your mobile device can access the network successfully, disconnect it from the inverter's WLAN first, then connect it to a network or enable mobile data.
6. Go back to the App. You can see on the screen that the mobile device has connected to the Internet. Tap **Next** to download the latest update package.
7. After finishing downloading, tap **Next**.
 - a. Once connected to the inverter's hotspot automatically, you can see on the screen that the mobile device has connected to the inverter. You can now tap **Next** to initiate an update.
 - b. Once failed to connect to the inverter's hotspot automatically, you will see a prompt on the screen noting you to connect the mobile device to the WLAN network named as **SG-Device S/N**. If connected successfully, go back to the App. You will then see on the screen that the mobile device has connected to the inverter. You can now tap **Next** to initiate an update.
8. Upon completion of the update, the previous and current software version and the update time will be shown on the screen. Tap **Complete** to go back to the identity verification screen.
9. Tap **Verification**:
 - a. You will go to the home screen if initialization has been completed.
 - b. You will go to "Commissioning" if initialization has not been completed. For details, see **Commissioning**. You will go to the home screen after finishing commissioning.



The default username is **user** and the initial password is **pw1111**. Please change the password as soon as possible to keep your account secure.

- Manual Connection
 1. Tap **Local Access** at the bottom of the screen, and choose **Manual Connection**.
 2. Turn on WLAN on the mobile device, and connect to the WLAN named as **SG-Device S/N**.
 3. Go back to the App and select the device type.
 4. Refer to Step 3 in **QR Code Connection** for details of connection status.

5. Tap **Verification**. If there is no latest update package in the system, you will go to Step 6 directly. If the latest installation package is available in the system, refer to Step 5 to 8 in **QR Code Connection**.
6. Tap **Verification**. See Step 9 in “QR Code Connection”.

Commissioning

You will go to the commissioning screen after connection is successfully established.

- Network Configuration
 1. Tap **Network Configuration**.
 2. Select the home network from the WLAN list.
 3. Once connected successfully, you will be directed to the commissioning screen again.
 4. If the icon  shows, it indicates that network configuration has been completed successfully.
- Device Initialization
 1. Tap **Device Initialization**.
 2. Complete protection parameter initialization based on actual needs. Tap **Setting**.
You will go back to the commissioning screen after settings are completed successfully.



Set “Country/Region” to the country/region where the inverter is installed. Otherwise, the inverter may report a fault.

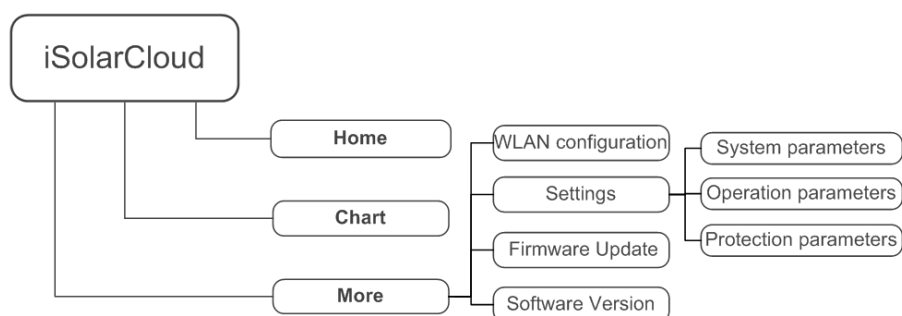
3. Tap **Complete**. Go back to the home screen of the App to check the plant you have created.



Upon completion of plant creation, or quitting in the middle of plant creation, the user review window will pop up on the screen. You can tap it to give your ratings.

11.1.2 Function Overview

You can view the inverter's real-time power and yield data, turn on or off the inverter, and update its firmware.



11.1.3 Home

Once logged in, you will see the Home screen.

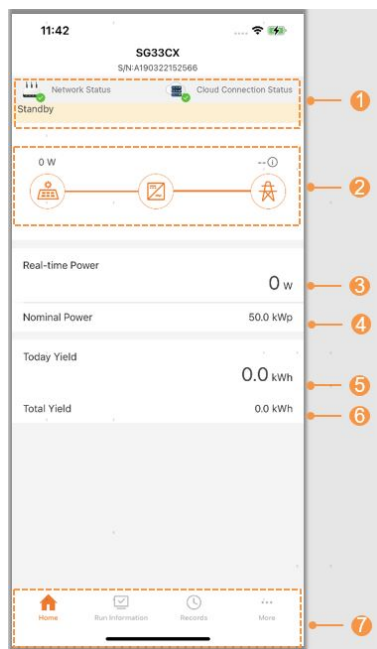


Table 11-1 Home

No.	Definition	Description
	Inverter status	Indicates the current operating status of the inverter.
1	Network status	Indicate the current network status. 1. Tap the network status to go to network settings. 2. Select a home network from the WLAN list for configuration.
	Cloud connection status	Indicates the server connection status. You can tap Cloud Connection Status to select a server.
2	Power flow	Information such as generated output and feed-in power of the PV system are shown here. Arrows between the icons indicate that there is energy flowing between the devices. The direction in which the arrow points indicates the direction of the energy flow.
3	Real-time power	Indicates the current output power of the inverter.

No.	Definition	Description
4	Nominal power	Indicate the rated power of the PV module.
5	Daily yield	Indicate the energy generated by the inverter on that day.
6	Total yield	Indicate the energy generated by the inverter in total.
7	Navigation bar	Includes Home , Run Information , Records and More .

In the case of anything abnormal with the inverter, an icon  will appear in the upper left corner of the screen. You may tap it to view the fault details and suggested solutions.

11.1.4 Chart

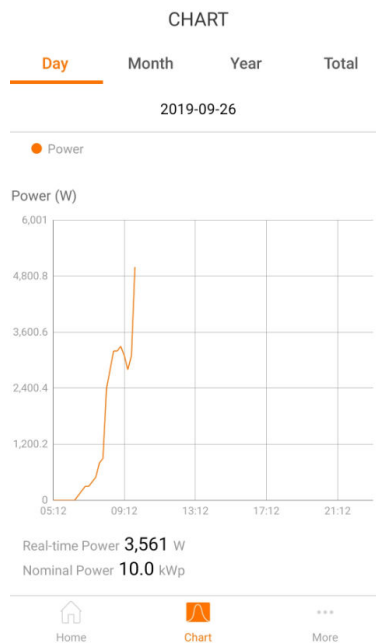
Prerequisite

Power generation data are displayed in various forms on the App, such as daily yield curve graph and monthly/annual/total yield histogram.

Table 11-2 Explanation of Yield Records

Parameter	Description
Daily yield curve graph	A curve graph that demonstrates the power changing between 5:00 and 22:00 every day (points in the curve indicate the current power of the inverter).
Monthly yield histogram	A histogram that demonstrates the power yield of the month and the equivalent hours.
Annual yield histogram	A histogram that demonstrates the power yield of the year and the equivalent hours.
Total yield histogram	A histogram that demonstrates the total yield and the equivalent hours.

Step 1 Choose **Chart** in the navigation bar. You will then see the daily yield graph.

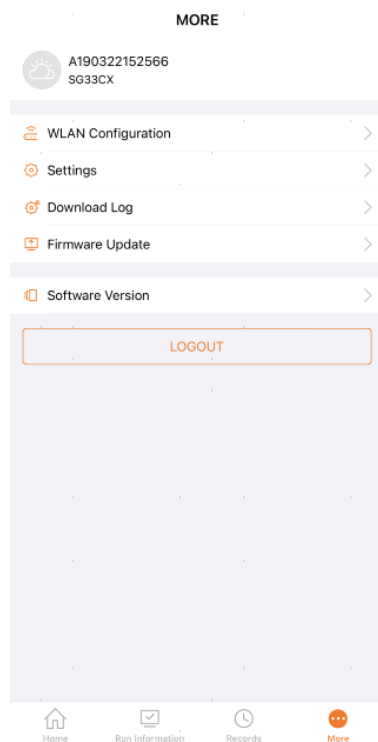
**Figure 11-1** Power Curve

Step 2 Swipe left to check the monthly/yearly/total yield histogram.

--End

11.1.5 More

Choose **More** in the navigation bar. You can set up the WLAN, set parameters, or update the firmware, etc.

**Table 11-3** Parameter Description

User Interface	Description
WLAN configuration	By completing the WLAN configuration, you can access the WiFi module to the home network, thus enabling data exchange between the inverter and the cloud server. You can then view the inverter data or send commands to control the inverter on the App.
Settings	Tap Settings to set system parameters, running parameters, protection parameters, and other parameters for the inverter.
Firmware Update	Tap Firmware update to update the inverter firmware.
Software version	Tap Software version to check the software version.

11.1.5.1 WLAN Configuration

Prerequisite

By completing the WLAN configuration, you can access the WiFi module to the home network, thus enabling data exchange between the inverter and the cloud server. You can then view the inverter data or send commands to control the inverter on the App.

Requirements

- You have acquired an iSolarCloud account and password from the retailer/installer or SUNGROW.
- The inverter has been connected to a SUNGROW WiFi wireless communication module.
- You have acquired the WLAN name and password of the home network.

Step 1 Enter the account name and password on the login screen, and tap **Login** to log in to the iSolarCloud App.

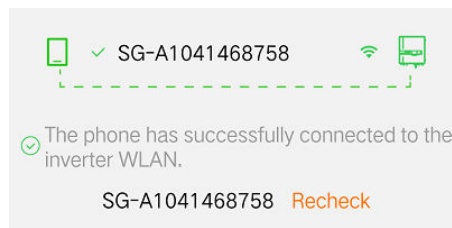
Step 2 Choose **More** in the navigation bar.

Step 3 Tap **WLAN Configuration**.

Step 4 Connect to the inverter's WLAN. For Android devices, tap **Settings**, and you will be directed to the WLAN settings. For iOS devices, you need to open "Settings" and choose "WLAN" manually. Select the inverter's WLAN, which is named as "SG-WiFi module S/N". The S/N of the WiFi module can be found on the side of the module.



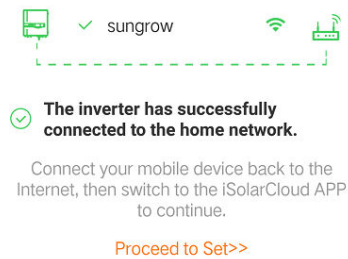
Step 5 A success message will appear on the screen upon a successful connection.



Step 6 Tap **Next** at the bottom of the screen to connect the inverter to the home network. Select the home WLAN and enter the password. If ✓ appears, it indicates that the connection has been established successfully.



Step 7 Tap **Next**. A success message will appear on the screen upon a successful connection. Now, tap **Complete** to finish.



--End

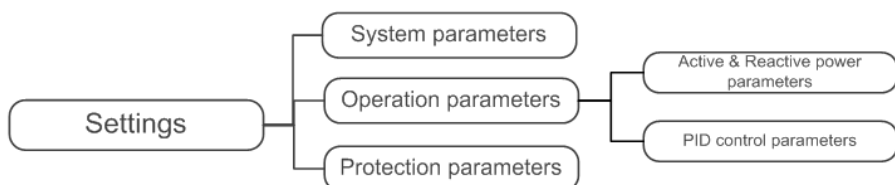
You can also tap  in the upper right corner of the screen and choose “WLAN Configuration” to configure the WLAN settings.

To ensure the phone can access the network normally, disconnect it from the inverter's WLAN first. Then, connect the phone to the home network or turn on mobile data.

11.1.5.2 Parameter Settings

Step 1 Tap **Parameter Settings**.

Step 2 You can set system parameters, operation parameters, protection parameters, and other parameters for the inverter here.





The parameter range and default value may be updated from time to time. Please refer to the information actually shown on the App. Please contact SUNGROW for any further queries.

--End

11.1.5.3 Firmware Update

Prerequisite

This section gives an introduction on how to update the inverter firmware.

Requirements

Your account has been granted access to firmware update.

Step 1 Get a firmware update package. See [9.2 Firmware Download](#)

Step 2 Choose **More > Local Access > WLAN** to log in. See [11.1.1 Login](#) for details.

Step 3 Choose **More > Firmware Update** in the navigation bar.

Step 4 Tap the update package. A confirmation dialog box will appear on the screen. Tap **Confirm** to initiate an update.

Step 5 Wait for the update to finish. A success message will appear on the screen upon a successful update. Tap **Complete**.



No update package will be shown on the screen if you have not imported a local update package or downloaded an update package online. If tapping **Download Now**, you will be directed to **"More"**. You can tap **Firmware Download**, download the package, and initiate an update by referring to the instructions in this section. When updating the WiFi wireless communication module from a non-encrypted to an encrypted version, the password required for plant creation or WLAN configuration should be the module's S/N.

--End

11.2 Login via Bluetooth Connection (Local)

By establishing communication with the mobile phone via Bluetooth connection, near-end maintenance of the inverter is allowed. Users can check the inverter information and set the parameters for the inverter.



Parameters shown on the App may vary by the model of the inverter connected. Please refer to the information actually shown on the screen.

11.2.1 Login

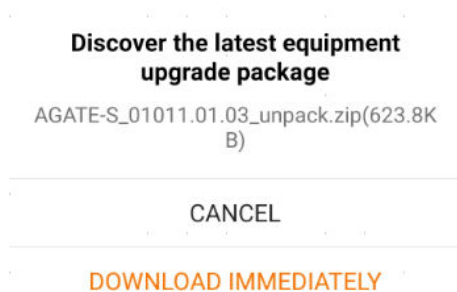
Requirements

- The AC and DC sides or the AC side of the inverter has been powered.
- The mobile device (e.g., mobile phone) is positioned within 5 m of the EyeS4 or the inverter, with no shelter in between.
- The mobile device should be positioned within a range of 60° right in front of the EyeS4 or the inverter.
- Bluetooth is enabled on the mobile device.
- The mobile device has connected to the network.

Two connection methods are available: QR code connection and manual connection.

QR Code Connection

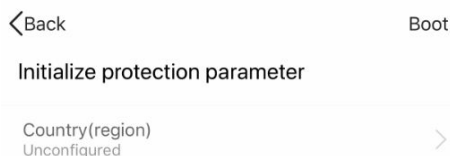
1. Tap **Local Access** at the bottom of the screen, scan the QR code on the device, and connect the device.
2. Prompt noting you to turn on Bluetooth:
 - For devices running iOS: A prompt reading **Please turn on the bluetooth setting** will pop up. Turn on Bluetooth in system settings, go back to the App, and tap **Close**;
 - For devices running Android: A prompt reading **iSolarCloud requests that you enable Bluetooth to connect to the device** will pop up. Tap **Allow**.
3. Connection status
 - If the connection is established successfully, you will go to the identity verification screen, where you need to enter your account name and password.
 - In case of connection failure, a pop-up will appear, and you may check the device by following the onscreen instructions.
 - a. Tap **Manual Connection**. Please refer to steps in [Manual Connection](#).
 - b. Tap **Close**, and repeat the steps in "QR Code Connection".
4. Tap **Verification**. If there is no latest update package in the system, you will go to Step 9 directly. If the latest update package is available, you will see the dialog below.



5. Tap **Download Immediately** to download the update package. After the download is completed, tap **Update Immediately** to go to the Firmware Update screen.
6. If the update fails, an update failure prompt will pop up. Tap **Confirm** to continue with the update. Upon completion of the update, the previous and current software version and the update time will be shown on the screen.
7. Tap **Complete**. There will be success message. Tap **Close** to go to the identity verification screen.

8. Tap **Verification**.

- a. You will go to the home screen if initialization has been completed.
- b. You will go to the screen for initialization protection parameter setting if the initialization parameters have not been set. After completing the settings, tap **Boot** in the upper right corner. A command will be sent by the App to start up the inverter. You will go to the home screen after initialization is completed.



Set "Country/Region" to the country/region where the inverter is installed. Otherwise, the inverter may report a fault. The default username is **user** and the initial password is **pw1111**. Please change the password as soon as possible to keep your account secure.

Manual Connection

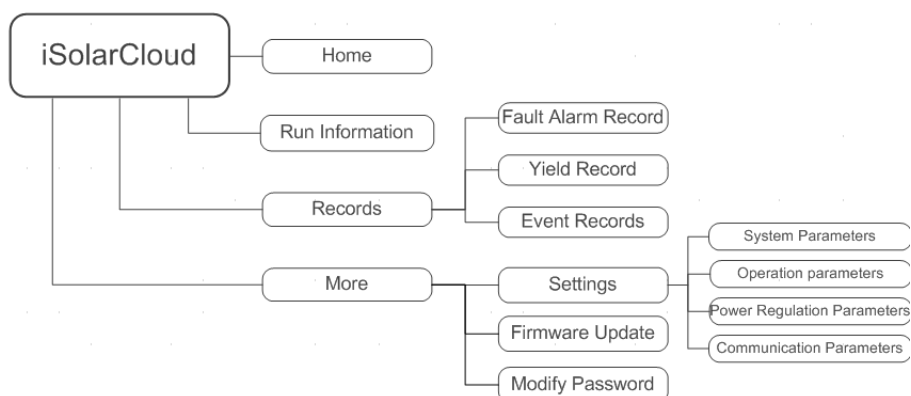
1. Tap **Local Access** at the bottom of the screen to go to the screen for QR code scanning.
2. Tap **Manual Connection** at the bottom.
3. Tap the device that supports Bluetooth.
4. Go to the "Identity Verification" screen. A "Bluetooth Search" window will pop up.
 - a. Select the inverter to be connected according to its S/N, which can be found on its nameplate.
 - b. You can also tap  to scan the QR code on the inverter for Bluetooth connection.
5. Enter your account name and the password once connected successfully.
6. Tap **Verification**. If there is no latest update package in the system, you will go to Step 7 directly. If the latest installation package is available in the system, proceed by following Steps 4 to 7 in [QR Code Connection](#).
7. Tap **Verification**. See Step 8 in [QR Code Connection](#).



The default username is **user** and the initial password is **pw1111**. Please change the password as soon as possible to keep your account secure.

11.2.2 Function Overview

You can view the inverter's operating status and yield data, turn on or off the inverter, and change the password here.



11.2.3 Homepage Information

Once logged in, you will see the Home screen.

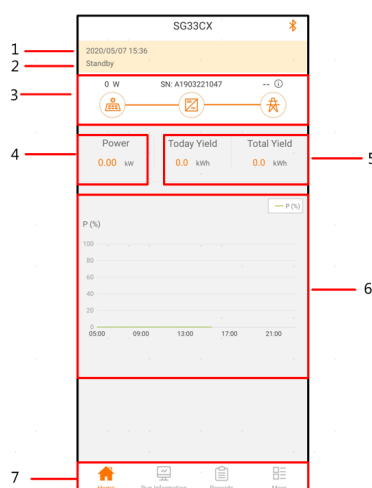


Figure 11-2 Home

Table 11-4 Home

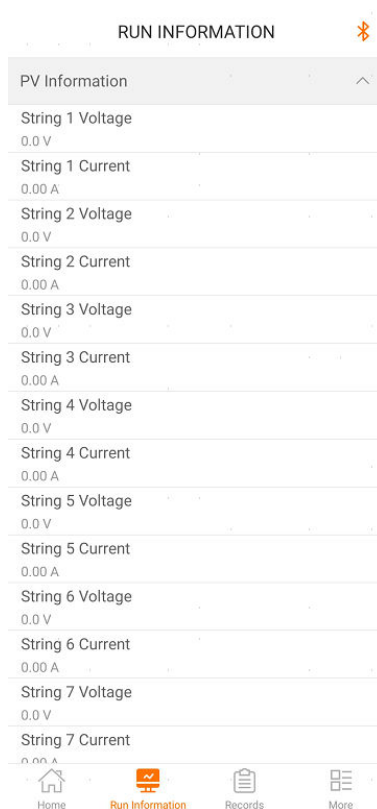
No.	Definition	Description
1	Date and time	Indicates the system date and time.
2	Inverter status	Indicates the current operating status of the inverter.
3	Power flow	Information such as generated output and feed-in power of the PV system are shown here. Arrows between the icons indicate that there is energy flowing between the devices. The direction in which the arrow points indicates the direction of the energy flow.

No.	Definition	Description
4	Power	Indicates the current output power of the inverter.
5	Yield	Shows the inverter's energy production of the day and its total production.
6	Power curve	Curve graph that demonstrates the power changes between 5:00 and 22:00 of the day. (the point in the curve represents the percentage of current inverter power to rated power)
7	Navigation bar	Includes Home , Run Information , Records , and More .

In the case of anything abnormal with the inverter, an icon  will appear in the lower right corner of the inverter icon in the power flow diagram. You can tap it to view the fault details and suggested solutions.

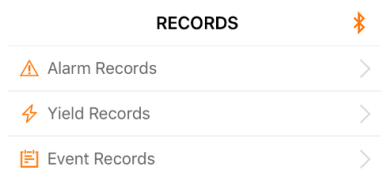
11.2.4 Run Information

Choose **Run Information** in the navigation bar. Information such as PV information, inverter information, and input/output information will be shown on this screen.



11.2.5 Records

Choose **Records** in the navigation bar to go to "Records". You can check the alarm records, yield records, and event records on this screen.



Alarm Records

1. Tap **Fault Alarm Record** to view the fault alarm history.
2. Tap  to view the record within a specific period of time.
3. Select a record and tap it to go to the details screen, where you can check the alarm level, time of occurrence, alarm ID, and suggested countermeasures.

Yield Records

1. Tap **Yield Record** to go to the power curve view.
2. Tap the time bar  **2019-03-13** at the top of the screen to view the power curve within a specific period of time.
3. Swipe left to check the daily/monthly/yearly yield histogram.

Event Records

1. Tap **Event Records** to view the historical events.
2. Tap  to view the record within a specific period of time.

11.2.6 More

Choose **More** in the navigation bar. You can turn on/off the device, set the parameters, update the firmware, or change your password here.

11.2.6.1 Parameter Settings

1. Tap **Parameter Settings**.
2. You can set the following parameters on this screen.

Parameter	Description
System Parameters	Turn on or off the inverter by sending commands, set the date and time, and check the software version of the inverter ARM and MDSP.
Operation Parameters	Set running time and PID parameters.

Parameter	Description
Power Regulation Parameters	Configure the active/reactive power regulation settings for the inverter.
Communication Parameters	Set the device address.

11.2.6.2 Firmware Update

Prerequisite

This section gives an introduction on how to update the inverter firmware.

Requirements

Your account has been granted access to firmware update.

Step 1 Get a firmware update package. See [9.2 Firmware Download](#)

Step 2 Choose **More > Local Access > Bluetooth** to log in. See [11.2.1 Login](#) for details.

Step 3 Choose **More > Firmware Update** in the navigation bar.

Step 4 Tap the update package. A confirmation dialog box will appear on the screen. Tap **Confirm** to initiate an update.

Step 5 Wait for the update to finish. A success message will appear on the screen upon a successful update. Tap **Complete**.



No update package will be shown on the screen if you have not imported a local update package or downloaded an update package online.
If tapping **Download Now**, you will be directed to “**More**”. You can tap **Firmware Download**, download the package, and initiate an update by referring to the instructions in this section.

--End

11.2.6.3 Modify Password

1. Tap **Modify Password**.
2. Enter a new password and tap **Confirm** to change your password. The new password should be 8–20 character long and contain letters and numbers.

12 Device Commissioning (V2.1.6.20250218 or Later)

12.1 Device Connection

12.1.1 Device Connection Methods

Users can access a device (such as an inverter) via the iSolarCloud App on a mobile device (such as a mobile phone) by scanning its QR code. This allows users to perform local commissioning activities, including quick setup, viewing operation information, and configuring parameters.

Table 12-1 Device Connection Methods

Connection Method	Description	Application Scenarios	Instructions
WLAN	The iSolarCloud App and the device exchange data over WLAN.	Applicable to inverters that support WLAN communication, or inverters used in conjunction with WiFi/EyeM4/WiNet-S/WiNet-S2 wireless communication modules.	For detailed instructions, see 12.1.2.1 Connection by Scanning QR Code (WLAN) .
Bluetooth	The iSolarCloud App and the device exchange data over Bluetooth.	Applicable to inverters that support Bluetooth communication, or inverters used in conjunction with EyeS4 wireless communication modules.	For detailed instructions, see 12.1.3.1 Connection by Scanning QR Code (Bluetooth) .



Parameters shown on the iSolarCloud App may vary by the model of the inverter connected. Please refer to the information actually shown on the screen. Introductions in this manual are based on a PV inverter.

12.1.2 Device Connection via WLAN

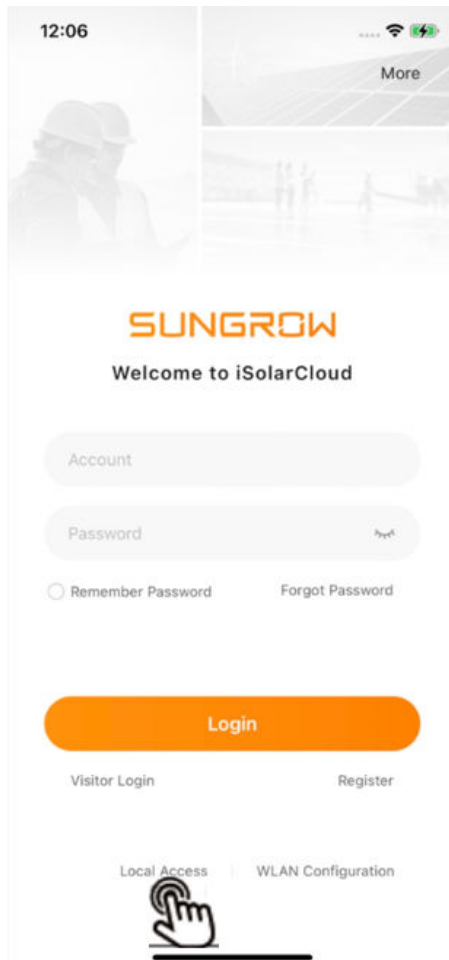
12.1.2.1 Connection by Scanning QR Code (WLAN)

This section provides instructions for establishing a WLAN connection between a mobile device (such as a mobile phone) and an inverter for local commissioning.

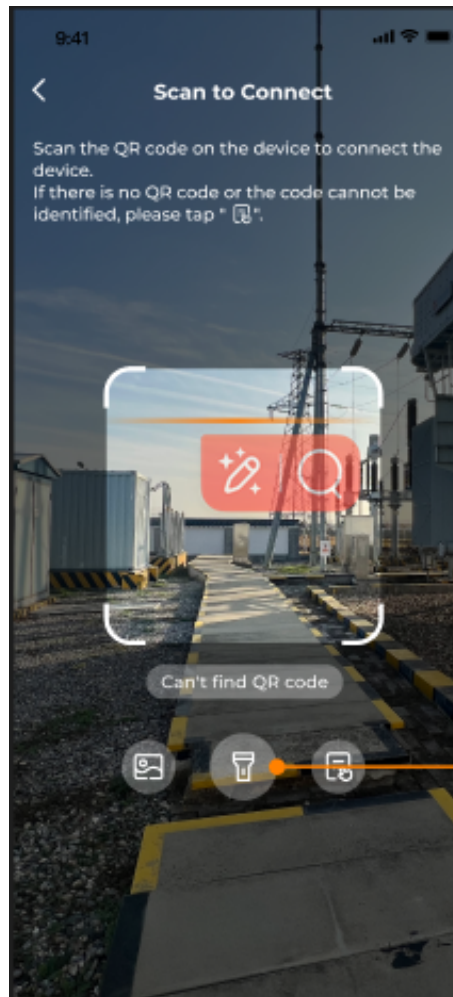
Prerequisite

- A wireless communication module that supports WLAN communication is properly connected to the communication port at the bottom of the inverter.
- The AC and DC sides or the AC side of the inverter is powered on.
- WLAN is enabled on the mobile device (such as a mobile phone).
- The mobile device is positioned within the wireless signal coverage of the inverters or wireless communication module.

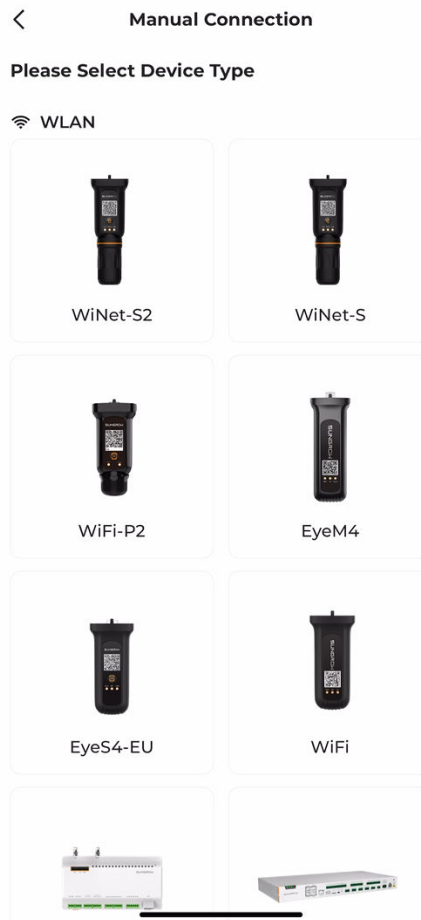
Step 1 Open the iSolarCloud App and tap **Local Access** at the bottom left of the login screen.



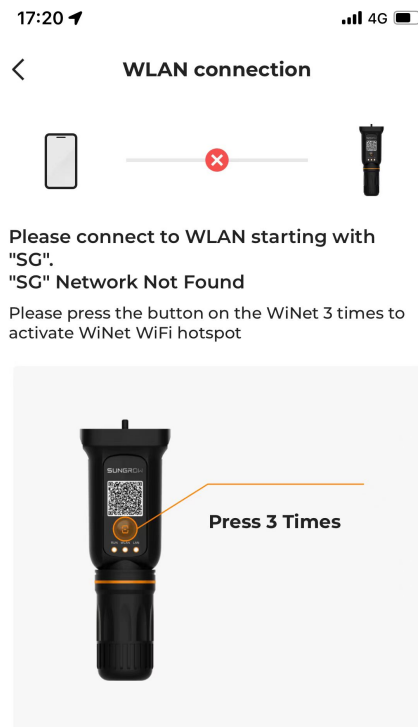
Step 2 On the **Scan to Connect** screen, point your camera at the QR code on the device's enclosure, then wait for the connection to complete.



- a. If the QR code is missing or the scan fails, tap  to go to **Manual Connection** and connect to the device manually.



- b.** Select the target device. The system will proceed to **WLAN Connection**. Wait for the connection to complete. If the connection fails, following the onscreen instructions to reconnect to the WLAN beginning with "SG". If the problem persists, disconnect and reconnect the wireless communication module, then try again.



Step 3 Upon a successful connection, you will go to the **Identity Verification** process.

--End

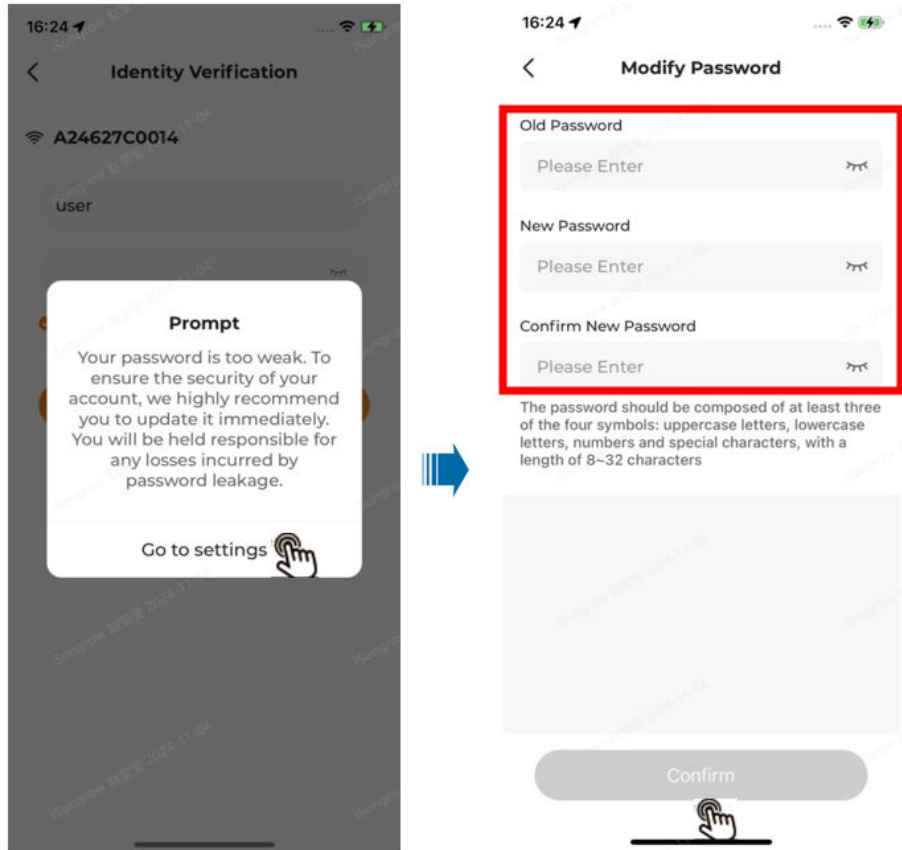
12.1.2.2 Identity Verification

Step 1 Enter your account name and password on the **Identity Verification** screen, and then tap **Verify**. The default account name and password are listed below. Please change your password as soon as possible to keep your account secure.

Role	Account Name	Password	Permissions
General user	user	pw1111	Granted access to monitoring and general settings. For instance, Overview, Device Monitoring, and

Role	Account Name	Password	Permissions
			some of the History Data.
Retailer/Installer	admin	pw8888	Operations mentioned in this manual.
Developer Account	develop	Dynamic password	Login with a developer account is allowed only after authorization by an O&M user account.
Administrator	administrator	pw1111	The administrator manages all users, and can create, view, and delete users; reset account passwords; and enable session management and O&M mode.  Some device versions do not support the administrator role. Refer to the actual device for details.

Step 2 A message will show on the screen prompting you to change your password. Tap **Go to settings**. Then, enter the original password and new password, confirm the new password, and tap **Confirm**.



- At your first login, please use the default password and change your password in time. To keep your account secure, it is recommended to update your password regularly and always make sure you remember the new one. You may see a password leak if you do not change the default password, or an increased risk of the account getting hacked or compromised if you use the default password for a long time. Besides, you may not be able to access the device if you have lost your password. All these situations may cause losses for the plant, and such losses shall be borne by users.
- Passwords should be 8–32 character long and contain at least three of the following four character types: uppercase letters, lowercase letters, numbers, and special characters.
- The user interface may vary by user role. Please refer to the actual interface.

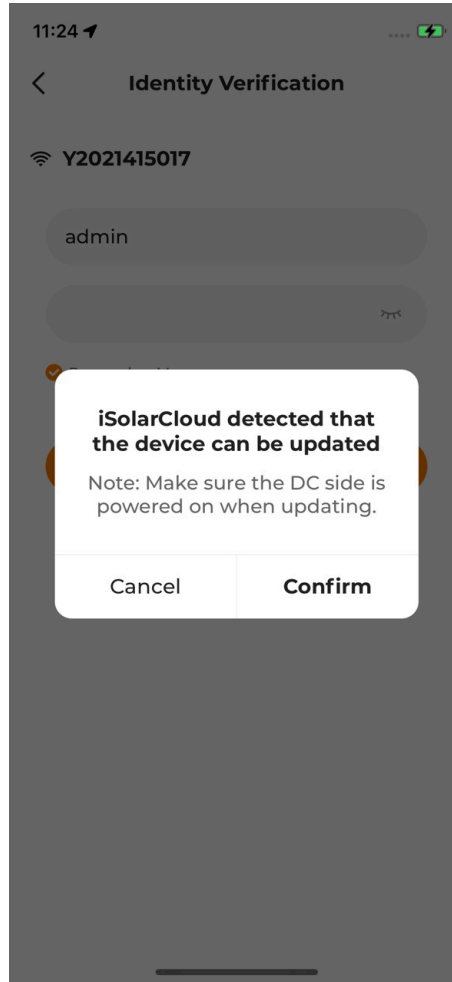
Step 3 Log in using your new password on the **Identity Verification** screen.

--End

12.1.2.3 Mandatory Update via Wi-Fi

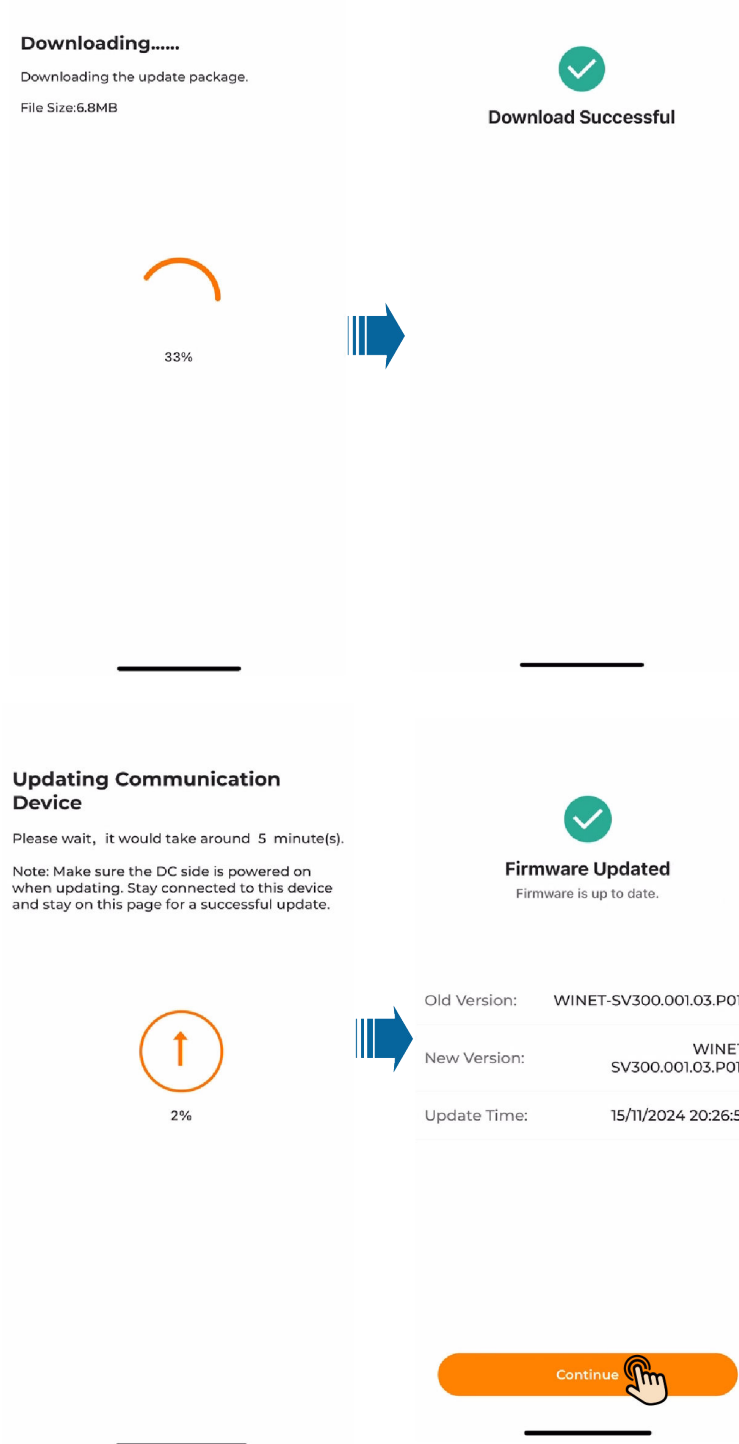
When connecting to a device, the iSolarCloud App will automatically check for the latest update package. If an update is available, the device will undergo a mandatory update. Wi-Fi-based mandatory updates can be completed in either offline or online mode.

Step 1 Enter the account name and password on the **Identity Verification** screen, and then tap **Verify**. An update notification will appear. Tap **Update Now**.



- **Online Mandatory Update**

The online mandatory update is suitable for scenarios where the communication device is connected to Internet. You can initiate an update task via iSolarCloud App directly.



- a. Go to the screen for update package download. Once download is completed, a **Download Successful** message will appear.

- b. The App will automatically initiate the update process.

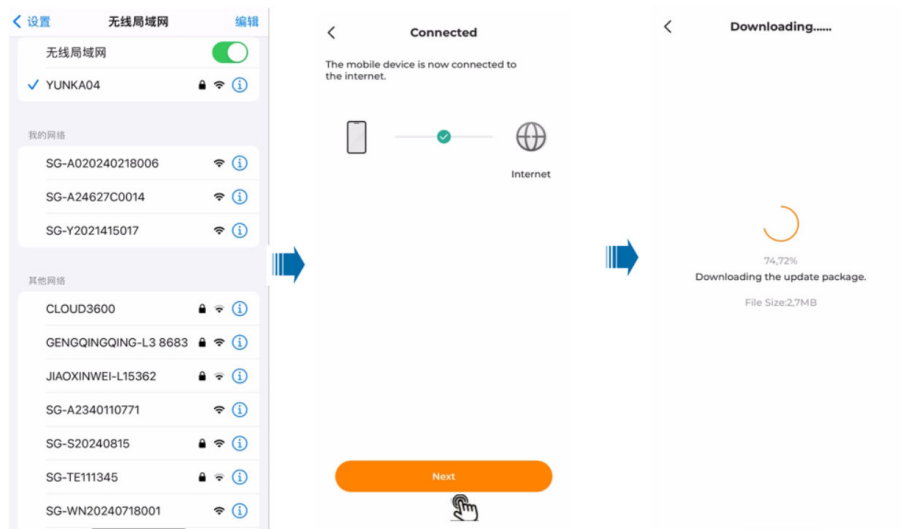


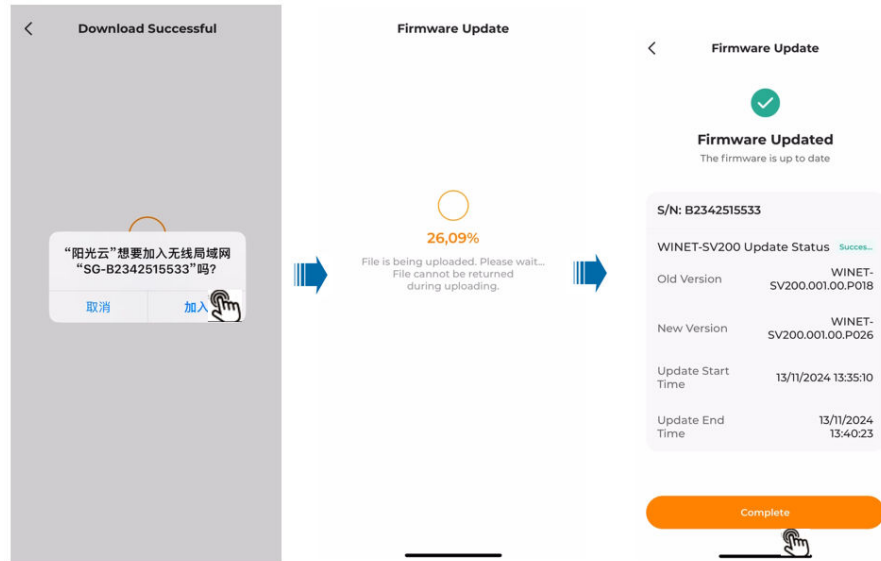
Ensure that the DC side is powered on and the connection to this specific device is stable, and stay on the current screen to guarantee a successful update.

- c. After the update is completed, the App will go to the **Firmware Updated** screen.
The previous and current software versions and the update time will be shown here.
- d. Tap **Complete** to go back to identity verification and log in.

- **Offline Mandatory Update**

The offline mandatory update is suitable for scenarios where the communication device is not connected to Internet. In this case, you need to connect your mobile device to Internet to initiate an update task.





- Disconnect your mobile device from the inverter's WLAN and then connect it to a home network, or switch to mobile data, to ensure it can access the Internet properly.
- Once the mobile device is connected to the network, return to the iSolarCloud App. You can see on the screen that the mobile device has connected to the Internet successfully. Tap **Next** to download the latest update package.
- Once download is completed, a message will appear on the screen prompting you to connect to the WLAN. Tap "Join" to connect to the WLAN network beginning with "SG".
- After a successful connection, go back to the iSolarCloud App. The App will automatically initiate the **Firmware Update** process.



Ensure that the DC side is powered on and the connection to this specific device is stable, and stay on the current screen to guarantee a successful update.

Upon a successful update, the device will restart automatically. Reconnect to its WLAN network to get the relevant update information.

- After the update is completed, the App will go to the **Firmware Updated** screen. The previous and current software versions and the update time will be shown here.
- Tap **Complete** to go back to identity verification and log in.

--End

12.1.3 Device Connection via Bluetooth

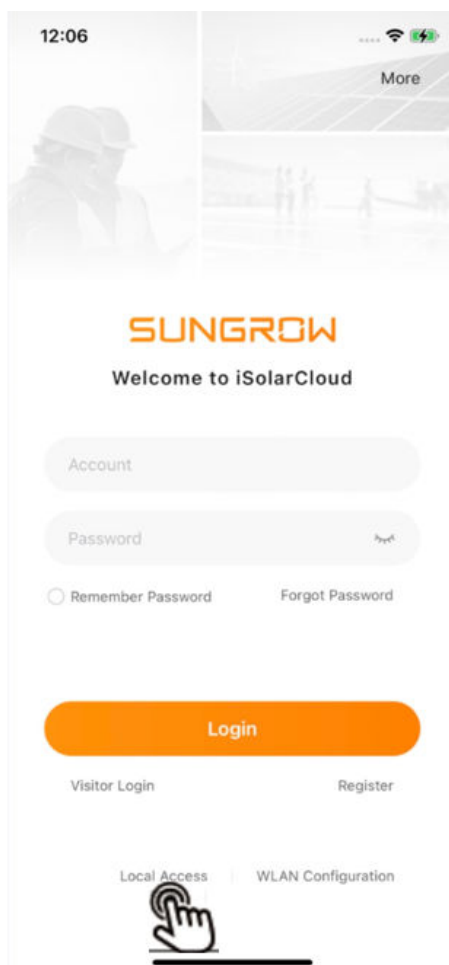
12.1.3.1 Connection by Scanning QR Code (Bluetooth)

This section provides instructions for establishing a Bluetooth connection between a mobile device (such as a mobile phone) and an inverter for local commissioning.

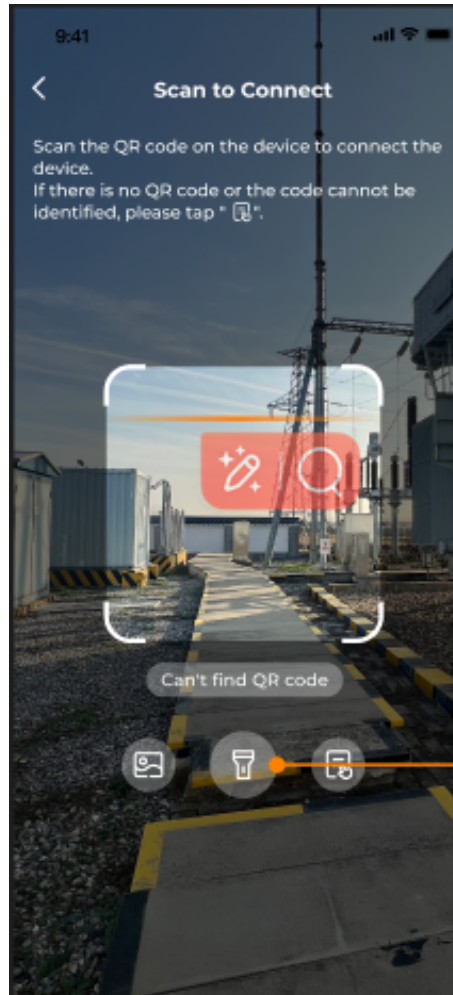
Prerequisite

- A wireless communication module that supports Bluetooth communication is properly connected to the communication port at the bottom of the inverter.
- The AC and DC sides or the AC side of the inverter is powered on.
- The mobile device (such as a mobile phone) is positioned within 5 m of the wireless communication module or the inverter, with no shelter in between.
- The mobile device is positioned within a range of 60° right in front of the inverter or wireless communication module.
- Bluetooth is enabled on the mobile device.
- The mobile device is connected to the network.

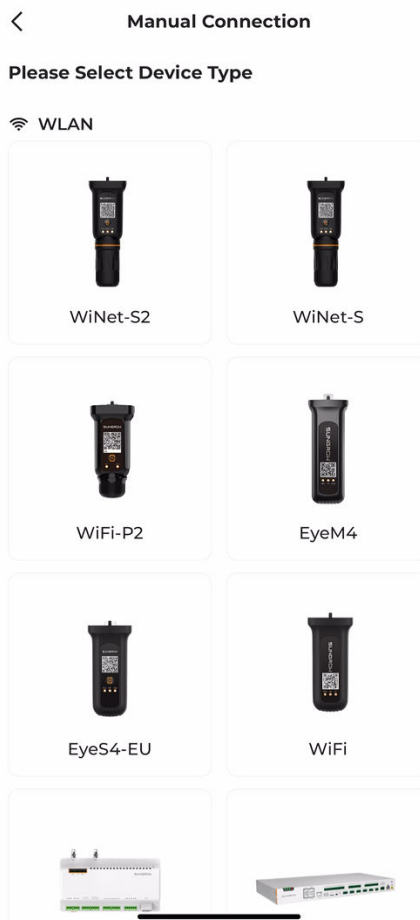
Step 1 Open the iSolarCloud App and tap **Local Access** at the bottom left of the login screen.



Step 2 On the **Scan to Connect** screen, point your camera at the QR code on the device's enclosure, then wait for the connection to complete.



- a. If the QR code is missing or the scan fails, tap  to go to **Manual Connection** and connect to the device manually.



- b. Select the target device. The system will proceed to **Bluetooth Connection**. Wait for the connection to complete. If no Bluetooth device is found, disconnect and reconnect the communication module, then try again.

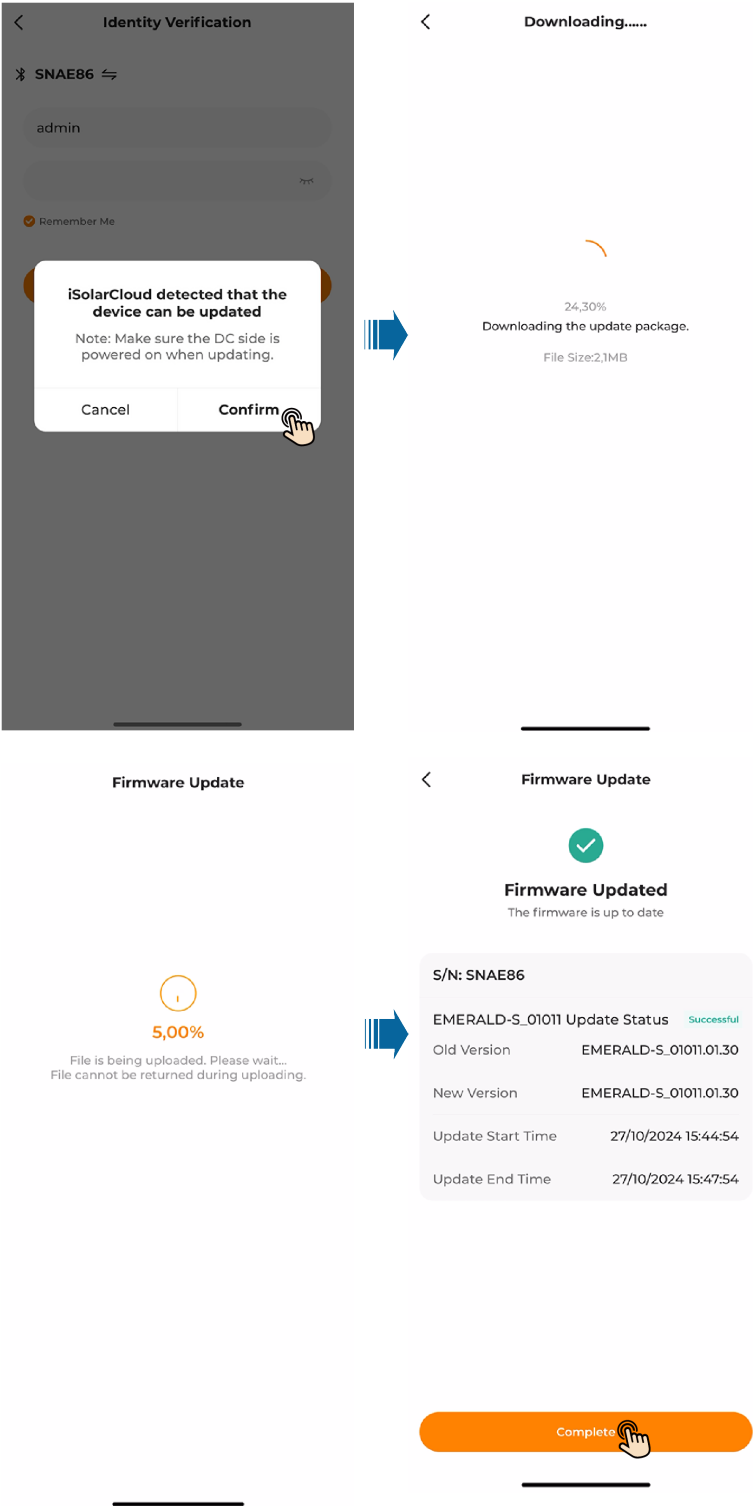
Step 3 Upon a successful connection, you will go to the **Identity Verification** process. For detailed instructions, see [12.1.2.2 Identity Verification](#).

--End

12.1.3.2 Mandatory Update via Bluetooth

When connecting to a device, the iSolarCloud App will automatically check for the latest update package. If an update is available, the device will undergo If mandatory update.

Step 1 Enter the account name and password on the **Identity Verification** screen, and then tap **Verify**. An update notification will appear.



Step 2 Tap **Confirm** to download the latest update package. Once the download is complete, the App will automatically proceed to the **Firmware Update** screen, where the package will be uploaded.



If you tap **Cancel** on the update notification, you will stay on the **Identity Verification** screen, ending the login process. Ensure the DC side is powered on and stay on the current screen to guarantee a successful update.

Step 3 After the update is completed, the App will go to the **Firmware Updated** screen. The previous and current software versions and the update time will be shown here.

Step 4 Tap **Complete** to go back to identity verification and log in.

--End

12.2 Inverter Commissioning

12.2.1 Quick Setting

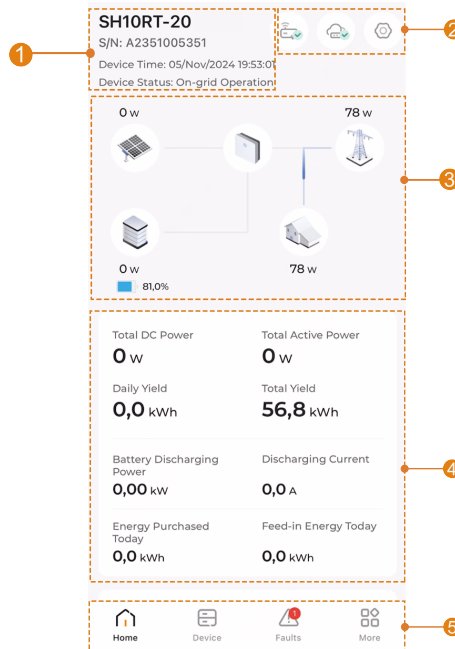
This section provides instructions for completing device initialization, device check, network configuration, and other settings for the inverter using the Quick Setting feature when accessing the inverter via the App for the first time.



If the inverter is used with an EyeS4 communication module, the quick setup is unnecessary, and this option will not appear once the connection between the inverter and the App is established.

12.2.1.1 Inverter View

After logging in, you will go to the Home screen by default, as shown in the figure below.

**Table 12-2** Home

No.	Definition	Description
1	Inverter name	Shows the model, S/N, and status of the current inverter.
2	Toolbar	Provides access to network settings, cloud server selection, and quick settings.
3	Energy distribution (power flow) diagram	Shows information such as PV output power and feed-in power. Arrows between the icons indicate that there is energy flowing between the devices. The direction in which the arrow points indicates the direction of the energy flow.
4	Plant operation information	Shows the key plant data, such as the total DC power, total active power, daily yield, and total yield. Battery charging/discharging power will also be shown if a battery has been added to the plant.
5	Navigation bar	- Home: View the operation information of the plant and the devices. - Device: Check and maintain the connected devices. - EV Charger: Check and set the working mode, running status, and charging parameters for the

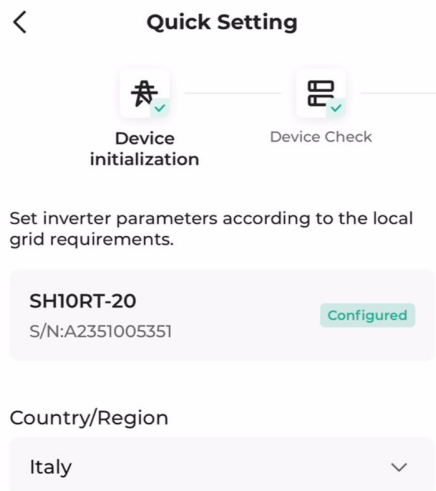
No.	Definition	Description
		charger. This tab is available only if an EV charger is added.
		- Faults: View real-time and history faults. - More: Perform operations such as parameter settings, firmware updates, and password modification.

12.2.1.2 Device Initialization

Configure the inverter settings according to local grid requirements, including the country code, grid type, feed-in power limitation, and Backup mode.

When the inverter is connected to the App for the first time, the App initiates the "Quick Setting" process, starting with **Device Initialization**.

Step 1 Tap **Country (Region)** and select the appropriate country/region based on the actual situation.



- For Australia: Select the Power Company.
- For countries/regions other than Australia: Select the Grid Type.

Step 2 Configure Feed-in Power Limitation.

Feed-in Limitation ? ☐

Rated Power of Third-Party Power Generation Systems (kW)

0,00

Current Value: 0,00 Range:[0,00~300,00]

Feed-in Limitation Ratio

100,0 %

Current Value: 100,0 Range:[0,0~100,0]

Feed-in Limitation Type

Installed PV Power

Installed PV Power (kWp) ?



Decide whether the device responds to feed-in limitation commands by enabling or disabling Feed-in Power Limitation.

Step 3 Configure Backup Mode.

Backup Mode ? ☐

Reserved Battery SOC for Off-Grid (%)

20

Current Value: 20 Range:[0~100]



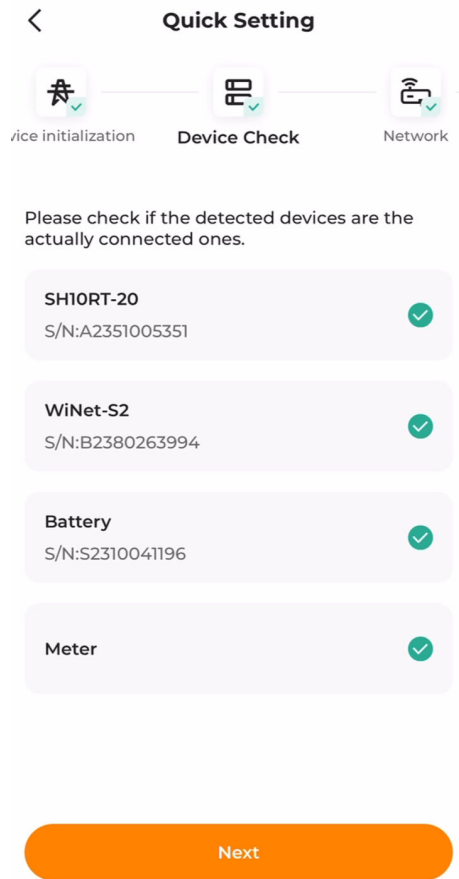
- This parameter needs to be configured only for systems featuring energy storage.
- Decide whether to activate the Backup function for the inverter by enabling or disabling Backup Mode.

Step 4 After the above settings are completed, tap **Next** to proceed to **Device Check**.

--End

12.2.1.3 Device List

The inverter and the devices connected to the inverter, such as communication modules, batteries, and meters, are displayed in the device list.



- The names and numbers of devices shown in the list will depend on the actual devices connected on-site. The figure above is for illustration purposes only.
- If a connected device is missing from the list, verify the reliability of device connection and check for any potential damage.

Once the device list is fully loaded, tap **Next** to go to **Network Configuration**.

12.2.1.4 Wireless Network Connection

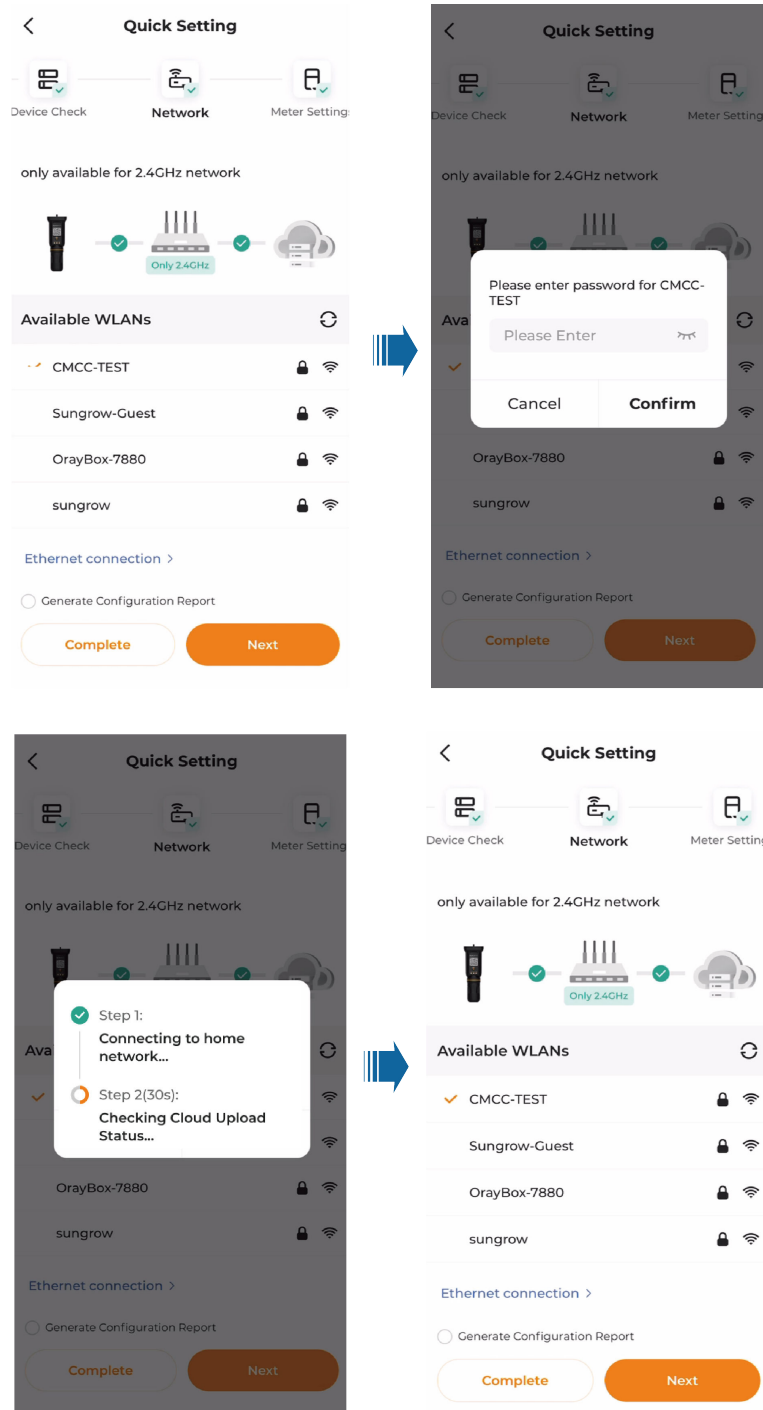
Prerequisite

- Enable the 2.4 GHz wireless network on the router.
- Ensure the network is stable and has a strong signal.

Step 1 Under **Network Configuration**, select the router network from the list of available WLANs.

Step 2 Enter the router network password in the dialog box.

Step 3 Tap **Confirm** and wait for the connection to complete.



Once the connection is successful, the status of the device's connection to the router network and the cloud service will be updated. The icon  indicates a successful connection. If the connection fails, follow the onscreen instructions to find the cause and resolve the issue.

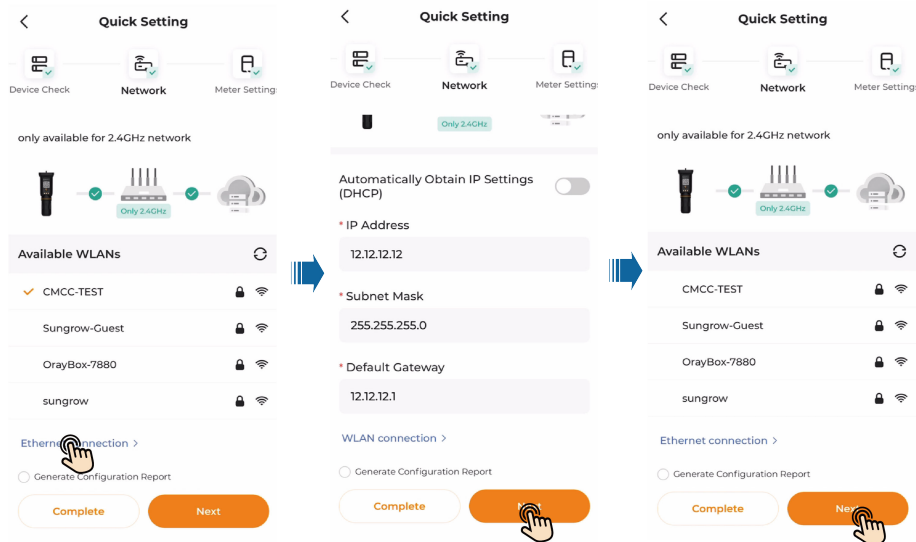
--End

12.2.1.5 Ethernet Connection

The App supports both wireless communication and Ethernet communication. Ethernet communication is ideal for scenarios where a communication device is connected to the router using an Ethernet cable.

Step 1 Tap **Ethernet connection** in the bottom left of the **Network** screen.

Step 2 Under **Ethernet connection**, enter the required information, including IP address, subnet mask, gateway address, and DNS, and tap **Complete**.



To get a configuration report, select the **Generate Configuration Report** checkbox above the **Complete** button.

Check the network connection and cloud service status. Once the connection is successful, the status of the device's connection to the router network and the cloud service will be updated. The icon  indicates a successful connection. If the connection fails, follow the onscreen instructions to find the cause and resolve the issue.

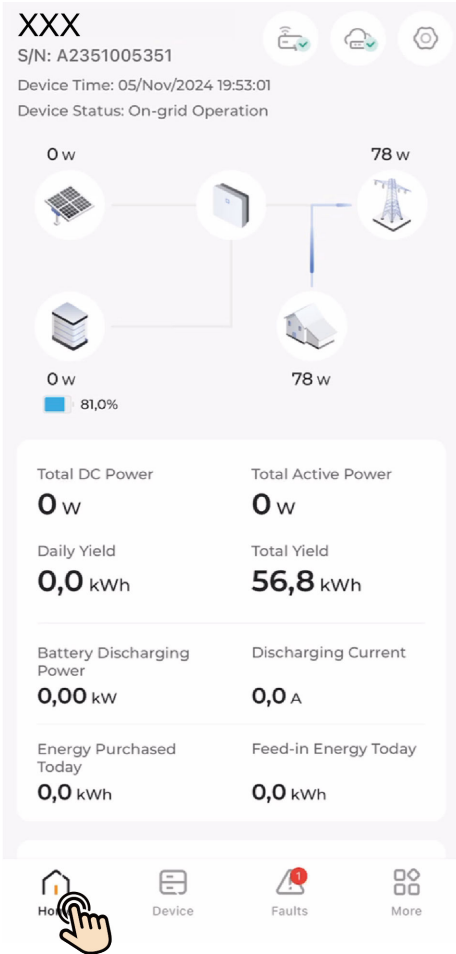
--End

12.2.2 View Device Operation Data

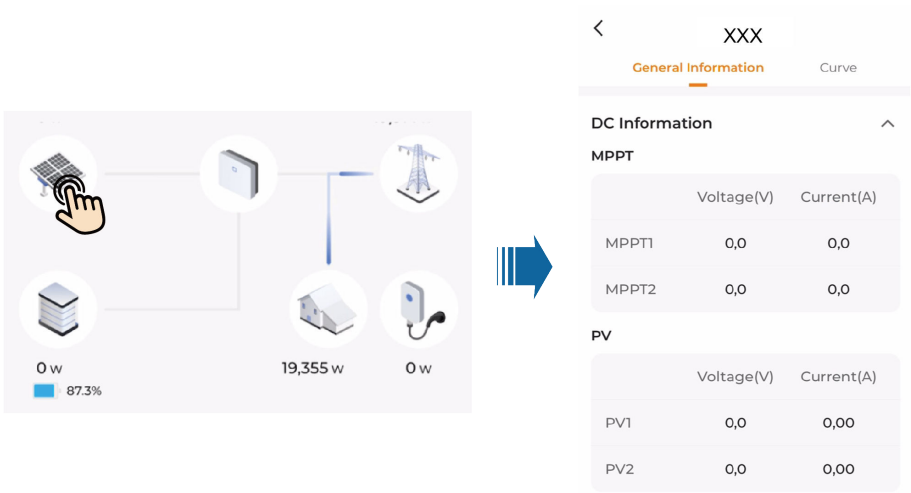
12.2.2.1 Check Energy Distribution (Power Flow)

The Power Flow diagram presents information such as PV output power and feed-in power. It provides a clear visualization of energy flow between various equipment, including the direction of energy transfer within the system. The Power Flow may vary depending on the specific product.

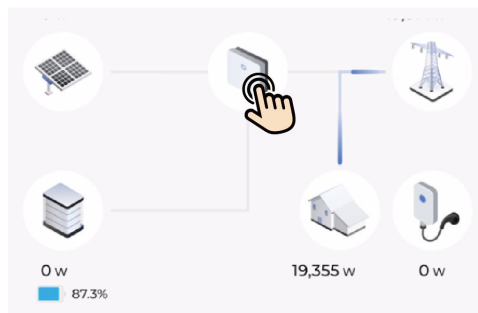
Step 1 Tap **Home** in the bottom navigation to view the Power Flow diagram.



Step 2 Tap the PV module icon to view the inverter's DC-side data.

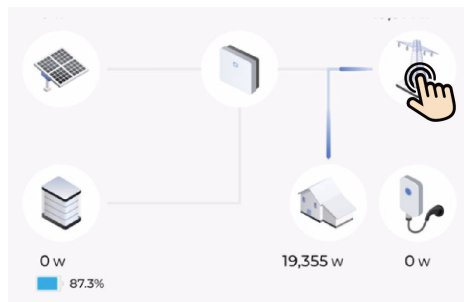


Step 3 Tap the inverter icon to view the “General Information” about the inverter.



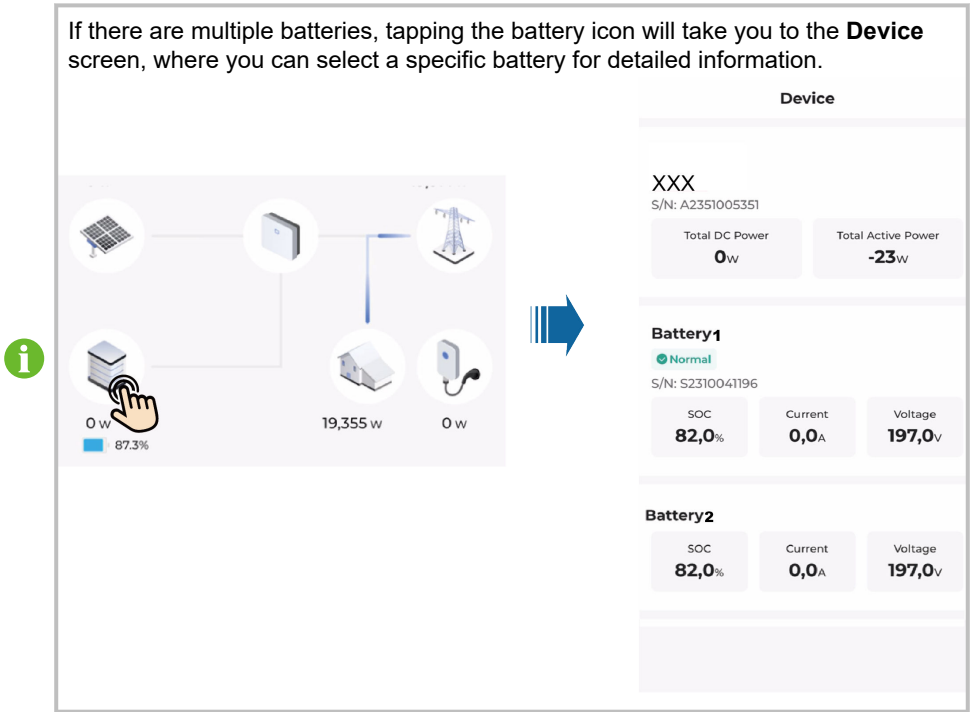
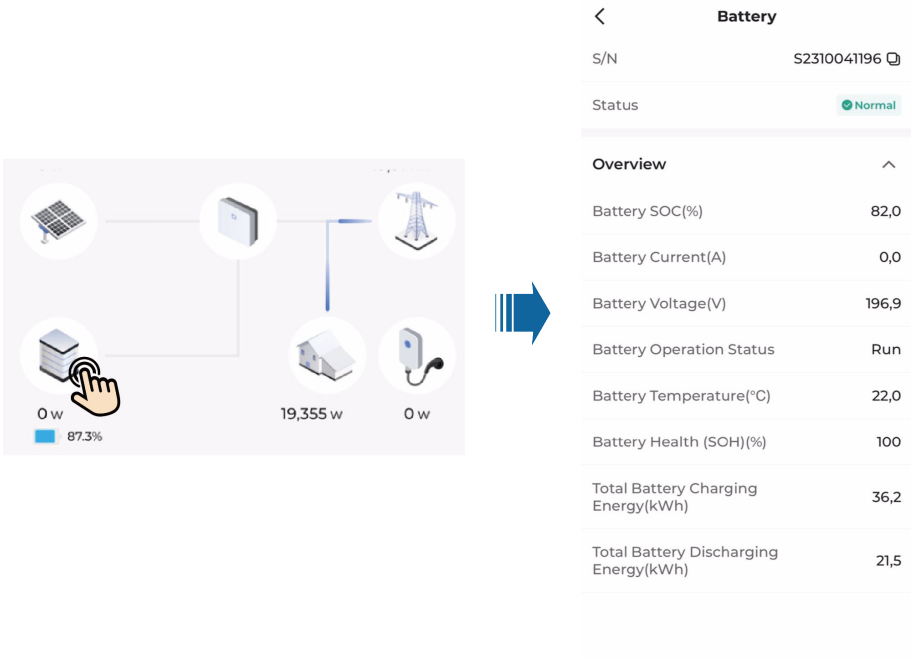
XXX	
General Information	Curve
S/N	A2351005351
Communication Device S/N	B2380263994
Country/Region	Italy
Overview	
Grid Frequency(Hz)	50,03
Bus Voltage(V)	642,0
Internal Air Temperature(°C)	27,6
Array Insulation Resistance(kΩ)	1.082
More >	

Step 4 Tap the grid icon to view the inverter's grid-side data.

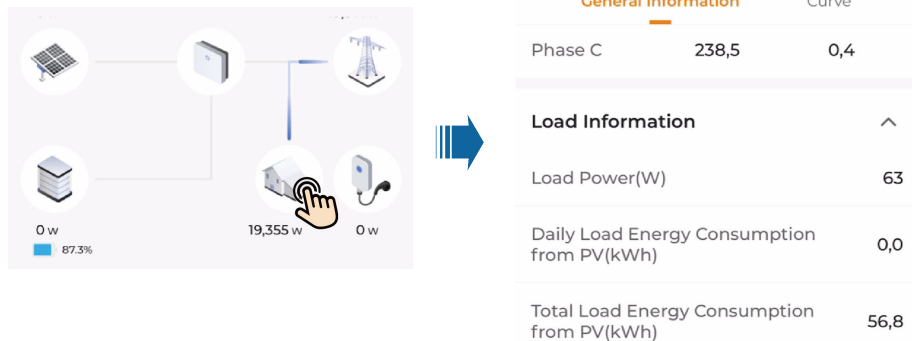


XXX	
General Information	Curve
Overview	
Grid Frequency(Hz)	50,03
Bus Voltage(V)	642,0
Internal Air Temperature(°C)	27,6
Array Insulation Resistance(kΩ)	1.082
More >	

Step 5 Tap the battery icon to view the battery information.



Step 6 Tap the load icon to view the inverter's load-side information.



--End

12.2.2.2 View MPPT and PV Information

Step 1 Tap **Home** in the bottom navigation. Scroll down to locate the DC Information section.

Step 2 Select **MPPT** under **DC Information** to view the input voltage and current of each MPPT.

DC Information		
MPPT PV		
	Voltage(V)	Current(A)
MPPT1	0,0	0,0
MPPT2	0,0	0,0

Step 3 Select **PV** under **DC Information** to view the input voltage and current of each PV input.

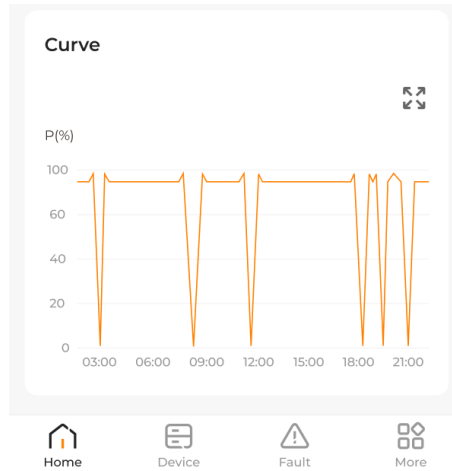
DC Information		
MPPT PV		
	Voltage(V)	Current(A)
PV1	0,0	0,00
PV2	0,0	0,00

--End

12.2.2.3 View Utilization Rate Curve

The daily utilization rate of the device is displayed as a curve graph on the Home screen.

Step 1 Tap **Home** in the bottom navigation. Scroll down to find the daily utilization rate curve.



- You can tap  to switch to landscape view.
- Points on the curve represent the percentage of the current power relative to the rated power of the inverter.
- Utilization rate curve is available only for specific inverter models. The actual user interface may vary based on the product.

--End

12.2.3 Inverter Self-test

The Inverter Self-Test feature is available for Italy only.

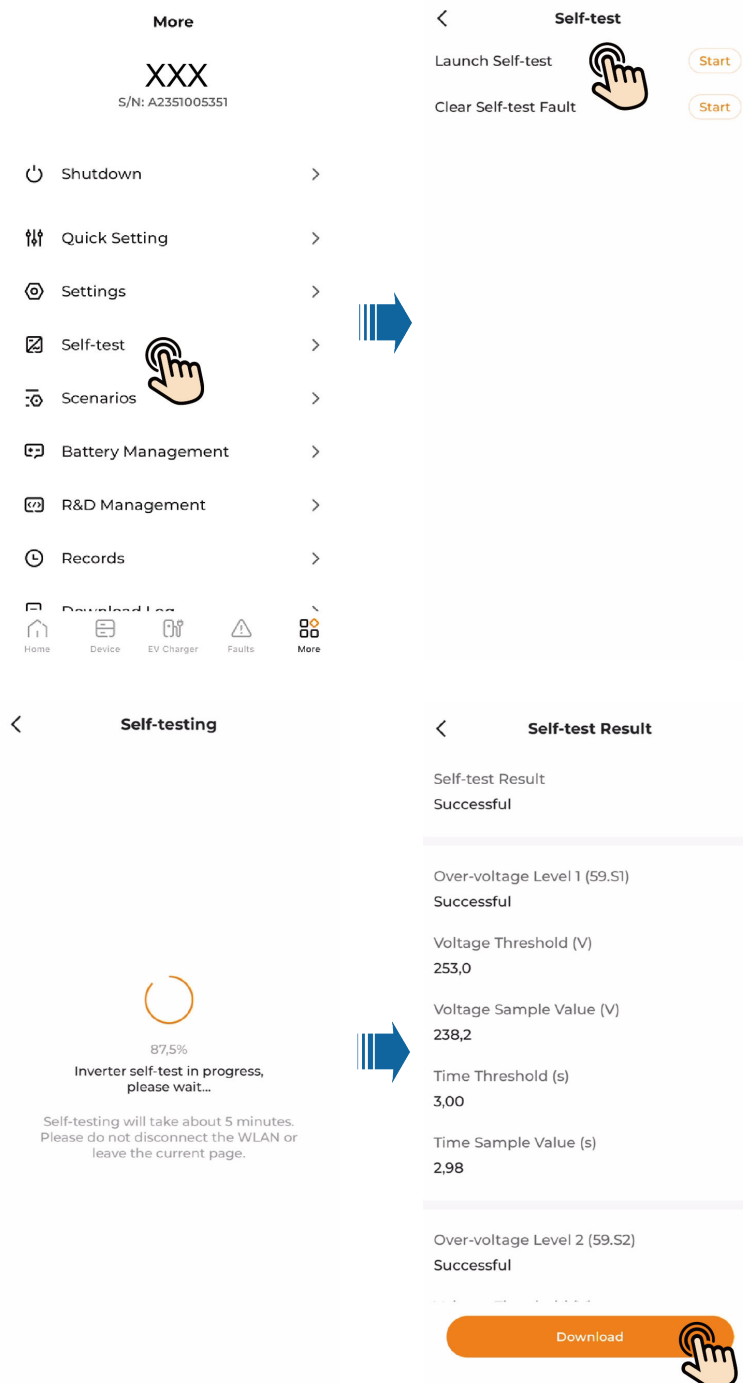
Prerequisite

Set the Country (Region) to Italy.

Step 1 Navigate to **More > Self-test**.

Step 2 Tap **Start** next to **Launch Self-test**. Wait for the self-test process to complete.

Step 3 Once the self-test is successfully completed, you can tap **Download** to download the test results.



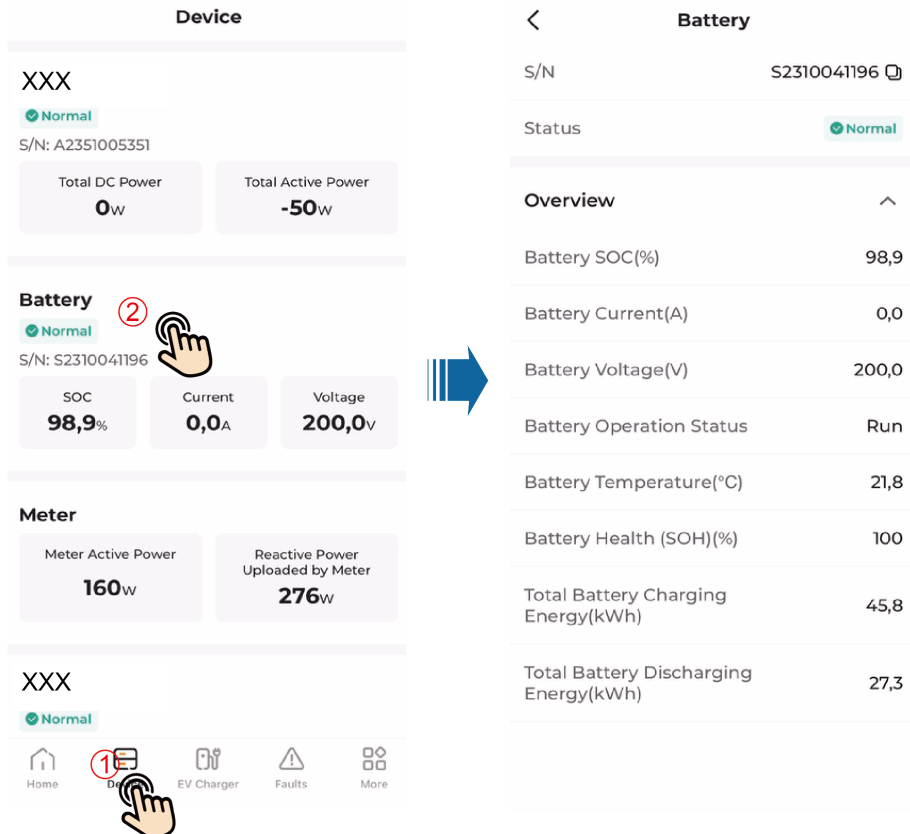
--End

12.2.4 Battery Management

12.2.4.1 View Battery Information

Step 1 Tap **Device** in the bottom navigation to open the device list.

Step 2 Locate the target battery and tap **Battery** to view its detailed information.



--End

12.2.4.2 Battery Augmentation

During the battery augmentation process, it is necessary to charge or discharge the existing PACKs (battery modules) to ensure their SOC matches that of the new PACK.

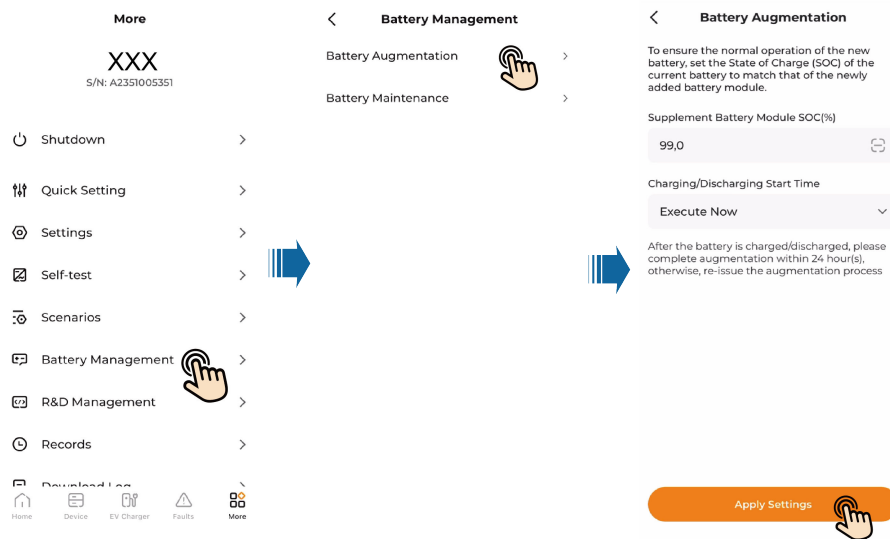
Step 1 Navigate to **More > Battery Management**.

Step 2 Tap **Battery Augmentation**. Enter the SOC (%) of the new PACK, and specify the time to start charging or discharging.



You can check the SOC of the existing PACKs via the App. For detailed instructions, see [12.2.4.1 View Battery Information](#).

Step 3 Tap **Apply Settings**.



--End

12.2.4.3 Battery Maintenance

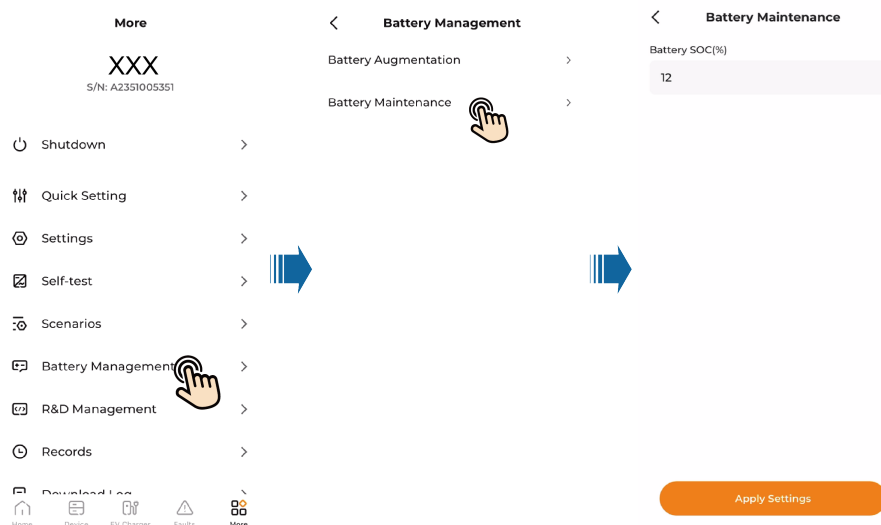
Battery Maintenance can be used to charge or discharge the new PACK (battery module) so that its SOC matches that of the existing PACKs.

This step is necessary when replacing a damaged PACK in the plant with a new one.

Step 1 Navigate to **More > Battery Management**.

Step 2 Tap **Battery Maintenance**. Enter the SOC (%) of the new PACK, and then tap **Apply Settings** to start charging or discharging.

 You can check the SOC of the existing PACKs via the App. For detailed instructions, see [12.2.4.1 View Battery Information](#).



--End

12.3 EV Charger Commissioning

12.3.1 Charger View

If an EV charger is connected in the plant, the tab **EV Charger** will appear in the bottom navigation of the App, enabling users to perform charger commissioning.

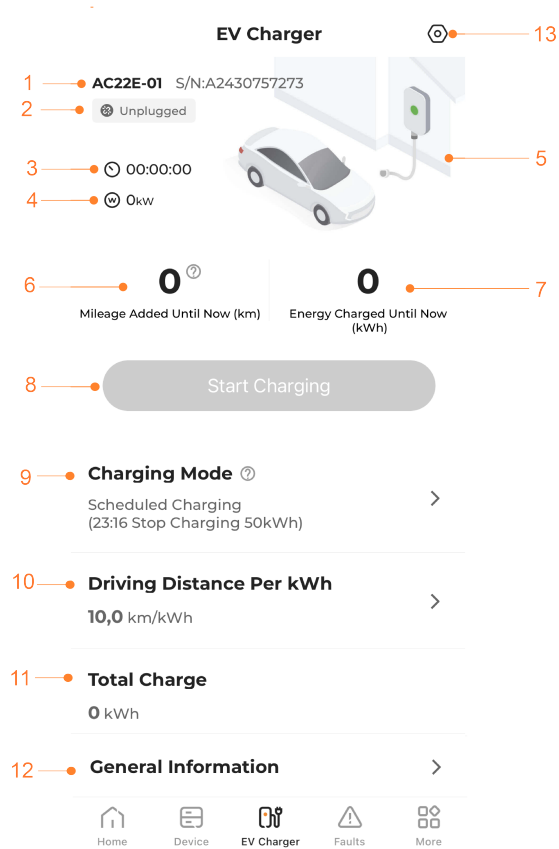


Table 12-3 Charger View

No.	Definition	Description
1	Charger Model	Shows the model of the connected charger.
2	Running Status	Indicates the current status of the charger, including: - Unplugged: The charging connector is not connected to the EV. - Standby: The charging connector is connected to the EV, but charging has not started. - Charging: EV charging in process.

No.	Definition	Description
		- Charging Suspended (EV): The EV is fully charged. Charging is stopped by the EV. - Charging Suspended (Charger): The preset charging target is reached, or the user manually stops the charging process. Charging is stopped by the charger. - Completed: The charging target is reached. - Fault: Charging fails due to a fault in the charger. - Disabled: The charger is disabled and thus cannot be used for charging. See 12.3.5 Configure Charger Parameters for instructions on enabling the charger.
3	Charging Time	Displays the total charging time for the current charging process.
4	Charging Power	Shows the real-time charging power of the charger.
5	Power Flow	Visualizes the usage of charger dynamically.
6	Mileage Added Until Now	Shows the mileage added since the start of the current charging process.
7	Energy Charged Until Now	Shows the total energy charged since the start of the current charging process.
8	Start/Stop Charging	Used to start or stop the charging process. Orange indicates the button is active and can be tapped to start or stop charging, while grey indicates the button is inactive and unavailable. For detailed instructions, see 12.3.4.1 Start Charging .
9	Charging Mode	Sets a charging mode. For details, see 12.3.2 Set Charging Mode .
10	Driving Distance Per kWh	Defines how far an EV can drive on 1 kWh of energy. For detailed instructions, see 12.3.3 Set Driving Distance Per kWh .
11	Total Charge	Displays the total energy delivered by the charger from its initial start to the current moment. If the charge data has been reset before, it shows the energy delivered since the last reset.

No.	Definition	Description
12	General Information	Shows the general information about the charger, including charger S/N, status, total charge, charging power, charging voltage, and charging current.
13	Settings	Allows users to enable or disable the charger, reset the charge data, and set the plug & play function and the offline charging current. For details, see 12.3.5 Configure Charger Parameters .



A **user** account can **start or stop charging**, set the **charging mode** and the **Driving Distance Per kWh**, and access **Settings**. An **admin** account can only access **Settings**.

12.3.2 Set Charging Mode

Four charging modes are available: Eco Charging, Fast Charging, Scheduled Charging, and Customized Charging. You can select only one charging mode for one charging process.

12.3.2.1 Eco Charging

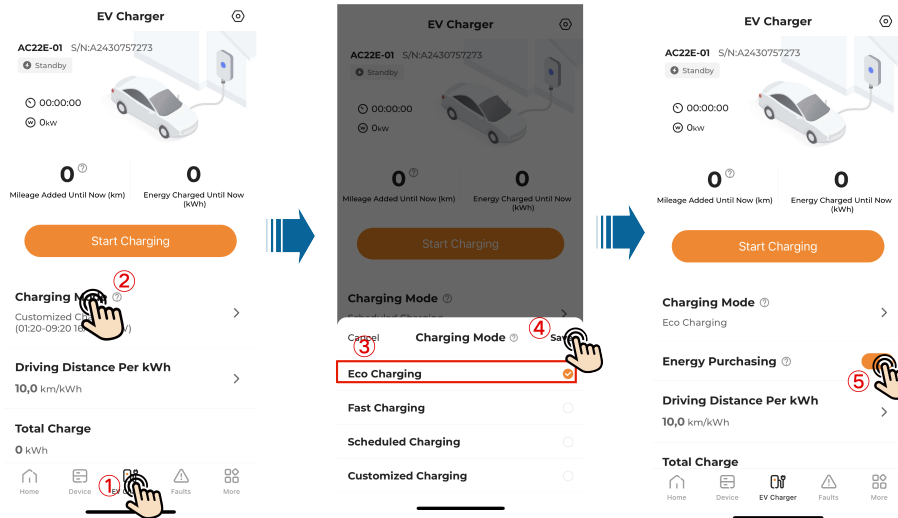
Eco Charging is the most economical charging mode. In this mode, the system prioritizes supplying other loads with PV output and, when there is excess feed-in power, directs the charger to charge the EV. If the PV output power cannot meet the charging demand, the system uses energy stored in the battery for the EV charger. If the battery capacity is insufficient, the system can purchase energy from the grid to fulfill the charging demand (depending on whether energy purchasing is allowed).

Step 1 Tap **EV Charger** in the bottom navigation.

Step 2 Tap **Charging Mode**, select **Eco Charging**, and tap **Save**.

Step 3 Turn on or off **Energy Purchasing** as needed.

- ON: When the PV output and battery energy are insufficient, the EV can be charged with energy purchased from the grid.
- OFF: Charging EVs with energy purchased from the grid is not allowed.



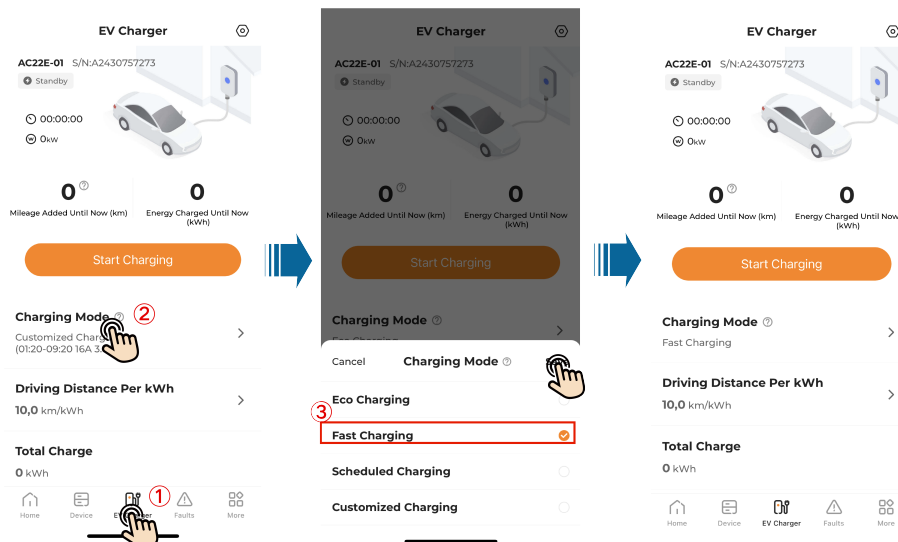
--End

12.3.2.2 Fast Charging

In the Fast Charging mode, the charger charges the EV at the maximum power. Users can select this mode to get the EV ready quickly in case of an urgent travel need. In this mode, when the PV output power is not sufficient to meet the charging demand, the system supplies energy stored in the battery to the charger. If the battery capacity is insufficient, the system purchases energy from the grid to fulfill the charging demand.

Step 1 Tap **EV Charger** in the bottom navigation.

Step 2 Tap **Charging Mode**, select **Fast Charging**, and tap **Save**.



--End

12.3.2.3 Scheduled Charging

In the Scheduled Charging mode, based on the preset charging target and time to pick up the car, the system automatically switches between eco charging and fast charging, and completes charging at the minimum electricity cost before the user picks up the car.



Charging Target sets the amount of energy expected to be delivered to the EV during the specific charging process, without considering the remaining available energy in the EV battery.

Step 1 Tap **EV Charger** in the bottom navigation.

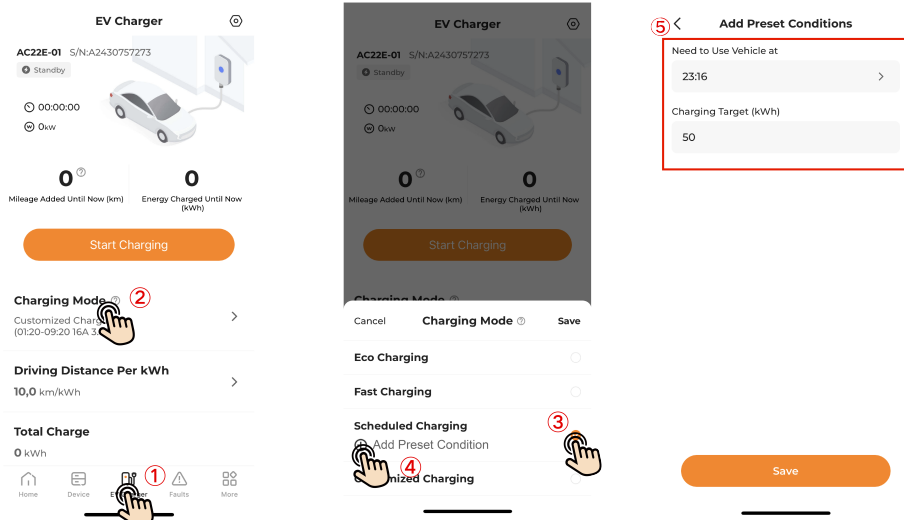
Step 2 Tap **Charging Mode** and select **Scheduled Charging**.

Step 3 Tap **+** to go to **Add Preset Conditions**.

Step 4 Set the **Charging Target** and the time to pick up the car, and tap **Save**.



- If the charger cannot meet the charging target before the pickup time, the screen will display a message stating "unable to complete the charging target before you pick up the vehicle".
 - Tap **Confirm** to save the settings and proceed with the charging process.
 - Tap **Cancel** to go back to **Add Preset Conditions** and set the parameters again.
- Charging will stop once the Charging Target is reached, even if the predefined pickup time has not yet arrived.



--End

12.3.2.4 Customized Charging

The Customized Charging mode allows users to define the start time and end time for a charging process and the charging power/current. In this mode, when the PV output power

is not sufficient to meet the charging demand, the system supplies energy stored in the battery to the charger. If the battery capacity is insufficient, the system purchases energy from the grid to fulfill the charging demand.

Step 1 Tap **EV Charger** in the bottom navigation.

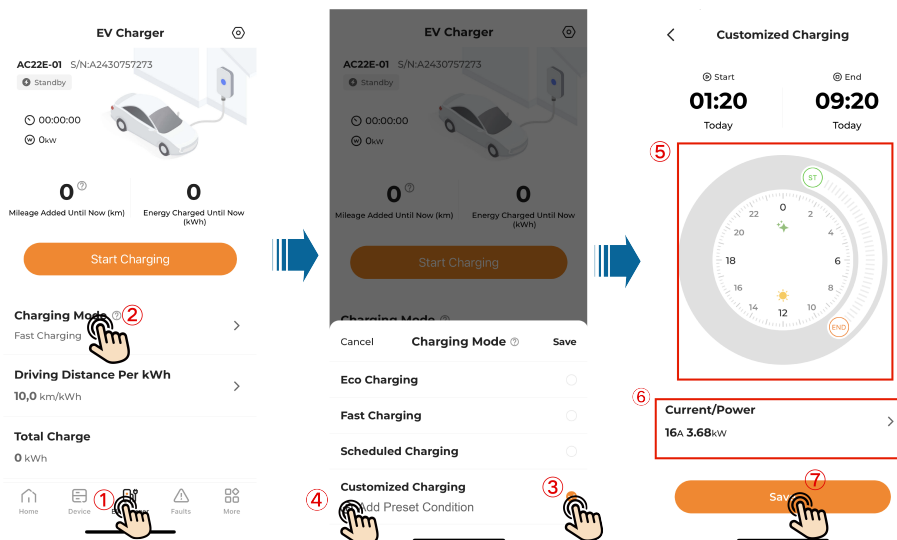
Step 2 Tap **Charging Mode** and select **Customized Charging**.

Step 3 Tap **+** to proceed with settings for **Customized Charging**.

Step 4 Set the start time and end time by dragging the handle around the dial, set the **Current/Power**, and then tap **Save**.



- In Customized Charging mode, the charger will automatically charge the EV within the preset time period. If charging is completed before the preset end time, the charger status will show “Charging Suspended (EV)”.
- If the current time falls within the set charging window and the charging connector has been plugged into the socket on the EV, charging will begin immediately after tapping **Save**.



--End

12.3.3 Set Driving Distance Per kWh

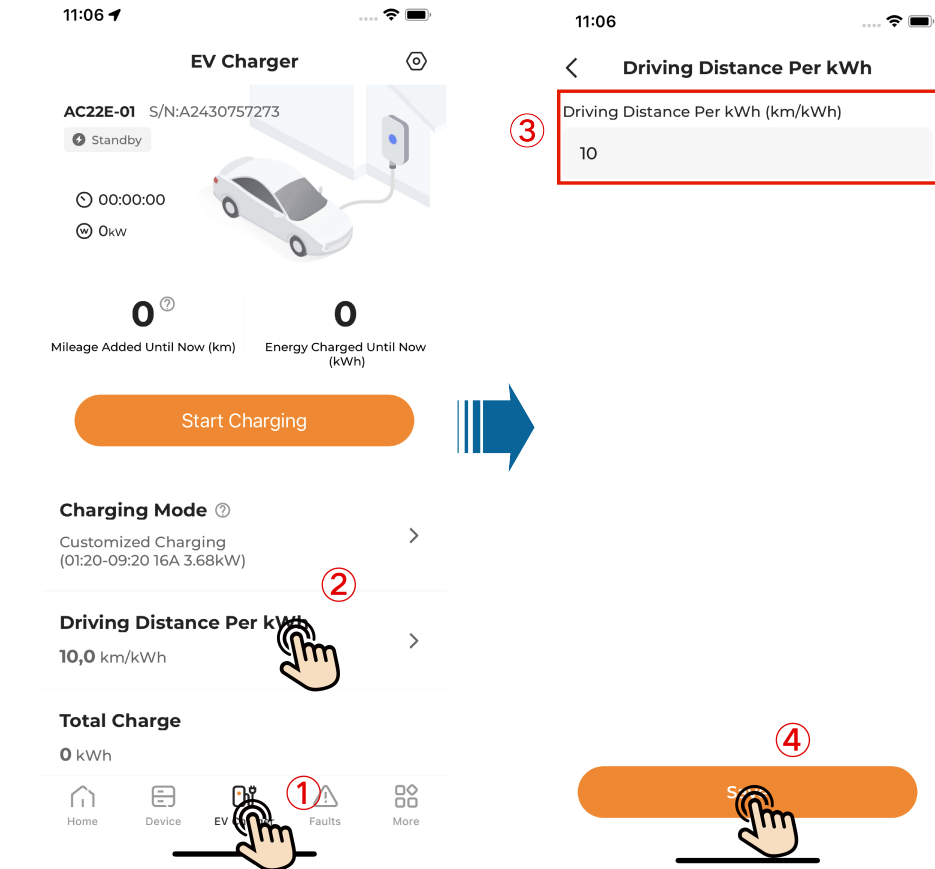
The parameter “Driving Distance per kWh” indicates how far a vehicle can travel on 1 kWh of energy. It depends on the actual road conditions, the vehicle model, the weight of the vehicle and the load it carries, and the speed of the vehicle.

Step 1 Tap **EV Charger** in the bottom navigation.

Step 2 Tap **Driving Distance Per kWh** on the **EV Charger** screen.

Step 3 Enter a value in the input box under **Driving Distance Per kWh** based on actual requirements, with a maximum of 20 km/kWh. The default value is 6 km/kWh.

Step 4 Tap **Save** to apply the settings.



--End

12.3.4 Start/Stop Charging

Users can start or stop a charging process using the **iSolarCloud App**, the **iEnergyCharge App**, or a **charging card**. This section explains how to start or stop charging using the **iSolarCloud App**. Please use the same method to start or stop charging within the same charging process.

12.3.4.1 Start Charging

Step 1 Plug the charging connector into the EV's charging port.

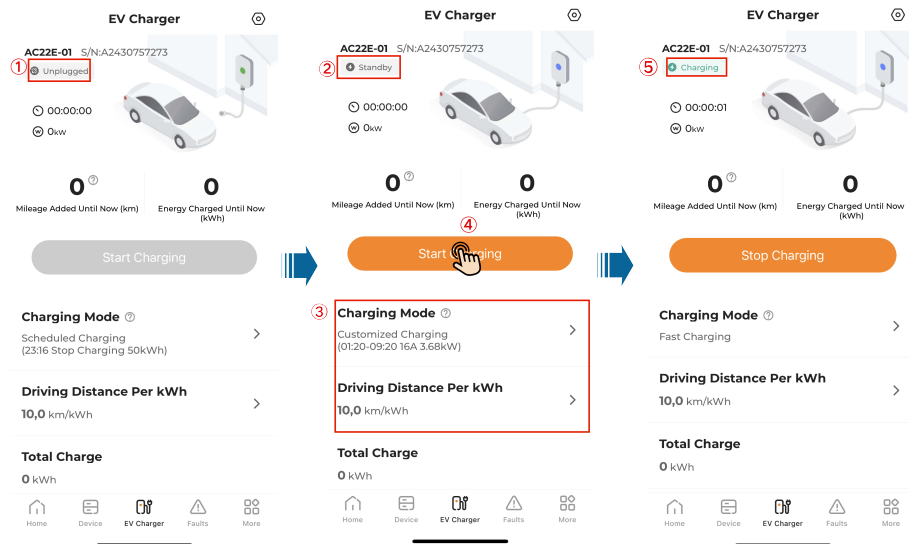
Step 2 Wait for the charger status to change from **Unplugged** to **Standby**.



If the charger remains in the **Unplugged** state for a long time, the charging connector may not be properly connected to the EV. In this case, inspect the connection, and disconnect and reconnect the charging connector.

Step 3 Set the charging mode and driving distance per kWh. For detailed instructions, see [12.3.2 Set Charging Mode](#) and [12.3.3 Set Driving Distance Per kWh](#).

Step 4 Tap **Start Charging**. Check that the charger status switches to **Charging**.



--End

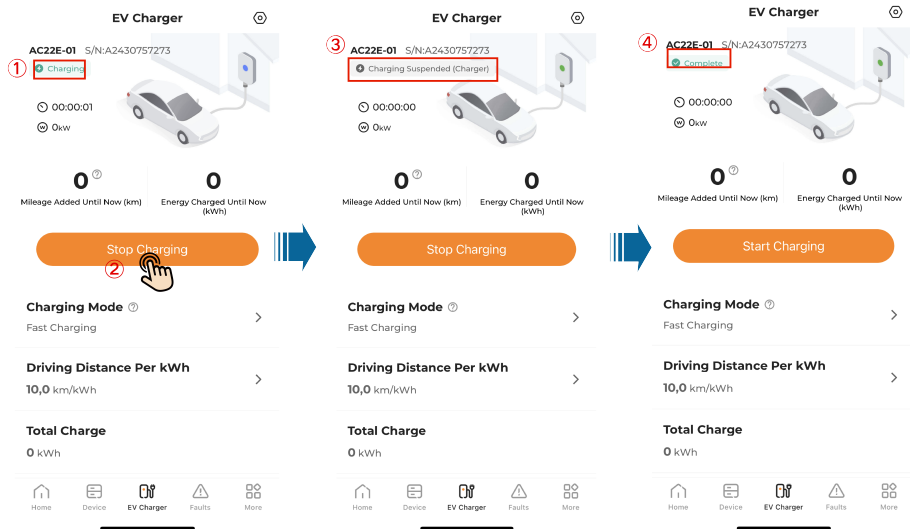
12.3.4.2 Stop Charging

The charging process may stop automatically or be manually stopped by the user. Typically, charging stops automatically when the EV battery is full or the preset charging target is reached, with the charger status displaying “Charging Suspended (EV)” or “Completed”. To manually stop charging during the process, follow the steps below:

Step 1 While the charger is in the **Charging** state, tap **Stop Charging**.

Step 2 Wait for the charger status to change to **Charging Suspended (Charger)**, and eventually to **Completed**.

Step 3 Disconnect the charging connector and return it to the charger.



--End

12.3.5 Configure Charger Parameters

Step 1 Tap **EV Charger** in the bottom navigation.

Step 2 Tap  in the upper right corner to go to **Charger Settings**.

Step 3 Determine whether to **Enable Charger**:

- Enable: The button is orange, indicating the charger is enabled.
- Disable: The button is grey, indicating the charger is disabled.

Step 4 Determine whether to **Clear Charging History Data**:

- Tap **Confirm** to reset the charger's total charge data (total energy delivered) to zero. The charge data will then begin accumulating again, starting from zero.
- No operation: The charge data will continue accumulating from the current value.

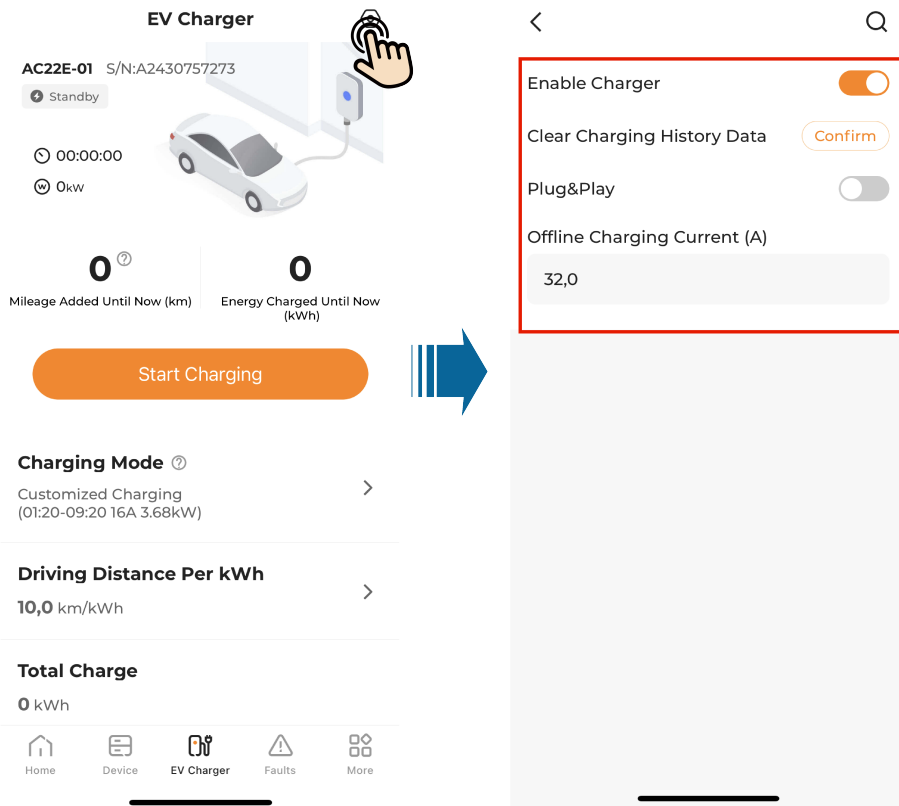
Step 5 Set the **Plug & Play** function:

- Enable: The button is orange, indicating that charging will begin automatically once the charging connector is plugged into the EV.
- Disable: The button is grey, indicating that charging must be manually started after the charging connector is plugged into the EV.



If Customized Charging is selected and the start time is set to a time later than the current time, the Plug & Play function will not take effect. Charging will only begin once the preset start time is reached.

Step 6 Specify the **Offline Charging Current**, in a range of 0.6A to 3.2A. It defines the charging current when the charger is not connected to the inverter. Then, tap **Set**.



--End

12.4 Microinverter Commissioning

12.4.1 Quick Setting

This section provides instructions for completing device initialization, network configuration, and other settings for the microinverter using the Quick Setting feature when accessing the microinverter via the App for the first time.

12.4.1.1 Microinverter View

After logging in, you will go to the Home screen by default, as shown in the figure below.

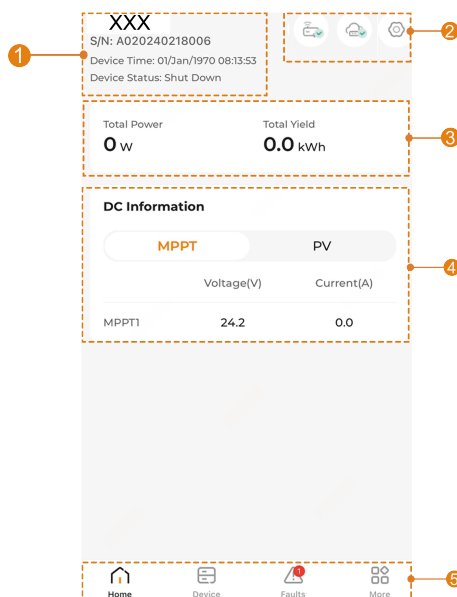


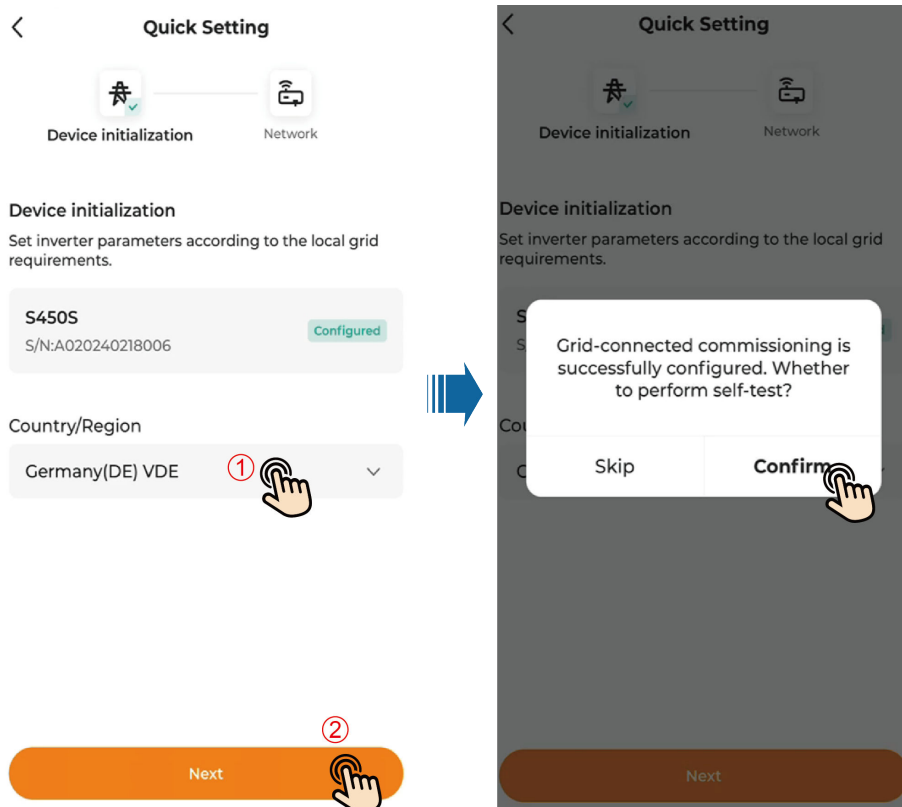
Table 12-4 Home

No.	Definition	Description
1	Microinverter name	Shows the model, S/N, and status of the current microinverter.
2	Toolbar	Provides access to network settings, cloud server selection, and quick settings.
3	Plant operation information	Shows the key plant data, such as the total power and total yield.
4	DC-side information	View MPPT and PV information on the DC side.
5	Navigation bar	- Home: View the operation information of the plant and the devices. - Device: Check and maintain the connected devices. - Faults: View real-time and history faults. - More: Perform operations such as parameter settings, log downloads, and firmware updates.

12.4.1.2 Device Initialization

After connecting to the microinverter, the App automatically goes to **Device Initialization**. Please configure the microinverter parameters according to the local grid requirements.

Step 1 Tap **Country (Region)**  and select the appropriate country/region based on the actual situation.

Step 2 Tap Next.**--End**

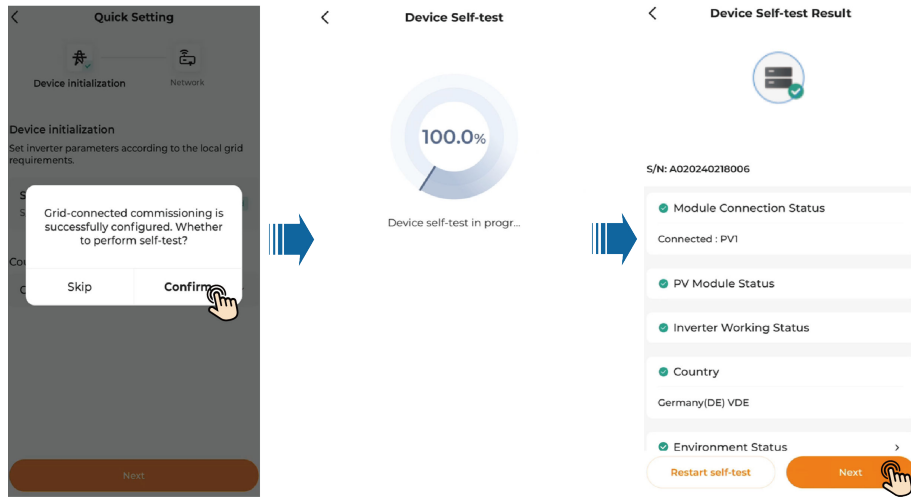
It is recommended to initiate a device self-test after completing the device initialization to ensure the microinverter can operate properly.

12.4.1.3 Device Self-test

Step 1 After completing device initialization, tap **Confirm** to go to **Device Self-test**.

Step 2 If the result shows that the device is abnormal, check the device connection and configuration by following the onscreen instructions.

Step 3 Tap **Next** after the test is completed.



--End

12.4.1.4 Network Connection

Connect the microinverter to a wireless network.

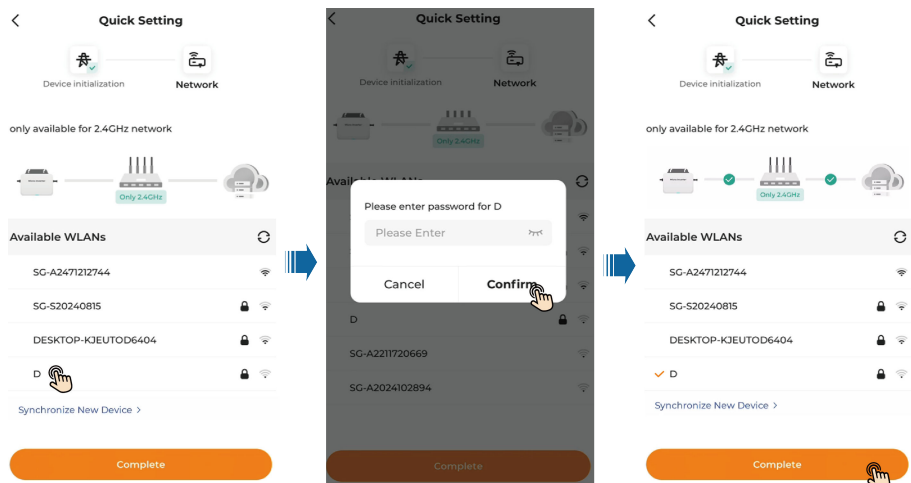
Prerequisite

- Enable the 2.4 GHz wireless network on the router.
- Ensure the network is stable and strong enough.

Step 1 On the **Network** screen, select the router network from the list of available wireless networks.

Step 2 Enter the wireless network password.

Step 3 Tap **Confirm** and wait for the connection to complete.



Once the connection is successful, the status of the device's connection to the router network and the cloud service will be updated. The icon  indicates a successful

connection. If the connection fails, follow the onscreen instructions to find the cause and resolve the issue.

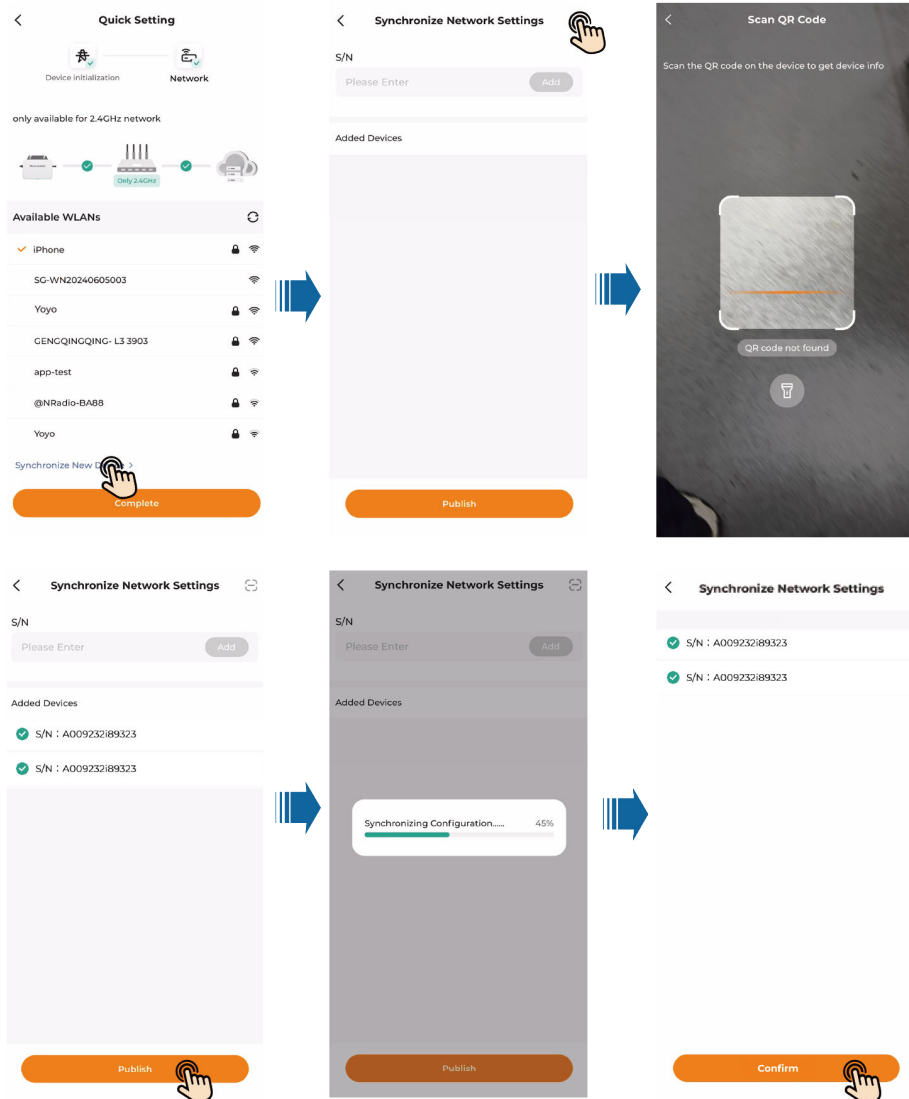
--End

If multiple microinverters are connected in the system, it is recommended to synchronize the network settings for other devices using **Synchronize New Device**.

12.4.1.5 Synchronize Network Configuration

After completing the network settings for a microinverter, you can synchronize its settings for other microinverters.

- Step 1** After completing the network settings for a microinverter, tap **Synchronize New Device** at the bottom left of the screen.
- Step 2** Add microinverters using one of the following methods: Tap **Add** and manually enter the microinverter S/N, or tap  in the upper right corner to scan the QR code on the device.
- Step 3** Tap **Synchronize** and wait for the synchronization to complete.

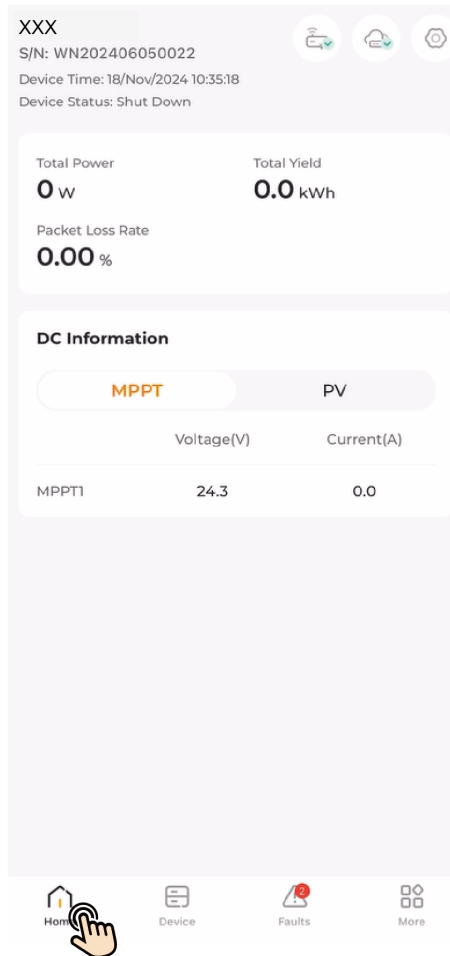


Step 4 Once the synchronization is successful, tap **Confirm**.

--End

12.4.2 View Microinverter Operation Information

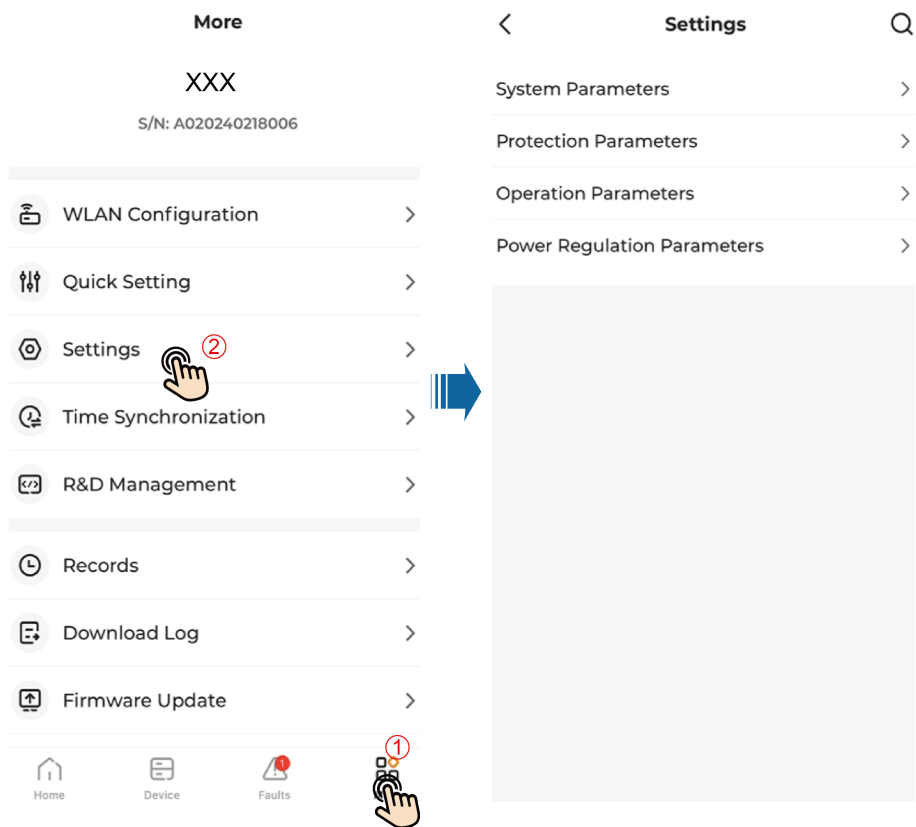
Step 1 Tap **Home** in the bottom navigation to view the total power, total yield, and DC information about the microinverter, as shown below.



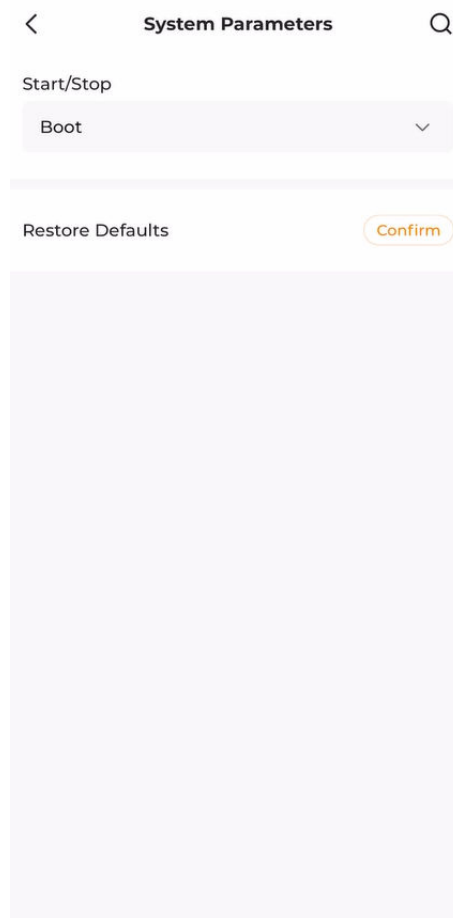
--End

12.4.3 Configure Other Parameters for Microinverter

Step 1 Navigate to **More > Settings**.

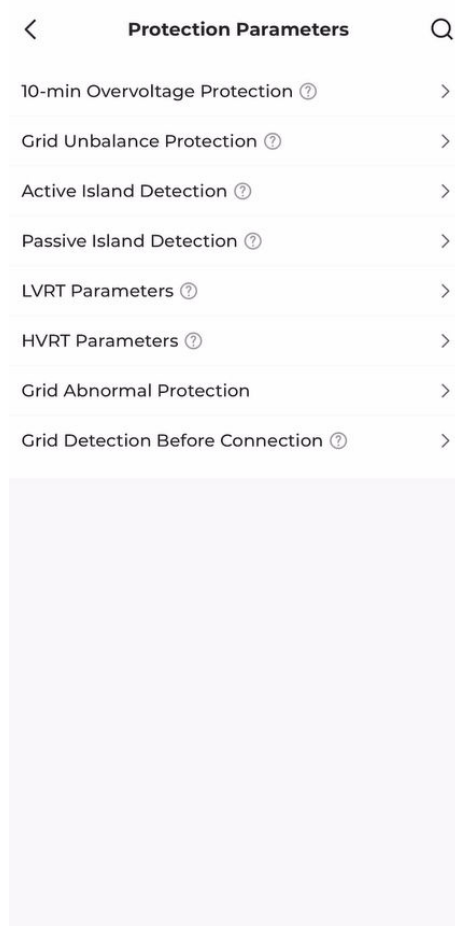


Step 2 Tap **System Parameters** to go to the screen below.

**Table 12-5** System Parameters

Parameter	Description
Boot/Shutdown	Select Boot or Shutdown to boot or shut down the inverter via command.
Restore Defaults	Reset the settings of grid standard and other parameters to their default values.

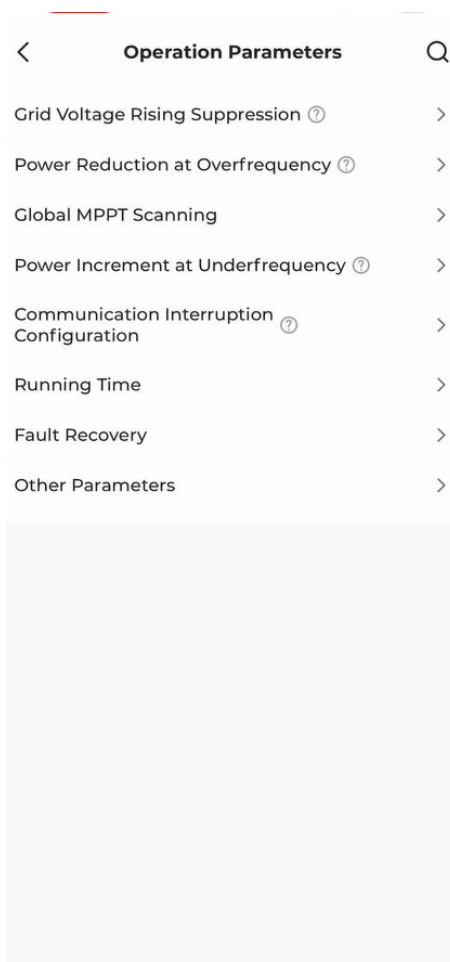
Step 3 Tap **Protection Parameters** to go to the screen below.

**Table 12-6** Protection Parameters

Parameter	Description
10-min Overvoltage Protection	This parameter typically does not require modification, unless required by new guidelines from the grid operator. In the case of grid fluctuations, if the inverter frequently reports a grid overvoltage fault (fault code: 14), the protection threshold value may be properly increased with approval from the grid operator.
Grid Unbalance Protection	This parameter typically does not require modification, unless required by new guidelines from the grid operator. In the case of grid fluctuations, if the inverter frequently reports a grid unbalance fault (fault code: 17), the protection threshold value may be properly increased with approval from the grid operator.

Parameter	Description
Active Island Detection	This parameter typically does not require modification, unless required by new guidelines from the grid operator.
Passive Island Detection	This parameter typically does not require modification, unless required by new guidelines from the grid operator.
LVRT Parameters	This parameter typically does not require modification, unless required by new guidelines from the grid operator.
HVRT Parameters	This parameter typically does not require modification, unless required by new guidelines from the grid operator.
Grid Detection Before Connection	This parameter typically does not require modification, unless required by new guidelines from the grid operator. In the case of grid fluctuations, if the inverter frequently reports a grid abnormal fault (fault code: 13), the protection threshold value may be properly adjusted with approval from the grid operator.

Step 4 Tap Operation Parameters.

**Table 12-7** Operation Parameters

Parameter	Description
Grid Voltage Rising Suppression	This parameter typically does not require modification, unless required by new guidelines from the grid operator. It lowers the grid voltage by reducing active power and producing reactive power.
Power Reduction at Overfrequency	This parameter typically does not require modification, unless required by new guidelines from the grid operator. It sets the curve for the inverter's derated output in response to overfrequency. This curve illustrates the relationship between frequency changes and active power reduction.
Power Increment at Underfrequency	This parameter typically does not require modification, unless required by new guidelines from the grid

Parameter	Description
	operator. It sets the curve for the inverter's uprated output in response to underfrequency. This curve illustrates the relationship between frequency changes and active power increase.
Communication Interruption Configuration	The grid operator provides standard default values, which typically do not need to be adjusted. It defines the preset values for operation during a communication interruption between the inverter and the control device (such as the Data Logger).

Step 5 Tap **Power Regulation Parameters** to go to the screen below.

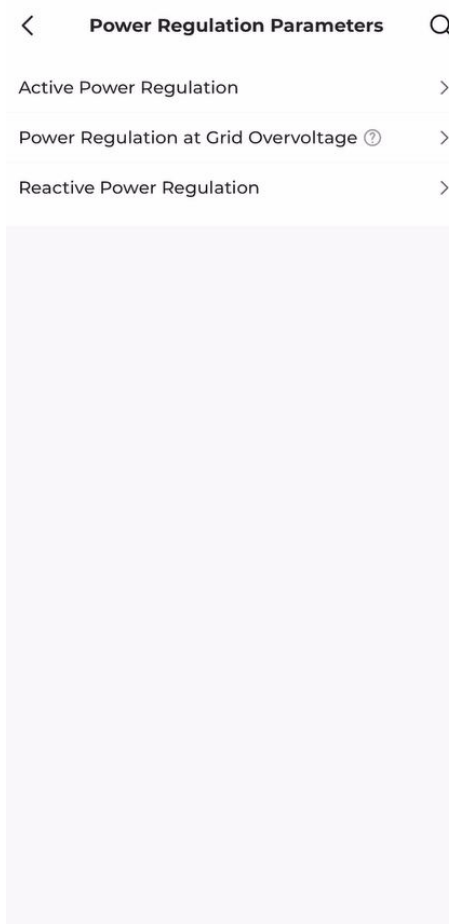


Table 12-8 Power Regulation Parameters

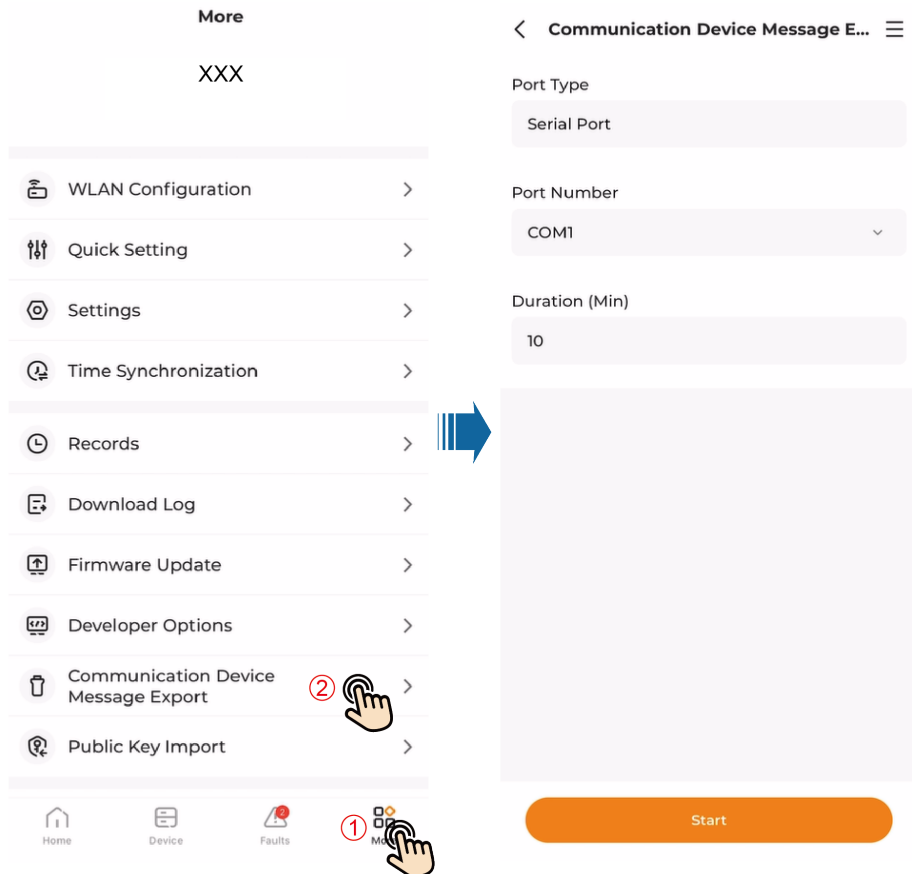
Parameter	Description
Power Regulation at Grid Overvoltage	This parameter typically does not require modification, unless required by new guidelines from the grid operator. It sets the curve for the inverter's active power output in response to overvoltage. This curve illustrates the relationship between voltage changes and active power.

--End

12.4.4 Export Communication Device Message

Step 1 Navigate to **More > Communication Device Message Export**.

Step 2 Set the **Port Number** and **Duration**, and then tap **Start**.

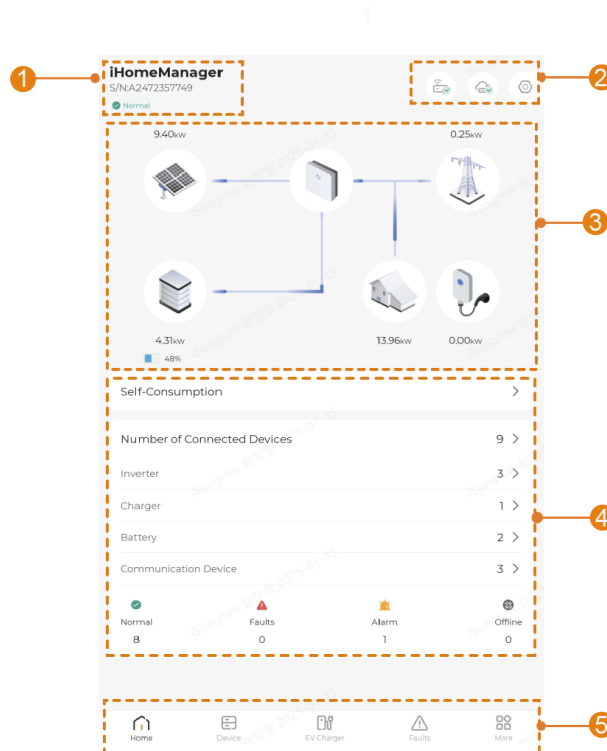


--End

12.5 iHomeManager Commissioning

12.5.1 iSolarCloud App Overview

After logging in, you will go to the **Home** screen by default, as shown in the figure below.



No.	Definition	Description
1	Device name	Shows the model, S/N, and status of the current device.
2	Toolbar	Provides access to network settings, cloud server selection, and quick settings.
3	Plant operation information	Shows the key plant data, such as the total PV power, feed-in/energy purchasing power, and load power. Battery charging/discharging power will also be shown if a battery has been added to the plant.
4	Device operation information	Shows the type, number, and running status of the devices that have been added to the plant. You

No.	Definition	Description
		can tap on the device type or running status to go to the list of the corresponding devices.
5	Navigation bar	• Home: View the operation information of the plant and the devices. • Device: Check and maintain the connected devices. • EV Charger: Check and set the working mode, running status, and charging parameters for the charger. This tab is available only if an EV charger is added. • Faults: View the fault information of the connections between iHomeManager and the connected devices. • More: Set the energy management, power control, intelligent load, and device parameters.



The navigation bar and available functions may slightly differ by account permission. In such cases, the App you actually use should take precedence. The instructions below are provided based on an Retailer/Installer account, unless otherwise specified.



After logging in for the first time, you will go to [12.5.2 Quick Setting](#) by default.

12.5.2 Quick Setting



For the AC22E-01 firmware version lower than LE-01.1E1.001.101.34, please refer to this document https://support.sungrowpower.com/PdfDetail?id=1942479071067181058&language_id=1, and follow the AC22E-01 firmware upgrade process to upgrade to a version compatible with iHomeManager.

"Quick Setting" offers simplified network connection settings, grid connection settings, and cloud access configuration. You can also set the device parameters here.

- **First login**
After logging in for the first time, you will go to "**Quick Setting**" automatically. You can complete device initialization by following the steps below.



Network
Configuration



Device
Management



Parameter
Settings



System
Self-test

- Subsequent login

If it is not your first login, tap  in the upper right corner of the **Home** screen to go to **“Quick Setting”**.



- During quick setting, do not power off or restart the router or the inverter, communication module, and charger connected to the iHomeManager.
- For a retrofit system using SUNGROW inverter, the inverter and communication module will undergo a firmware update and factory reset. Please wait for device initialization to complete first before proceeding with quick setting.

12.5.2.1 Network Configuration



If multiple routers are used at the site, ensure the iHomeManager, communication module, and charger are connected to the same local area network (LAN) and can communicate with each other properly.

Connecting the iHomeManager to the home router via Ethernet cable is preferred. If using the WLAN connection, ensure that the router's WLAN gets full bars in signal strength and operates at 2.4 GHz.

You can check the WLAN signal strength in the following two ways. If the signal bars are not full, it is recommended to adopt Ethernet communication.

1. Choose **Network > WLAN connection** to check the signal strength of the router's WLAN.
2. Choose **More > System Information** to check the signal strength of the router's WLAN to which the device is currently connected.

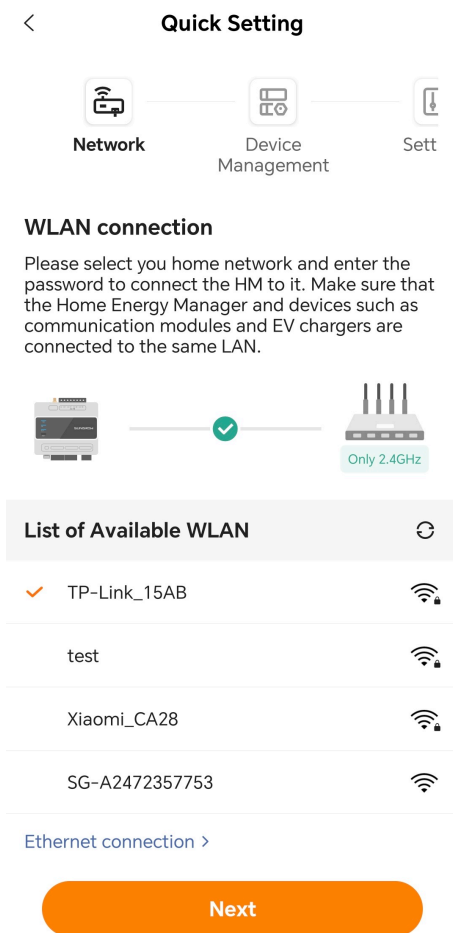


< System Information	
Interface Information	Meter Information
DI ^	
DI1	Disconnected
DI2	Disconnected
DI3	Disconnected
DI4	Disconnected
DO ^	
DO1	Disconnected
DO2	Disconnected
Emergency Stop Status	Disconnected
Antenna Status	External
WLAN Signal Strength	



- To connect a mobile phone directly to the device, ensure the phone is within the coverage of the device's WLAN signal.
- To connect the device to the router via WLAN, ensure the device is within the coverage of the router's WLAN signal and the signal is good and stable.
- The router should support WLAN (IEEE 802.11/B/G/N, 2.4 GHz) and the WLAN signal should cover the inverter.
- WPA, WPA2, and WPA/WPA2 encryptions are recommended for the router; enterprise-level encryption (e.g., airport WLAN and other public networks that require authentication) is not supported; while WEP and WPA TKIP encryptions are not recommended because of their severe security defects. If WEP is adopted and the connection fails, go to the router configuration page and change the encryption to WPA2 or WPA/WPA2.

• WLAN Connection



1. Select the target home network in the list of available WLANs.
2. Enter the password and tap **Confirm**.

3. Tap **Next** upon successful connection.
4. Select **Synchronization** to synchronize the network settings for the communication module, charger, and other devices.

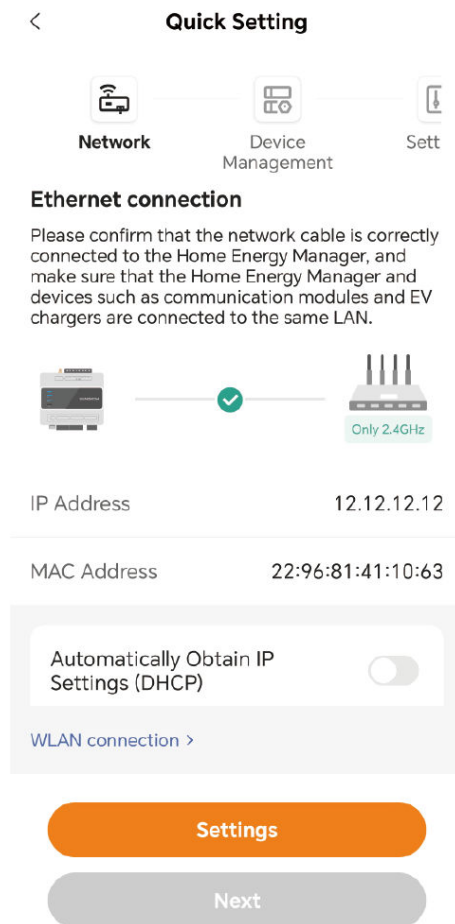
If the WiNet-S communication module is used, you need to configure its network settings manually before "Network Configuration". For details, see "9.1 WLAN Configuration" in the user manual for iSolarCloud App. You can scan the QR code below for the user manual.



5. Go to the "Device Management" screen (see [12.5.2.2 Device Management](#)). The system will initiate a device search automatically.
- Ethernet connection

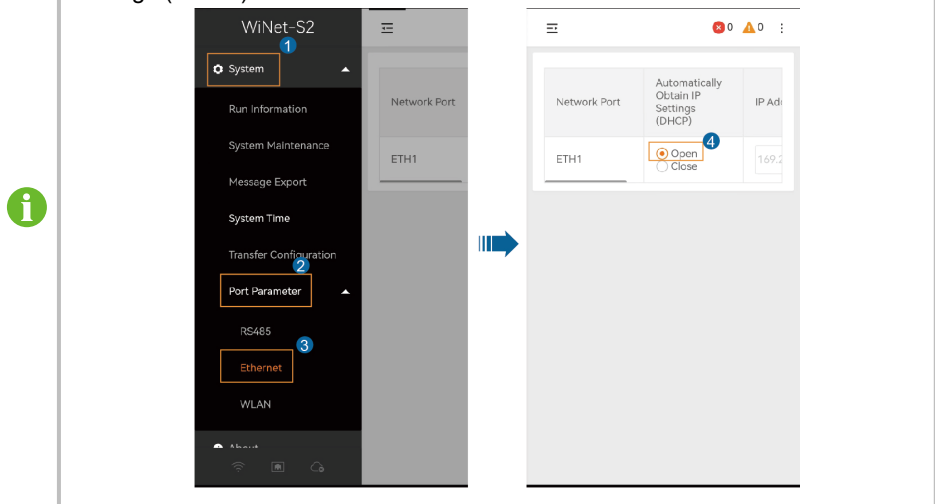


Make sure that the network cable is properly connected to the .



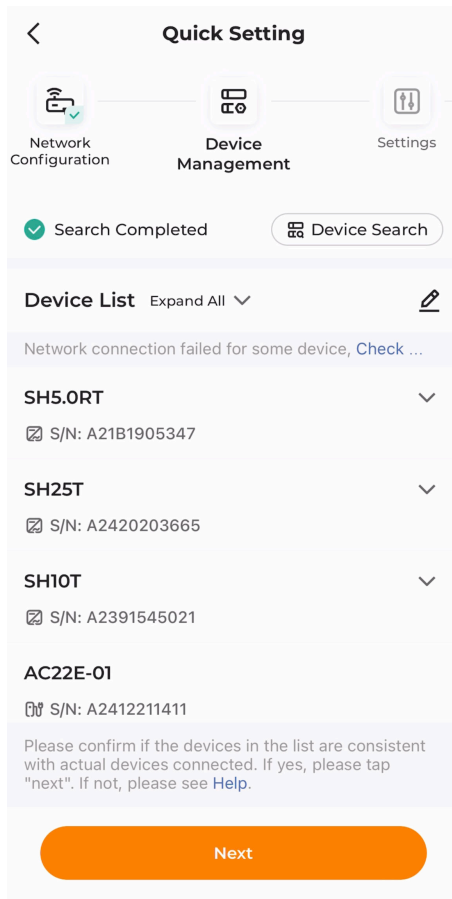
1. On the **Network Configuration** screen, tap **Ethernet Connection** in the lower left corner.
2. **Automatically Obtain IP Settings (DHCP)** is turned on by default. If it is turned off, you need to configure network settings manually based on the router to which the device is connected. The following parameters can be set:
 - IP address
 - Subnet mask
 - Gateway address
 - DNS1
 - DNS2
3. If there are devices connected to the router via WLAN at the site, turn on **WLAN Sharing**. This function allows you to share your WLAN username and password with other wirelessly connected devices and complete network settings in one click.
4. Select the target home network in the list of available WLANs.
5. Enter the password and tap **Confirm**.
6. Tap **Next** after a successful connection to go to [12.5.2.2 Device Management](#).

If the communication module is connected to the router with an Ethernet cable, log in to the module's built-in Web system and turn on "Automatically Obtain IP Settings (DHCP)" in advance.



12.5.2.2 Device Management

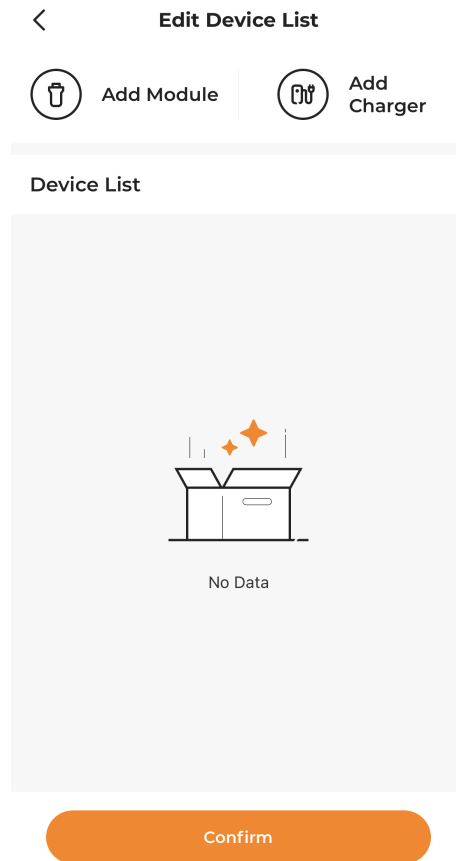
After the network configuration is completed, go to "**Device Management**". The system will scan for nearby devices automatically. Once the scan is finished, verify that the devices in the list match the actual networked devices. This step can be temporarily skipped. For future maintenance and management, see [12.5.8 Device List](#) for details.



- If there are fewer devices in the list than actual networked devices, check that the communication is normal and then tap **Device Search** in the upper right corner or [Add devices manually](#).
- If there are more devices than the actual networked devices, tap  to go to the **Edit Device List** screen, then tap  to delete the unnecessary ones.

Add devices manually

On the **Device Management** screen, tap  to go to the **Edit Device List** screen.

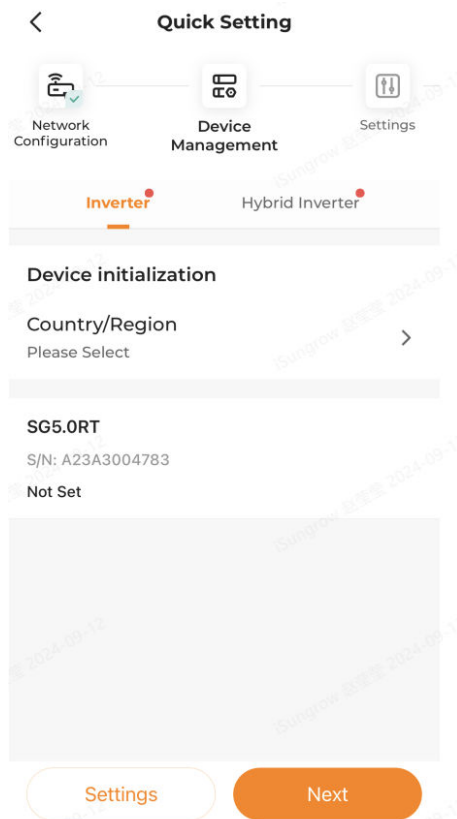


- Choose **Add Module**:
 1. Option 1: Scan the QR code on the communication device and tap **Confirm**.
 2. Option 2: Tap  to upload a picture of the communication device's QR code and tap **Confirm**.
 3. Option 3: Tap , select the type of the communication device, enter the device S/N, and tap **Confirm**.
- Select **Add Charger**:

Enter the charger S/N, and tap **Continue**.

Once the device is added, tap **Confirm** to go back to “**Device Management**”, and then tap **Next** to go to [Device initialization](#).

Device initialization



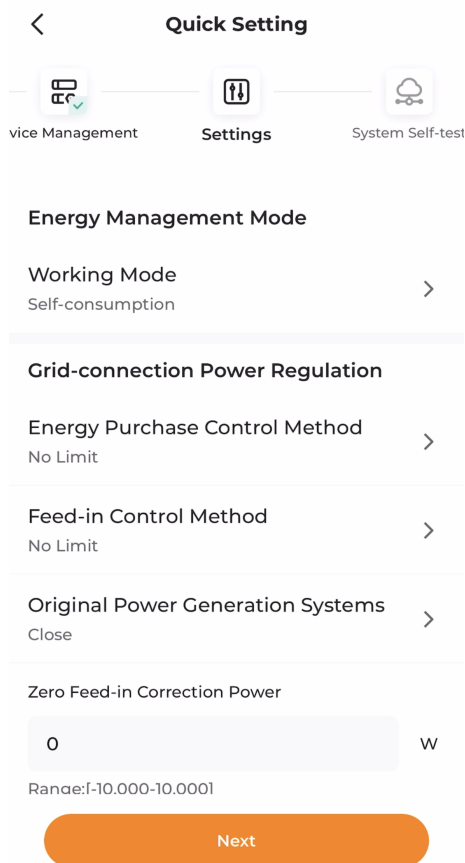
1. Tap **Country/Region**, select the country/region where the device is located or the standard for grid connection, and tap **Confirm** in the upper right corner.
2. Go back to **"Device Management"** and tap **Set** to apply the settings.
3. After all devices are set up successfully, tap **Next** to go to [12.5.2.3 Parameter Settings](#).



If both the PV inverter and the hybrid inverter are used, complete the settings for both in their respective tabs upon first setup. If settings in a tab is missing, you'll need to return to the tab later to finalize them.

12.5.2.3 Parameter Settings

You can set the energy management mode and power control parameters for the device in **"Settings"**. This step cannot be skipped.



Energy management mode

The system provides various energy management modes to ensure effective energy management and maximization of energy utilization.

1. On the **Settings** screen, tap **Working Mode**.
2. Select a working mode for the device. For details, see [12.5.4 Energy Management by iHomeManager](#).

Grid-connected power regulation

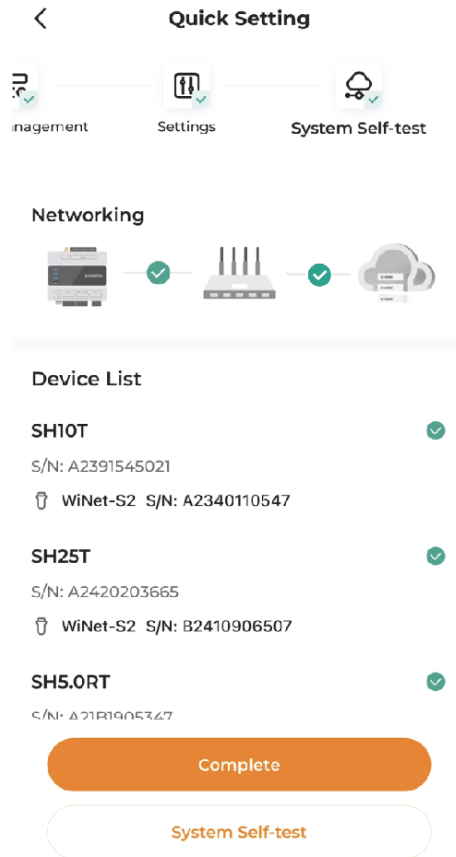
Energy management mode allows users to set power limits on energy purchase and feed-in.

Set the grid-connected power regulation parameters. For details, see [12.5.5.2 Grid-connection Power Regulation](#).

After completing the settings, tap **Next** to go to [12.5.2.4 System Self-test](#).

12.5.2.4 System Self-test

A connection check will be performed by the system automatically once you go to "**System Self-test**". You can then check whether the communication between devices is normal.



1. If the communication is abnormal, perform an inspection by following the onscreen instructions.
2. Tap **System Self-test** at the bottom of the screen.
3. If the system check is finished without detecting anything abnormal in the devices, tap **Complete**.
4. Choose whether to create a plant now.
 - Tap **Continue** to go to [12.5.2.5 Create Plant](#).
 - Tap **Not Now** to go to the **Home** screen.

12.5.2.5 Create Plant



To enter the **Create Plant** screen, please switch to the mobile data or connect your mobile device to a home network, and then go back to the App.

1. Fill in the **Basic Plant Information**:

Parameter	Description
Plant Name*	Name the plant.

Parameter	Description
Installed PV Power (kWp)*	Enter the installed power.
Plant Type*	Select the type of the plant: • Residential PV plant • Residential energy storage plant
City*	The city where the plant is located.
Postal Code	The postal code of the place where the plant is located.
Country/Region*	The country/region where the plant is located.
Time Zone*	Completed automatically according to the country/region you have selected.
Grid-connection Type*	Select the type of grid connection for the plant: • 100% Feed-in • Self-consumption • Zero-export • Off-grid
Grid-connection Date	Shows the current date by default. You can tap  to set the grid-connection date as needed.



* indicates required fields.

2. Fill in the **Retailer/Installer Information**:

Enter the **Retailer/Installer Email Address**. You can select the **Notifying the installer via email** checkbox as needed. The retailer/installer can log in to the App using the email address and check the plant in the plant list.

3. Fill in the **Owner Information**:

Enter the **Owner's Address**. You can select the **Notifying the property owner via email** checkbox as needed. The owner can log in to the App using the email address and check the plant in the plant list.

4. Set tariffs.

a. Set your preferred currency in **Unit**.

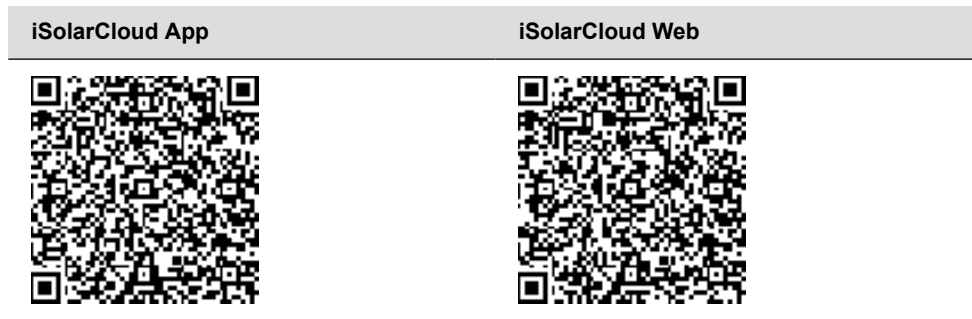
b. Set the **Feed-in Tariff** and the **Consumption Tariff**, and select the **Tariff Type**:

- **Fixed tariff**: Rate charged for electricity consumed at different times of day is the same.
- **Time-of-Use Tariff**: You can set different rates for electricity consumed in different time windows of the day. The time windows cannot overlap.

5. Tap **Save and Continue**.

12.5.2.6 View Plant Information

After a plant is created, users can log in to the iSolarCloud App or Web system, using the previously provided retailer/installer email address or owner email address, and view the information about the plant. For detailed instructions, scan the QR code below for the user manual.



12.5.2.7 View Device Information

After completing the quick settings, go back to “**Home**”. You can then tap the number of connected devices, device type, or device status to open the list of the corresponding devices. For detailed instructions, see [12.5.8 Device List](#).

12.5.3 EV Charger Settings (Optional)

If an EV charger has been added to the plant, the **EV Charger** tab will appear in the bottom navigation bar of the App.

The iHomeManager can be used in conjunction with the following SUNGROW chargers.

- AC22E-01



The **User** can set the charging mode and other parameters in “**EV Charger**”, while the **Retailer/Installer** can view the data only and cannot take any action.



Charging modes and parameter setting instructions below are provided with an **User** account as an example.



Start charging

1. Plug the charging connector into the charging port on the EV.
2. Set the charging mode.
3. Check that the charger status changes to **Standby**.
4. Tap **Start Charging**. Check that the charger status changes to **Charging**.
5. After charging is completed, pull out the charging connector.



If the charger status shows **Unplugged**, the charging connector may not be plugged into the EV correctly. In this case, check the connection, or pull out and plug the charging connector again.

Stop charging

1. Tap **Stop Charging** during the charging process.
2. Check that the charger status changes to **Completed**.

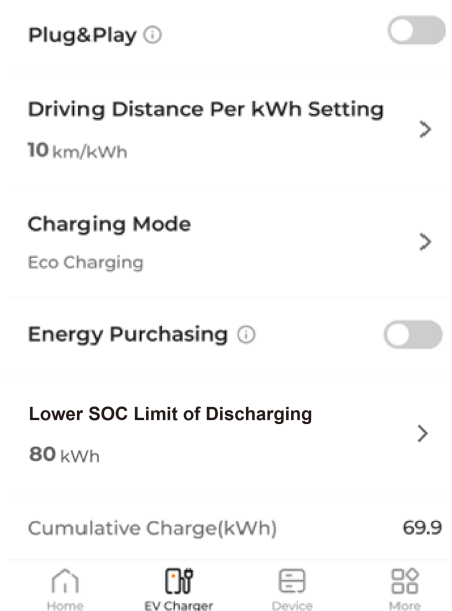


You can start or stop charging on the iSolarCloud App or using a charging card. Please start or stop charging in the same way for the same charging session.

12.5.3.1 Eco Charging

"Eco Charging" is the most economical charging mode. In this mode, the system prioritizes supplying other loads with PV output and, when there is excess feed-in power, directs the charger to charge the EV. If the PV output power cannot meet the charging demand, the system uses energy stored in the battery for the EV charger. If the battery capacity is insufficient, the system purchases energy from the grid to cover the charging demand.

Steps



1. Go to the **EV Charger** screen.
2. Turn on or off **Plug & Play** as needed.
 - ON: Charging begins once the charging connector is plugged into the EV.
 - OFF: Charging begins when the user taps **Start Charging** after the charging connector is plugged into the EV.
3. Set the **Driving Distance Per kWh**. "Driving distance per kWh" indicates how far a vehicle can travel on 1kWh of energy. It depends on the actual road conditions, the vehicle model, the weight of the vehicle and its load, and the speed of the vehicle.
4. Tap **Charging Mode**, select **Eco Charging**, and tap **Save**.
5. Turn on or off **Energy Purchasing** as needed.
 - ON: When the PV output and battery energy are insufficient, the EV can be charged with energy purchased from the grid.
 - OFF: Charging EVs with energy purchased from the grid is not allowed.

6. Set the **Lower SOC Limit of Discharging**.

If the PV output power is not sufficient for the charger to work, battery energy is used to serve the charger. The rules are:

- The battery is allowed to discharge to supply the charger when the system SOC is above this threshold.
- The battery is not allowed to discharge to supply the charger when the system SOC is below this threshold.

You can start charging once the settings are completed.

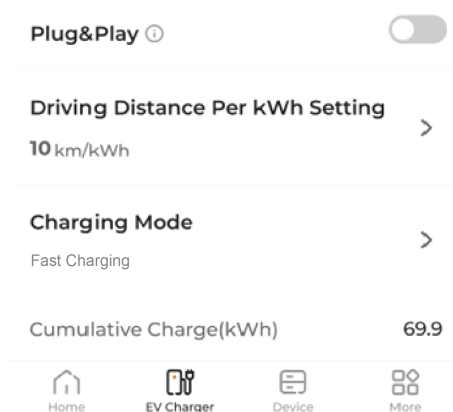


If the EV supports both three-phase and single-phase charging, the iHomeManager will instruct the three-phase charger to switch between single-phase and three-phase charging modes to enhance clean energy utilization. When the charging power falls within the range of 1.38–4.14 kW, the charger switches to single-phase charging mode; when the charging power rises above 4.14 kW again, the charger switches back to three-phase mode. A temporary power drop to 0 W during this transition is normal.

12.5.3.2 Fast Charging

In the “Fast Charging” mode, the charger charges the EV at the maximum available power. Users can select this mode to get the EV ready quickly in case of an urgent travel need. In this mode, when the PV output power is not sufficient to cover the charging demand, the system supplies the energy stored in the battery to the charger. If the battery capacity is insufficient, the system purchases energy from the grid to cover the charging demand.

Steps



1. Go to the **EV Charger** screen.
2. Turn on or off **Plug & Play** as needed.
 - ON: Charging begins once the charging connector is plugged into the EV
 - OFF: Charging begins when the user taps **Start Charging** after the charging connector is plugged into the EV.

3. Set the **Driving Distance Per kWh Setting**. "Driving distance per kWh" indicates how far a vehicle can travel on 1kWh of energy. It depends on the actual road conditions, the vehicle model, the weight of the vehicle and its load, and the speed of the vehicle.

4. Tap **Charging Mode**, select **Fast Charging**, and tap **Save**.

You can start charging once the settings are completed.

12.5.3.3 Scheduled Charging

In the "Scheduled Charging" mode, based on the preset charging target and time to pick up the car, the system automatically switches between eco charging and fast charging, and completes charging at the minimum electricity cost before the user picks up the car.



"Charging Target" sets the amount of energy expected to be delivered to the EV, without considering the remaining available energy in the EV battery.

Steps

<
Add Preset Conditions

Need to Use Vehicle at

17:55
 >

Charging Target (kWh)

20

Save

1. Go to the **EV Charger** screen.

2. Turn on or off **Plug & Play** as needed.

- ON: Charging begins once the charging connector is plugged into the EV.

- OFF: Charging begins when the user taps **Start Charging** after the charging connector is plugged into the EV.
3. Set the **Driving Distance Per kWh**. "Driving distance per kWh" indicates how far a vehicle can travel on 1kWh of energy. It depends on the actual road conditions, the vehicle model, the weight of the vehicle and its load, and the speed of the vehicle.
 4. Tap **Charging Mode** and select **Scheduled Charging**.
 5. Tap  to go to the **Add Preset Conditions** screen.
 6. Set the **Charging Target** and the time to pick up the car, and tap **Save**.



Charging will stop once the charging target is reached, even if the predefined pickup time has not yet arrived.



If the charger cannot meet the charging target before the pickup time, the screen will display "unable to complete the charging target before you pick up the vehicle".

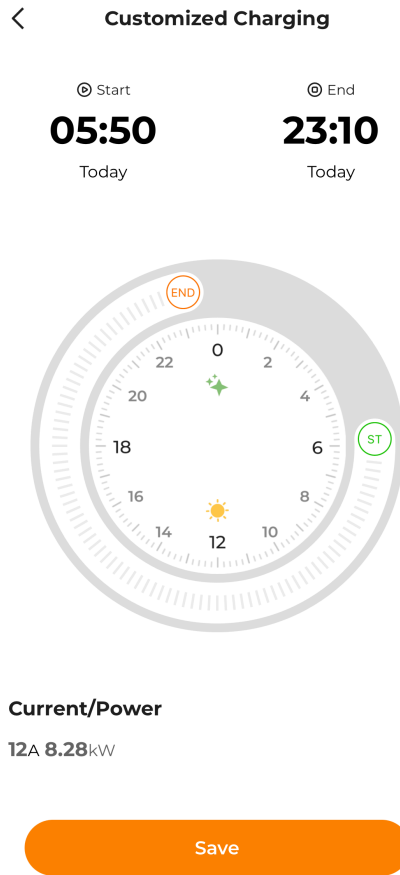
- Tap **Confirm** to save the above settings.
- Tap **Cancel** to go back to "Add Preset Conditions" and set the parameters again.

You can start charging once the settings are completed.

12.5.3.4 Customized Charging

The "Customized Charging" mode allows users to define the start time and end time for a charging task and the charging power/current. In this mode, when the PV output power is not sufficient to meet the charging demand, the system supplies energy stored in the battery to the charger. If the battery capacity is insufficient, the system purchases energy from the grid to fulfill the charging demand.

Steps



1. Go to the **EV Charger** screen.
2. Set the **Driving Distance Per kWh**. "Driving distance per kWh" indicates how far a vehicle can travel on 1kWh of energy. It depends on the actual road conditions, the vehicle model, the weight of the vehicle and its load, and the speed of the vehicle.
3. Tap **Charging Mode** and select **Customized Charging**.
4. Tap  to go to **Customized Charging** screen.
5. Set the start time, end time, and **Current/Power**, then tap **Save**.



- In this mode, the charger will charge the EV automatically within the preset time period.
- If the current time falls within the set charging window and the charging connector has been plugged into the socket on the EV, charging will begin immediately after you tap **Save**.
- Outside of the custom charging window, if a charging session is initiated using Plug & Play or a card and the charger starts working accordingly, the iHomeManager will automatically cut off power to the charger to make it stop.

12.5.4 Energy Management by iHomeManager

The system provides various energy management modes to ensure effective energy management and maximization of energy utilization.

The following working modes are available for the iHomeManager.

- Self-consumption
- Time Plan
- Compulsory Mode
- AI Mode



iHomeManager supports third-party scheduling. When the Third-party scheduling mode is selected, the Energy management page displays a message indicating that the system is currently operating in External energy dispatch mode, the plant dispatch is controlled by a third party, and users can manually switch to other modes.

12.5.4.1 Self-Consumption

The **Self-consumption** mode maximizes the utilization of PV output and battery energy to power the loads, thus minimizing grid energy consumption. Users can configure time windows for Feed-in Peak Power and Peak Shaving Limit based on electricity rates, allowing for flexible adjustment of battery charging/discharging and energy purchase strategies to optimize energy costs.

Function Logic

- When the PV output power is sufficient, the PV energy will be first supplied to the loads, with the excess stored in the battery. If, after this, there is still energy surplus, it will be fed into the grid.
- If the PV output power is insufficient to meet the load demand, the system discharges the battery to compensate. If the battery capacity is insufficient, the system draws power from the grid to meet the load demand.

Procedure

14:09 80%

Energy management

Working mode

Self-consumption

Peak Shaving Mode

Reserved SOC for Peak Shaving(%)

Please enter

Range:[0-100]

TI

Jan to Jun

Every day

Peak Shaving Limit Feed-in Peak Power

00:00

01:00

Apply settings

1. Choose **More > Energy management**.
2. Set the **Working mode** to **Self-consumption**.
3. Enable or disable the **Peak Shaving Mode**. The mode is disabled by default.
4. If **Peak Shaving Mode** is enabled, enter a value in **Reserved SOC for Peak Shaving (%)**.



The Reserved SOC for Peak Shaving must be greater than the Reserved battery SOC for off-grid. Otherwise, the setting will not take effect.

5. Configure the time windows for **Feed-in Peak Power** and **Peak Shaving Limit**. See [12.5.4.1.2 Custom Month Span](#) for details.
6. Set the **Feed-in Peak Power** and **Peak Shaving Limit**. See [12.5.4.1.1 Demand Control](#) for details.
7. Tap **Apply settings**.

12.5.4.1.1 Demand Control

Demand control allows you to set the **Feed-in Peak Power** and **Peak Shaving Limit**. In the **Self-consumption** mode, after the demand control parameters are set, the battery

charging/discharging strategy will adjust automatically based on the energy purchasing and feed-in power, thus improving the economic benefits of clean energy.

Feed-in Peak Power

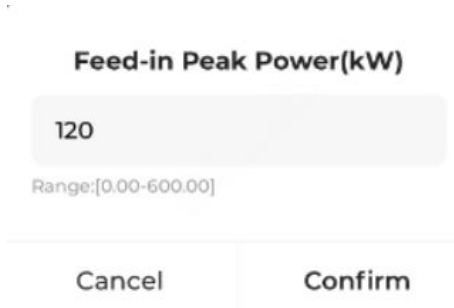
After you configure this threshold, when there is sufficient sunlight, the system will meet the load demand with PV energy first and feed the excess into the grid. The battery will only be charged when the power feed-in exceeds this threshold. When the battery is fully charged, the system will limit PV generation or grid feed-in based on the configured Feed-in limit power.

Peak Shaving Limit

After you configure this threshold, when there is insufficient sunlight: If the battery has sufficient charge, the system will prioritize supplying power to the load from the battery. If the battery charge is insufficient, the system will draw power from the grid to supply the load. When the energy purchase power exceeds this threshold, the system will continue to draw power from the battery for load use, helping reduce the user's electricity cost.

Procedure

1. In the **Feed-in Peak Power** column, click an existing time window. In the pop-up **Feed-in Peak Power** dialog box, enter the demand feed-in power upper limit (range: 0–600 kW). Tap **Confirm**.



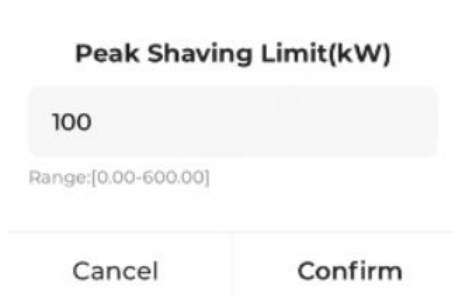
Feed-in Peak Power(kW)

120

Range:[0.00-600.00]

Cancel Confirm

2. In the **Peak Shaving Limit** column, click an existing time window. In the pop-up **Peak Shaving Limit** dialog box, enter the demand purchase power upper limit (range: 0–600 kW). Tap **Confirm**.



Peak Shaving Limit(kW)

100

Range:[0.00-600.00]

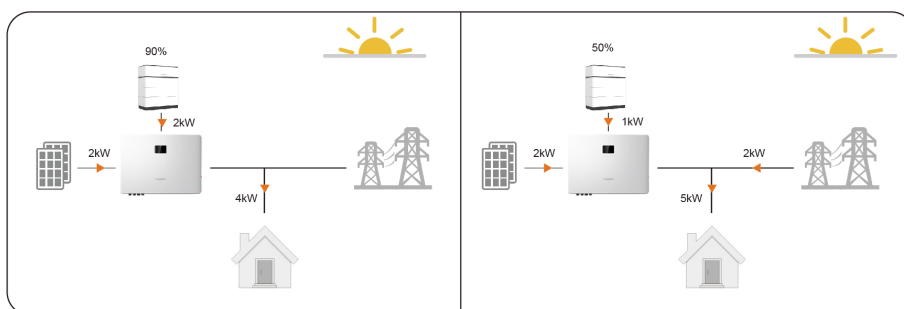
Cancel Confirm

Example

Given the inverter PV installed power is 10 kW, the inverter rated power is 10 kW, the maximum charging/discharging power of the battery is 5 kW, and the battery backup SOC is set to 70%.

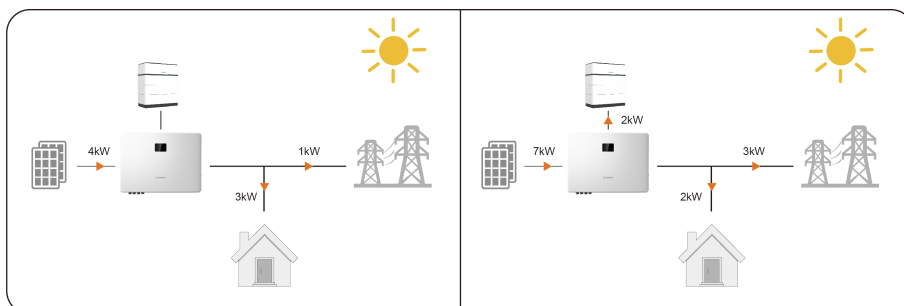
Set the **Peak Shaving Limit** to 2 kW. Then, in case of insufficient sunlight, the energy allocation in the system is as follows:

- If the PV output power is 2 kW, the consumption of the load is 4 kW, and the battery backup SOC is 90%: The load prioritizes drawing power from the battery. At this time, the battery discharging power is 2 kW.
- If the PV output power is 2 kW, the consumption of the load is 5 kW, and the battery backup SOC is 50%: Due to the restriction of **Peak Shaving Limit**, the load imports a power of 2 kW from the grid, and the excess 1 kW is supplemented by battery discharge.



Set the **Feed-in Peak Power** to 3 kW. Then, under sufficient sunlight, the energy allocation in the system is as follows:

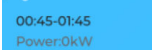
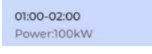
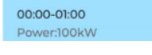
- If the PV output power is 4 kW, and the consumption of the load is 3 kW: As the excess 1kW has not exceeded the **Feed-in Peak Power**, the excess will be fed into the grid, instead of being used to charge the battery.
- If the PV output power is 7 kW and the consumption of the load is 2 kW, due to the restriction of **Feed-in Peak Power**, 3 kW will be fed into the grid and the remaining 2 kW will be used to charge the battery.



12.5.4.1.2 Custom Month Span

In the **Self-consumption** mode, users can set battery charging/discharging plans to optimize the energy usage and management. With properly set time windows for Feed-in Peak Power and Peak Shaving Limit, the system maximizes the use of PV output during

on-peak hours and reduces the energy purchased from the grid during off-peak hours, thus lowering the electricity costs.

Time Window Status	Description
 : Feed-in Peak Power	If the time window is displayed in a dark color, you can drag up and down to adjust its length, to a minimum of 15 minutes.
 : Peak Shaving Limit	
 : Feed-in Peak Power	If the time window is displayed in a light color, it indicates that the Feed-in Peak Power or Peak Shaving Limit has been set for this period of time. You can tap and delete the window.
 : Peak Shaving Limit	

Procedure

- In the time window configuration area, set the desired month span. You can set different time windows based on seasonal energy demand patterns.
- Select the days on which the **Feed-in Peak Power** or **Peak Shaving Limit** plan applies. You can apply the plan to all days, or set different plans for weekdays and weekends. The plan applies to every day by default.
 - Every day:** The set **Feed-in Peak Power** and **Peak Shaving Limit** plan applies on all days. This option is ideal for scenarios where the daily energy demand is relatively stable.
 - Weekdays & weekends:** Set different **Feed-in Peak Power** and **Peak Shaving Limit** plans for weekdays and weekends.
- To add more month spans, tap  to the right of the default month span name and select **Add**.



You can select a month span and tap  to modify its name or delete it.

- Tap the desired time period in the **Feed-in Peak Power** or **Peak Shaving Limit** column. A new Feed-in Peak Power or Peak Shaving Limit time window will be created. Then, drag up and down to adjust the length of time, and tap the window again to add it.



Feed-in Peak Power and **Peak Shaving Limit** time windows can overlap.

12.5.4.2 Time Plan

The **Time plan** mode is mainly used in electricity transaction scenarios. You can set the time windows and power for battery charging/discharging manually, according to the on- and off-peak electricity prices, to maximize the economic benefits.

It is recommended to allow the battery to discharge during on-peak hours (when electricity prices are higher) and charge during off-peak hours (when electricity prices are lower).

Function Logic

- **Discharging window:** The battery discharges at the predefined discharging power within the set time period until the Battery discharge target SOC is reached.
- **Charging window:** The battery charges at the predefined charging power within the set time period. If PV power is sufficient, the battery charges until it is fully charged. If PV power is insufficient, it charges until the Battery charge target SOC is reached.

Procedure

The screenshot shows the 'Energy management' settings interface. At the top, there are status icons and the time '16:23'. The title bar says '< Energy management'. Below it, 'Working mode' is set to 'Time plan'. A horizontal separator follows. 'Battery charge target SOC(%)' is set to '100' with a range of '[0-100]'. 'Battery discharge target SOC(%)' is set to '80' with a range of '[0-100]'. Another separator follows. 'Perform self-consumption in rest time' is toggled on. Below this is a calendar icon with 'TI' and a date range dropdown set to 'Jan to Mar'. At the bottom is an orange 'Apply settings' button.

1. Choose **More > Energy management**.
2. Set the **Working mode** to **Timed plan**.
3. Set the **Battery charge target SOC (%)**: Charging stops when the battery reaches the target charging SOC.
4. Set the **Battery discharge target SOC (%)**: Discharging stops when the battery drops to the target discharging SOC.

5. Enable **Perform self-consumption in rest time**. When enabled, the system performs self-consumption outside the defined charging/discharging time windows.
6. Set the desired month span. You can set different time windows based on seasonal energy demand patterns.
7. Select the days on which the battery charging/discharging plan applies.
You can apply the charging/discharging plan to all days, or set different charging/discharging plans for weekdays and weekends. The plan applies to every day by default.
 - **Every day**: The set charging/discharging plan applies on all days. This option is ideal for scenarios where the daily electricity price is relatively consistent.
 - **Weekdays & weekends**: Set different charging/discharging plans for weekdays and weekends.
8. To add more month spans, tap  to the right of the default month span name and select **Add**.



You can select a month span and tap  to modify its name or delete it.

9. Tap a time period in the **Discharge** or **Charge** column, a new discharging or charging window will be created. Then, drag up and down to adjust the length of time, and tap the window again to add it.



The charging and discharging windows cannot overlap.
The battery will not discharge in a time period with no settings. If the PV output is insufficient to meet the load demand, the system purchases energy from the grid to meet the load demand, and allows the battery to charge from the excess PV energy.

10. Tap an added window, choose **Set power**, and set the discharging or charging power.
11. Tap **Apply settings**.

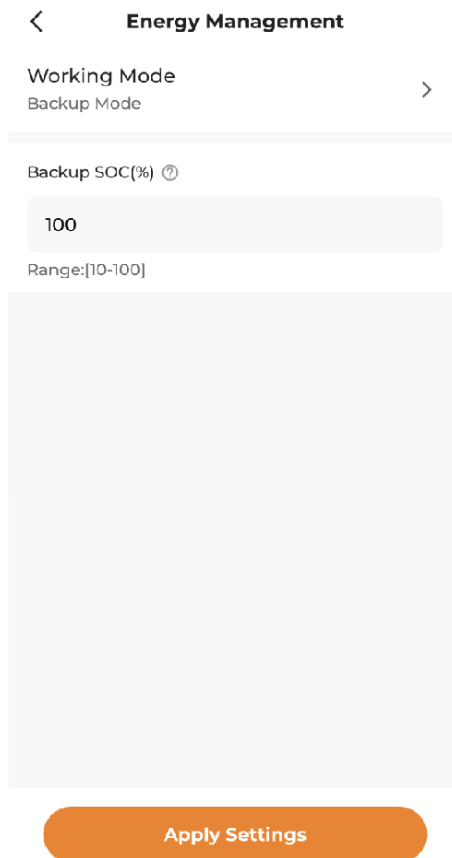
12.5.4.3 Backup Mode

The **Backup Mode** is mainly used for emergency power backup in off-grid scenarios. This mode can be enabled by the user based on the actual situation, and it will take effect once the settings are applied. In this mode, the battery charges at the maximum power until reaching the backup SOC, while battery discharging is not allowed.

Function Logic

- When the PV output power is sufficient, the system uses the PV power to charge the battery first. If, after this, there is excess energy, it will be supplied to the load.
- If the PV power cannot meet the backup demand, the system purchases energy from the grid to charge the battery.

Steps



1. Choose **More > Energy Management**.
2. Set the **Working Mode** to **Backup Mode**.
3. Set the **Backup SOC**, in a range of 10–100.

The **Backup SOC** sets the upper limit for battery charging. If the current battery SOC is higher than this level, the system allows the battery to discharge until reaching the **Backup SOC**.

Example: If the current battery SOC is 80% and the **Backup SOC** is 70%, the battery is allowed to discharge to 70% SOC.

4. Tap **Apply Settings**.

12.5.4.4 Compulsory Mode

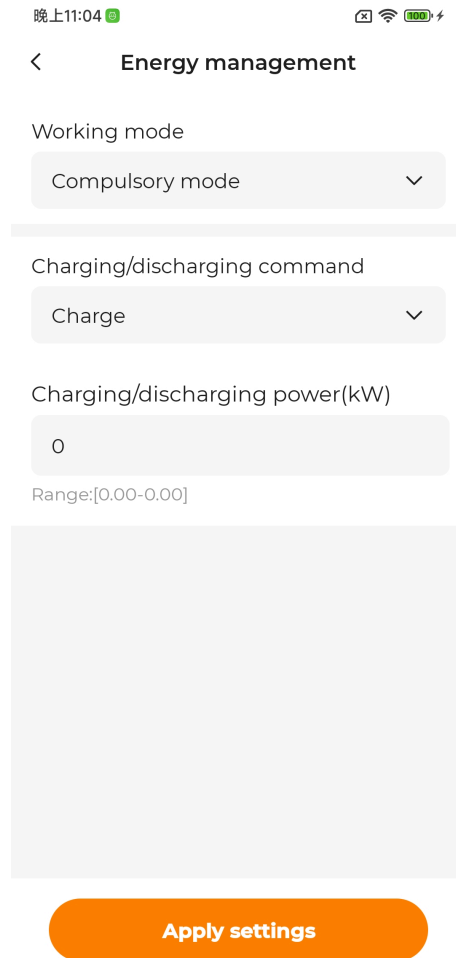
The **Compulsory Mode** is mainly used in battery O&M to control the battery and make it operate in compliance with the preset charging/discharging mode and power. Restore the system to the previous working mode after maintenance work is completed.

Function Logic

- **Forced Charging:** The battery charges at the preset charging power until it is fully charged.

- **Forced Discharging:** The battery discharges at the preset discharging power until it is fully discharged.

Steps



1. Choose **More > Energy Management**.
2. Set the **Working Mode** to **Compulsory Mode**.
3. Set the **Charging/Discharging Command**.
 - **Charge:** Force the battery to charge at the preset charging power until the battery SOC upper limit is reached.
 - **Discharge:** Force the battery to discharge at the preset discharging power until the battery SOC lower limit is reached.
 - **Stop:** Stop battery charging or discharging manually.
4. If **Charge** or **Discharge** is selected, set the target charging or discharge power in **Charging/Discharging Power**.
5. Tap **Apply Settings**.

12.5.4.5 VPP

The **VPP** is mainly used in the scenario of the third-party VPP provider. In this mode, the system operates according to the feed-in power and battery charging/discharging commands from the VPP provider.

Energy management and scheduling will be conducted based on the external demands, to satisfy the needs and operational requirements of the grid and achieve efficient utilization and scheduling of external resources.

Steps

1. Choose **More > Energy Management**.
2. Set the **Working Mode** to **VPP**.
3. Tap **Apply Settings**.

12.5.4.6 AI Mode

In the **AI Mode**, the system predicts future PV yield and household electricity use, based on the meteorological data and the user's consumption profile. It then decides on an optimal strategy to control battery charging/discharging and electricity usage in the household, thus maximizing the clean energy usage or the revenue.



A certain amount of data accumulation is required for AI mode to predict future production and consumption more accurately.

Steps

晚上11:04   

< **Energy management**

Working mode

Compulsory mode 

Charging/discharging command

Charge 

Charging/discharging power(kW)

0

Range:[0.00-0.00]

Apply settings

1. Choose **More > Energy Management**.
 2. Set the **Working Mode** to **AI Mode**.
 3. Set **Working Strategy** to **Maximize Revenue** or **Maximize Clean Energy Usage**.
See [12.5.4.6.1 Maximize Revenue](#) and [12.5.4.6.2 Maximize Clean Energy Usage](#) for detailed instructions.
 4. Turn on or off **Storm Protection** as needed.
 - If the **Storm Protection** is enabled, upon receiving an extreme weather alert, the system charges at maximum capacity until reaching the SOC upper limit, ignoring all the preset restrictions. When the extreme weather ends, the system will go back to the previous working mode.
 - Disable: The system will work as per the set working strategy.
 5. Tap **Apply Settings**.
- 12.5.4.6.1 Maximize Revenue**
- Function Logic**

By analyzing the meteorological data, the system controls the charging/discharging of the battery properly based on PV yield forecast, electricity price settings, and loads' energy consumption, to cover the user's energy demand and reduce the consumption of energy from the grid.



The meteorological data comes from official statistics.

Procedure

1. Tap **Working Strategy**, and select **Maximize Revenue**.
2. Set the tariff mode. Options include **Dynamic Tariff** and **Fixed/TOU tariff**. For detailed instructions, see [7.6.1 Edit Tariff](#).

12.5.4.6.2 Maximize Clean Energy Usage Function Logic

After the load connected to the device is added and the rated power and work time of the load are set, the system maximizes the use of PV output and battery energy to supply the load and reduces the energy purchased from the grid.

Steps

1. Tap **Working Strategy**, and select **Maximize Clean Energy Usage**.
2. Tap  to the right of **Intelligent Load**, and select the target load based on the port to which it is connected.
 - If the load is connected to the DO1 port, select **DO1-Load**, and tap **Add**. This also applies to **DO2-Load**.
 - If the load is connected to both the DO1 and DO2 ports, choose **Select All** in the lower left corner, and tap **Add**.
3. Set the load's power and work plan.

<
DO1-Load

* Load Name

DO1-Load

* Nominal Power(kW)

0.1

Range:[0.0-50.0]

* Every Day >

01:00 - 05:00

⊕ Add Time

Connection Method

DO1

Apply Settings

- a. Tap on the load that has been added and choose **Edit**.
- b. The **Load Name** and **Nominal Power** can be modified.
- c. Select the days on which the work plan applies.
 - **Every Day**: The work plan applies on all days.
 - **Weekdays & Weekends**: Set different work plans respectively for weekdays and weekends.
- d. Set the **Start Time** and **End Time** of work for the load. You can also tap **Add Time** to add more time windows.
- e. Tap **Save**.

12.5.5 Power Control

12.5.5.1 DI Power Regulation

DI power regulation supports Ripple Control and EnWG 14a control. If an emergency stop device is connected, users can also configure the emergency stop function.



If the DI power regulation is not needed, set **DI Control Method** to “OFF”.

12.5.5.1.1 Ripple Control

In the "Ripple Control" mode, the system receives control signals from the grid in the form of dry contact signals, and perform power regulation as required.

If the "Ripple Control" mode is selected, the grid operator will convert the grid schedule signal into the dry contact signal and send it out. A total of 16 DI combinations are available, each with a specific power ratio. Please set the DI combination for the system so that it can receive and respond to grid signals properly.

Table 12-9 DI Interface Status

Icon	Description
	This DI interface is in the open state.
	This DI interface is in the closed state.
	DI combinations cannot be repeated.

Steps

DI Power Regulation

DI Control Method
Ripple Control

Inverter Output Power Limit Ratio
Calculation Basis
Nominal Power

No.	DI1	DI2	DI3	DI4	P%	
01					0	

Add DI Combination

Note: Disconnect Closed Range:0%-100...

Emergency Stop Function
Close

1. Choose **More > Power Control > DI Power Regulation**.
2. Set the **DI Control Method** to **Ripple Control**.
3. Set the **Inverter Output Power Limit Ratio Calculation Basis**.
 - **Nominal Power**: The value of the schedule command is calculated based on the rated power of the inverter that is connected.

- **Installed PV Power:** The value of the schedule command is calculated based on the installed PV power of the inverter that is connected. Please enter the **Total Installed Power of Modules** based on the actual plant conditions.
4. Select DI ports, and set a power ratio in a range of 0%–100%.



Set DI combinations based on the control signals sent from the grid operator.

Example

If the control signal received is converted into the DI combination of 1100, which indicates a power limit ratio of 80%, set as follows:

No.	DI1	DI2	DI3	DI4	P%
01	☒	☒	☐	☐	80

5. Tap **Add DI Combination** to add other DI combinations.
6. Tap **Apply Settings**.

12.5.5.1.2 Emergency Stop Function

The emergency stop function allows users to stop the inverter immediately in case of an emergency.

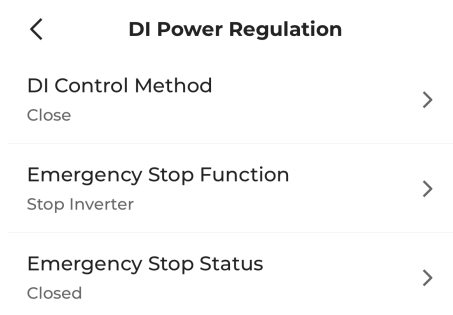


The emergency stop function is available for SUNGROW inverters only.

Table 12-10 Emergency Stop Modes

Mode	Description
OFF	Emergency stop control is disabled.
Stop Inverter	When emergency stop is triggered, the inverter enters the emergency stop state.

Steps



1. Choose **More > Power Control > DI Power Regulation**.
2. Open the **Emergency Stop Function** drop-down list. You can decide whether to enable the emergency stop function and select the emergency stop mode based on actual needs.

3. If **Stop Inverter** is selected, select a trigger condition in the drop-down list of "Emergency Stop Status".
 - **Open**: Emergency stop will be triggered when DI opens.
 - **Closed**: Emergency stop will be triggered when DI closes.
4. Tap **Apply Settings**.

12.5.5.2 Grid-connection Power Regulation

The energy management mode allows users to set power limits on energy purchase and feed-in.

Steps

1. Choose **More > Power Control > Grid-connection Power Regulation**.
2. In the **Energy Purchasing Control Method** drop-down list, select **Unlimited** or **Purchase Energy With Limited Power**.
 - **Unlimited**: There is no power limit for purchasing energy from the grid.
 - **Purchase Energy With Limited Power**: There is a power limit for purchasing energy from the grid.
3. If **Purchase Energy With Limited Power** is selected, set a proper power limit in **Power Limit for Energy Purchase** based on the rated current of the main power source equipment (e.g., household air circuit breaker) that is connected in the system.

< **Grid-connection Power Regula...**

Energy Purchase Control Method >

Purchase Energy With Limited Power

Power Limit for Energy Purchase

100

kW

Range:[0.00-600.00]



The value of **Power Limit for Energy Purchase** should not be lower than the total load connected in the system.

4. In the **Feed-in Control Method** drop-down list, select **Unlimited** or **Feed-in Limited Power**.
 - **Unlimited**: There is no power limit on energy feed-in.
 - **Feed-in Limited Power**: There is a power limit on energy feed-in.
5. If **Feed-in Limited Power** is selected, set a proper power limit in **Feed-in Limitation Ratio** for energy feed-in according to the local laws and regulations. The unit of the power limit is user-definable, "%" by default.

Feed-in Control Method ⓘ
Feed-in Limited Power >

Feed-in Limitation Ratio

80 % ▼

Range:[0.0-100.0]

6. In the **Third-Party Power Generation Systems** drop-down list, select **Disable** or **Enable**.
- **Disable:** There is no power output from third-party power generation facilities.
 - **Enable:** There is power output from third-party power generation facilities.
7. If **Enable** is selected, provide the rated power of such power generation equipment in **Rated Power of Third-Party Power Generation Systems**.

Third-Party Power Generatio... >
Open

Rated Power of Third-Party Power Generation Systems

30 kW

Range:[0.00-600.00]



This parameter should be set if a third-party inverter is connected to the device.

8. Set **Swift grid dispatch mode** to **Open** (enable) or **Close** (disable).

Swift grid dispatch mode ⓘ >
Open



This mode is inactive by default. Enabling this mode allows faster active power regulation for the system. It is recommended to enable it in the scenario of reverse power protection or zero export.

9. Tap **Apply Settings**.

12.5.6 Intelligent Load

The **Intelligent Load** allows users to define the working mode for a load and control how and when the load works. The following three working modes are available.

- Scheduled Mode
- Instant Mode
- ECO Mode

Steps

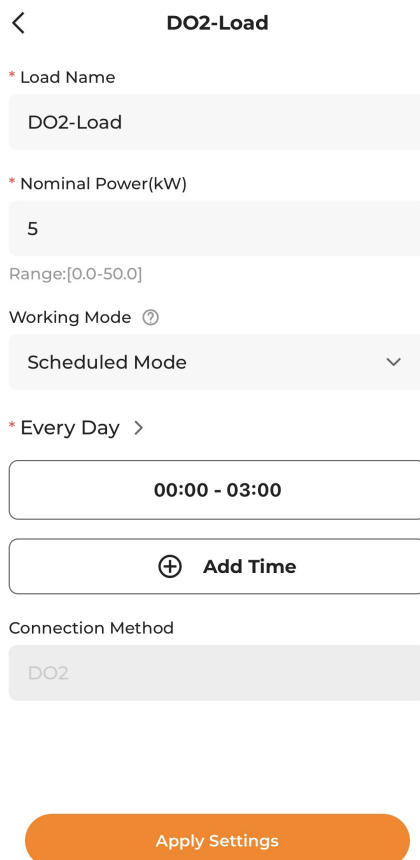
1. Choose **More > Intelligent Load**.

2. Tap on a load and select a working mode for it. For details, see [12.5.6.1 Scheduled Mode \(Heat Pump Control\)](#), [12.5.6.2 Instant Mode \(Heat Pump Control\)](#) and [12.5.6.3 ECO Mode \(Heat Pump Control\)](#).
3. Tap  in the upper right corner of the **Intelligent Load** screen to set the priority in energy consumption for the load. For detailed instructions, see [12.5.6.4 Intelligent Load Consumption Priority](#).
4. Go back to the **Intelligent Load** screen, and turn on the target load. The load will then operate in compliance with the preset working mode.

12.5.6.1 Scheduled Mode (Heat Pump Control)

The **Scheduled Mode** allows the load to work in a specific time period. You can define the time for the load to start and stop working.

Steps



< **DO2-Load**

* Load Name
DO2-Load

* Nominal Power(kW)
5
Range:[0.0-50.0]

Working Mode ?
Scheduled Mode

* Every Day >
00:00 - 03:00
⊕ Add Time

Connection Method
DO2

Apply Settings

1. Select the target load. The **Load Name** and **Nominal Power** can be modified.
2. Set the **Working Mode** to **Scheduled Mode**.
3. Select the days on which the work plan applies.

You can apply the work plan to every day, or set different work plans respectively for weekdays and weekends. The work plan applies to every day by default.

- **Every Day:** The work plan applies on all days. This mode is suitable for scenarios where the load usage is relatively stable.
- **Weekdays & Weekends:** Set different work plans respectively for weekdays and weekends.

4. Tap **Add Time** and set the **Start Time** and **End Time** of each time window.



Up to four time windows can be set, each with a minimum length of 30 minutes. The time windows cannot overlap.

5. Tap **Confirm**.

12.5.6.2 Instant Mode (Heat Pump Control)

The **Instant Mode** allows the load to start or stop working immediately as per the commands. In this mode, you can start or stop an intelligent load as needed on the **Intelligent Load** screen.

Steps

<

DO2-Load

* Load Name

DO2-Load

* Nominal Power(kW)

5

Range:[0.0-50.0]

Working Mode

Instant Mode

▼

Connection Method

DO2

Apply Settings

1. Select the target load. The **Load Name** and **Nominal Power** can be modified.
2. Set the **Working Mode** to **Instant Mode**.
3. Tap **Confirm**.

12.5.6.3 ECO Mode (Heat Pump Control)

The **ECO Mode** allows the loads to turn on and consume PV energy when the PV output power is sufficient, thus improving the self-consumption rate. In this mode, the system prioritizes supplying PV energy to other loads and, if there is excess feed-in power, turns on the intelligent load.

Steps

The screenshot shows the 'DO2-Load' configuration interface. At the top, there is a back arrow and the title 'DO2-Load'. Below this, there are several configuration fields:

- * Load Name**: A text input field containing 'DO2-Load'.
- * Nominal Power(kW)**: A numeric input field containing '5'. Below it, the range '[0.0-50.0]' is displayed.
- Working Mode**: A dropdown menu with a question mark icon, currently set to 'ECO Mode'.
- * Lower SOC Limit of Discharging(%)**: A numeric input field containing '5'. Below it, the range '[5-100]' is displayed.
- * Every Day**: A section with a right arrow icon, containing a time range '00:00 - 03:00' and an 'Add Time' button with a plus icon.
- Connection Method**: A label with a corresponding input field below it.
- Apply Settings**: An orange button at the bottom of the screen.

1. Select the target load. The **Load Name** and **Nominal Power** can be modified.
2. Set the **Working Mode** to **ECO Mode**.
3. Set a lower-limit SOC threshold for discharging in **Lower SOC Limit of Discharging**, in a range of 5 to 100.
4. Select the days on which the work plan applies.
You can apply the work plan to every day, or set different work plans respectively for weekdays and weekends. The work plan applies to every day by default.

- **Every Day:** The work plan applies on all days. This mode is suitable for scenarios where the PV power output is rather stable.
 - **Weekdays & Weekends:** Set different work plans respectively for weekdays and weekends.
5. Tap **Add Time** and set the **Start Time** and **End Time** of each time window.

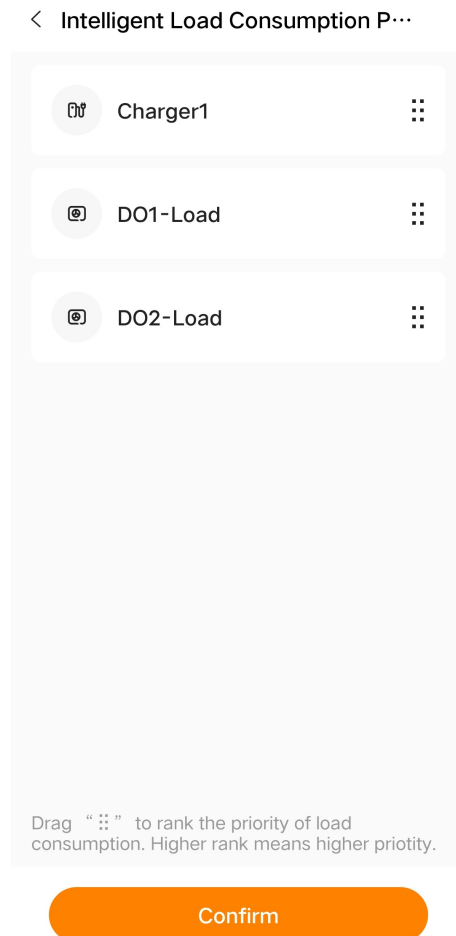


Up to four time windows can be set, each with a minimum length of 30 minutes. The time windows cannot overlap.

6. Tap **Apply Settings**.

12.5.6.4 Intelligent Load Consumption Priority

Steps



1. Choose **More > Intelligent Load**.
2. Tap in the upper right corner of the **Intelligent Load** screen.

3. On the **Intelligent Load Power Consumption Priority** screen, drag  to re-arrange the loads by priority in energy consumption. The item higher up on the list has higher priority.
4. Tap **Complete**.



When a load with higher priority is activated, if the lower-priority load is working in ECO mode and the remaining PV energy is not sufficient to meet its demand, the system will turn off the lower-priority load to ensure energy supply for the higher-priority load.

12.5.7 Device Settings

12.5.7.1 iHomeManager Settings

Basic Settings

Choose **More > iHomeManager Settings**, and select **Basic Settings** to set the parameters related to the iHomeManager.

<

Basic Settings

GRID.CT Ratio

100A (CT)

>

PROD.CT Ratio

100A (CT)

>

GRID.CT Reverse Connection Correction

Off

>

PROD.CT Reverse Connection Correction

Off

>

Select Antenna

Please Select

>

Backup Mode ⓘ

☒

* Reserved Battery SOC for Off-Grid (%) ⓘ

90

Range: [0-100]

Automatic Recharge to Reserved Battery

☐

for

Settings

Table 12-11 Parameter Description

Parameter	Description
GRID.CT Ratio	Set the maximum current that the CT at the GRID.CT terminal can measure.
PROD.CT Ratio	Set the maximum current that the CT at the PROD.CT terminal can measure.
GRID.CT Reverse Connection Correction	This function is used to correct the polarity for data accuracy when the signal wires of the CT are connected in reverse. Correct
PROD.CT Reverse Connection Correction	

Parameter	Description
	wiring: Connect the white signal wire to "+" and blue wire to "-". Example If the white wire is connected to "-" and blue wire to "+" in phase A, select the option Phase A Reverse for reverse polarity correction.
Select Antenna	• Built-in Antenna: No external antenna is connected. • External Antenna: An external antenna is connected.
Backup Mode	Turn on this button and set the Reserved Battery SOC for Off-Grid if the device is in the backup mode.
Reserved Battery SOC for Off-Grid	Energy reserved for the off-grid operation of the system. It sets the minimum SOC to which the system can discharge in the grid-connected mode.
Automatic Recharge to Reserved Battery SOC for Off-grid	If this function is turned on, when the battery SOC is lower than 2% of the Reserved Battery SOC for Off-Grid, the system starts an emergency battery charging until reaching the Reserved Battery SOC for Off-Grid.

Forwarding channel Settings

Choose **More > iHomeManager Settings**, and select **Forwarding channel Settings** to set the open status of the local port of the iHomeManager and the SSL encryption status.

晚上8:38

92%

< Forwarding channel settings

Local port	Channel switch	SSL encryption
502	☒	☒
503	☐	☐
504	☐	☐

Apply settings

The function is supported in versions iHomeManager-SV930.001.00.P006 and above.

Local ports 502, 503 and 504 are Used to connect SUNGROW devices or third-party management systems to iHomeManager via Modbus Transmission Control Protocol (Modbus TCP). Port 502 is enabled by default and SSL encryption is enabled. Ports 503 and 504 are closed by default and SSL encryption is also disabled.

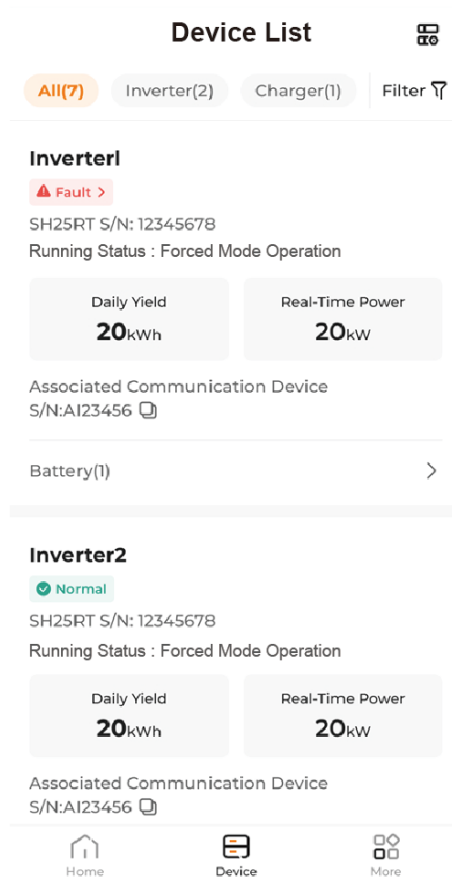
12.5.7.2 Inverter Grid-connection Settings

Choose **More > Inverter Settings**. Then, select the target inverter, and tap **Settings** to set the parameters for the inverter's connection to grid.

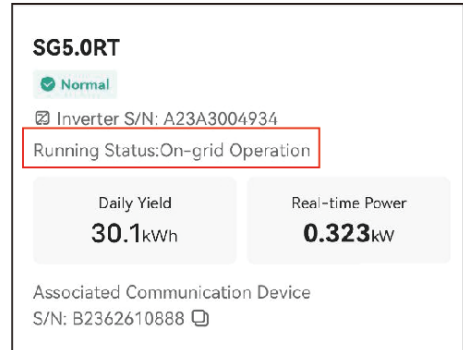
To configure parameters beyond the grid-connection parameters for the inverter, the WiNet-S/S2 is required. Please refer to the inverter's user manual for detailed instructions, as settings may vary by model.

12.5.8 Device List

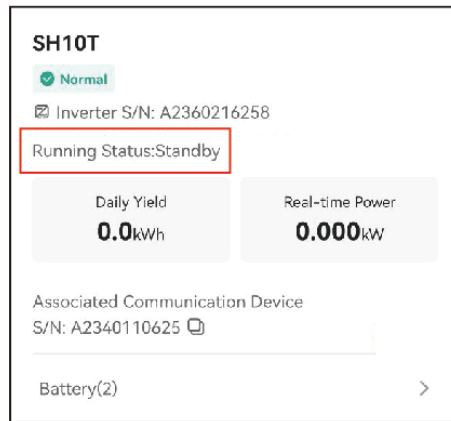
You can view the general information about and manage the devices connected to the iHomeManager on the **Device** screen.



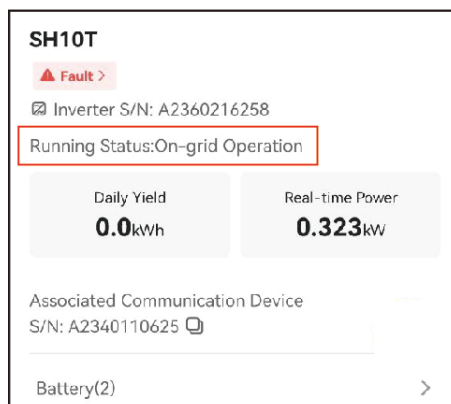
- **Device running data:** Check the inverter's power generation data, the signal strength of the communication device, the battery voltage, current, and SOC, the charger's charging power, and the energy delivered by the charger.
- **Associated devices:** Check the S/Ns of the communication device and battery associated with the inverter.
- **Device running status:** Check the running status of the inverter.
 - After the quick settings are completed and the devices can communicate with each other normally, the status of the hybrid inverter will be **Energy Dispatching Operation**, and that of the PV inverter will be **On-grid Operation**.



- If the hybrid inverter operates normally, while the PV voltage is too low and there is a fault in the battery or no battery is connected, the status of the hybrid inverter will be **Standby**.



- If no battery is connected to the hybrid inverter, the status of the hybrid inverter will be **On-grid Operation**.



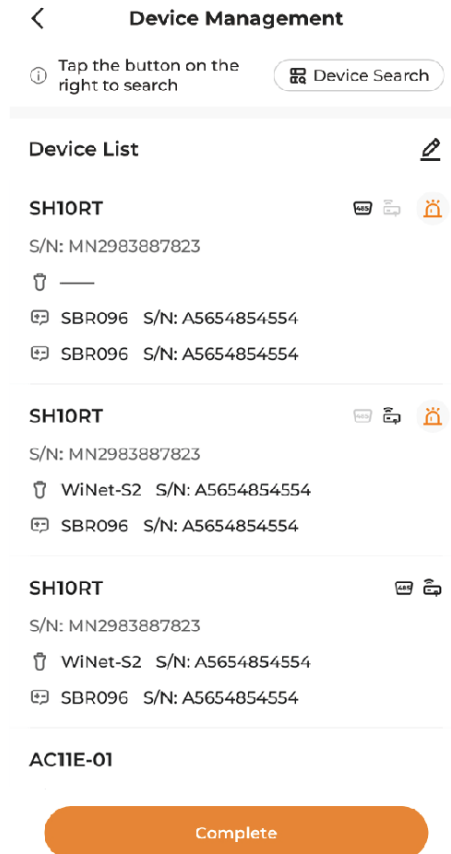
12.5.8.1 Add Device

In the **Device List** view, tap  in the upper right to go to “**Device Management**”. Automatic device search is supported. You can also add the device manually.

Requirements

- The device is correctly connected to the RS485 port of the iHomeManager.
- The communication module and the iHomeManager are connected to the same network.

Automatic device search



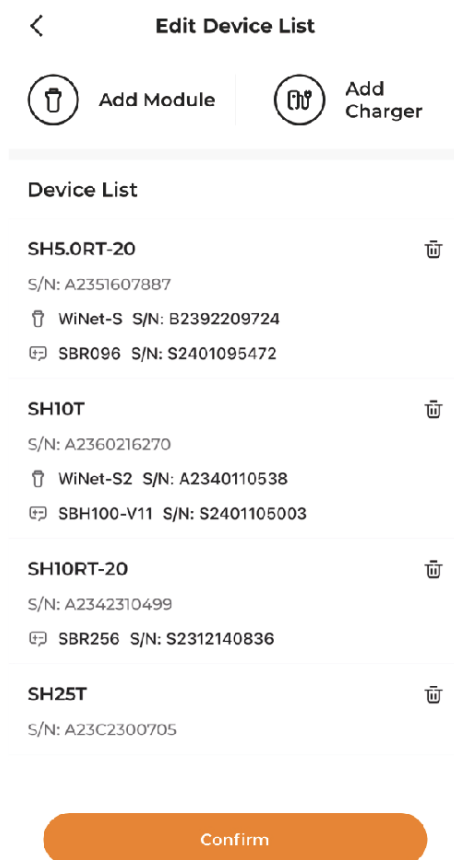
1. On the **Device Management** screen, tap **Device Search**.
2. After the device search is finished, verify that the devices in the list match the actual networked devices.
In case any device is missing, add it by following the instructions in [Add devices manually](#).
3. Tap **Complete**.



If a device has been added before but is not in the current search list, it will be deleted.

Add devices manually

On the **Device Management** screen, tap to go to the **Edit Device List** screen.



- Choose **Add Module**:
 1. Option 1: Scan the QR code on the communication device and tap **Confirm**.
 2. Option 2: Tap  to upload a picture of the communication device's QR code and tap **Confirm**.
 3. Option 3: Tap , select the type of the communication device, enter the device S/N, and tap **Confirm**.
- Choose **Add Charger**:
Enter the charger S/N, and tap **Continue**.

12.5.8.2 Delete Device

You can delete the devices that are no longer needed on site.

Steps

1. Tap  in the upper right corner of the **Device List** screen.
2. Tap  to go to "Edit Device List".

3. Tap  following the device to be deleted.
4. Tap **Confirm** in the confirmation dialog.

12.6 PCS Commissioning

12.6.1 Quick Setting

This section provides instructions for completing protection parameter initialization, device check, and other settings for the PCS using the Quick Setting feature when accessing the PCS via the App for the first time.

Step 1 Set initialization protection parameters.

Configure the settings for the PCS according to local grid requirements, including the **Country (Region)** and **Grid Type**.

- a. Tap  next to **Country (Region)** and select the country/region based on the actual situation.
- b. Tap  next to **Grid Type** and select the grid type according to local grid requirements.

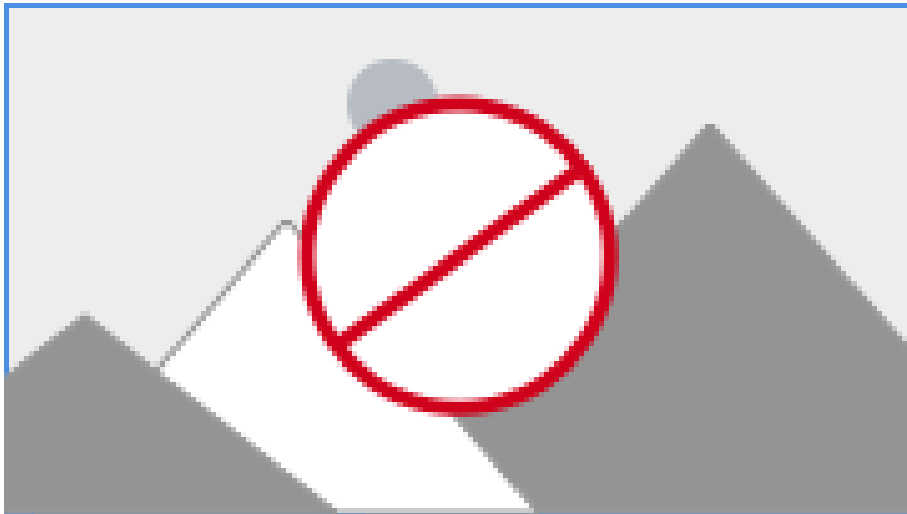


In some countries (regions), the **Grid Type** parameter is unavailable. Set the initialization protection parameters based on the actual page.

- c. Tap **Next**.

Step 2 Perform device check.

Check whether the S/N code displayed on the interface is the same as that on the PCS.
Tap **Complete**.



--End

12.6.2 PCS View

The following content is based on the SC125CX PCS. The actual user interface may differ.

Tap **Home** in the bottom navigation bar to view the overview of the PCS.

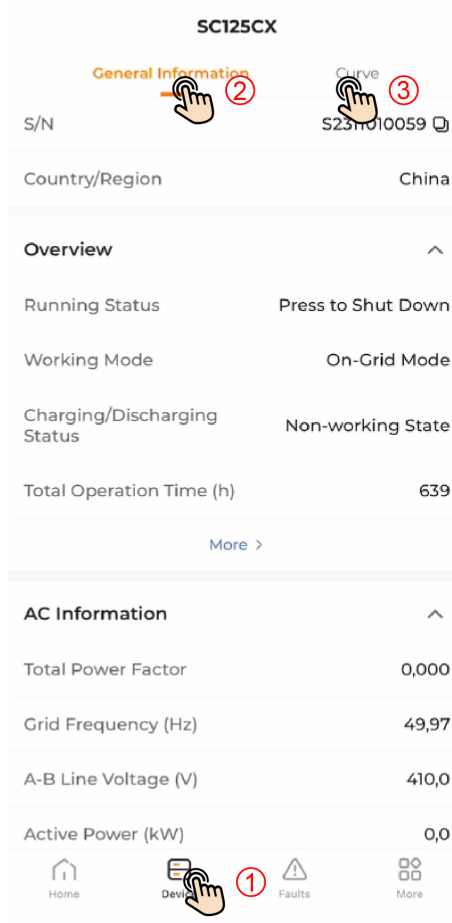


Table 12-12 Home

No.	Definition	Description
1	Data indicators	Show data indicators for the PCS, including Charging Power, Discharging Power, Today's Charge, and Today's Discharge.
2	Data curve	Shows daily charge and discharge curves by default. If you switch to view monthly, yearly, or total data, the corresponding power ratio curve is shown. In the curve, power percentage (P) = real-time power/rated power.

12.6.3 View PCS Information

Tap **Device** in the bottom navigation bar to view information about the PCS.



You can view the **general information** and **curves** of the PCS on the **Device** screen.

- **General Information:** Shows overview, DC information, AC information, load information, and backup port information of the PCS.
- **Curve:** Shows the daily, monthly, yearly, and total output power curves of the PCS.



You can tap in the upper right corner of a curve to view it in landscape mode.

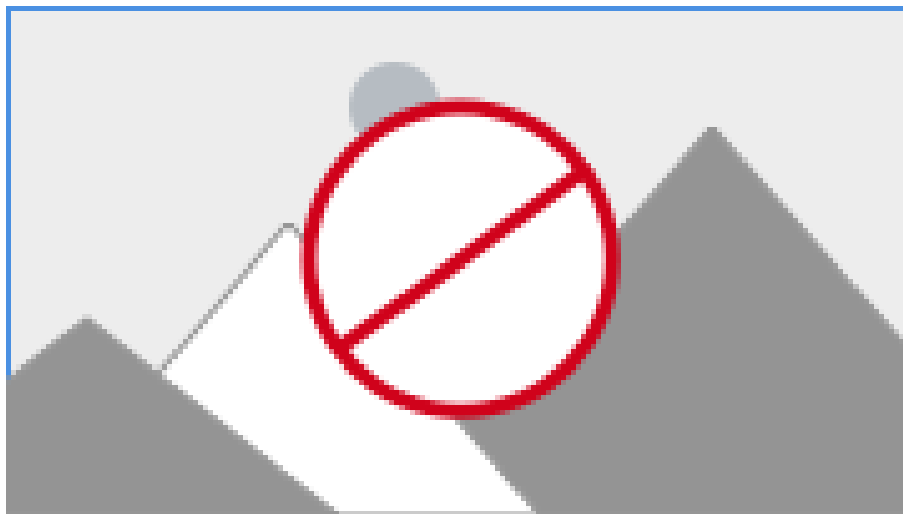
12.6.4 Fault Management

The **Faults** page displays information about all faults, including real-time faults and history faults. To access the fault list, tap **Faults** in the bottom navigation bar. You can tap a fault to view details and repair advice for that issue.

For information about how to view fault details, refer to [12.9 Fault Management](#).

12.6.5 Parameter Settings

Step 1 Navigate to **More > Settings**.



Step 2 Tap System Parameters.



Table 12-13 System Parameters

Parameter	Description
Boot/Shutdown	Select Boot or Shutdown to boot or shut down the PCS via command.
Date/Time Setting	Ensure the system time is correct and accurate. Wrong system time will directly affect the data logging and energy production statistics of the PCS. The time is in 24-hour format.
Restore Defaults	Restore the settings of grid standard and other parameters to their default values.
Country (Region)	Set the country (region) and the information related to the grid and grid operator as needed.
Grid Type	Set this parameter based on the actual situation.

Step 3 Tap Operation Parameters.

**Table 12-14** Operation Parameters

Parameter	Description
Running Time	This parameter typically does not require modification, unless required by new guidelines from the grid operator.
Grid Voltage Rising Suppression	This parameter typically does not require modification, unless required by new guidelines from the grid operator. It lowers the grid voltage by reducing active power and producing reactive power.
Fault Recovery	This parameter typically does not require modification, unless required by new guidelines from the grid operator. You can set the fault recovery mode, clear the fault, and enable or disable Fault State Persisting After DC Power-Off.
Power Reduction at Overfrequency	This parameter typically does not require modification, unless required by new guidelines from the grid operator. Set the output curve for the PCS's derating operation in response to overfrequency conditions. This curve defines the relationship between frequency changes and active power reduction.
Power Increase at Underfrequency	This parameter typically does not require modification, unless required by new guidelines from the grid operator. Set the output curve for the PCS's uprating operation in response to underfrequency conditions. This curve defines the relationship between frequency changes and active power increase.

Step 4 Tap **Power Regulation Parameters**.

**Table 12-15** Power Regulation Parameters

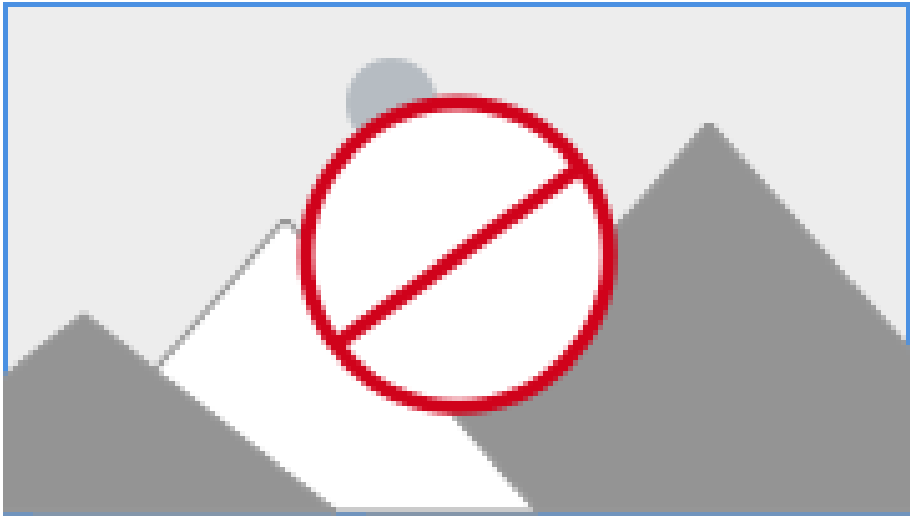
Parameter	Description
Active Power Regulation at Grid Overvoltage	This parameter typically does not require modification, unless required by new guidelines from the grid operator. Set the active power output curve for the PCS in response to overvoltage conditions. This curve defines the relationship between voltage changes and active power.
Power Regulation at Grid Undervoltage	This parameter typically does not require modification, unless required by new guidelines from the grid operator. Set the active power output curve for the PCS in response to undervoltage conditions. This curve defines the relationship between voltage changes and active power.

Step 5 Tap Protection Parameters.**Table 12-16** Protection Parameters

Parameter	Description
10-min Overvoltage Protection	This parameter typically does not require modification, unless required by new guidelines from the grid operator. In the event of grid fluctuations, where the grid overvoltage fault (with a specific fault code) is frequently reported by the PCS, you can properly increase the protection value with approval from the grid operator.

Parameter	Description
Grid Unbalance Protection	This parameter typically does not require modification, unless required by new guidelines from the grid operator. In the event of grid fluctuations, where the grid unbalance fault (with a specific fault code) is frequently reported by the PCS, you can properly increase the protection value with approval from the grid operator.
Active Island Detection	This parameter typically does not require modification, unless required by new guidelines from the grid operator.
Passive Island Detection	This parameter typically does not require modification, unless required by new guidelines from the grid operator.
LVRT Parameters	This parameter typically does not require modification, unless required by new guidelines from the grid operator.
HVRT Parameters	This parameter typically does not require modification, unless required by new guidelines from the grid operator.
Grid Abnormal Protection	This parameter generally does not need to be modified, unless required by new protection level directives from the grid operator.
Grid Testing Before Connection	This parameter typically does not require modification, unless required by new guidelines from the grid operator. In the event of grid fluctuations, where the grid abnormal fault (with a specific fault code) is frequently reported by the PCS, you can properly adjust the protection value with approval from the grid operator.

Step 6 Tap Energy Management Parameters.



Step 7 Tap Battery Parameters.



Configure battery parameters and specify the time windows for battery charging and discharging.
The parameters include SOC Upper Limit, Protection Value of Battery Average Overvoltage, and Max. Charging Power.

Step 8 Tap Communication Parameters.



Table 12-17 Communication Parameters

Parameter	Description
Serial Port Parameters	The device address ranges from 1 to 246.

Parameter	Description
Network Parameters	Enable DHCP (Dynamic Host Configuration Protocol) or manually enter the network IP address.

--End

12.7 1+X Central Inverter Commissioning

12.7.1 1+X Central Inverter View

The following content is based on the SG3300UD central inverter. The actual user interface may differ.

Tap **Home** in the bottom navigation bar to view the overview of the inverter.

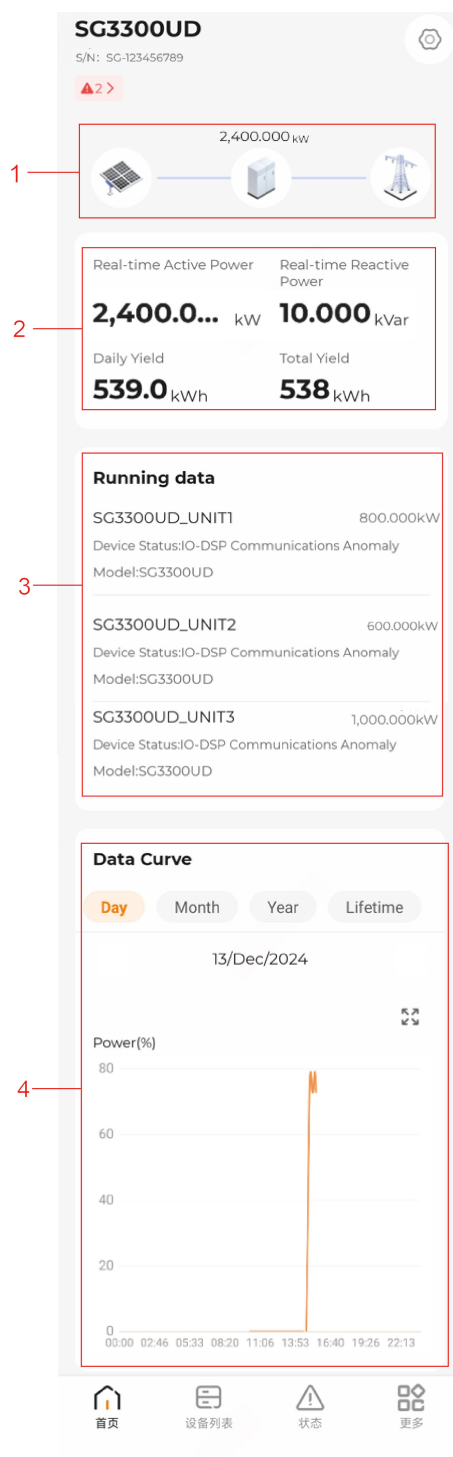


Table 12-18 Home

No.	Definition	Description
1	Power flow	Shows information such as the output power and feed-in power of the PV system. Arrows between the icons indicate that there is energy flowing between the devices. The direction in which the arrow points indicates the direction of the energy flow.
2	Data indicators	Shows data indicators for the inverter, including Real-time Active Power, Real-time Reactive Power, Daily Yield, and Total Yield.
3	Running data	Shows information such as the device model and the active power and faults of the inverter units.
4	Data curve	Shows the daily yield curve by default. If you switch to view monthly, yearly, or total data, the corresponding power ratio curve is shown. In the curve, power percentage (P) = real-time power/rated power.



You can tap  in the upper right corner of a curve to view it in landscape mode.

12.7.2 Set PVS Address

The PVS Settings function allows you to set PVS address.

You can set PVS address via the RS485 and DC MPLC communication methods. Choose a method based on the actual configuration of the on-site equipment.

12.7.2.1 Set PVS Address via RS485 Communication Method

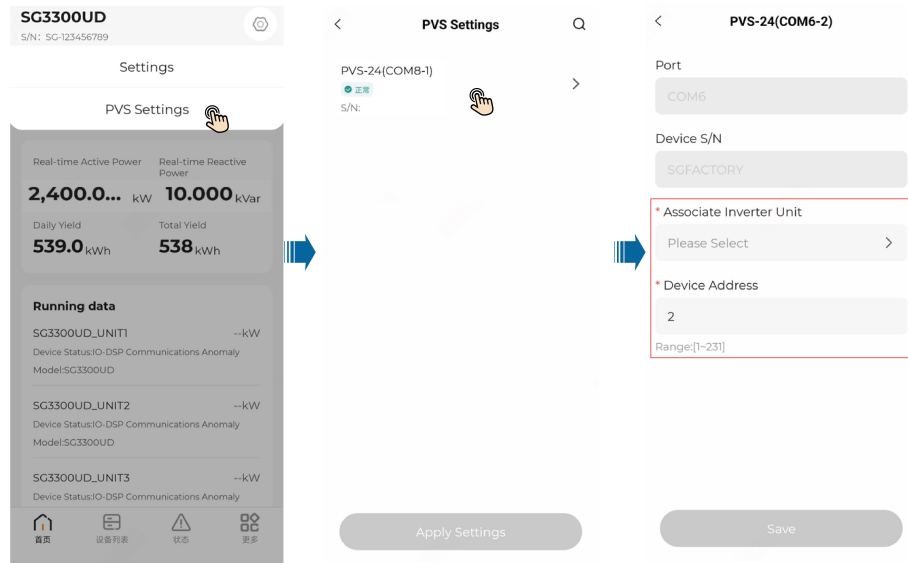
Step 1 Tap **Settings** in the upper right corner of the **Home** page and choose **PVS Settings**.

Step 2 Select the PVS whose address you want to set.



Tap  in the upper right corner and enter a PVS name to search for the desired PVS.

Step 3 Set the inverter unit associated with the PVS and the device address.



The device address ranges from 1 to 231.

--End

12.7.2.2 Set PVS Address via DC MPLC Communication Method

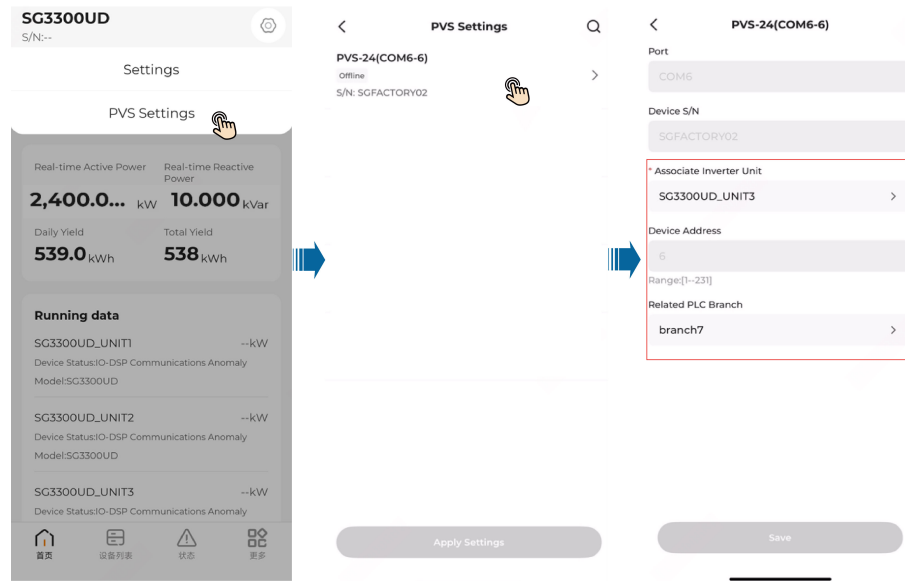
Step 1 Tap **Settings** in the upper right corner of the **Home** page and choose **PVS Settings**.

Step 2 Select the PVS whose address you want to set.



Tap  in the upper right corner and enter a PVS name to search for the desired PVS.

Step 3 Set the inverter unit associated with the PVS and the associated PLC branch.



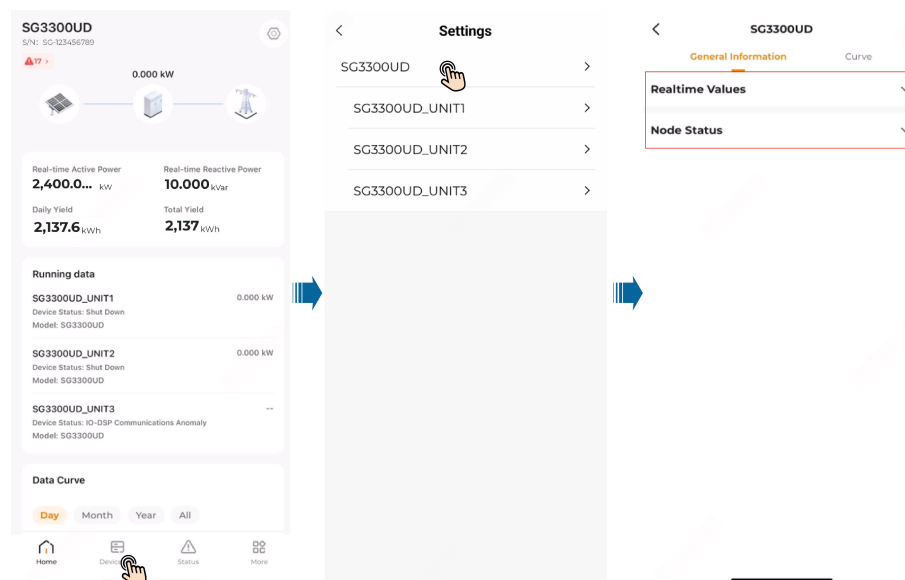
--End

12.7.3 View Device Information

Step 1 Tap **Device List** in the bottom navigation bar.

Step 2 Tap the device whose information you want to view.

- To view the device information of the inverter, tap **SG3300UD**.
- To view the device information of an inverter unit, tap that inverter unit, such as **SG3300UD_UNIT1**.

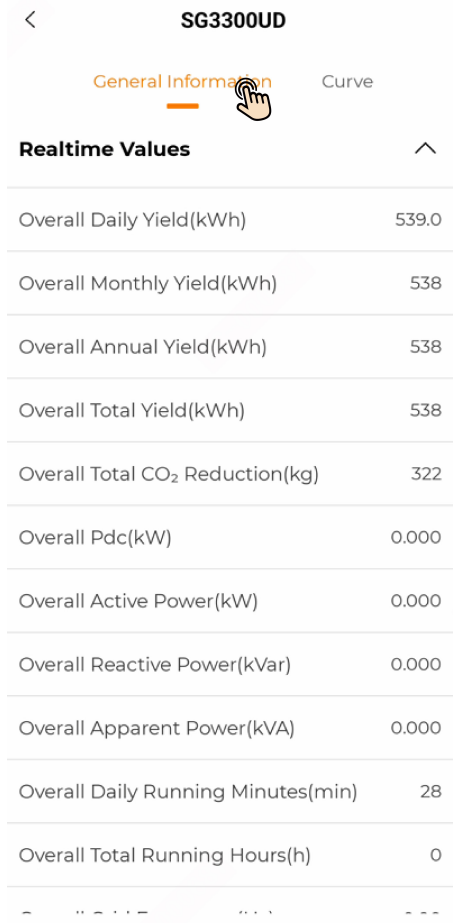


Step 3 On the device information details page, view the basic information and power curve of the device.

General Information

The General Information page shows **Realtime Values** and **Node Status**. To view information such as yield, power, efficiency, and running duration, tap **Realtime Values**.

Node Status shows the enabling status of **Local Emergency Stop**.



SG3300UD	
General Information	
Realtime Values	
Overall Daily Yield(kWh)	539.0
Overall Monthly Yield(kWh)	538
Overall Annual Yield(kWh)	538
Overall Total Yield(kWh)	538
Overall Total CO ₂ Reduction(kg)	322
Overall Pdc(kW)	0.000
Overall Active Power(kW)	0.000
Overall Reactive Power(kVar)	0.000
Overall Apparent Power(kVA)	0.000
Overall Daily Running Minutes(min)	28
Overall Total Running Hours(h)	0

Curve



- Tap or to switch to a date to view the curve on that date.

Step 4 Tap in the upper right corner of the curve to view information such as **Overall Working State**, **Overall Daily Yield**, and **Overall Total Yield**.

30/12/2024 - 30/12/2024		30/12/2024 - 30/12/2024	
SG3300UD	Filter	Select a Measuring Point	Filter
Time	Overall Working State	Overall Working State	Overall Daily Yield
2024-12-30 13:45:00	0	Overall Total Yield	Active Power Limit Ratio
2024-12-30 14:00:00	1026	Transformer Oil Temperature	Winding Temperature
2024-12-30 14:15:00	1026		
2024-12-30 14:30:00	1026		
2024-12-30 14:45:00	1026		
2024-12-30 15:00:00	1026		

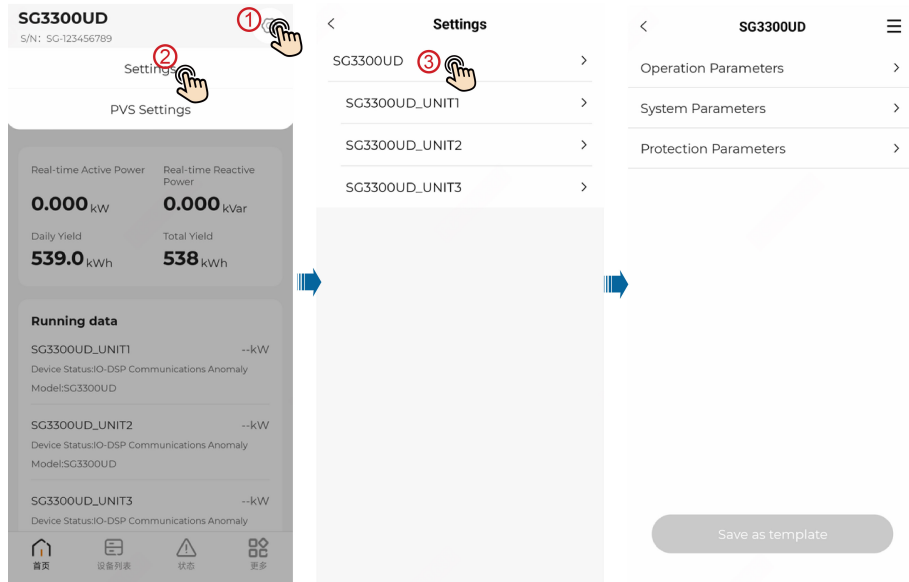
--End

12.7.4 Parameter Settings

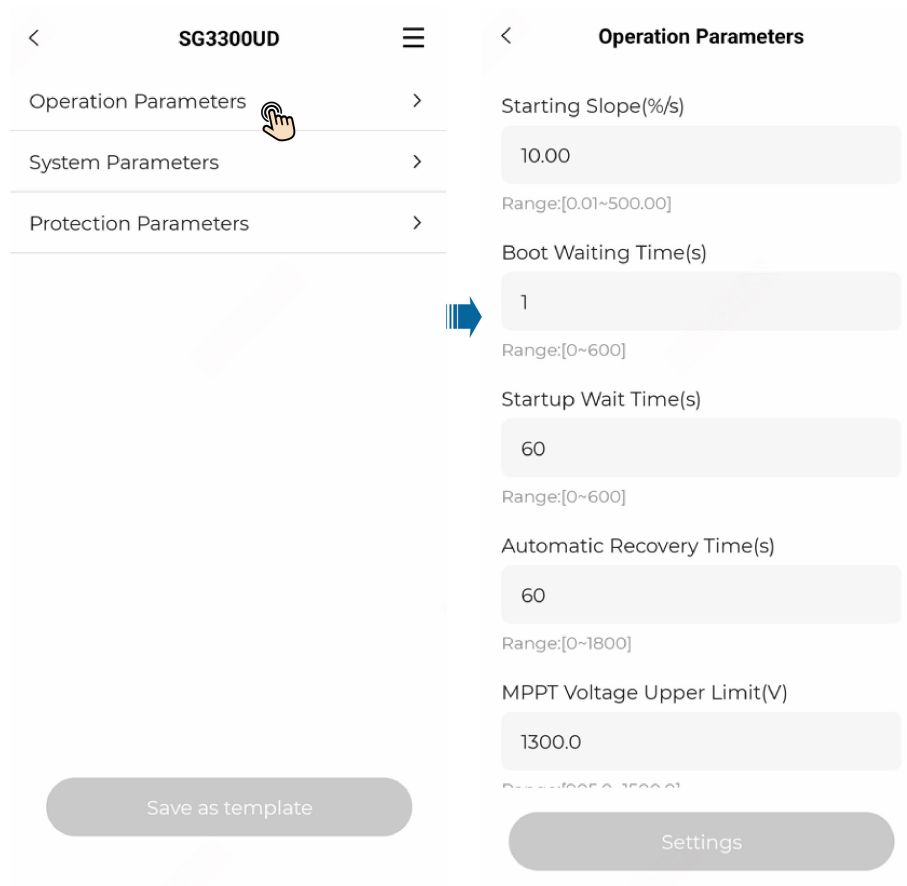
The Parameter Settings function allows you to set Operation Parameters, System Parameters, and Protection Parameters.

Step 1 Tap  in the upper right corner of the **Home** page, choose **Settings**, and select the device whose parameter information you want to view.

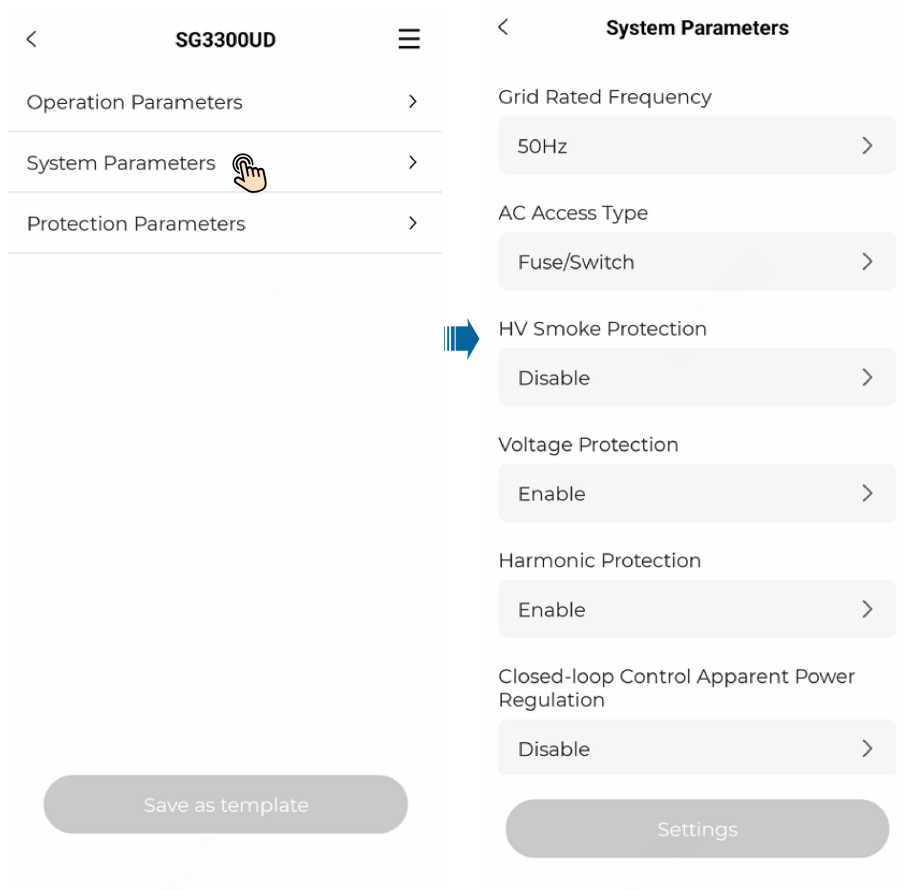
- To view the device information of the inverter, tap SG3300UD.
- To view the device information of an inverter unit, tap that inverter unit, such as SG3300UD_UNIT1.



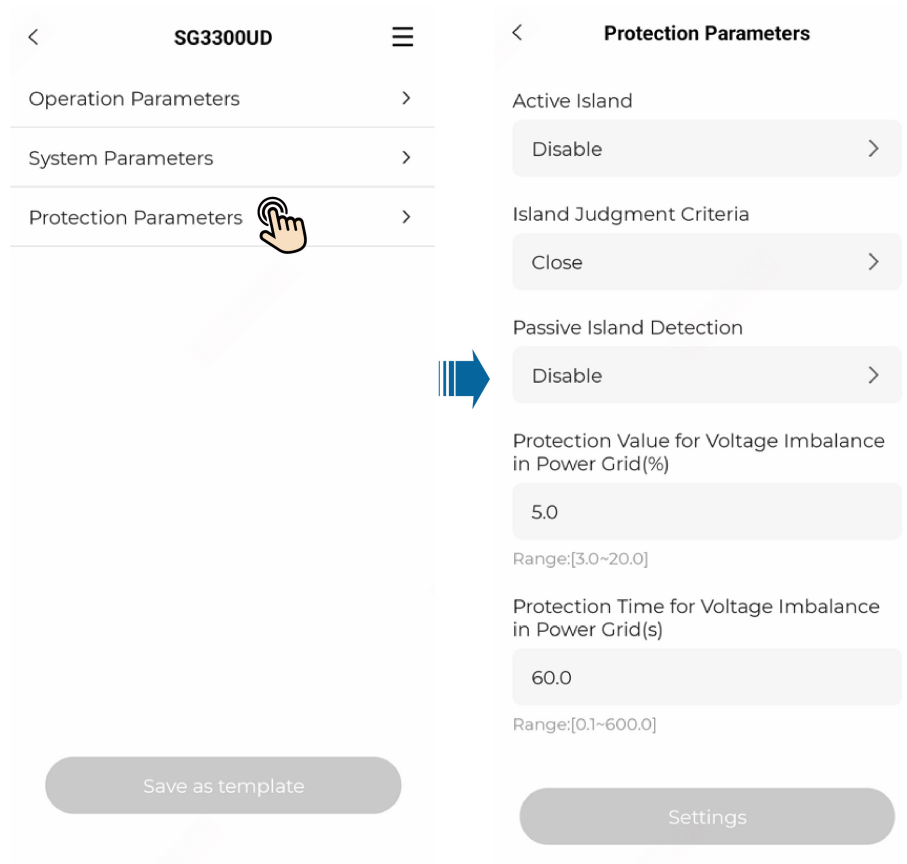
Step 2 View and set Operation Parameters.



Step 3 View and set System Parameters.



Step 4 View and set Protection Parameters.



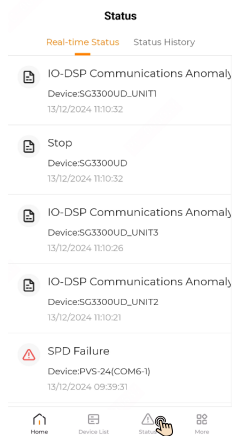
--End

12.7.5 Status Management

The status management function allows you to view Real-time Status and Status History for quick fault location and troubleshooting.

12.7.5.1 Real-time Status

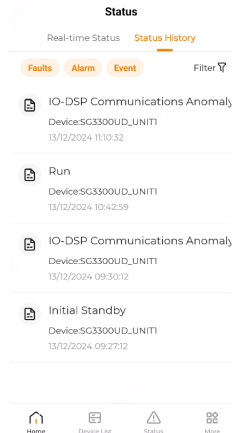
Tap **Real-time Status** to enter the real-time status list interface, which displays the status name, alarm level, associated device, and alarm triggering time.



- Among the alarm levels,  indicates a fault,  indicates an alarm, and  indicates an event.
- The real-time status list is automatically refreshed every 5 seconds.

12.7.5.2 Status History

Step 1 Tap **Status History** to enter the status history list interface, which displays the name, alarm level, associated device, and alarm triggering time of history statuses.



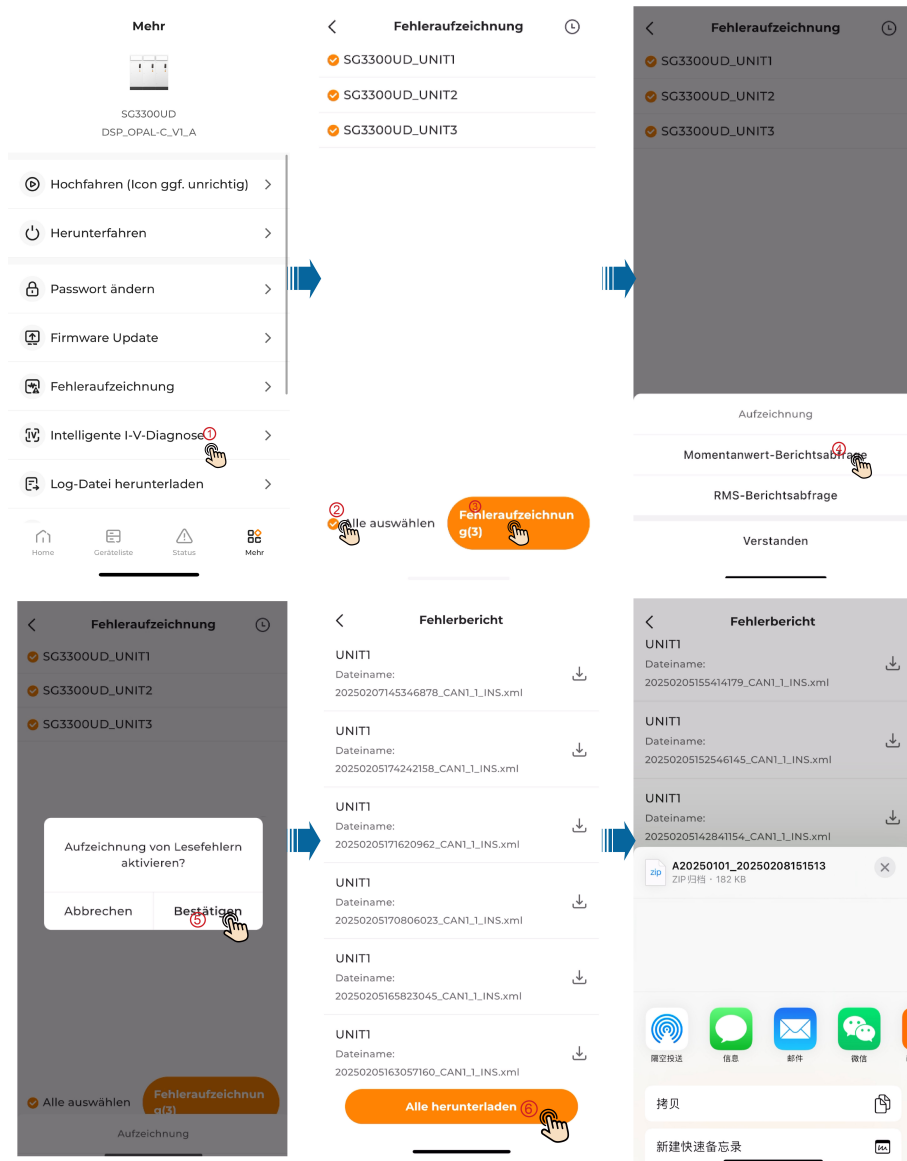
You can filter the status history list.

--End

12.7.6 Fault Recording

When a fault occurs in the inverter, the fault recording function can accurately and automatically record the changes in current, voltage, and other data throughout the entire fault process.

- Step 1** Tap **More > Fault Recorder** in the bottom navigation bar.
- Step 2** Select the device units to be viewed and tap **Fault Recorder**. (In this example, all inverter units are selected.)
- Step 3** Select **Instantaneous Value Recorder Query** or **RMS Recorder Query** as needed.
- Step 4** In the pop-up dialog box, tap **Confirm**.
- Step 5** Tap **Download All** to download the fault recording information.
- Step 6** Open the fault recording file via a designated app and view the recorded voltage, current waveform, and other information.



--End

12.7.7 Smart IV Diagnosis

Smart IV Diagnosis can quickly identify string faults, accurately locate issues, and provide repair advice, enhancing O&M efficiency and ensuring stable operation of the plant.

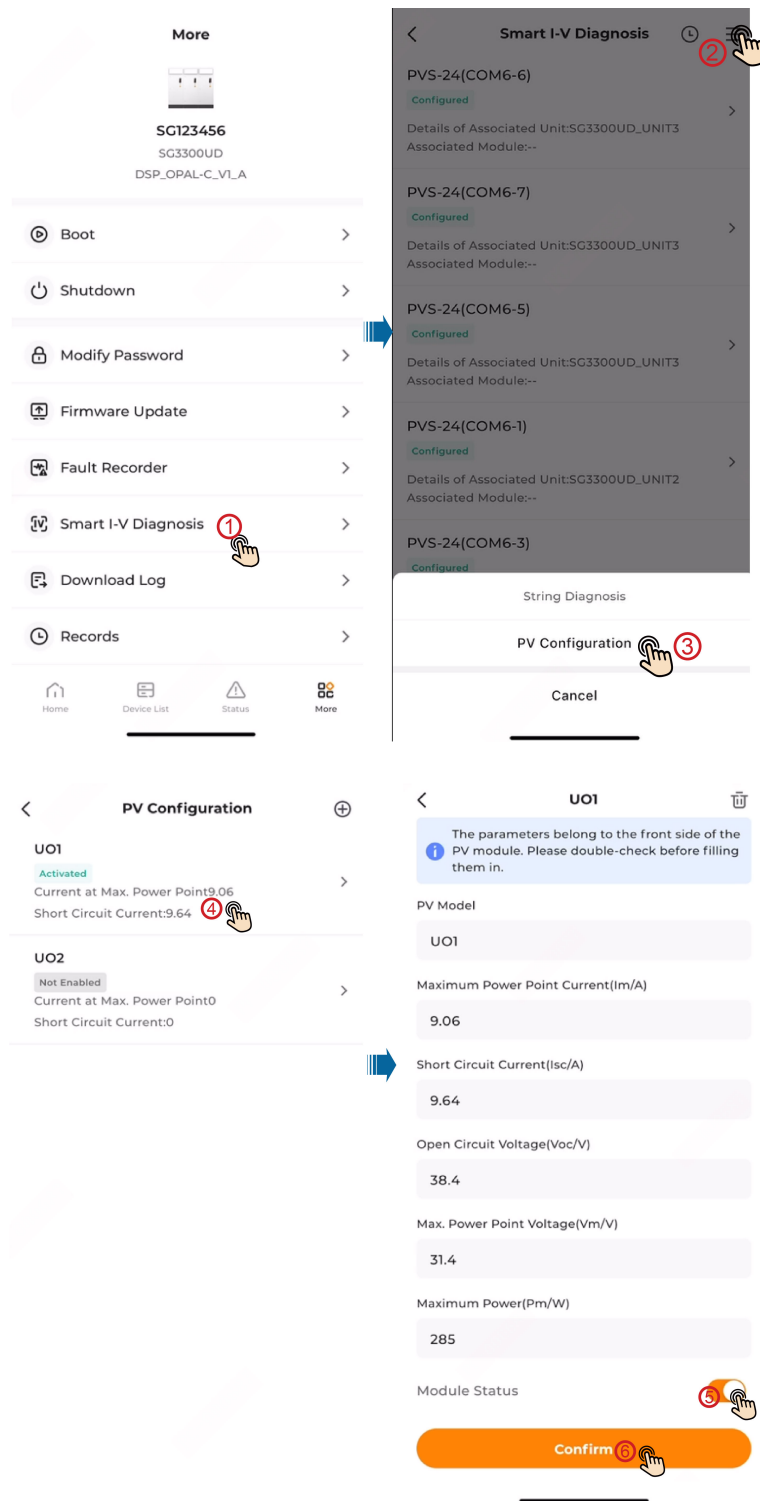
12.7.7.1 PV Configuration

The PV Configuration function allows you to view the parameter information of all associated PV modules.

Step 1 Tap **More > Smart I-V Diagnosis** to enter the **Smart I-V Diagnosis** page.

Step 2 Tap  in the upper right corner. A selection box pops up at the bottom of the page.

Step 3 Choose **PV Configuration**, select a PV module, scroll down the page, and then enable **Module Status** to enable the PV module.





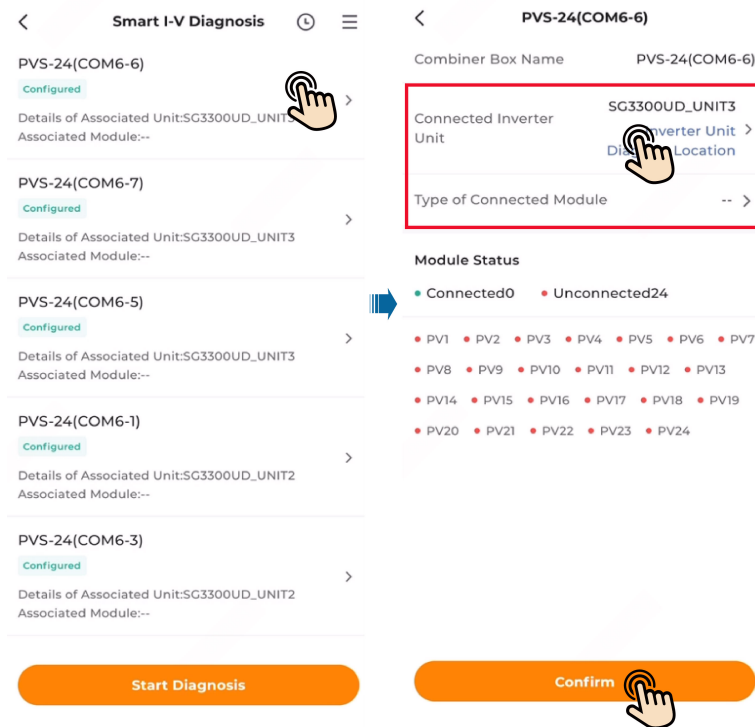
- To add the parameter information of a PV module, tap .
- To delete a PV module, tap .

--End

12.7.7.2 String Diagnosis

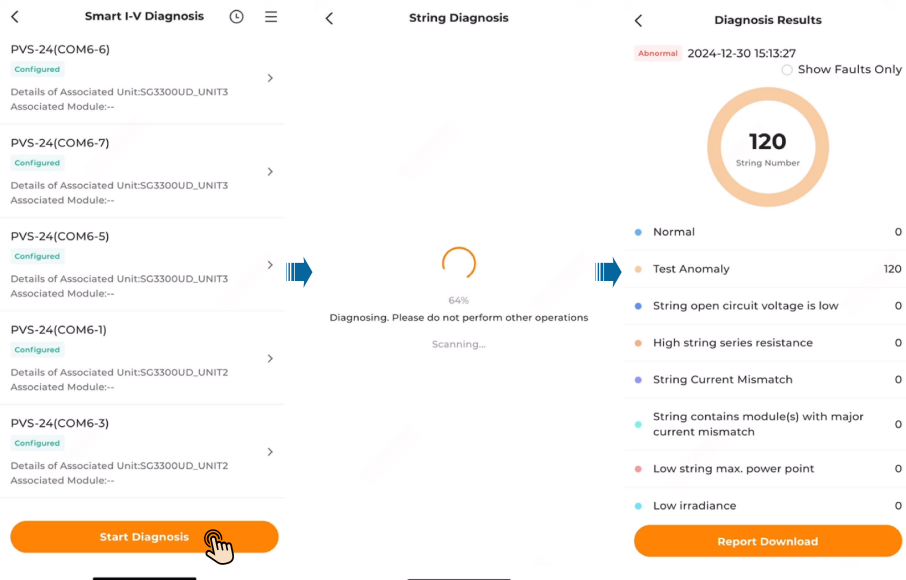
Step 1 Tap **More > Smart I-V Diagnosis** to enter the **Smart I-V Diagnosis** page.

Step 2 Associate inverter units and modules with combiner boxes. If the configuration is complete, skip this step.



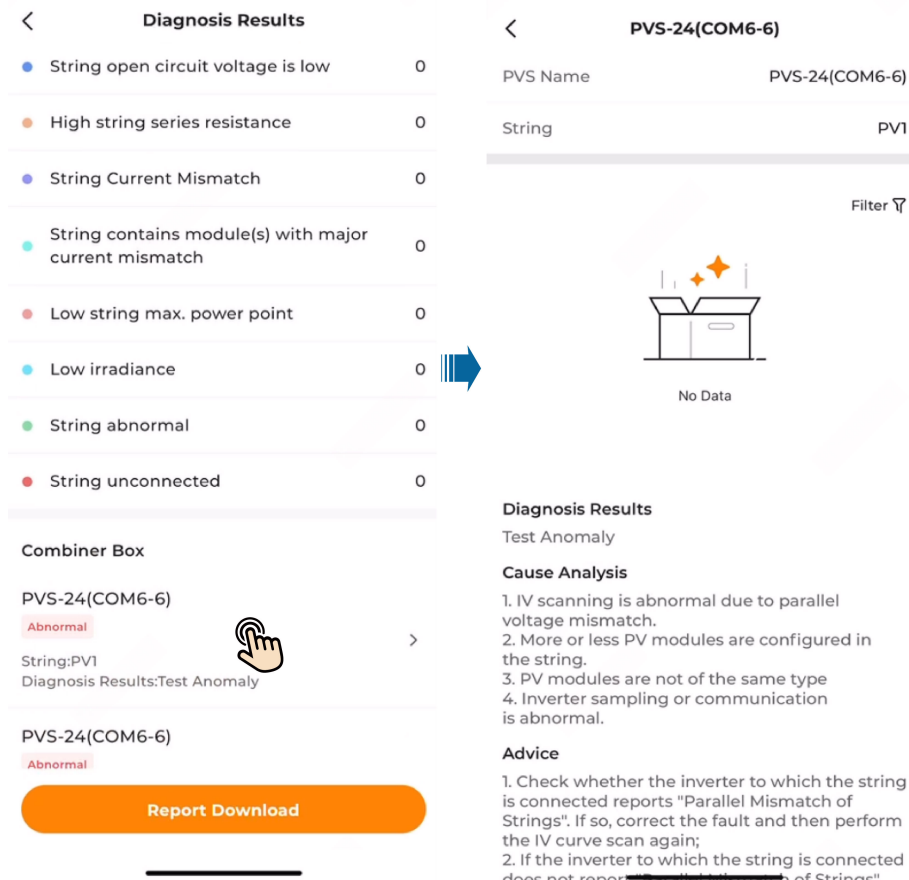
You can tap a combiner box (such as **PVS-20(COM8-1)** in the figure above) on the page to view the status of the module connected to the combiner box.

Step 3 Tap **Start Diagnosis** to start smart I-V diagnosis.



--End

You can scroll down the Diagnosis Results page and select a combiner box to view the diagnosis result analysis.

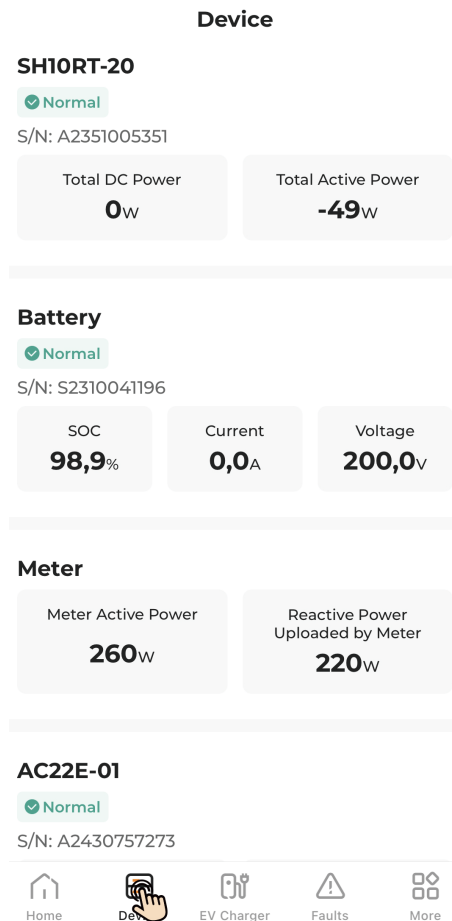


12.8 Device Management

12.8.1 View Device List

You can access the device list and view detailed information for each device by following the steps below.

Step 1 After logging in, select **Device** in the bottom navigation.



Step 2 The **Device** screen will display a list of all connected devices.

--End

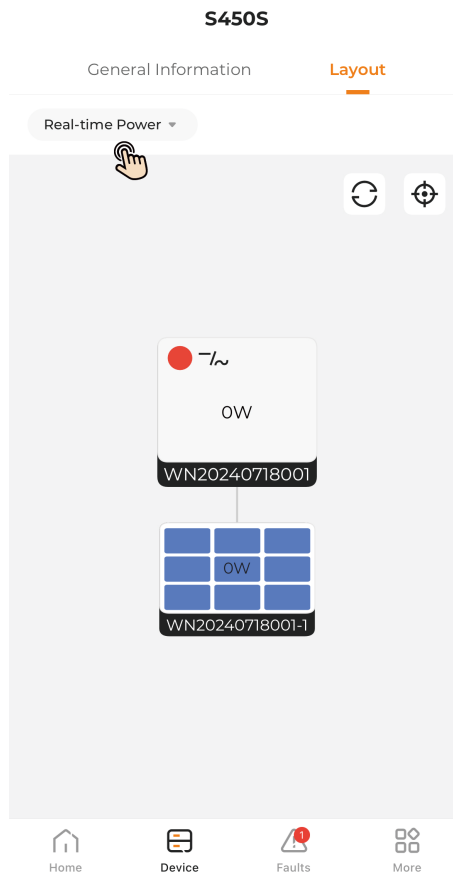
12.8.2 View Detailed Device Information

12.8.2.1 View Microinverter Information

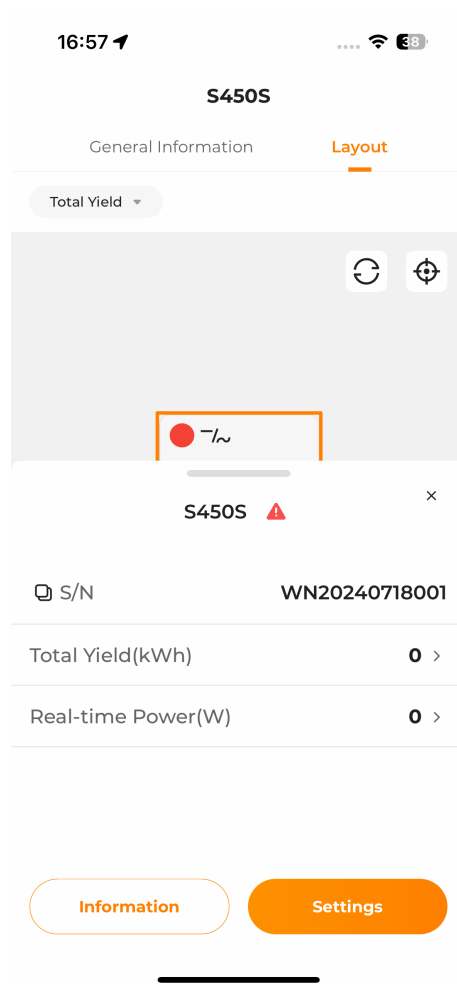
Tap **Device** in the bottom navigation to go to the details screen for the microinverter. Here, you can view the microinverter's **General Information** and **Layout**.

S450S	
General Information	Layout
S/N	WN20240718001 
Country/Region	Spain(ES) NTS 631
Overview ^	
Total DC Power(W)	0
Total Active Power(W)	0
Grid Frequency(Hz)	0,00
Internal Air Temperature(°C)	31,8
More >	
Yield Information ^	
Total Yield(kWh)	0,0
DC Information ^	
MPPT	
 Home	 De
 Faults	 More

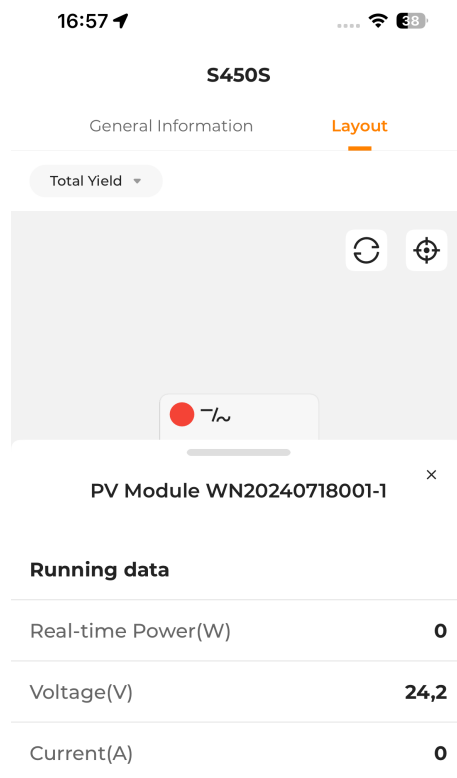
- **General Information** consists of the following sections: device S/N, country (region), overview, yield information, DC information, and AC information.
- **Layout** supports two modes: real-time power and total yield. You can select a mode and then tap on the microinverter or PV module in the layout to view its detailed information.



- Tap the microinverter in the layout. Then, you can tap Information at the bottom to view its general information, or tap Settings to configure its parameters. For more information, see [12.4.3 Configure Other Parameters for Microinverter](#).

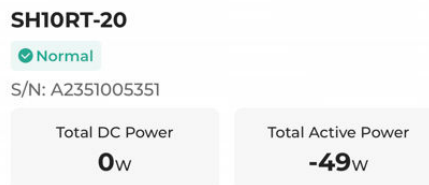


- Tap the PV module in the layout to view its operation parameters.



12.8.2.2 View Inverter Information

Tap **Device** in the bottom navigation and select the inverter (with SH10RT-20 as an example) to go to its details screen.



Here, you can view the inverter's **General Information** and **Curve**.

- **General Information** consists of the following sections: Overview, DC Information, AC Information, Load Information, and Backup Port.
- **Curve** displays the inverter's output power curves. You can switch between Daily, Monthly, Annual, and Total views to check power curves for different time periods.

< SH10RT-20	
General Information Curve	
S/N	A2351005351 
Communication Device S/N	B2380263994 
Country/Region	--
Overview 	
Grid Frequency(Hz)	50,00
Bus Voltage(V)	841,0
Internal Air Temperature(°C)	33,9
Array Insulation Resistance(kΩ)	694
More >	
DC Information 	
MPPT	
Voltage(V) Current(A)	

12.8.2.3 View Battery Information

Step 1 Tap **Device** in the bottom navigation and select the battery to go to its details screen.

Battery		
 Normal		
S/N: S2310041196		
SOC	Current	Voltage
98,9%	0,0A	200,0V

Step 2 This screen provides an overview of battery data.

< Battery	
S/N	S2310041196 
Status	 Normal
Overview ^	
Battery SOC(%)	98,9
Battery Current(A)	0,0
Battery Voltage(V)	200,0
Battery Operation Status	Run
Battery Temperature(°C)	22,0
Battery Health (SOH)(%)	100
Total Battery Charging Energy(kWh)	45,8
Total Battery Discharging Energy(kWh)	27,3

--End

12.8.2.4 View Meter Information

Step 1 Tap **Device** in the bottom navigation and select the meter to go to its details screen.

Meter	
Meter Active Power	Reactive Power Uploaded by Meter
260_W	220_W

Step 2 This screen is mainly divided into four sections: Overview, Load Information, Grid Information, and Other Information, as shown below.

11:16			
		Meter	
Overview			
Meter Active Power(W)		72	
Feed-in Power(W)		--	
Load Information			
Daily Load Energy Consumption from PV(kWh)		0,0	
Total Load Energy Consumption from PV(kWh)		56,8	
Grid Information			
Forward Active Energy(kWh)		--	
Reverse Active Energy(kWh)		--	
Other Information			
Meter Phase A Active Power(W)		664	
Meter Phase B Active Power(W)		548	

--End

12.8.2.5 View EV Charger Information

Step 1 Tap **Device** in the bottom navigation and select the EV charger (with AC22E-01 as an example) to go to its details screen.



Step 2 The details screen for the charger is shown below.

< AC22E-01	
S/N	A2430757273 
Status	 Normal
Overview ^	
Charging Power(W)	0
Total Charge(Wh)	0
Energy Charged(Wh)	0
Phase A Charging Voltage(V)	0,0
Phase B Charging Voltage(V)	0,0
Phase C Charging Voltage(V)	0,0
Phase A Charging Current(A)	0,0
Phase B Charging Current(A)	0,0
Phase C Charging Current(A)	0,0



This section introduces how to view the general information about the charger. For further information, see [12.3 EV Charger Commissioning](#).

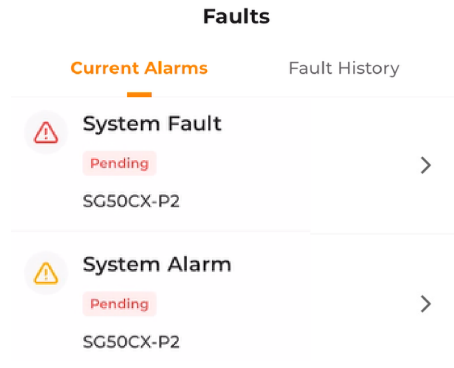
--End

12.9 Fault Management

This section provides an overview of fault management using the App. The App enables you to view faults in different states, including Pending and Resolved, to facilitate quick fault identification and troubleshooting.

12.9.1 View Current Faults

Step 1 Tap **Faults** in the bottom navigation bar to access the fault list. By default, the App goes to **Current Alarms**, where you can view the faults in pending state, along with their severity levels and associated devices.



- For severity level,  indicates critical, and  indicates general.
- The list of current faults automatically updates every 5 seconds.

Step 2 Tap on a specific fault to open its details screen, where you can review handling recommendations.

< System Fault	
Fault Information	
Alarm Level	Important
Status	Pending
Fault Code	322
Fault Reason	
1.In-systemmoduleabnormal, 2.Systemrelatedwiringorterminalabnormal.	
Repair Advice	
Waitforthesystemtoreturntonormal: DisconnecttheACtestswitchandDCswitch.Ifthereisabattery,theswitchonthebatteryside mustbeswitchedoff.Wait15minutes,thenclose theACandDCswitchesinturn,andrestartthesystem.Ifthefaultpersists,pleasecontacttheSungrowCustomerService.	

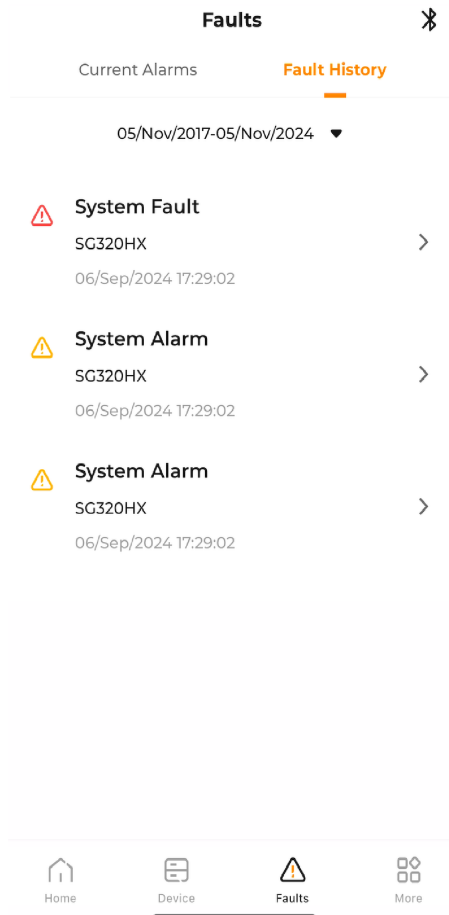
--End

12.9.2 View Fault History



Fault History is available only for some specific devices. The user interface may differ.

Step 1 Tap **Fault History** to view the list of past faults. The list displays the faults that have been resolved, along with their severity level, associated device, and occurrence time. You can filter the faults by date.



- For severity level,  indicates critical, and  indicates general.
- The fault history list updates automatically every 5 seconds.
- The fault history list displays up to 400 entries, arranged in reverse chronological order (latest to earliest).
- Filtering faults by date may not be available for certain devices. The actual user interface may differ.

Step 2 Tap on a specific fault to open its details screen, where you can review handling recommendations.

< System Fault	
Fault Information	
Alarm Level	Important
Fault Code	1492
Fault Reason	
1.In-systemmoduleabnormal, 2.Systemrelatedwiringorterminalabnormal.	
Repair Advice	
Waitforthesystemtoreturntonormal: DisconnecttheACtestswitchandDCswitch.Ifthe reisabattery,theswitchonthebatterysidemustb eswitchedoff.Wait15minutes,thenclosetheACan dDCswitchesinturn,andrestartthesystem.Ifthef aultpersists,pleasecontacttheSungrowCustom erService.	

--End

12.10 Parameter Settings

Users can modify relevant parameter settings to address issues encountered during device operation.

The parameter descriptions and setting instructions provided in this section are based on a residential PV-ESS-EV charging system and are intended for reference only.

12.10.1 Search for Parameter

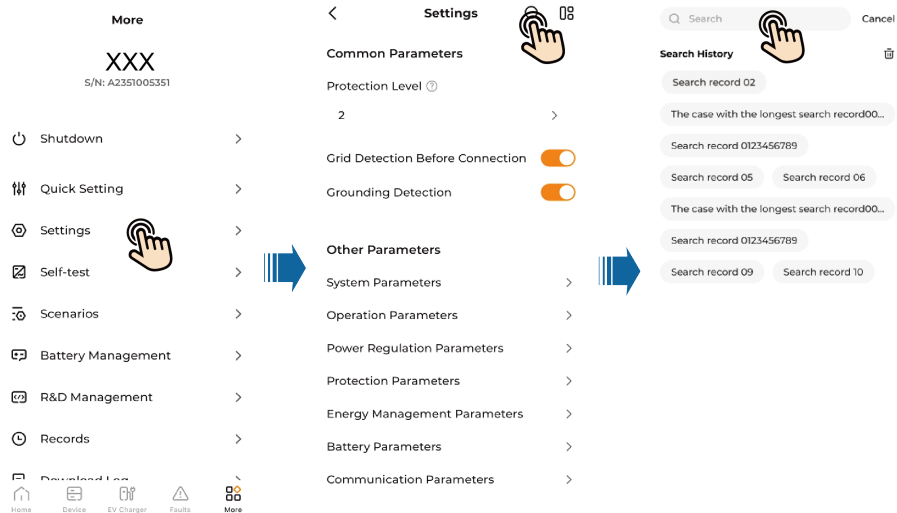
You can quickly locate the parameter to be configured using the search feature.

Step 1 Navigate to **More > Settings**.

Step 2 Tap  in the upper right corner of the **Settings** screen.

Step 3 Enter the parameter name.

Step 4 Select the parameter from the list to configure its settings.



--End

12.10.2 Create Parameter Template

You can save the parameter configuration as a template. This allows you to quickly apply the same settings to devices of the same type.

Step 1 Navigate to **More > Settings**.

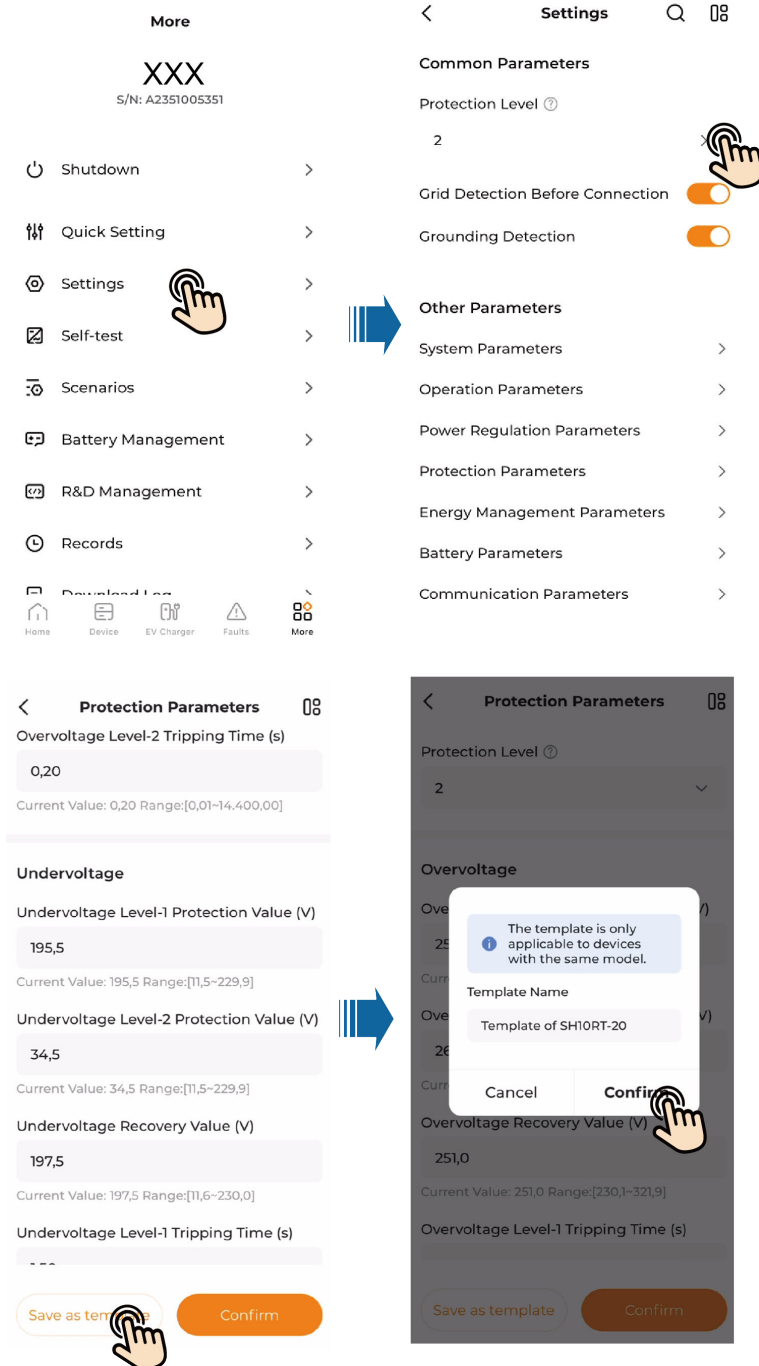


- Parameter configuration template is available only for protection parameters.
- Parameter configuration template is available only on Chinese Server.

Step 2 Tap  next to **Protection Level** to go to **Protection Parameters**.

Step 3 Adjust the parameter settings as needed, then tap **Save as template**.

Step 4 Enter a name for the template and tap **Confirm** to save it in the system.



--End

12.10.3 Set Common Parameters

Step 1 Navigate to **More > Settings**.



These settings are available only on the Chinese Server.

Step 2 Configure settings for common parameters.

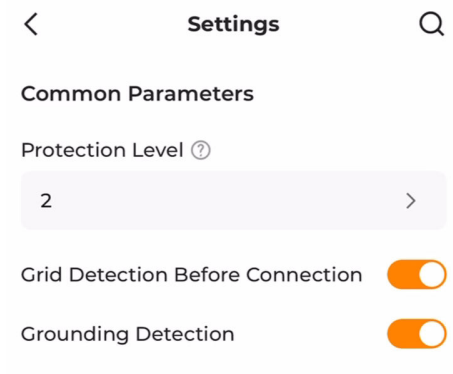


Table 12-19 Common Parameters

Parameter	Definition/Setting instructions
Protection Level	This parameter typically does not require modification, unless required by new guidelines from the grid operator. In the case of grid fluctuations, if the inverter frequently reports grid faults (fault code: 2/3/4/5/8/9/15), the protection threshold value may be properly adjusted with approval from the grid operator.
Grid Detection Before Connection	This parameter typically does not require modification, unless required by new guidelines from the grid operator. In the case of grid fluctuations, if the inverter frequently reports a grid abnormal fault (fault code: 13), the protection threshold value may be properly adjusted with approval from the grid operator.
Grounding Detection	A safe threshold for grounding fault detection is configured for the inverter. In the event of an abnormal condition, a grounding cable fault (fault code: 106) will be reported. Generally, keep the default value. If modification is necessary, contact qualified personnel for an on-site inspection and proceed only after verifying compliance with safety regulations and other local laws and regulations to avoid safety hazards.

--End

12.10.4 Set System Parameters

Step 1 Navigate to **More > Settings**.

Step 2 Tap **System Parameters** to go to the screen below.

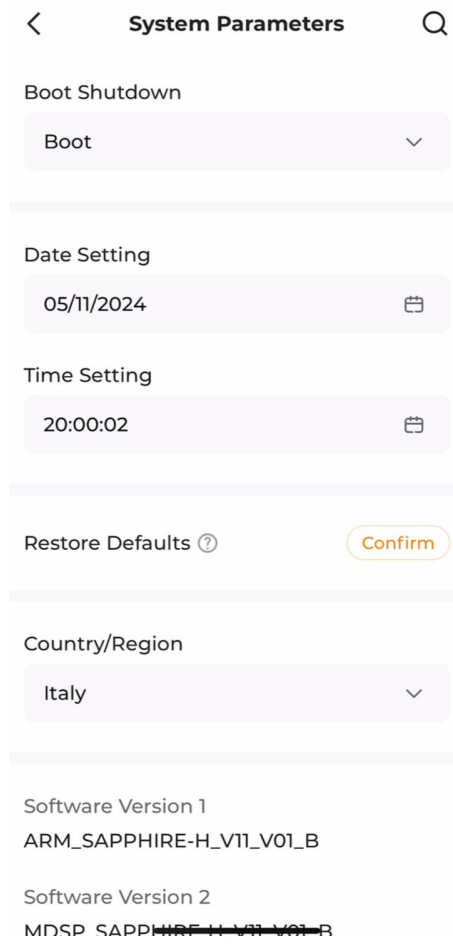


Figure 12-1 System Parameters

Table 12-20 System Parameters

Parameter	Description
Boot/Shutdown	Select Boot or Shutdown to boot or shut down the inverter via command.
Date/Time Setting	Ensure the system time is correct and accurate. Wrong system time will directly affect the data logging and energy production statistics of the inverter. The time is in 24-hour format.

Parameter	Description
Restore Defaults	Reset the settings of grid standard and other parameters to their default values.
Country (Region) Setting	Set the country (region) and the information related to the grid and power company as needed.

--End

12.10.5 Set Operation Parameters

Step 1 Navigate to **More > Settings**.

Step 2 Tap **Operation Parameters** to go to the screen below.

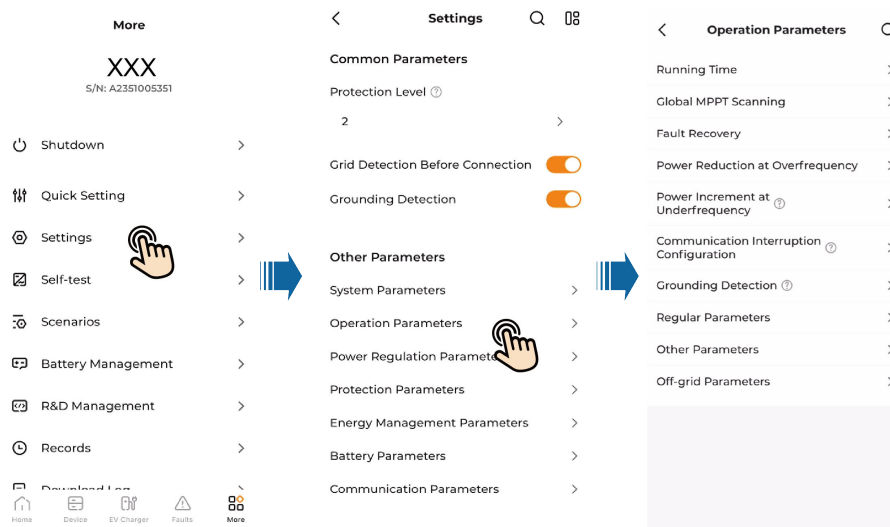


Table 12-21 Operation Parameters

Parameter	Description
Power Increment at Underfrequency	This parameter typically does not require modification, unless required by new guidelines from the grid operator. It sets the curve for the inverter's uprated output in response to underfrequency. This curve illustrates the relationship between frequency changes and active power increase.
Communication Interruption Configuration	The grid operator provides standard default values, which typically do not need to be adjusted. It defines the preset values for operation during a communication interruption between the inverter and the control device (such as the Data Logger).

Parameter	Description
Grounding Detection	It typically does not need to be configured. In the event of a false alarm, or if PV grounding faults (fault codes: 1600–1655) are frequently reported due to a low threshold setting, you can go to Grounding Detection and disable PV grounding detection or increase the PV Voltage Drop Threshold.

--End

12.10.6 Set Power Regulation Parameters

Power regulation includes both active power control and reactive power control.

Step 1 Navigate to **More > Settings**.

Step 2 Tap **Power Regulation Parameters** to go to the screen below.

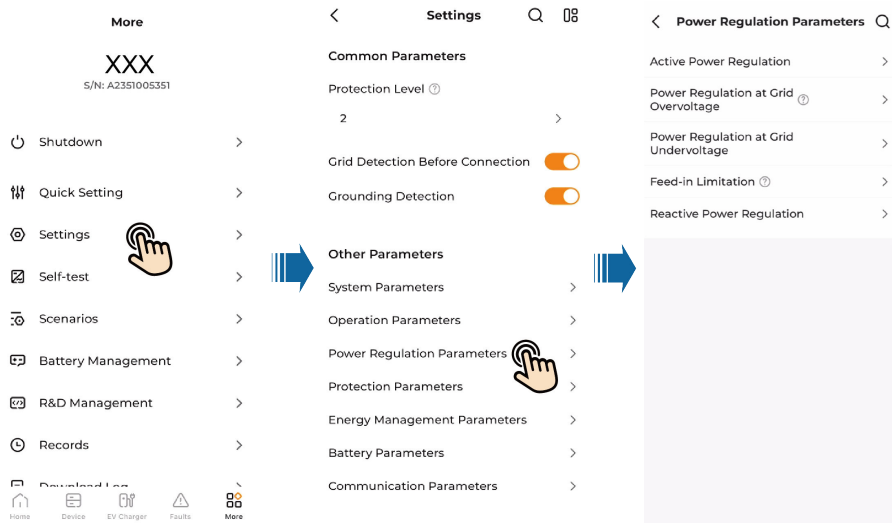


Figure 12-2 Power Regulation Parameters

Table 12-22 Power Regulation Parameters

Parameter	Description
Power Regulation at Grid Overvoltage	This parameter typically does not require modification, unless required by new guidelines from the grid operator. It sets the curve for the inverter's active power output in response to overvoltage. This curve illustrates the relationship between voltage changes and active power.

Parameter	Description
Feed-in Limitation	To limit the total feed-in power, enable Feed-in Limitation and disable Feed-in Limitation for Each Phase (if there is this option). For host-client configurations, only the host device needs to be configured.

--End

12.10.6.1 Active Power Regulation

Step 1 Tap **Active power regulation**.

Step 2 Configure the relevant parameters.

<
Active power regulation
Q

Active power soft start after fault ? ☐

Active power soft start time after fault (s)

600

Active power soft start ? ☐

Active power soft start gradient (%)

6,000

Active power gradient control ? ☒

Active power declining gradient (%/min)

39

Active power rising gradient (%/min)

39

Retain active power setting after power off ? ☐

Active power limitation ☐

Active power limit ratio (%)

100.0

Shutdown when active power limit to 0% ? ☐

Ripple control ☐

Swift grid dispatch mode ☒

Table 12-23 Parameter Description

Name	Description
Active power soft start after fault	This parameter typically does not require modification, unless required by new guidelines from the grid operator. The time it takes for the inverter to reach 100% rated power from 0 during

Name	Description
	soft start, after the inverter resumes grid-connected operation after fault stop due to islanding fault, over/under-voltage, over/under-frequency and so on.
Active power soft start	This parameter typically does not require modification, unless required by new guidelines from the grid operator. Set the gradient of inverter soft start from 0% to 100% rated power after the inverter recovers from a fault and resumes grid-connected operation.
Active power gradient control	This parameter typically does not require modification, unless required by new guidelines from the grid operator. If active power dispatch is performed on site, and the PPC or dispatching backend has special requirements for active power rise or drop rate, you can modify this parameter. Set this parameter to the percentage of active power rise or drop per minute to the rated power. In the scenario of zero feed-in, to increase adjustment speed and shorten the response time of zero power feed-in, you can increase the active power rise and drop rate appropriately with the permission from the power company.
Retain active power setting after power off	This parameter typically does not require modification, unless required by new guidelines from the grid operator. If this parameter is set to "Enable", the inverter will keep operating in the preset active power values after rebooting. If this parameter is set to "Disable", the inverter will restore to the default maximum active power value after rebooting.
Active power limitation	The switch for limiting output power.

Name	Description
Active power limit ratio	The ratio of limiting output power to rated power in percentage.



The value ranges and default values of the parameter vary by device. Please refer to the actual page.

--End

12.10.6.2 Active Power Regulation at Grid Overvoltage

Step 1 Tap **Active power regulation at grid overvoltage**.

Step 2 Enable **Active power regulation at grid overvoltage** and configure the relevant parameters.

< Active power regulation at gri... Q

Grid overvoltage active power
regulation mode

Linear adjustment

✓ Active power regulation at
grid overvoltage



OPU_V1 (V)

253.0

OPU_V2 (V)

257.6

OPU_V3 (V)

257.6

OPU_V4 (V)

257.6

OPU_P1 (%)

100.0

OPU_P2 (%)

0.0

OPU_P3 (%)

0.0

OPU_P4 (%)

0.0

Regulation time (s)

0.1

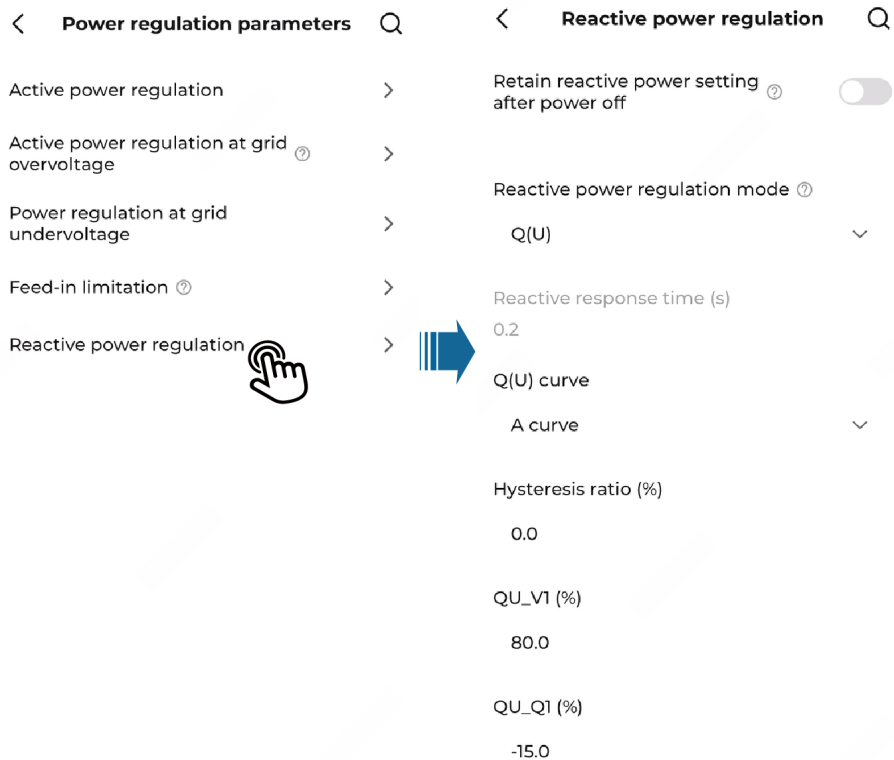


Please configure the parameters according to the Volt-Watt curve requirements of the local country or power company.

--End

12.10.6.3 Reactive Power Regulation

Step 1 Tap **Reactive power regulation**.

**Table 12-24** Reactive Power Regulation Parameters

Parameter	Description	Range	Default Value
Retain reactive power setting after power off	This parameter typically does not require modification, unless required by new guidelines from the grid operator. If this parameter is set to "Enable", the inverter will keep operating in the preset reactive power mode and reactive power	Enable/Disable	Disable

Parameter	Description	Range	Default Value
	values after rebooting. If this parameter is set to "Disable", the inverter will restore to the default state and not output reactive power after rebooting.		
Reactive power regulation mode	Select a reactive power regulation mode. This parameter typically does not require modification, unless required by new guidelines from the grid operator.	Off/PF/Qt/Q(P)/Q(U)	Off

Step 2 Turn on or off **Retain reactive power setting after power off** as needed.

Step 3 Select a **reactive power regulation mode** and configure corresponding parameters as needed.

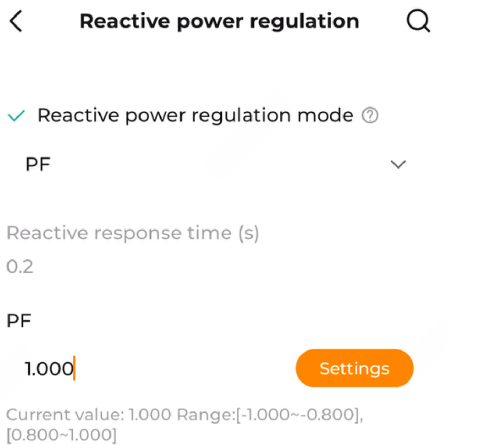
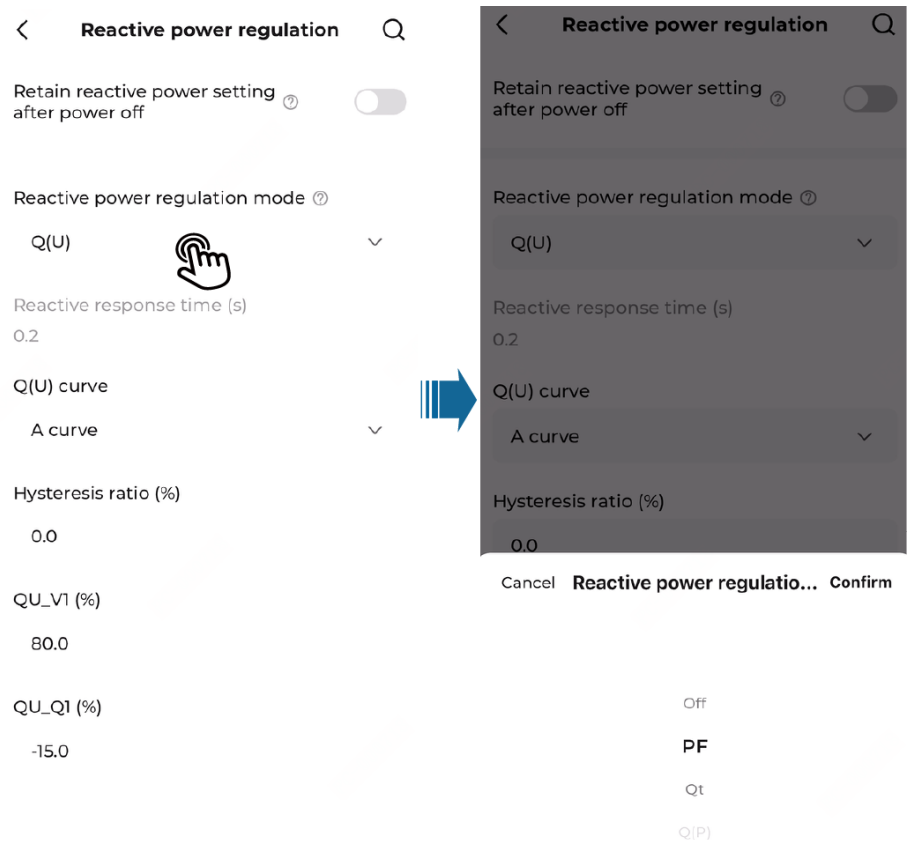


Figure 12-3 PF Configuration Page

<

Reactive power regulation

Q

✓

Reactive power regulation mode ⓘ

Qt

▼

Reactive response time (s)

0.2

Reactive power ratio (%)

0.0

Settings

Current value: 0.0 Range:[-100.0~100.0]

Figure 12-4 QT Configuration Page

<

Reactive power regulation

Q

Retain reactive power setting after power off ⓘ

☐

✓

Reactive power regulation mode ⓘ

Q(P)

▼

Reactive response time (s)

0.2

Q(P) curve

A curve

▼

QP_P1 (%)

20.0

QP_P2 (%)

50.0

QP_P3 (%)

100.0

QP_P4 (%)

100.0

<

Reactive power regulation

Q

QP_K1

1.000

QP_K2

1.000

QP_K3

0.900

QP_K4

0.900

QP_EnterVoltage (%)

100.0

QP_ExitVoltage (%)

90.0

QP_ExitPower (%)

1.0

QP_EnableMode

Yes

▼

Figure 12-5 QP Configuration Page

<

Reactive power regulation

Q

Retain reactive power setting after power off

?

☐

✓ Reactive power regulation mode

?

Q(U)

▼

Reactive response time (s)

0.2

Q(U) curve

A curve

▼

Hysteresis ratio (%)

0.0

QU_V1 (%)

80.0

QU_Q1 (%)

-15.0

QU_V2 (%)

95.0

<

Reactive power regulation

Q

QU_Q2 (%)

0.0

QU_V3 (%)

105.0

QU_Q3 (%)

0.0

QU_V4 (%)

115.0

QU_Q4 (%)

25.0

QU_EnterPower (%)

20.0

QU_ExitPower (%)

9.0

QU_EnableMode

Yes

▼

QU_Limited PF Value

0.27

Figure 12-6 QU Configuration Page

Table 12-25 Reactive Power Regulation Mode Parameters

Name	Definition/Setting description	Range	Default Value
PF	Set the inverter to output reactive power according to a fixed power factor.	The value range of the PF varies by device. Please refer to the actual range on the page.	The default value of the PF varies by device. Please refer to the actual default value on the page.
Q(t)	Set the inverter to output	The value range of the Reactive	The default value of the Reactive

Name	Definition/Setting description	Range	Default Value
	reactive power proportionally to the rated reactive power.	power ratio varies by device. Please refer to the actual range on the page.	power ratio varies by device. Please refer to the actual default value on the page.
Q(P)	Set the inverter to output reactive power according to power changes.	Options for Q(P) curve: Curve A/ Curve B/Curve C	Curve A
Q(U)	Set the inverter to output reactive power according to voltage changes.	Options for Q(U) curve: Curve A/ Curve B/Curve C	Curve A



The value ranges and default values of the parameter vary by device. Please refer to the actual page.

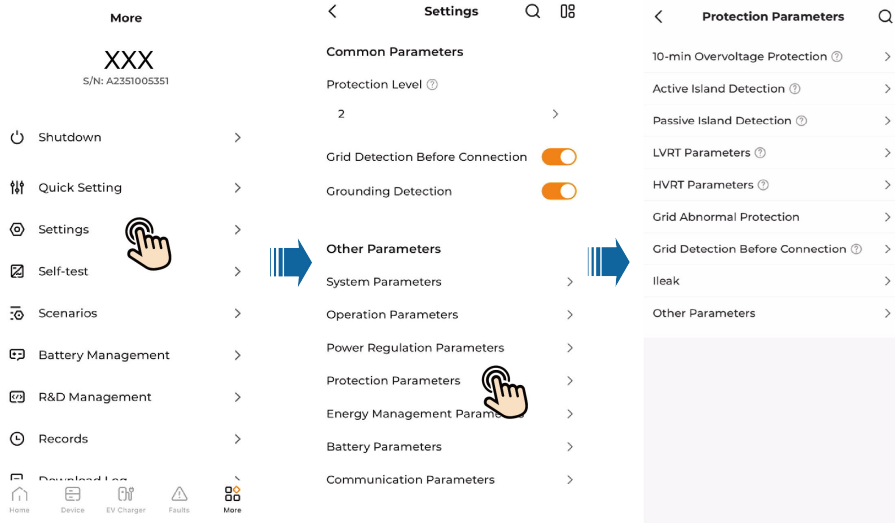
--End

12.10.7 Set Protection Parameters

You can manually edit the protection parameter settings, or apply a parameter configuration template to complete the settings.

Step 1 Navigate to **More > Settings**.

Step 2 Tap **Protection Parameters** to go to the screen below.

**Table 12-26** Protection Parameters

Parameter	Description
10-min Overvoltage Protection	This parameter typically does not require modification, unless required by new guidelines from the grid operator. In the case of grid fluctuations, if the inverter frequently reports a grid overvoltage fault (fault code: 14), the protection threshold value may be properly increased with approval from the grid operator.
Active Island Detection	This parameter typically does not require modification, unless required by new guidelines from the grid operator.
Passive Island Detection	This parameter typically does not require modification, unless required by new guidelines from the grid operator.
LVRT Parameters	This parameter typically does not require modification, unless required by new guidelines from the grid operator.
HVRT Parameters	This parameter typically does not require modification, unless required by new guidelines from the grid operator.
Grid Detection Before Connection	This parameter typically does not require modification, unless required by new guidelines from the grid operator. In the case of grid fluctuations, if the inverter frequently reports a grid abnormal fault (fault code: 13),

Parameter	Description
	the protection threshold value may be properly adjusted with approval from the grid operator.

--End

12.10.8 Set Communication Parameters

Set the device address and configure the network settings.

Step 1 Navigate to **More > Settings**.

Step 2 Tap **Communication Parameters** to go to the screen below.

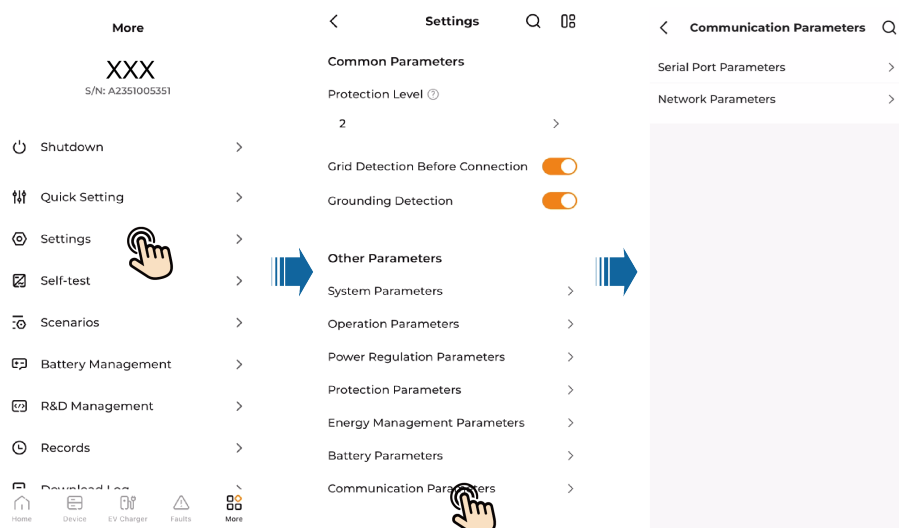


Table 12-27 Communication Parameters

Parameter	Definition/Setting instructions
Serial Port Parameters	The device address ranges from 1 to 246.
Network Parameters	Enable DHCP (Dynamic Host Configuration Protocol) or manually enter the network IP address.

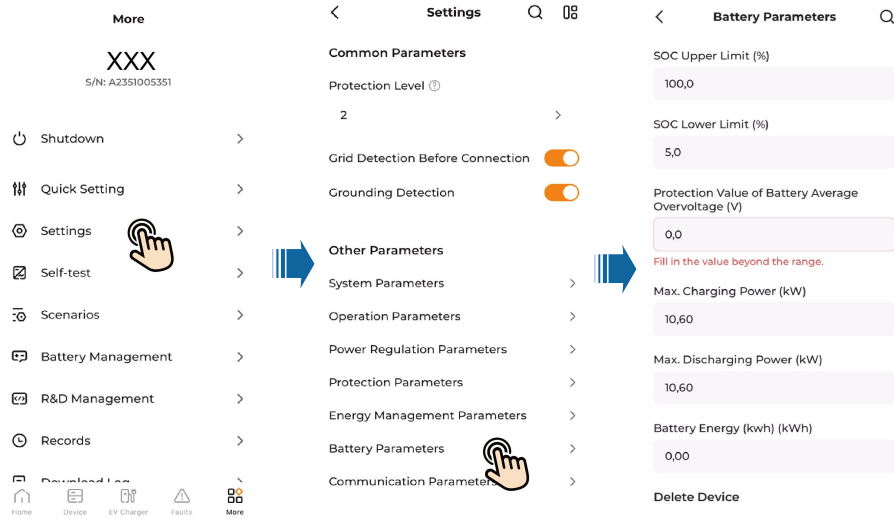
--End

12.10.9 Set Battery Parameters

Configure battery parameters and specify the time windows for battery charging and discharging.

Step 1 Navigate to **More > Settings**.

Step 2 Tap **Battery Parameters** to set parameters including SOC Upper Limit, Protection Value of Battery Average Overvoltage, and Max. Charging Power.



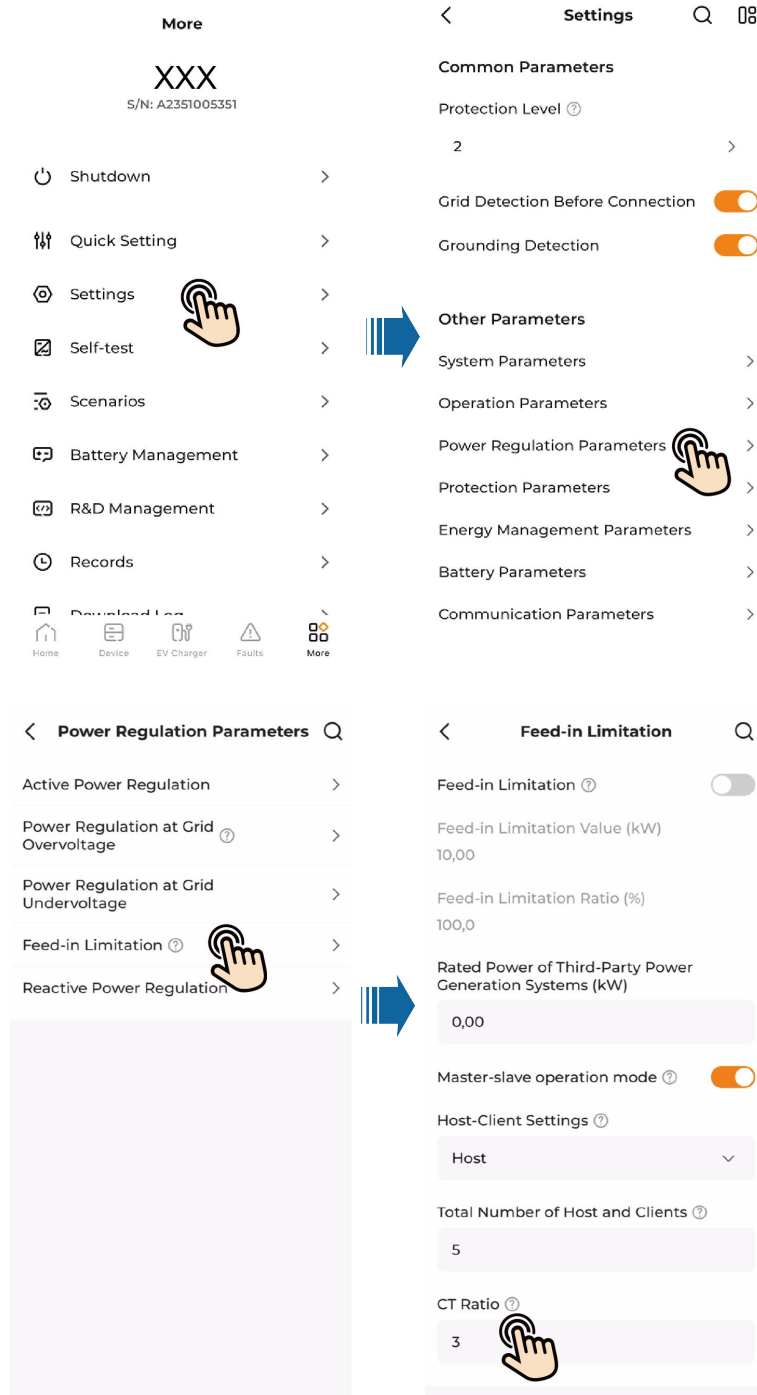
--End

12.10.10 Set Meter Parameters (Optional)

Step 1 Navigate to **More > Settings**.

Step 2 Choose **Power Regulation Parameters > Feed-in Limitation**.

Step 3 Modify the CT ratio for the meter as needed at the bottom of the screen.



--End

12.10.11 Set Optimizer/RSD Parameters

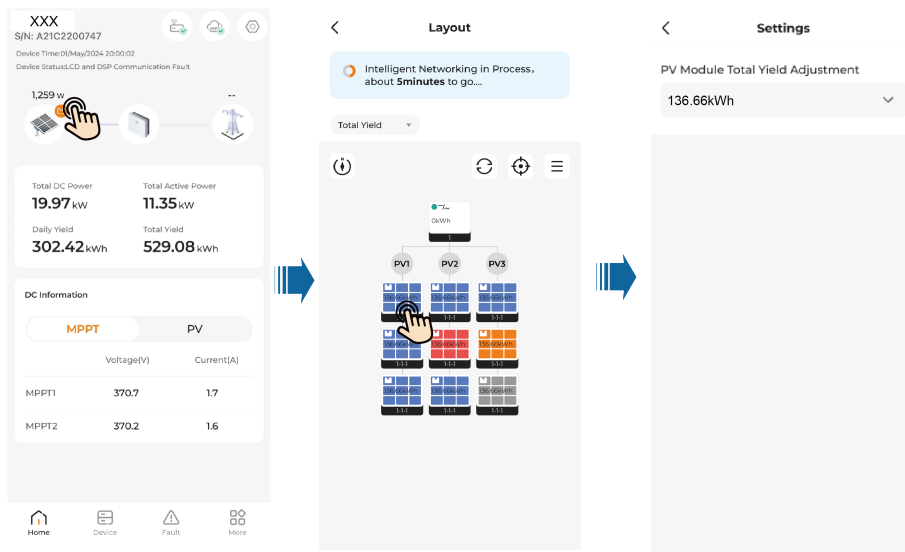
If an optimizer or RSD is connected on-site, you can view their information by following the steps below.

The instructions provided here are based on optimizers but apply to RSDs as well.

Step 1 Tap **Home** in the bottom navigation.

Step 2 In the Power Flow diagram at the top, tap the optimizer icon  (in the corner of the PV module icon) to go to the **Layout**.

Step 3 Tap a PV module with an optimizer icon in the layout. You can set the PV Module Total Yield Adjustment for this module as needed.



--End

12.11 Host-Client Settings

Host-Client Settings are used in scenarios where multiple hybrid inverters are connected in parallel. In this case, you need to configure settings for both the host and client devices.



Host-Client Settings are available only for specific device models. The actual user interface may vary.

12.11.1 Host Configuration

This section provides instructions primarily for configuring the host inverter, covering setting for energy management mode, power limitation at the grid connection point, backup mode, and generator parameters.



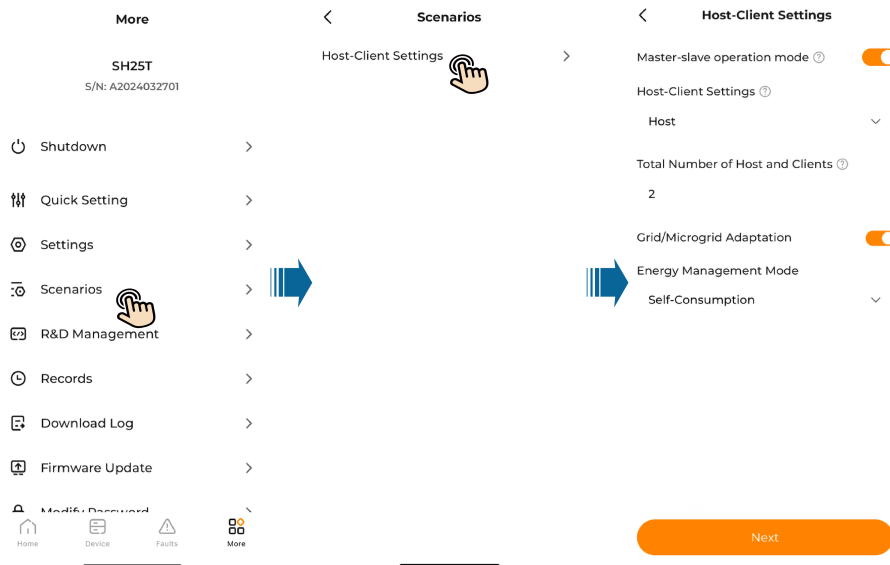
The parameters displayed on the user interface may vary depending on the device model or software version.

Step 1 Navigate to **More > Scenarios > Host-Client Settings**. Enable **Host-Client Operation Mode**.

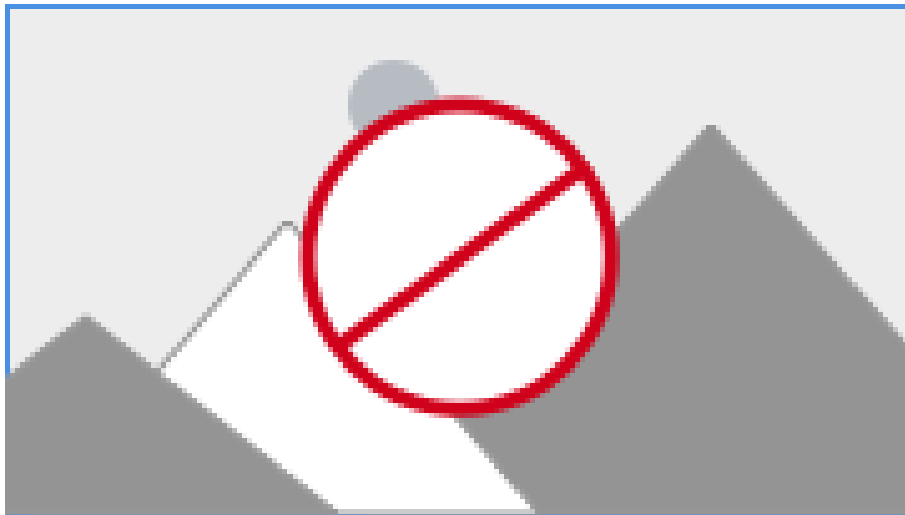
Step 2 Select Host in **Host-Client Settings**.

Step 3 Enter the **Total Number of Host and Clients**.

Step 4 Enable or disable **Grid/Microgrid Adaptation** based on actual needs.

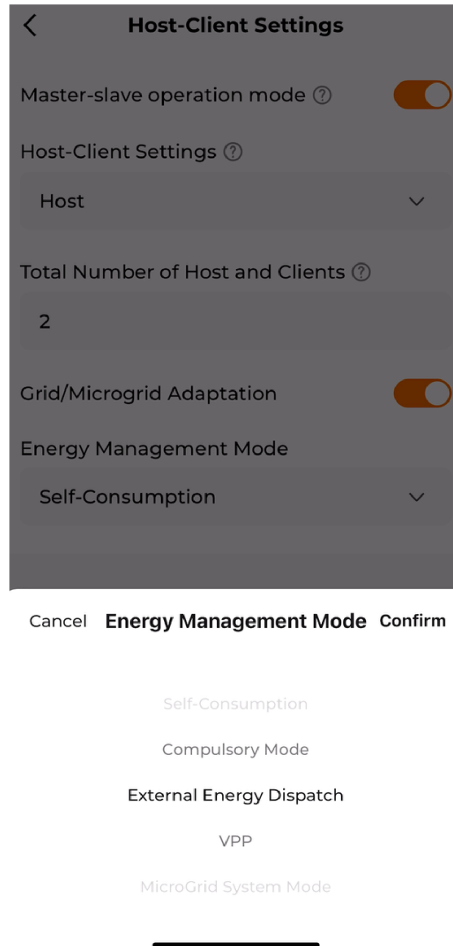


After enabling **Grid/Microgrid Adaptation**, a dialog box will appear asking whether the system is connected to the grid and generator. Tap **Confirm** (Yes) or **Cancel** (No) based on the actual on-site conditions.



For some inverter models, the **Grid/Microgrid Adaptation** option is not available. The actual user interface may differ.

Step 5 Select an **Energy Management Mode**. Five modes are available, as shown below.

**Table 12-28** Energy Management Mode

Mode	Description
Self-consumption	Maximizes the utilization of PV output and battery energy to power the loads, thus minimizing the consumption of grid energy. Users can allow the battery to discharge or force the battery to charge in specific time periods, based on electricity prices at different times, to lower the overall electricity costs.
Compulsory Mode	Mainly used in battery O&M to control the battery and make it operate in compliance with the preset charging/discharging mode and power.
External Energy Dispatch	The inverter is controlled by an external energy management system via communication.

Mode	Description
VPP Mode	Mainly used in the control of the third-party VPP operator. The system operates in compliance with the feed-in power and charging/discharging commands sent from the VPP operator.
MicroGrid System Mode	In MicroGrid System Mode, the generator or the grid works as AC power source. Configure the inverter's DO port to control the start and stop of the generator.

- Select **Self-Consumption** or **Compulsory Mode**, and then tap **Next** to proceed to [12.11.1.1 Energy Management](#).
- Select **External Energy Dispatch** and then tap **Next** to proceed to [12.11.1.2 Grid-connection Point Power Limitation](#).
- Select **VPP** and then tap **Next**. A message will appear on the screen informing you that enabling VPP will place the system under the control of a third party. Tap **Confirm** to proceed to [12.11.1.2 Grid-connection Point Power Limitation](#).
- Select **MicroGrid System Mode** and then tap **Next** to proceed to [12.11.1.3 Backup Mode](#).



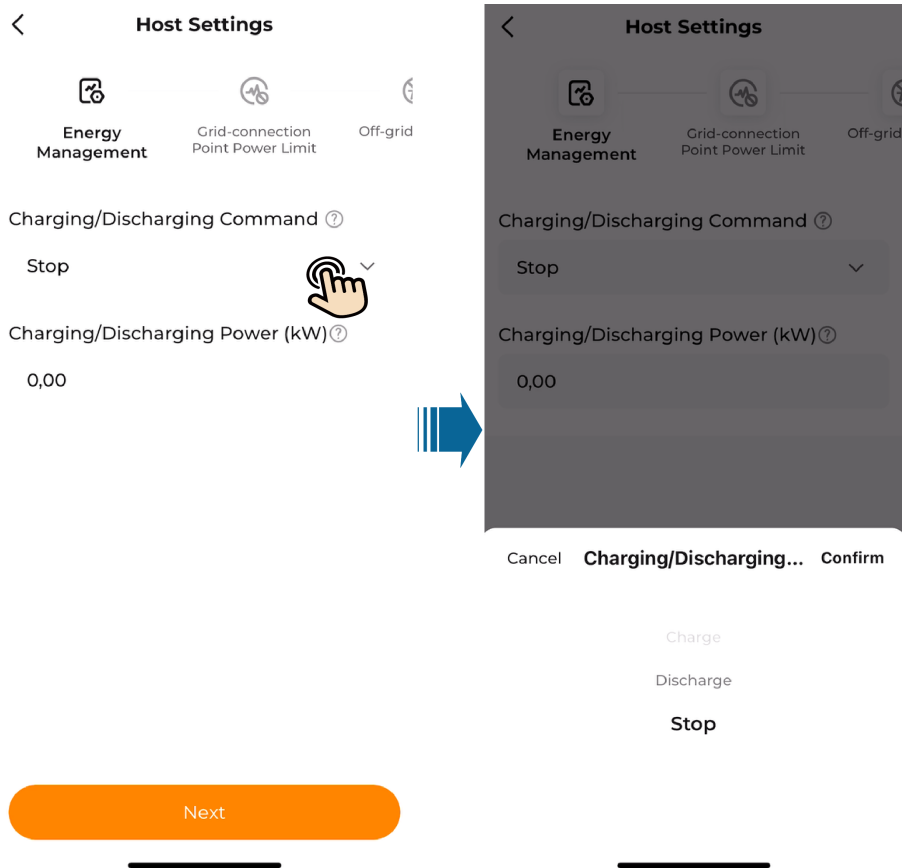
If **Grid/Microgrid Adaptation** is enabled, you cannot set **Energy Management Mode** to **MicroGrid System Mode**.

--End

12.11.1.1 Energy Management

If Compulsory Mode or Self-Consumption mode is selected in **Energy Management Mode**, complete the relevant settings in **Energy Management**.

Step 1 If Compulsory Mode is selected, set the **Charging/Discharging Command** and **Charging/Discharging Power** under **Energy Management**.

**Table 12-29** Parameter Description

Parameter	Description
Charging/ Discharging Command	Manually start charging or discharging. Used only in maintenance scenarios.
Charging/ Discharging Power	Manually control the charging or discharging power. Used only in maintenance scenarios.

Step 2 If Self-Consumption mode is selected, specify the time to use the battery and configure the forced charging function under **Energy Management**.

- a. Specify the time to use the battery.

 **Host Settings**


Energy Management


Grid-connection
Point Power Limit


Off-grid

Battery Use Time 1 of Weekday

01:58-04:59 

Battery Use Time 2 of Weekday

00:00-23:59 

Weekend Discharging 

Battery Use Time 1 of Weekend

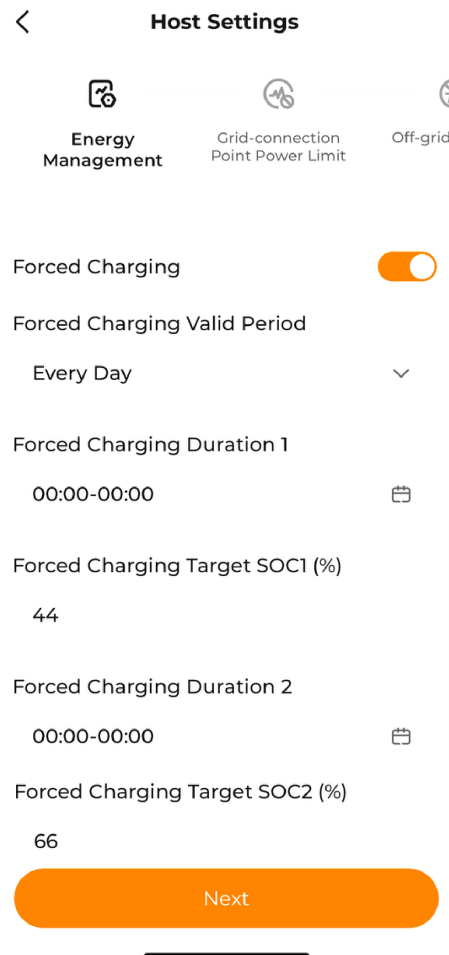
00:00-23:59 

Battery Use Time 2 of Weekend

00:00-23:59 



- b. If **Forced Charging** is enabled, complete the below settings.



Step 3 Tap **Next** to proceed to [12.11.1.2 Grid-connection Point Power Limitation](#).

--End

12.11.1.2 Grid-connection Point Power Limitation

Step 1 Configure the settings for the parameters shown in the figure below as needed.

Host Settings

Energy Management

Grid-connection
Point Power Limit

Off-grid Setting

1 — Rated Power of Third-Party Power Generation Systems (kW)

0,00

Current Value: 0,00 Range:[0,00~300,00]

2 — Feed-in Limitation for Each Phase ☐

3 — Feed-in Limitation ☒ Cancel Unit Confirm

4 — Feed-in Limitation Value

17,50

Current Value: 17,50 Range:[0,00~50,00]

kW

5 — Installed PV Power (kWp) %

25,00

Current Value: 25,00 Range:[0,00~300,00]

kW

Site Import Power Limit (kW)

43,47

CT Ratio

1

Next

Table 12-30 Parameter Description

No.	Parameter	Description
1	Rated Power of Third-Party Power Generation Systems (kW)	Set this parameter if there are third-party power generation facilities connected in the system on-site.
2	Feed-in Limitation for Each Phase	To limit the feed-in power per phase, enable Feed-in Limitation for Each Phase and disable Feed-in Limitation.
3	Feed-in Limitation	To limit the total feed-in power, enable Feed-in Limitation and disable Feed-in Limitation for Each Phase (if there is this option). For host-client

No.	Parameter	Description
		configurations, only the host device needs to be configured. If Feed-in Limitation is disabled, only the Energy Purchasing Power and CT Ratio need to be configured.
4	Feed-in Limitation Value/Ratio	Specify the amount of power that can be fed into the grid based on actual requirements. This can be set either as a value or a percentage. • Feed-in Limitation Value: Unit: kW. The Feed-in Limitation Value must be greater than the Rated Output Power of Third-Party Power Generation Systems. Otherwise, the setting will fail. • Feed-in Limitation Ratio: Unit: %.
5	Installed PV Power	Used to calculate the system's self-consumption rate, typically used in initial installation or retrofit. Set it to the actual total installed PV power on the DC side.



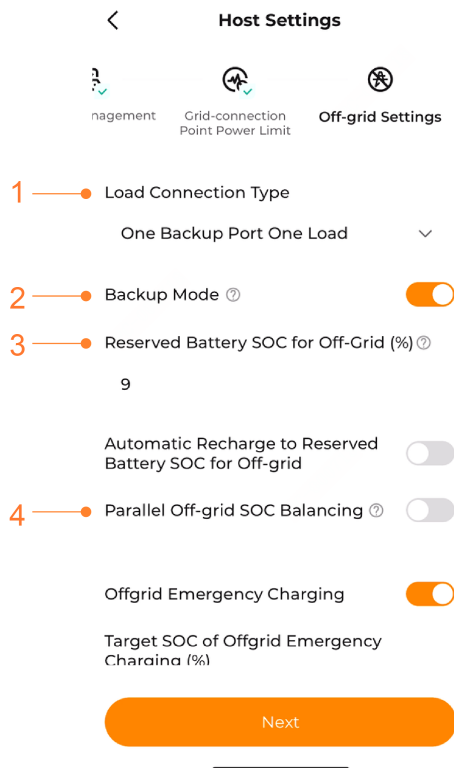
The parameters shown on the user interface may vary by inverter model.

Step 2 Tap **Next** to proceed to [12.11.1.3 Backup Mode](#).

--End

12.11.1.3 Backup Mode

Step 1 Configure settings for operation in Backup mode.

**Table 12-31** Parameter Description

No.	Parameter	Description
1	Backup Mode	Enable Backup Mode in backup or microgrid scenarios. Disable Backup Mode before device maintenance to ensure safety. Re-enable Backup Mode after maintenance is completed.
2	Reserved Battery SOC for Off-Grid (%)	Energy reserved for the off-grid (Backup) operation of the system. It sets the minimum SOC to which the system can discharge in the grid-connected mode. It is recommended to set it to 3% at least.
3	Parallel Off-grid SOC Balancing	In scenarios where multiple inverters are connected in parallel, SOC balancing during inverters' off-grid operation can prolong the time of power supply. It is recommended to enable this function. Only the host device needs to be configured.
4	Load Connection Type	One Backup Port One Load, All Backup Ports One Load, or External.

Step 2 Backup mode settings are completed.

If **Grid/Microgrid Adaptation** in **Host-Client Settings** is enabled, tap **Next** to proceed to [12.11.1.4 Genset Parameters](#), or tap **Complete** to return to **Scenarios** and complete the host inverter configuration process.

--End

12.11.1.4 Genset Parameters

Prerequisite

Grid/Microgrid Adaptation in **Host-Client Settings** is enabled.

Step 1 Configure the genset parameters, as shown below.


Host Settings



Connection Limit



Off-grid Settings



Genset Parameters

DO Configuration ?

MicroGrid System Mode ▼

Genset Start/Stop Control

Forced Stop ▼

Max. Permitted Charging Power from AC (kW)

3,00

Nominal Power of Genset (kW)

4,0

Lower Limit of SOC to Start Genset (%)

20,0

Upper Limit of SOC to Stop Genset (%)

90,0

Forbid Genset Night-time Operation ☐

Start/Stop Time of Genset Nighttime Operation Restriction

03:43-06:59 📅

Complete



DO Configuration: Configure the function of the DO port.

- Load Control Mode: Connect or disconnect the load via DO.
- Grounding Fault: The DO outputs corresponding status signal if a ground fault occurs.
- MicroGrid System Mode: Start or stop the genset via DO.

Step 2 Tap **Complete** to return to **Scenarios** and complete the host configuration process.

--End

12.11.2 Client Configuration

This section gives instructions for configuring the client inverter, including the client number and the quantities of host and client devices.



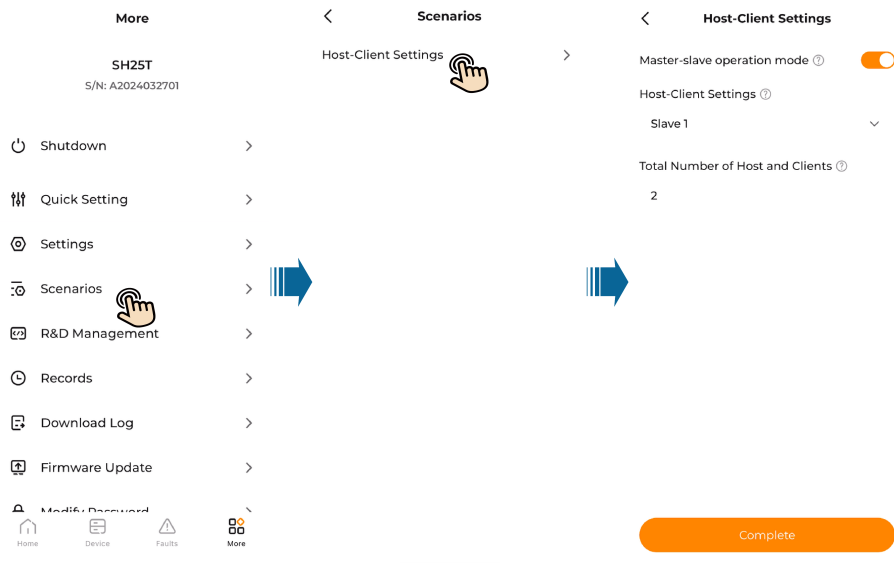
Before proceeding with client settings, disconnect your phone from the host inverter's WLAN and connect to the client inverter's WLAN named "SG-xxxxxxxxxx (Device S/N)".

Step 1 Navigate to **More > Scenarios > Host-Client Settings**. Enable **Host-Client Operation Mode**.

Step 2 Select the client to be configured in **Host-Client Settings**.

Step 3 Enter the **Total Number of Host and Clients**.

Step 4 After settings are completed, tap **Confirm** to return to **Scenarios**.



Step 5 When configuring settings for multiple client inverters, disconnect your phone from the previous client's WLAN and connect it to the target client's WLAN before setting. Repeat this process until all settings are complete.

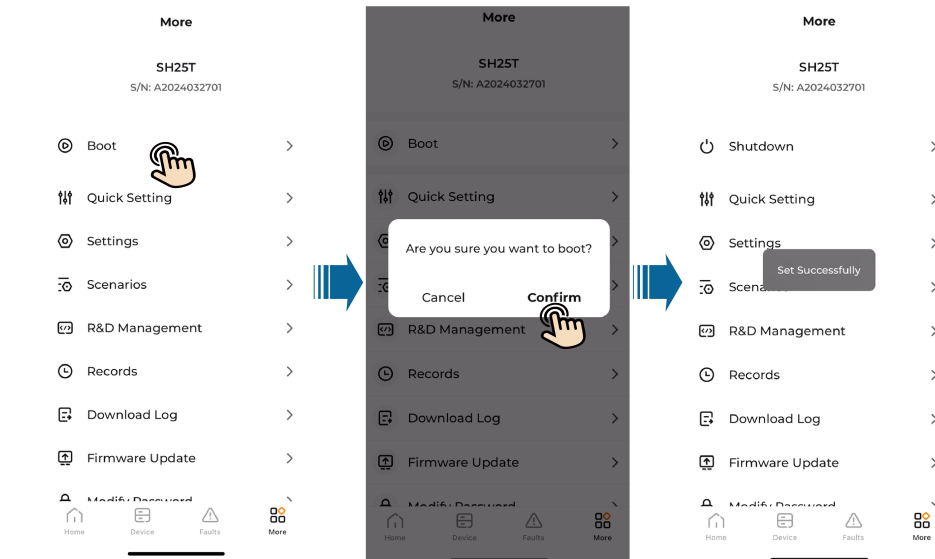
--End

12.12 More

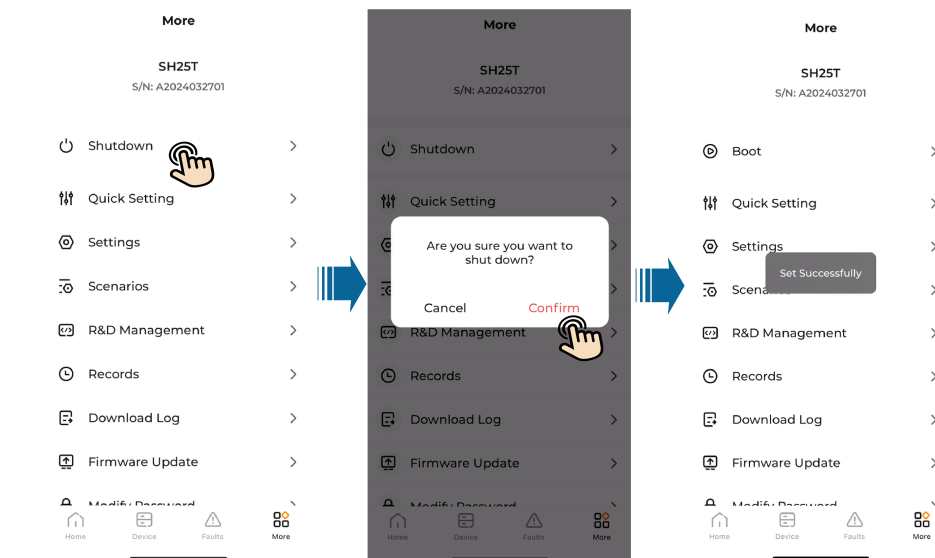
12.12.1 Boot/Shutdown

Boot/Shutdown is used to start or stop the inverter manually by sending a boot or shutdown command.

Boot



Shutdown



12.12.2 Quick Setting

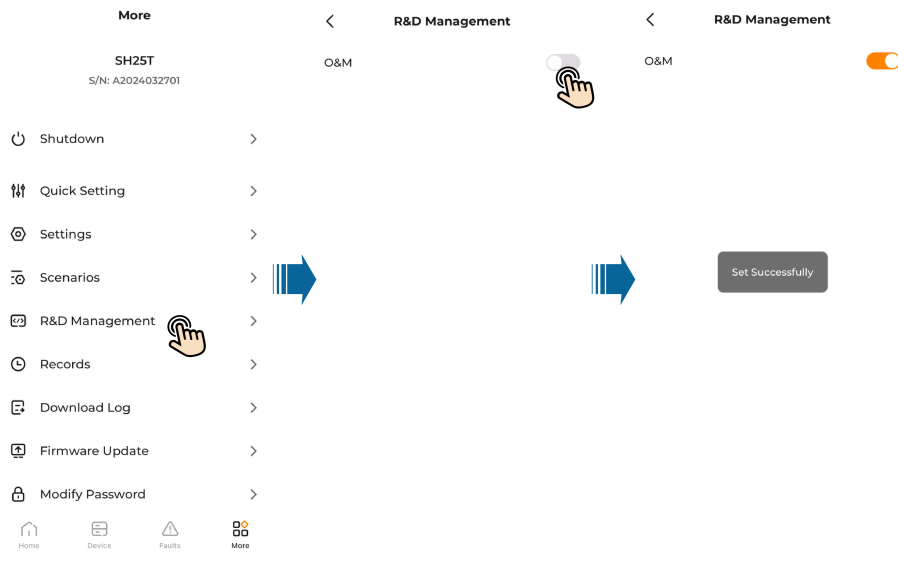
Quick Setting facilitates rapid configuration of parameters required for device operation. Once the device is connected, the App automatically initiates the **Quick Setting** process if it detects that the device has not been initialized, so that users can complete the required settings. The Quick Setting parameters can be modified by selecting **More > Quick Setting**.

- Quick setup instructions for the inverter are provided in [12.2.1 Quick Setting](#).
- Quick setup instructions for the microinverter are provided in [12.4.1 Quick Setting](#).
- Quick setup instructions for the iHomeManager are provided in [12.5.2 Quick Setting](#).

- Quick setup instructions for the PCS are provided in [12.6.1 Quick Setting](#).

12.12.3 R&D Management

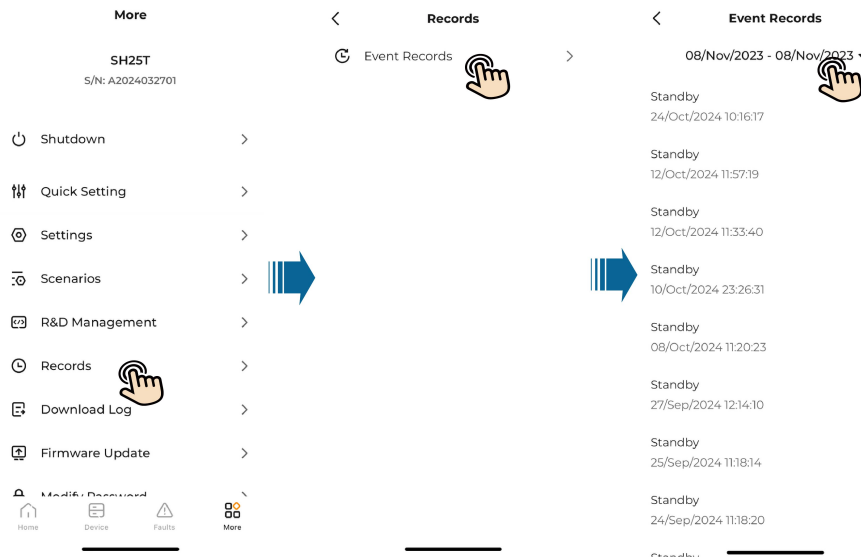
Before troubleshooting, the O&M personnel should enable O&M mode via the App. Navigate to **More > R&D Management** and enable **O&M** mode.



12.12.4 Records

12.12.4.1 View Event Records

- Step 1** Navigate to **More > Records > Event Records** to open the event record list. The list displays the events that occurred in the inverter, including their status and occurrence time.
- Step 2** You can filter the event records by date. Tap the time bar and select a time period to view the events within that specific period.



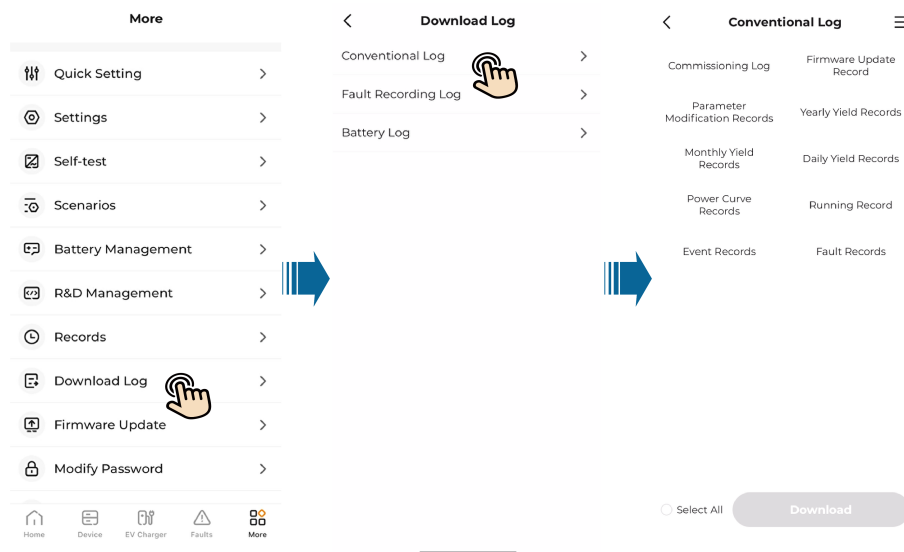
--End

12.12.5 Log Download

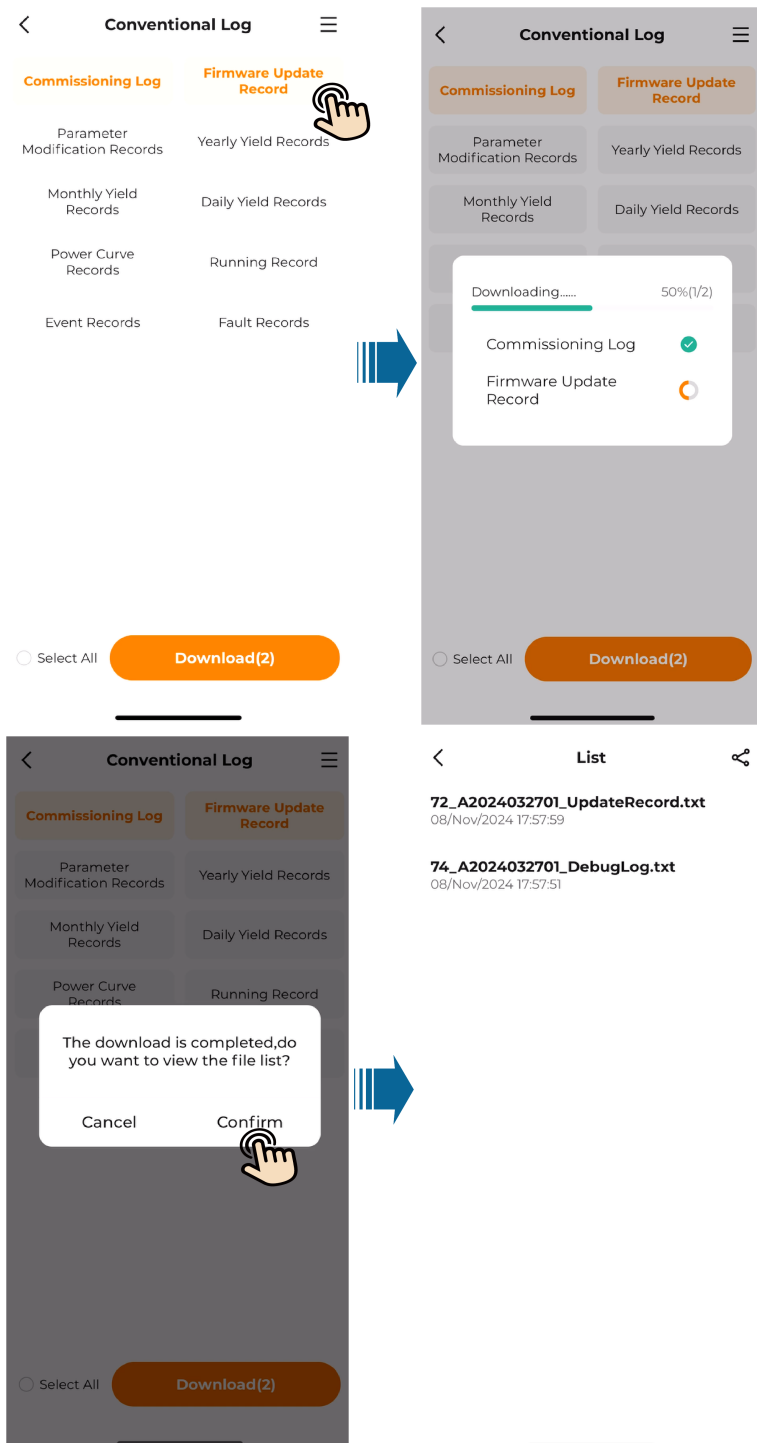
Download Log allows you to download and share the following logs: **Conventional Log**, **Communication Device Log**, **Battery Log**, **Fault Recording Log**, and **Grid Recorder Log**.

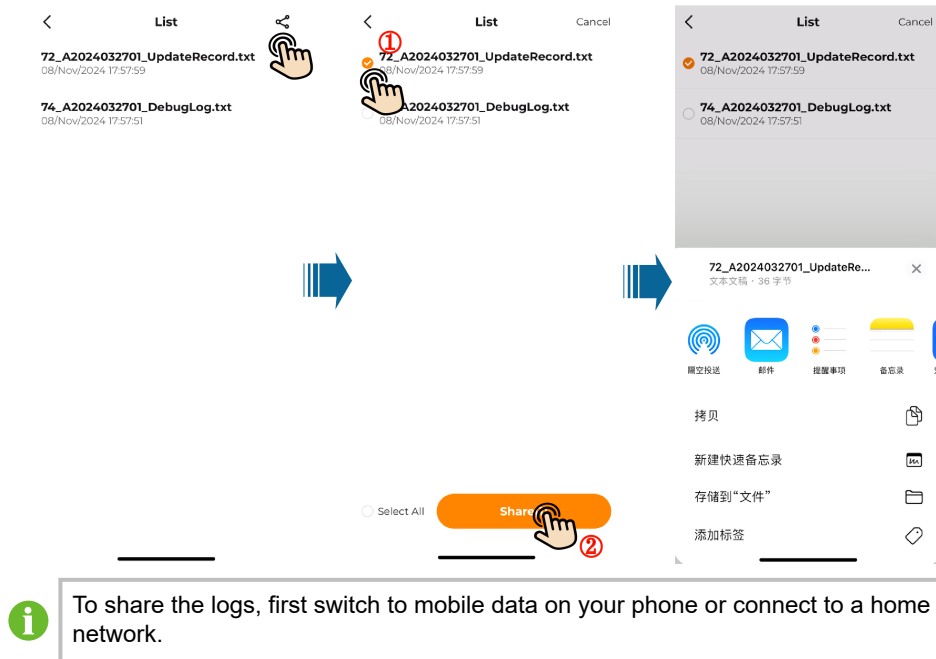
12.12.5.1 Conventional Logs

Step 1 Navigate to **More > Download Log > Conventional Log** to go to the screen for conventional log download.

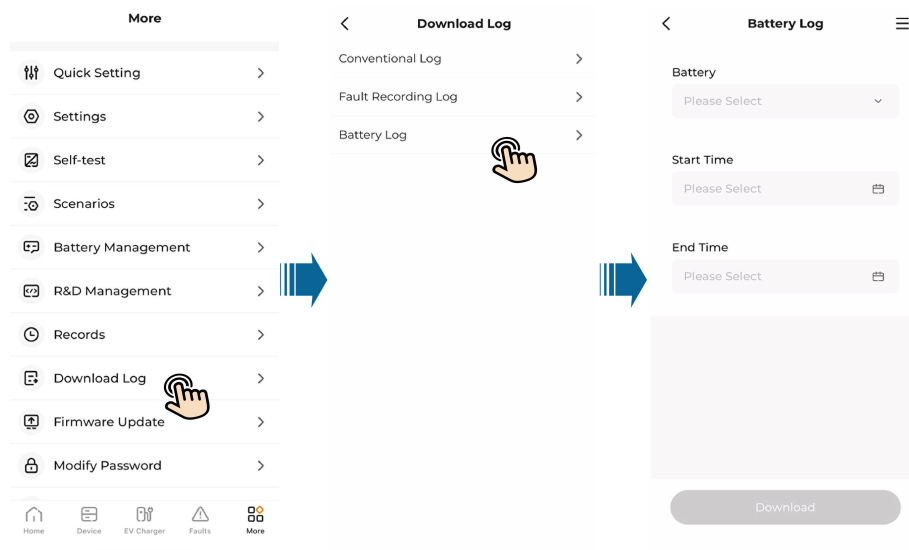


Step 2 Select the log types you need (multiple items can be selected at once). Then, tap **Download** and wait for the download to complete. Once finished, tap **Confirm** to view the file list.



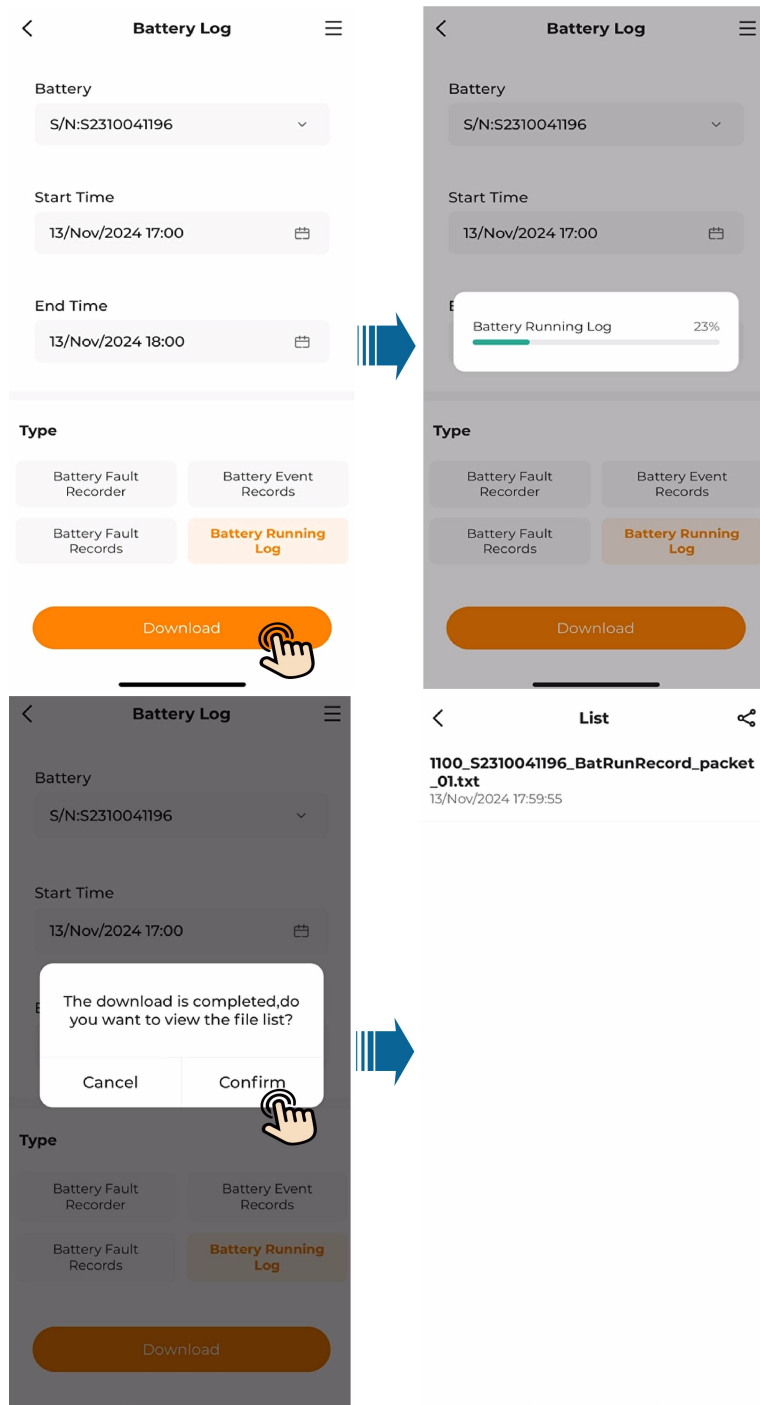
Step 3 Log files can be shared with others.**--End****12.12.5.2 Battery Logs**

Step 1 Navigate to **More > Download Log > Battery Logs** to go to the screen for battery log download.

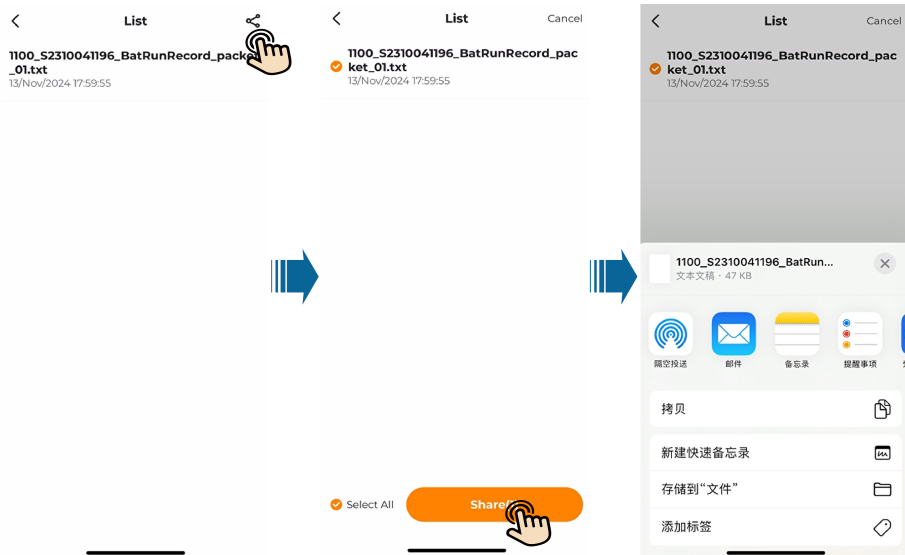


Step 2 Select the battery S/N, specify the start and end times, and choose the type of logs you need.

Step 3 Tap **Download** and wait for the download to complete. Once finished, tap **Confirm** to view the file list.



Step 4 Log files can be shared with others.



To share the logs, first switch to mobile data on your phone or connect to a home network.

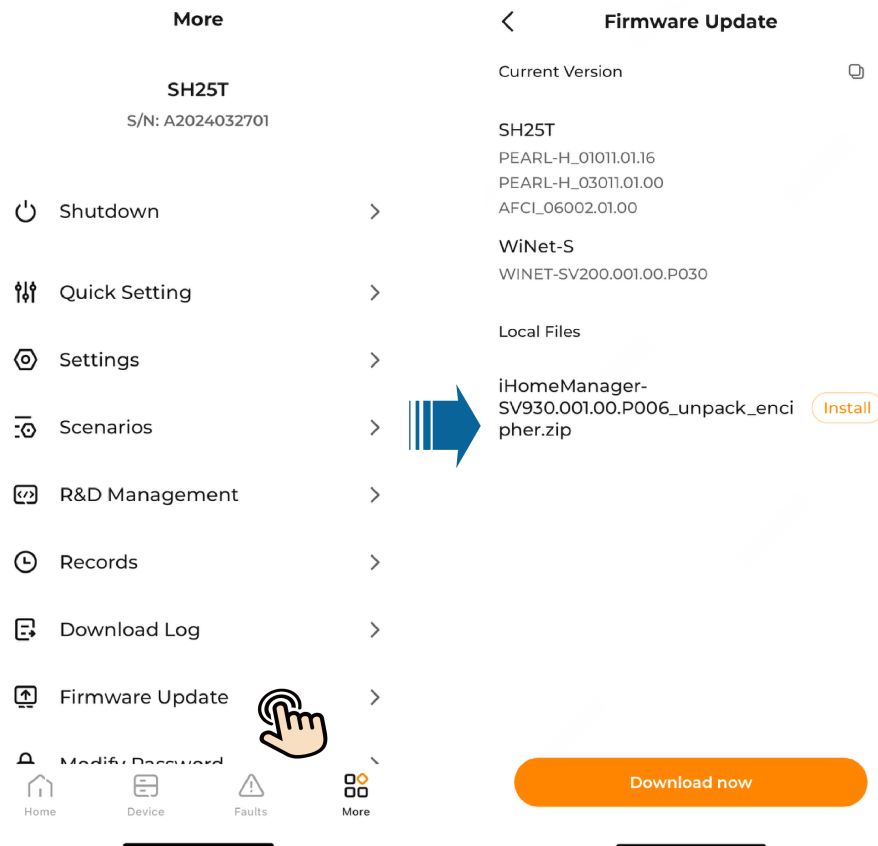
--End

12.12.6 Firmware Update

This section introduces how to check the firmware version used by the connected device and update the firmware.

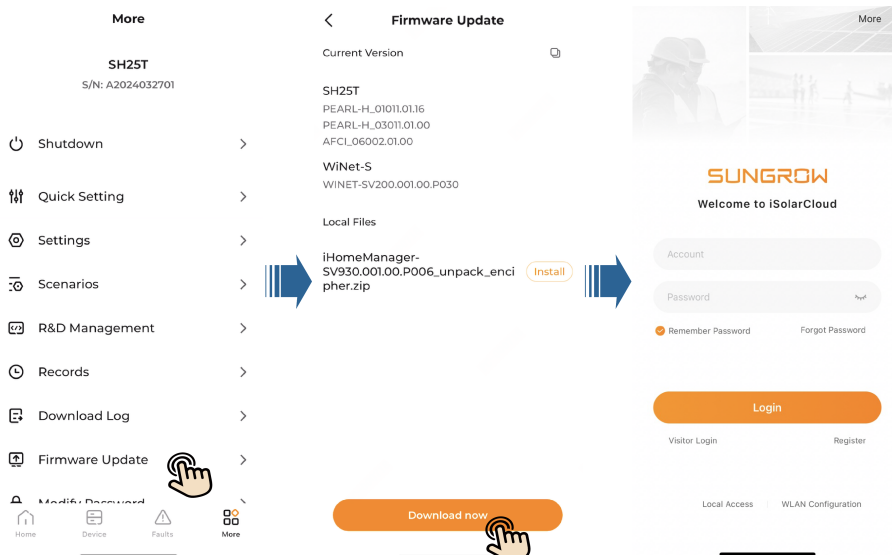
12.12.6.1 Check Firmware Version

Navigate to **More > Firmware Update** to check the firmware version used by the connected device.

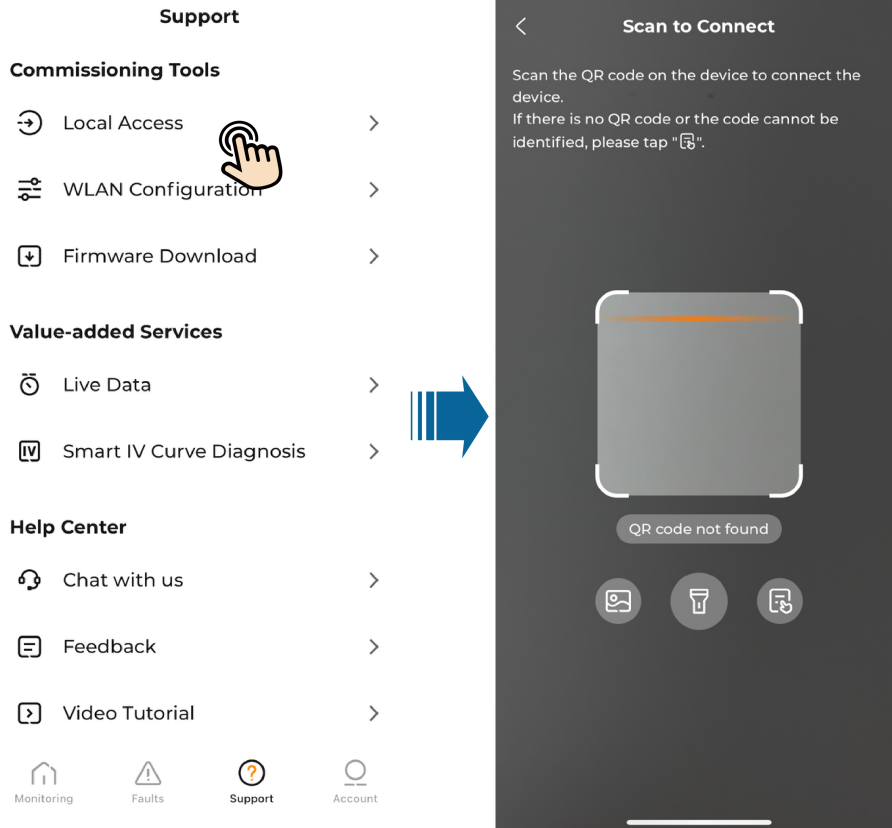


12.12.6.2 升级固件版本

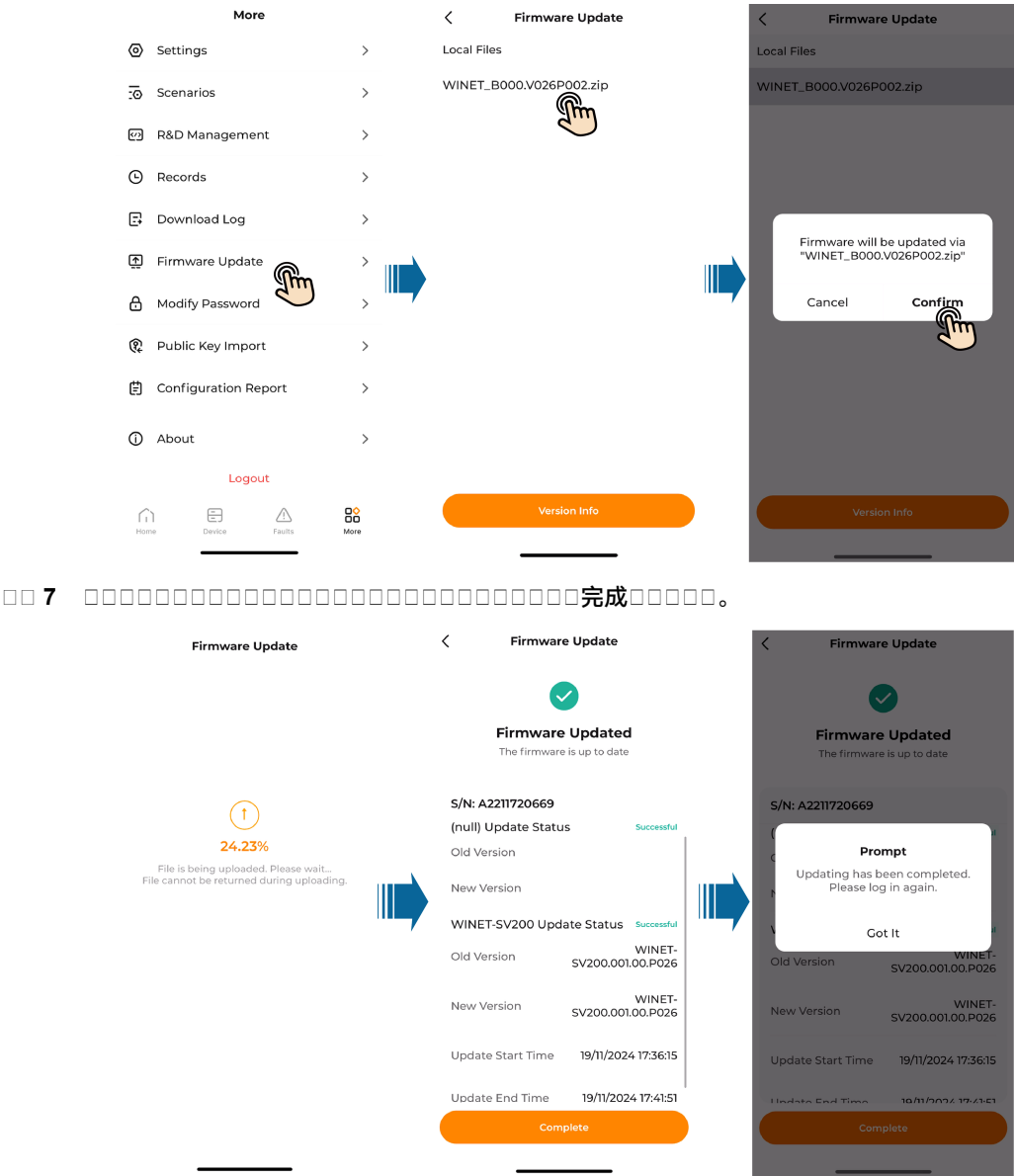
1 更多 > 固件升级 > 立即前往下载 App。



- 02 App. App “SG-xxxxxxxxxx”
App 4.3 Log in to an Account。
- 03 App 9.2 Firmware Download。
- 04 支持 > 登录设备 App 。



- ☐ ☐ App ☐ ☐ 12.1.2 Device Connection via WLAN ☐
- ☐ 12.1.3 Device Connection via Bluetooth。
- ☐ **5** ☐ App ☐ ☐更多 > 固件升级☐。
- ☐ **6** ☐ ☐确定☐.



 当用户未拷入本地升级包或者未通过远端下载升级包时，固件升级页面的升级包列表为空。

--结束

“”

WLAN。

- WLAN+
 - “” → “WLAN”
 - “WLAN ”()
 - “WLAN+” “”。

- 在 WLAN 设置界面
 1. 点击“WLAN” → 进入“WLAN”设置界面。
 2. 在 WLAN 设置界面。
 3. 点击“WLAN” → “WLAN”设置界面。
 4. 在 WLAN 设置界面。

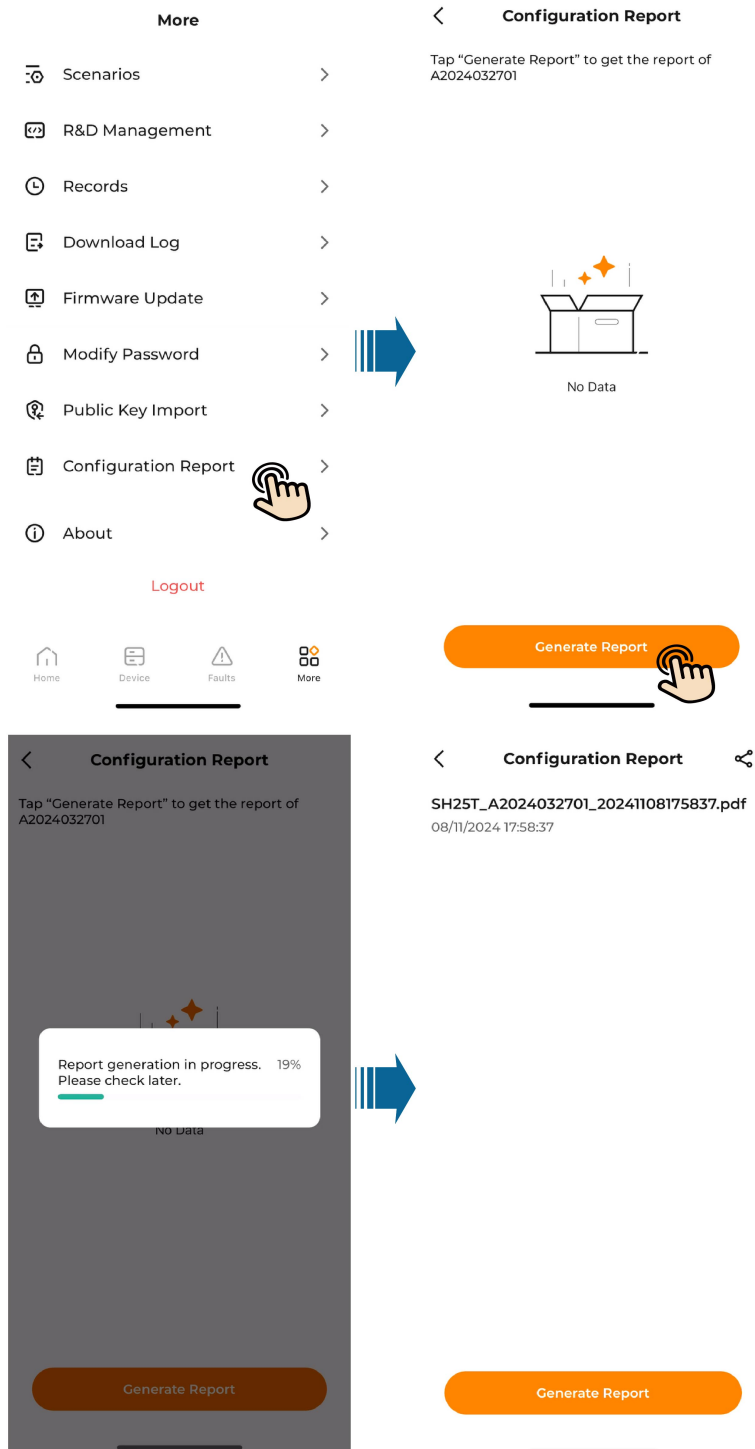


- 如果禁用 WLAN+ 后仍无法正常连接或者手机不支持 WLAN+，请按照方法二重新尝试。
- 如果连接内置 WLAN 时弹出“当前 WLAN 不可上网，是否继续使用此 WLAN？”，请点击“使用”，否则无法登陆使用。不同手机界面表述不同，请以实际为准。

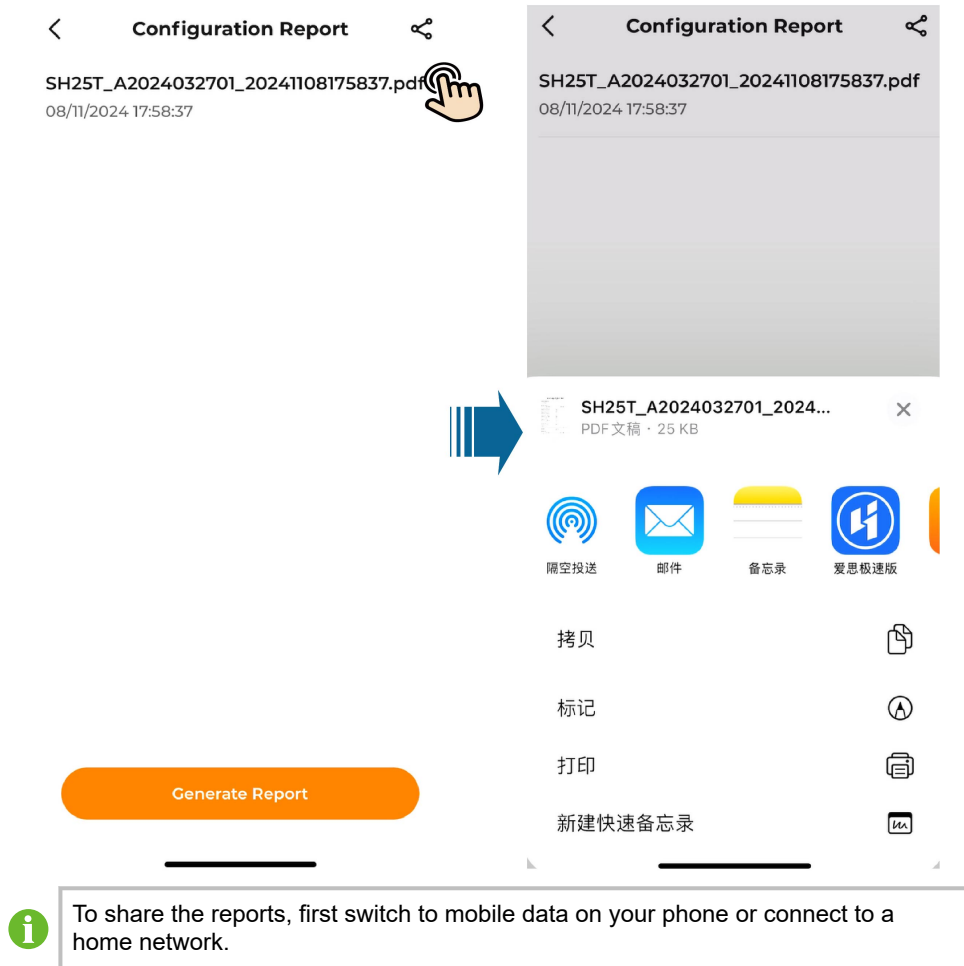
12.12.7 Configuration Report

After completing local commissioning, you can generate and download a parameter configuration report.

Step 1 Navigate to **More > Configuration Report** and tap **Generate Report** to create a parameter configuration report for the current commissioning process.



Step 2 Configuration reports can be shared with others.



--End

12.12.8 Modify Password

Step 1 Navigate to **More > Modify Password**.

Step 2 Enter the original password, set and confirm the new password, and then tap **Confirm** to change your password.

 **Modify Password**

Old Password

Please Enter 

New Password

Please Enter 

Confirm New Password

Please Enter 

The password should be composed of at least three of the four symbols: uppercase letters, lowercase letters, numbers and special characters, with a length of 8~32 characters

Confirm



New passwords should be 8–32 character long and contain at least three of the following four character types: uppercase letters, lowercase letters, numbers, and special characters.

--End

12.12.9 Check iSolarCloud Version

Navigate to **More > About** to check the current version of iSolarCloud.

**About****iSolarCloud****Current Version**

V2.1.6.20250218 (20250218)

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iSolarCloud Provides Computing Services

13 Appendix

13.1 Manual Description

The information contained in this document is the property of Sungrow Power Supply Co., Ltd. (referred to as **SUNGROW** hereinafter). Publishing its content, either partially or in full, requires the written permission of SUNGROW. Copying of the document for the purposes of evaluating the product or its correct implementation by internal staff of the company is allowed and does not require permission.

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13.2 Contact Information

If you have any questions about this product, please reach out to us. We need the following information to provide you the best assistance:

- Model of the device
- Serial number (S/N) of the device
- Fault code/name
- Brief description of the problem

Aftersales service contact: 400 119 7799

For more contact information, see <https://www.sungrowpower.com/headquarter.html>

SUNGROW

Sungrow Power Supply Co., Ltd.

www.sungrowpower.com