

SEMS+ App

User Manual

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NOTE

Due to product version upgrades or other reasons, the document content may be updated from time to time. Unless otherwise agreed, the document content does not supersede the safety precautions on the product label. All descriptions in this document are for guidance only.

Preface

Applicable Personnel

Applicable to professionals who are familiar with local regulatory standards and electrical systems, have received professional training, and are knowledgeable about this product, or to end users who purchase GoodWe products.

Symbol Definitions

 DANGER
Indicates a high-level potential hazard that, if not avoided, will result in death or serious injury.
 WARNING
Indicates a moderate-level potential hazard that, if not avoided, could result in death or serious injury.
 CAUTION
Indicates a low-level potential hazard that, if not avoided, may result in moderate or minor injury.
NOTE
Emphasis and supplementary information about the content, may also provide tips or tricks for optimal product use that can help you solve a problem or save your time.

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1 App Introduction

NOTE

- The interfaces shown in this manual are based on SEMS+ App V2.6.0 and may differ in later versions.
- The parameters that can be viewed and the operation permissions may vary depending on the login role.
- The displayed parameters and functions may vary depending on the device model and the Safety Regulation of the country.
- The contents of this manual are for reference only. Please refer to the actual display in the App.
- If you need to modify power station or device parameters, please read this manual and the corresponding product manual carefully before modification and become familiar with the product functions and features. Incorrect grid parameter settings may cause the inverter to fail to connect to the grid or to connect not in accordance with grid requirements, affecting the inverter's Energy Generation.

This document describes the common operations of the SEMS+ App.

SEMS+ App is a software application for remote power station monitoring or local device commissioning. Installers or owners can:

- Remotely monitor the operation of the power station and set operating parameters for the power station and equipment.
- Use Local Access to connect to devices, view device operation status, and set device parameters.

1.1 Compatible Products

Supports monitoring and management of GoodWe brand devices, such as inverters, smart meters, data loggers, charging piles, batteries, etc.

1.2 Download and Install the SEMS+ App

Phone requirements

- Phone operating system requirements: Android 7.0 and above, iOS 15.1 and above.
- The phone supports a web browser and can connect to the Internet.
- The phone supports WLAN/Bluetooth functions.

Download Methods

Method 1:

Search for SEMS+ in Google Play, App Store, Huawei, Honor, Xiaomi, OPPO, and vivo app stores to download and install.



Method 2:

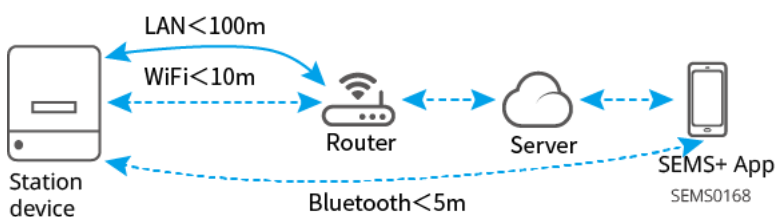
Scan the QR code below to download and install.



Add Home Screen Widget

- When the App version is V2.5.2 or above, you can add the SEMS+ App to your phone's home screen.
- The steps for adding a home screen widget vary by operating system. Please follow the actual steps.
- After the home screen widget is added, you can quickly view the power plant operating status without opening the App.

1.3 Connection Methods



1.4 Description of Common Icons

Icon	Description	Icon	Description
	Create power plant, add devices, etc.		Scan for nearby devices.
			
	More information.		Filter.
	Message notifications.		Favorite or unfavorite.
	Save.		Edit.
	Delete.		Copy.
	Expand or collapse data display.		Device software version upgrade.
	Enlarge chart display.		Turn on or off.
	Sort. Click to sort in ascending or descending order.		Expand the power station list and switch power stations.
	Configuration. For example, configure commonly used control items.		Switch between 2D/3D energy flow diagram display modes.

1.5 Account Registration

Operating steps

1. On the App home page, tap 'Register' to enter the Account Registration interface.
2. Select the server and account type according to actual needs, then tap 'Next'.
3. Enter the account information according to the actual situation, then tap 'Confirm'

to complete the registration.

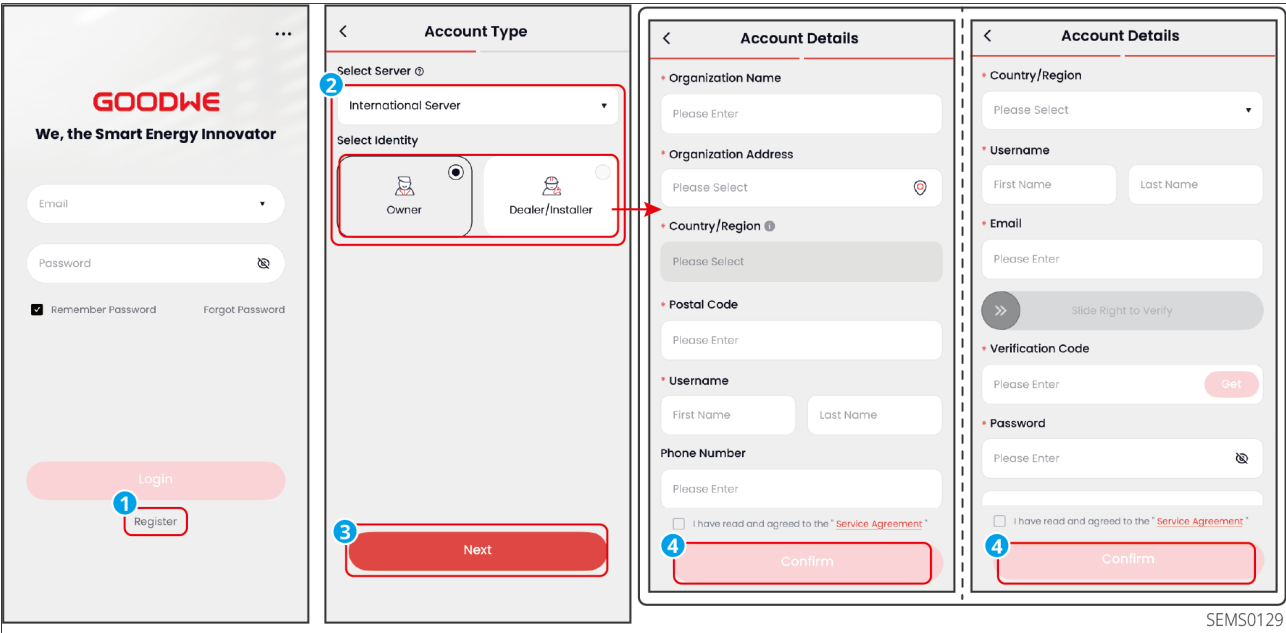


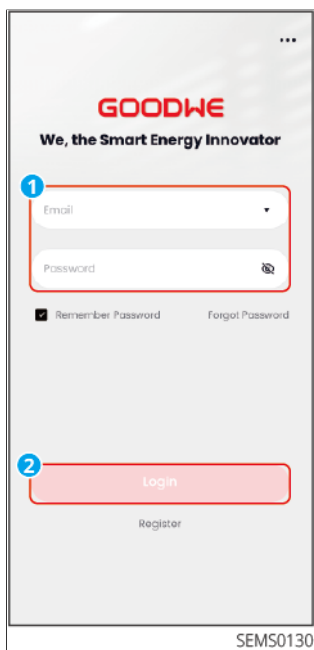
Figure1 Account Registration

1.6 Login Account

NOTE
• Before logging in to the App, please register an account or obtain an account and password from your dealer. • After logging in, you can view or manage power station information. Please refer to the actual interface for details. Power station information may vary depending on account type, region, power station type, etc.

Operating steps

1. Enter your account and password, then tap 'Login'.



The image shows a mobile application login screen for 'GOODWE'. At the top, the logo 'GOODWE' is in red, followed by the tagline 'We, the Smart Energy Innovator' in black. Below this, there are two input fields: 'Email' and 'Password'. A red box with a blue circle containing the number '1' highlights both input fields. Below the input fields, there is a checkbox labeled 'Remember Password' and a link labeled 'Forgot Password'. A red box with a blue circle containing the number '2' highlights the 'Login' button, which is a red rounded rectangle. Below the 'Login' button is a 'Register' link. At the bottom right of the screen, the text 'SEMS0130' is visible.

GOODWE

We, the Smart Energy Innovator

1

Email

Password

☒ Remember Password [Forgot Password](#)

2

Login

[Register](#)

SEMS0130

Figure2 Login Account

2 Remote Monitoring of Power Station

NOTE

Power plant information display varies by account type, region, power plant type, etc.

After logging in to the App with your account and password, you can create power stations, add devices, monitor power station operation status, and view device operation information, etc.

Add the App to the desktop widget to monitor the power station operation in real time.

2.1 Power Plant

2.1.1 Create Power Station

Supports creating power stations based on actual needs.

2.1.1.1 Fill in Power Station Information

Create a Power Station (Installer/Dealer)

Operating steps

1. After logging in to the App, tap 'Create Power Station' if there are no power stations under your account; if there are, tap '+' on the power station list screen to enter the new power station information entry screen.
2. Follow the on-screen prompts and fill in basic information such as power station address, name, capacity, and power according to actual conditions.
3. If you need to add power station visitors, you can enter the organization code and power station visitor information. Tap 'Done' to create the new power station.
4. Select whether to add power plant equipment based on actual conditions. If you need to add, please refer to [2.1.1.2.Add Device\(Page 14\)](#)section.

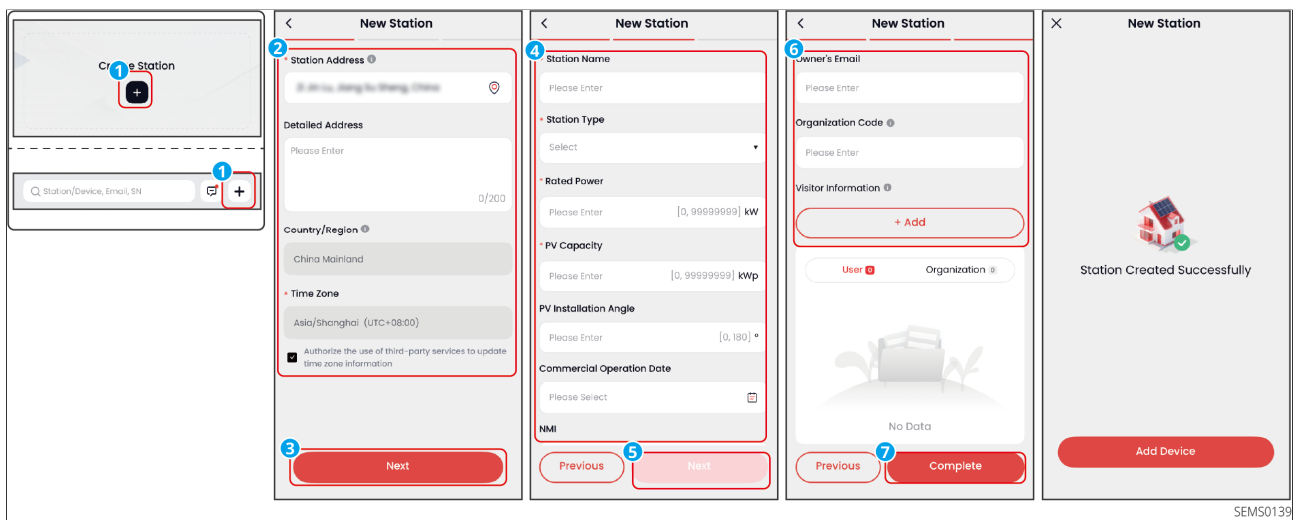


Figure3 Fill in power plant information (installer/dealer)

Parameters	Function Description
Power Station Type	Set according to the actual power station type. Supported: Residential PV Station, Residential Storage Station, Commercial & Industrial Storage Station, Commercial & Industrial PV Station.
Power Station Name	Set the power station name according to actual needs.
Rated Power	Set the total installed power of the power station.
PV capacity	Set the total installed PV capacity of the power plant.
Battery capacity	Set the total battery capacity in the power station.
PV Installation Angle	SetPVPanel Installation Angle.
Commercial Operation Date	Set the grid connection date of the power station.

Create Power Plant (Owner)

Operating steps

1. After logging in to the App, follow the on-screen prompts and tap "Create Power Plant"; if there are power plants under the account, tap "+" on the power plant list screen to enter the new power plant information page.
2. Follow the on-screen prompts and fill in basic information such as the power plant name, address, and type based on actual conditions.

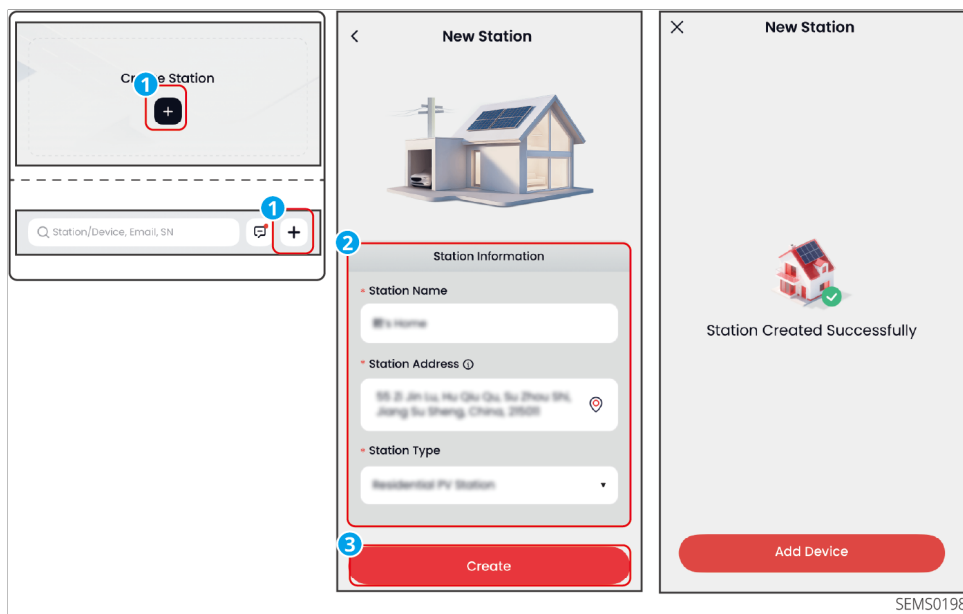


Figure4 Fill in Power Plant Information (Owner)

2.1.1.2 Add Plant Devices

After the plant is created, you can add plant devices as needed.

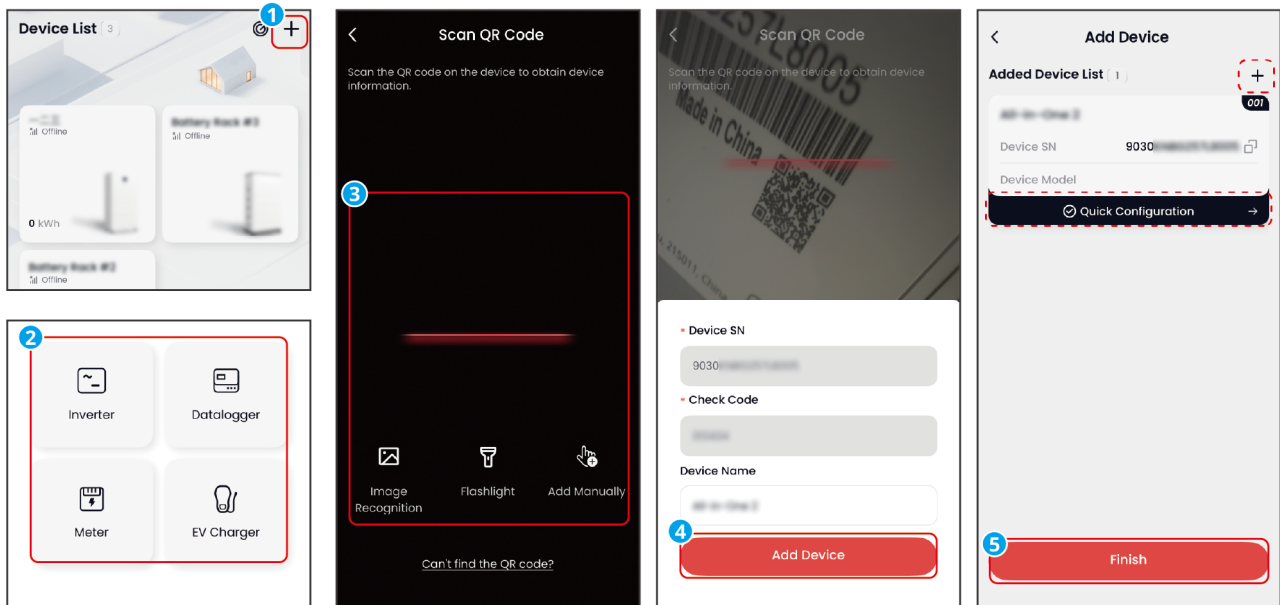
- When a Home Energy Management System (HEMS) has been added to the power station:
 - You can synchronize and add devices associated with HEMS, or add devices not associated with HEMS to monitor all devices within the same plant.
 - Please use Bluetooth Local Access to connect the energy storage inverter, EV charger, smart switch and other devices in the network to the same router as HEMS. Otherwise, HEMS cannot identify these devices. For GoodWe products, please refer to the [3.1.Local Device Connection\(Page 52\)](#) section; for third-party products, refer to the device user manual.

Manual Device Addition Steps

1. On the device list screen, tap **+**.
2. Add devices as needed. Select the device type, then scan the device SN or manually enter the device SN.
3. After scanning, confirm that the device serial number and verification code are correct. Modify the device name as needed. Tap "Add Device" to complete the addition.
4. (Optional) To continue adding devices to the current plant, tap **+**, and repeat the

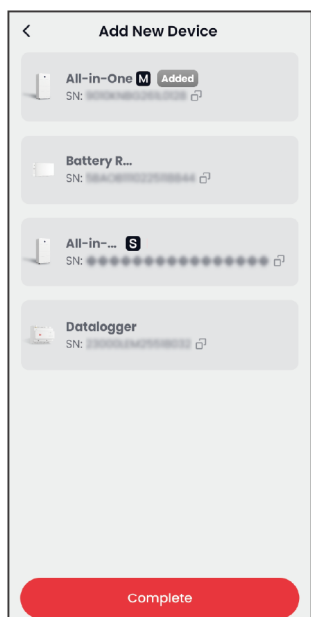
device SN entry steps.

5. (Optional) Tap "Quick Configuration" to modify device settings such as safety regulations and network configuration. For details, refer to the [2.1.1.3.Quick Configuration\(Page 16\)](#).



SEMS0147

6. After completing Quick Configuration, devices in the same system, such as meters and batteries, will be identified automatically without the need for manual addition. Tap "Complete" to finish adding devices. After device addition is completed, any new devices in the system will be automatically scanned and prompted for addition.

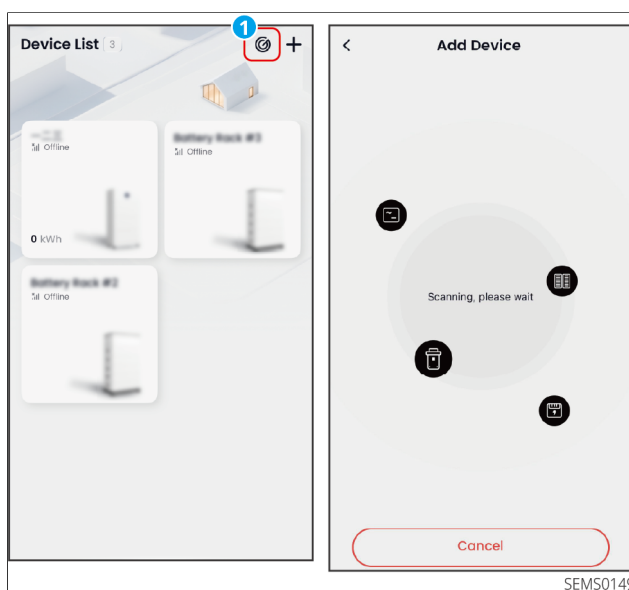


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Steps for Adding Devices by Scanning

After manually adding the inverter to the plant, you can scan to add associated devices of the inverter, such as batteries.

1. On the device list screen, tap .
2. In the scanned device list, select the devices to be added and tap "Add".
3. To continue adding other devices that were not scanned, tap "Continue Adding"; otherwise, tap "Complete".



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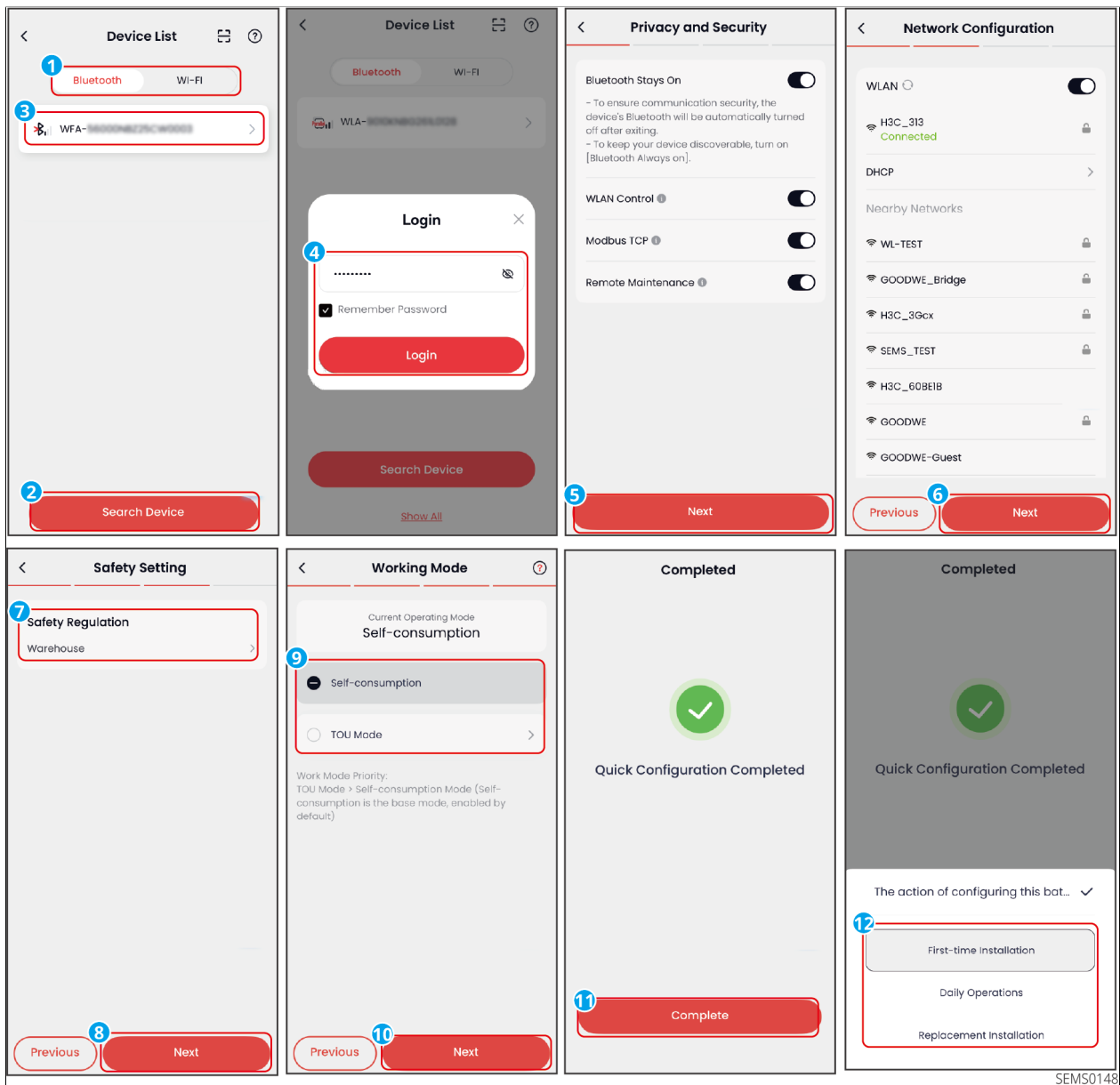
2.1.1.3 Quick Configuration of Devices

NOTE

- After a device is added to a power station for the first time, basic operation can be ensured through Quick Configuration.
- Before performing Quick Configuration, confirm that all devices are powered on and running normally.
- Different device types have different Quick Configuration content. Refer to the actual interface for details.

Operating steps

1. After adding a device, click "Quick Configuration" as prompted, or enter the device list screen via "Service" > "Local Access".
2. On the device list screen, select the "Bluetooth" or "WiFi" tab based on the signal type of the Smart Dongle.
3. Pull down or click "Search Device", confirm the inverter signal name based on the inverter serial number, and click to enter the Quick Configuration screen. If you entered the settings screen via "Local Access", click "Quick Configuration" on the home page.
4. Follow the on-screen prompts to complete network configuration, safety code, operating mode, etc. For details on operating modes, refer to [2.1.7.System Operating Modes\(Page 32\)](#)section.
5. Click "Finish" to complete Quick Configuration.



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Figure5 Quick Configuration of Devices

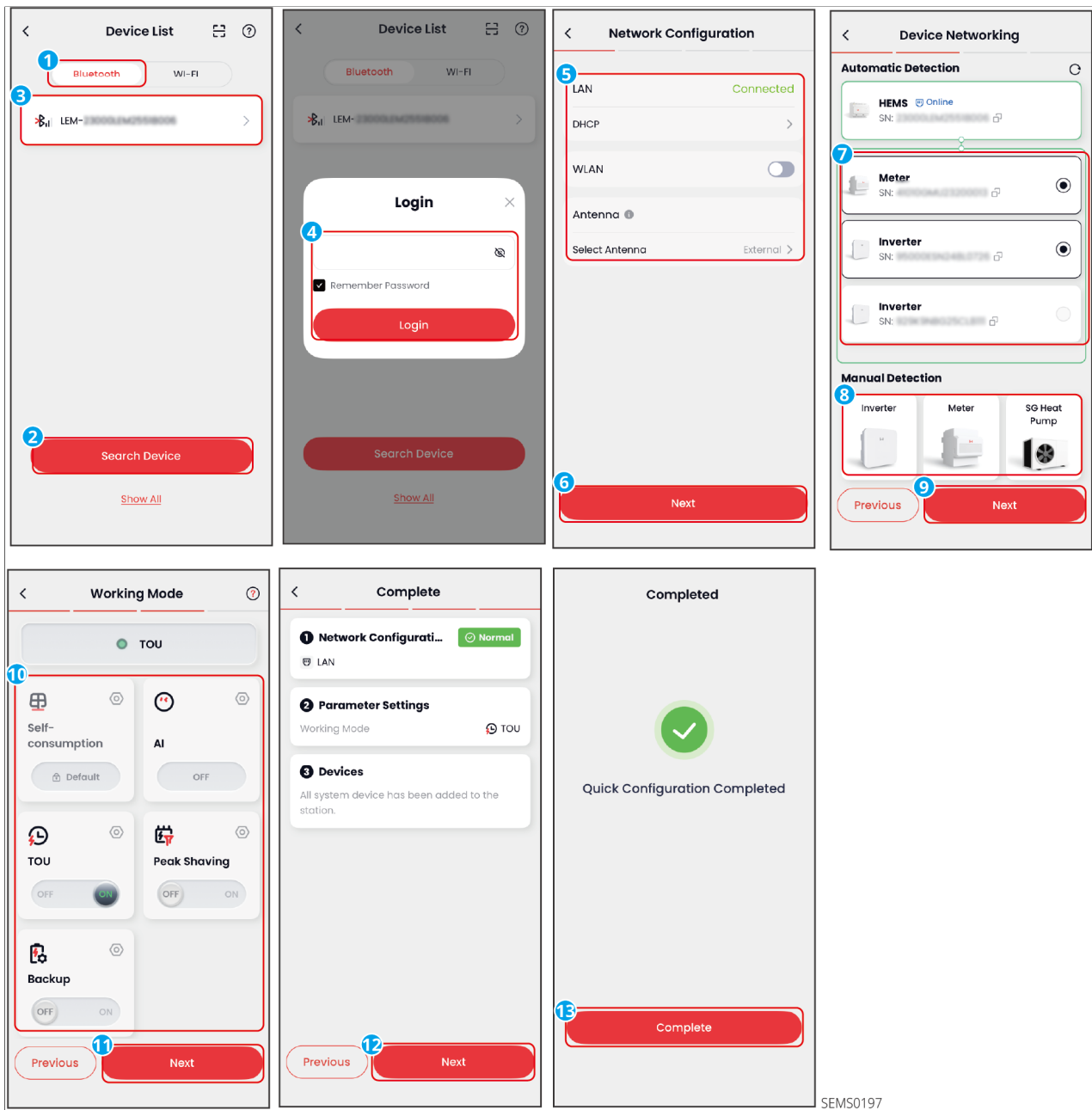
2.1.1.4 Quick Configuration (Home Energy Management System)

NOTE

- After a device is added to a power station for the first time, basic operation can be ensured through Quick Configuration.
- Before performing Quick Configuration, confirm that all devices are powered on and running normally.
- If you need to manage and dispatch inverters, charging piles, or other smart home devices (such as smart switches and smart sockets) through the Home Energy Management System (HEMS), ensure that all devices are connected to the same LAN as the HEMS and successfully networked.
- Please refer to [Inverter and IoT Device Compatibility List](#), Ensure that the device models and software versions in the system meet the requirements.

Operating steps

1. After adding a device, click "Quick Configuration" as prompted, or enter the device list screen via "Service" > "Local Access".
2. On the device list screen, select the "Bluetooth" tab.
3. Pull down or click "Search Device", confirm the signal name based on the device serial number, and click to enter the Quick Configuration screen. If you entered the settings screen via "Local Access", click "Quick Configuration" on the home page.
4. Complete the network configuration according to the on-screen prompts.
5. If other devices in the system have completed network configuration and are connected to the same LAN as the HEMS, they can be automatically discovered on the "Device Networking" screen. It is recommended to select all discovered devices to complete networking. If a device is not discovered, manual addition is supported.
6. Set the working mode according to the on-screen prompts. For detailed information about working modes, refer to [2.1.7.System Operating Modes\(Page 32\)](#)section.
7. Click "Finish" to complete Quick Configuration.



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Figure6 Quick Configuration of the Home Energy Management System

2.1.2 View PV Plant Information (Installer)

2.1.2.1 Power Station List

After logging in to the App with an installer account, you can view an overview of all plants under the current account on the App home page.

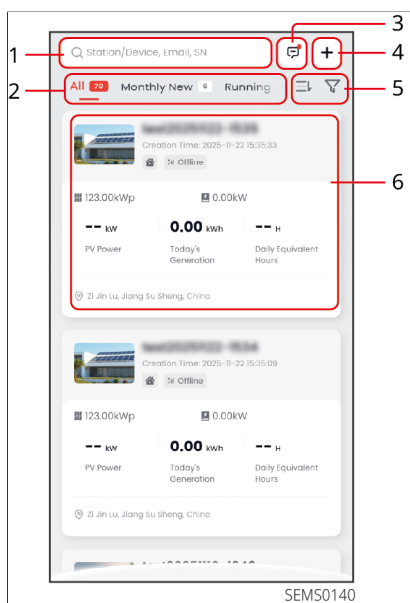


Figure7 Power Station List

No.	Description
1	Search for plants. Enter plant information to quickly locate the plant you want to view.
2	Plant operating status tab. Click to quickly switch between plants with different operating statuses.
3	Plant messages. View notifications such as plant alarms and events.
4	Click to create a new plant.
5	- Plant sorting. Sort by installed capacity or plant creation time in ascending or descending order. - Filter plants. Filter plants by plant type, Rated Power, favorite status, and other conditions.

No.	Description
6	- Plant card. Displays basic plant information such as plant name, operating status, Energy Generation, and address. - Click to enter the plant details screen. - Long press to perform quick actions such as favoriting, sharing, and deleting the plant. - Tap the plant address to launch the phone's map application for quick navigation.

2.1.2.2 Power Station Details

On the plant list page, tap any plant name to enter the plant details screen. On the plant details screen, you can view basic plant information, Energy Generation, revenue, energy flow diagram, Environmental Contributions, and other information.

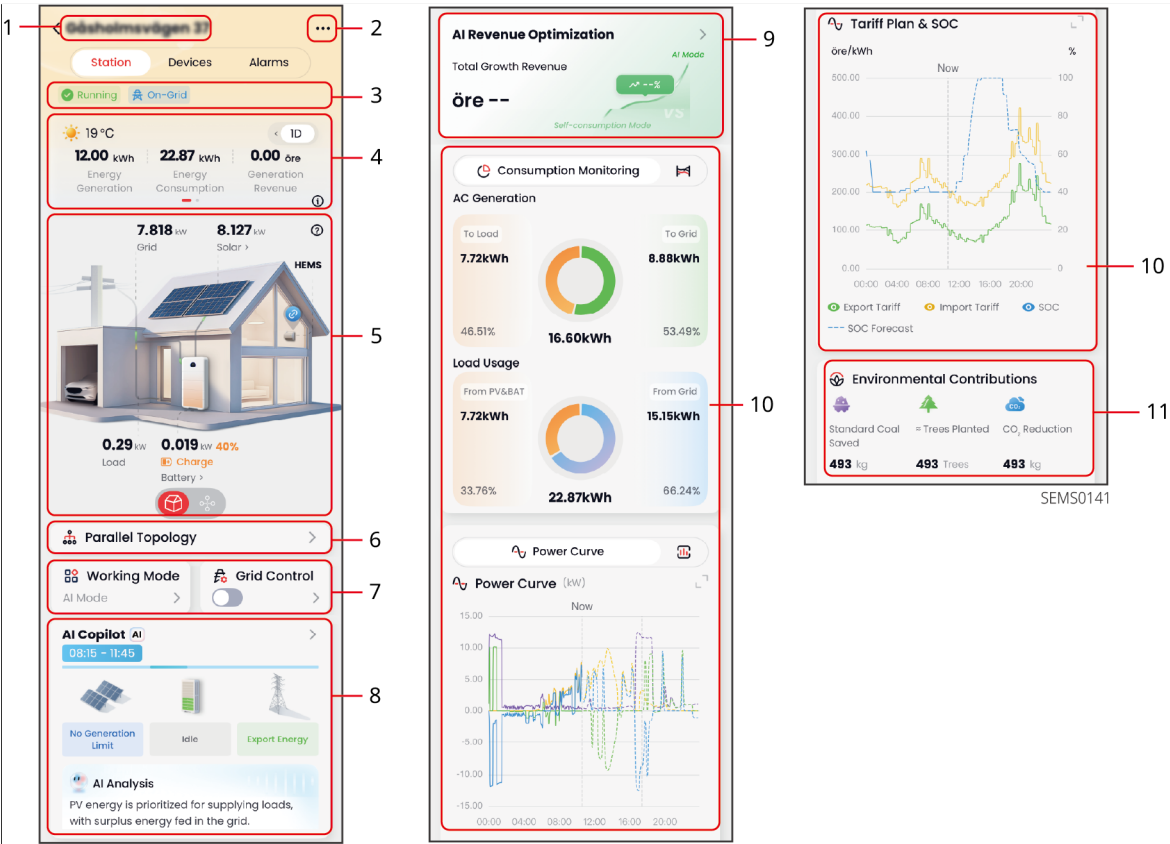


Figure8 Power Station Details

No.	Description
1	Current power station name.
2	Configure power station information. Supports: configuring basic station information, sharing the station, and setting Tariff information.
3	Current operating status of the power station.
4	• Current weather of the power station, along with Energy Generation, electricity consumption, generation revenue, purchased electricity, and feed-in revenue, etc. • Revenue statistics for the power station require configuring a Tariff; otherwise, the system cannot calculate revenue data. • Generation Revenue: displays the estimated generation revenue under the current power station type. • Energy Generation: displays the total Energy Generation under the current power station type. • Feed-in Revenue: displays the estimated electricity sales revenue under the current power station type. • Feed-in Energy: displays the total feed-in energy under the current power station type.
5	• Power station energy flow diagram display. • Supports switching between 2D/3D energy flow diagrams. After viewing the 2D/3D energy flow diagram of any power station, all power stations of the same type in the account switch simultaneously.
6	Parallel connection topology diagram. Click to view the device overview in the current system.
7	Quick settings entry for frequently used controls.

No.	Description
8	• AI Energy Butler. Displayed when the system enables AI Mode, indicating that the current system is being managed and dispatched by AI. • Displays the current time period and the planned dispatching status of PV, energy storage, and the grid within the current time period. • Click the card to enter the AI Energy Butler detail interface, where you can view the detailed plan of AI Copilot.
9	• Displayed when the system enables AI Mode. Compares Self-consumption Mode with AI Mode to show the optimization of economic benefits. • Click the card to enter the economic benefit optimization detail interface to view AI Running Days, revenue increase, spending comparison overview, revenue calendar, etc.
10	Electricity monitoring, energy flow, power curve, and energy monitoring diagrams. Visual charts are used to display the operating status and energy dynamics of the power station.
11	Environmental Contributions. Displays the environmental benefits generated by PV power generation, including CO2 emission reduction, standard coal conservation, equivalent tree planting, etc.

2.1.2.3 Alarm

When logging in with an installer account, click 'Alarm' on the homepage to view alarm information for all power stations under the account.

- By default, 'All' alarms are displayed. You can switch between 'Active' and 'Recovered' faults via the status tabs.
- Long press to favorite, delete, confirm alarms, etc.
-

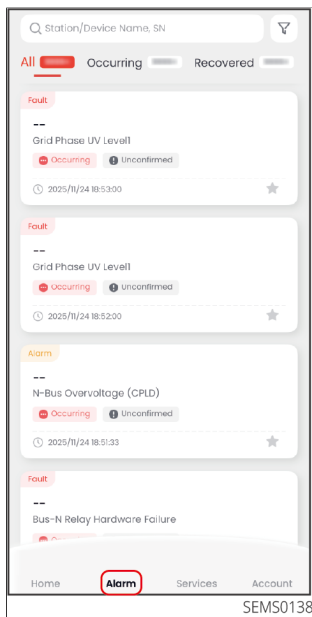


Figure9 View alarm information

2.1.3 View Power Station Information (Owner)

2.1.3.1 Power Station List

When the owner account has multiple power stations, you can view all power stations through the sidebar and switch the power station displayed on the home page.

The power station list displays all power stations under the account, including self-built power stations and shared power stations. Functions of shared power stations may be limited; please refer to the actual interface.



Figure10 View Power Station List

No.	Description
1	Search for plants. Enter plant information to quickly locate the plant you want to view.
2	Click to create a new plant.
3	- Plant card. Displays basic plant information such as plant name, operating status, Energy Generation, and address. - Click to enter the plant details screen. - Long press to perform quick actions such as favoriting, sharing, and deleting the plant.

2.1.3.2 Power Station Details

After logging into the App with the owner account, you can view the details of a certain power station under the current account on the App home page. On the power station details page, you can view basic information of the power station, energy generation, revenue, energy flow diagram, environmental contributions, and other information.

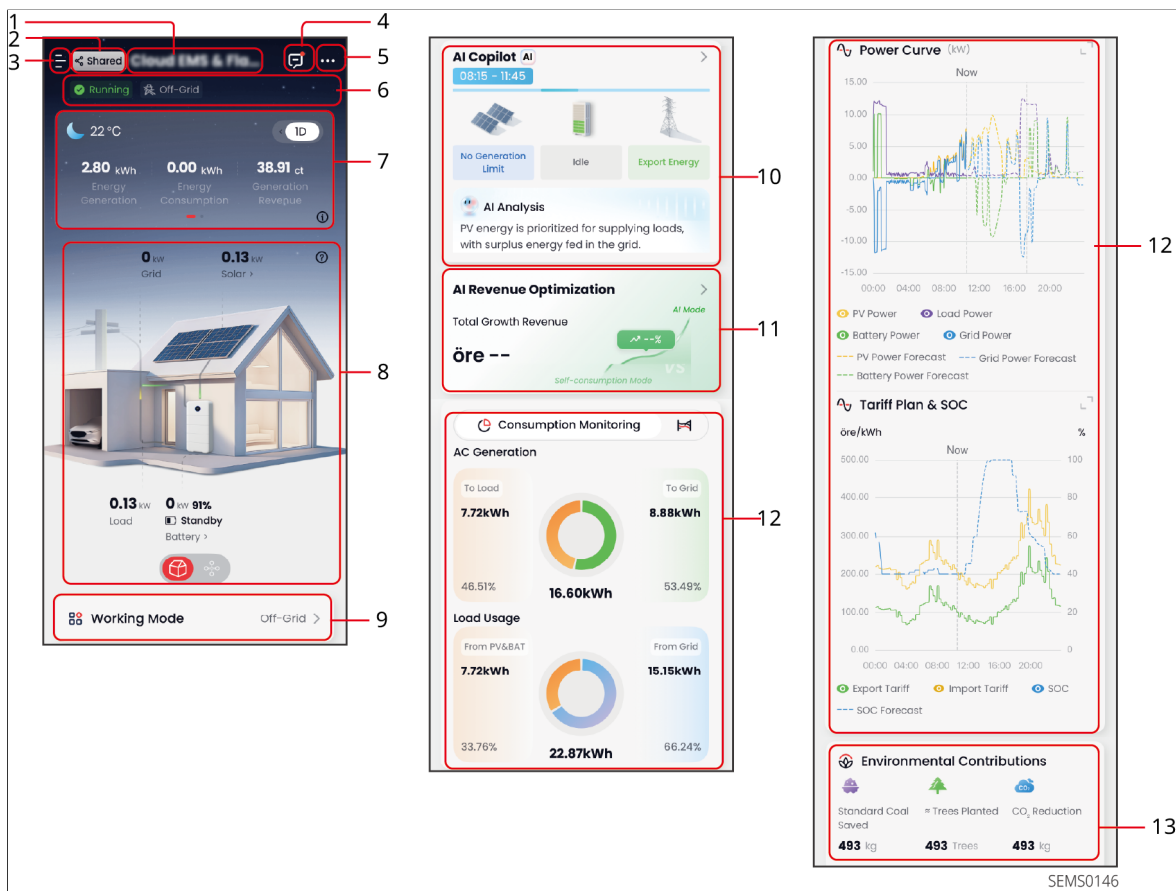


Figure11 View Power Station Details

No.	Description
1	Current power station name.
2	Displayed when the power station is a shared power station.
3	Power station list. Tap to expand all power stations under the current account and quickly switch.
4	Plant messages. View notifications such as plant alarms and events.
5	Configure power station information. Supports: configuring basic station information, sharing the station, and setting Tariff information.
6	Current operating status and update time of the power station.

No.	Description
7	• Current weather of the power station, along with Energy Generation, electricity consumption, generation revenue, purchased electricity, and feed-in revenue, etc. • Revenue statistics for the power station require configuring a Tariff; otherwise, the system cannot calculate revenue data. • Generation revenue: Displays the total generation revenue under the current power station type. • Energy Generation: displays the total Energy Generation under the current power station type. • Feed-in revenue: Displays the total feed-in revenue under the current power station type. • Feed-in Energy: displays the total feed-in energy under the current power station type.
8	• Power station energy flow diagram display. • Supports switching between 2D/3D energy flow diagrams. After viewing the 2D/3D energy flow diagram of any power station, all power stations of the same type in the account switch simultaneously.
9	Quick settings entry for frequently used controls.
10	• AI Energy Butler. Displayed when the system enables AI Mode, indicating that the current system is being managed and dispatched by AI. • Displays the current time period and the planned dispatching status of PV, energy storage, and the grid within the current time period. • Click the card to enter the AI Energy Butler detail interface, where you can view the detailed plan of AI Copilot.

No.	Description
11	- Displayed when the system enables AI Mode. Compares Self-consumption Mode with AI Mode to show the optimization of economic benefits. - Click the card to enter the economic benefit optimization detail interface to view AI Running Days, revenue increase, spending comparison overview, revenue calendar, etc.
12	Electricity monitoring, energy flow, power curve, and energy monitoring diagrams. Visual charts are used to display the operating status and energy dynamics of the power station.
13	Environmental Contributions. Displays the environmental benefits generated by PV power generation, including CO2 emission reduction, standard coal conservation, equivalent tree planting, etc.

2.1.4 Modify Basic Power Station Information

Supports modifying the basic information of the power station, including the power station name, power station type, rated power, battery capacity, PV capacity, power station address, etc.

When modifying the power station type, only switching to an energy storage power station is supported; switching to a PV power station is not supported.

Operating steps

1. On the power station details page, tap , to enter the power station settings page.
2. Tap 'Power Station Info' > , to modify the basic information of the power station.
3. After modifying the information, tap , Save the changes.

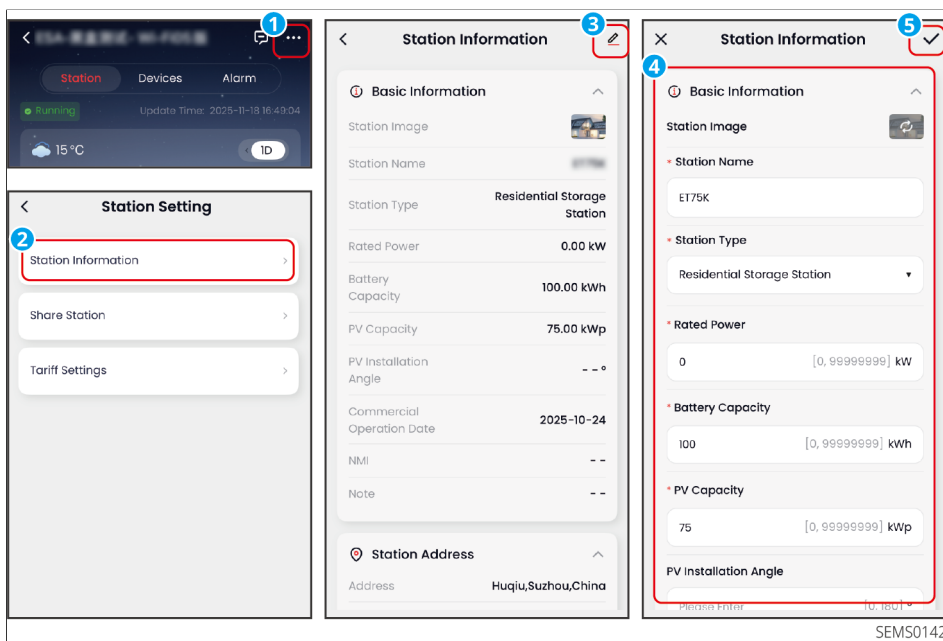


Figure12 Modify Power Station Information

2.1.5 Configure Tariff Information

Supports viewing or setting power station tariff information according to actual conditions.

Only some European countries or regions support the use of electricity market tariffs; currently, the electricity market only supports Nord Pool.

Operating steps

1. On the power station details screen, click...> "Tariff Settings" to enter the tariff settings screen.
 2. Select "Export Energy Tariff" or "Import Energy Tariff". Then set the tariff type, supporting "Fixed Tariff", "Time-of-Use Tariff", and "Dynamic Pricing".
- Fixed Tariff: The user sets according to the actual tariff.
 - Time-of-Use Tariff: The user sets tariff information for different time periods according to the actual tariff. Multiple sets of tariffs are supported. Periods without a Time-of-Use Tariff will automatically use the default tariff.
 - Dynamic Pricing: Obtains dynamic tariffs from the electricity company, and dynamically adjusts the actual purchase and export energy tariff based on the tariff surcharge set by the user. Only applicable to certain regions and certain equipment.

3. Click , Enter the actual tariff information and save.

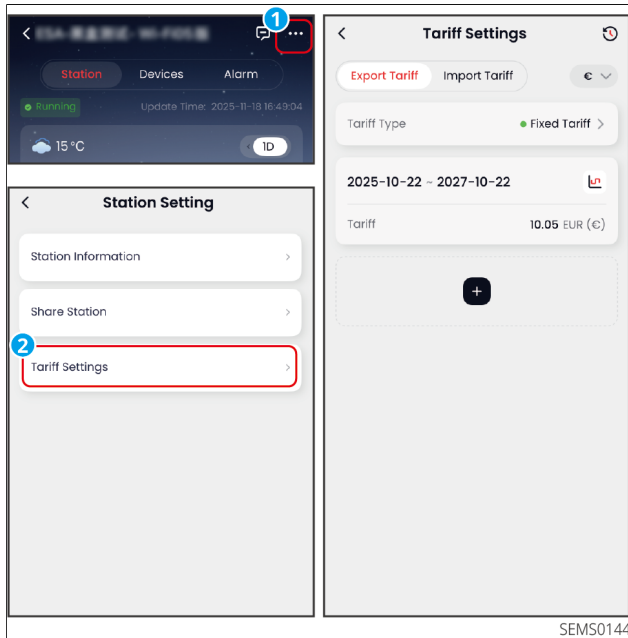


Figure13 Configure Tariff Information

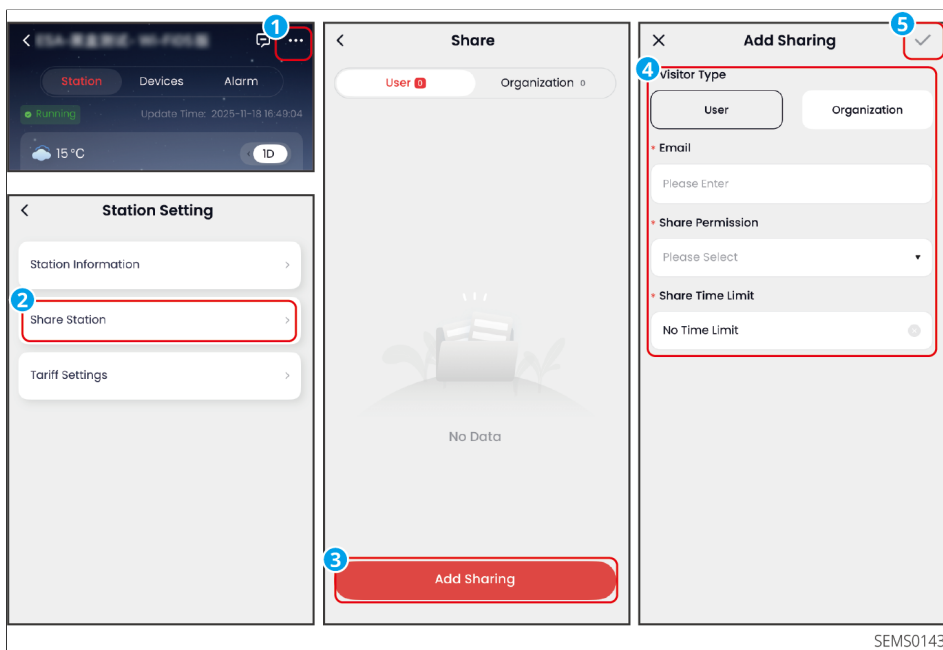
2.1.6 Manage Power Station Sharing

After creating a power station, you can share it with other organizations or individual users, and set sharing permissions and time limits.

If you need to share the power station with unregistered users, please fill in the email address and other information as prompted on the screen, and an account will be automatically registered.

Operating steps

1. On the power station details screen, click  > 'Share Power Station' to enter the sharing page.
2. Tap 'Add Sharing', fill in the recipient's information, set permissions and time limit as appropriate. After adding, if you need to remove the sharing, tap .



SEMS0143

Figure14 Manage Power Station Sharing

2.1.7 Set System Operating Mode

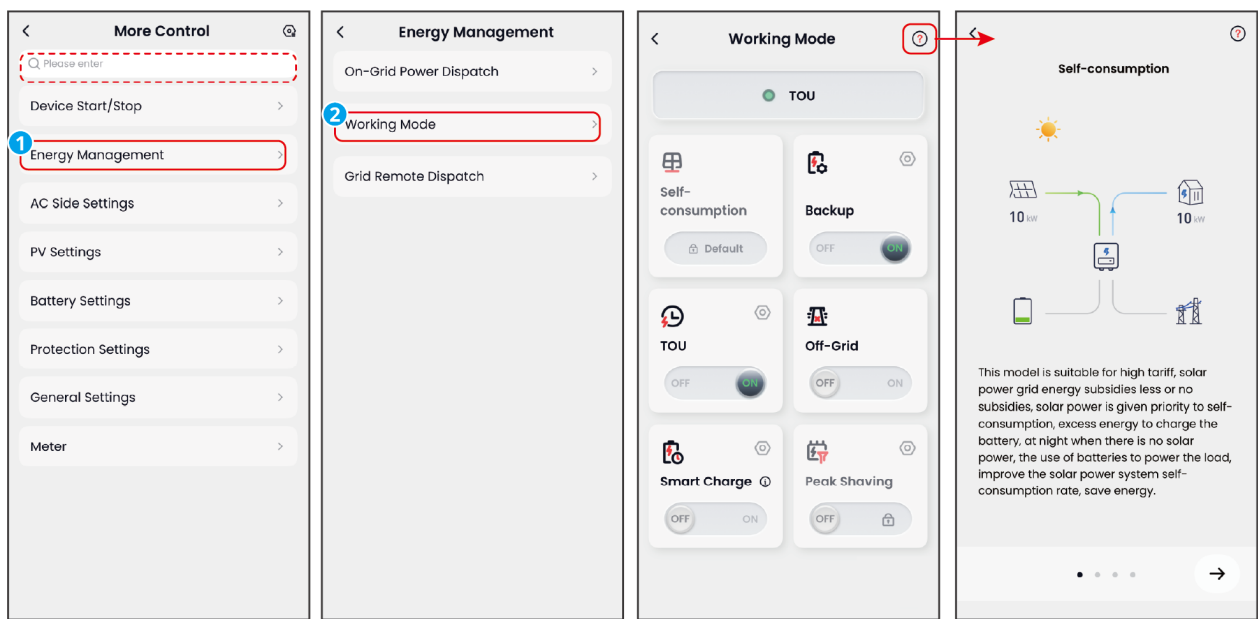
Supports selecting the system operating mode based on the Tariff, electricity demand, or power supply environment. After configuration, the system automatically coordinates PV, battery, and grid to dispatch energy according to actual needs.

NOTE

- The default working mode is Self-consumption Mode.
- Different systems support different configurable working modes; refer to the interface for details.
- When setting the working mode via the inverter, the priority of working modes is: Off-grid Mode > Demand Management > Smart Charging > TOU > Backup Mode > Self-consumption.
- When setting the working mode via the Home Energy Management System, the priority of working modes is: Backup Mode > AI Mode > Demand Management > TOU Mode > Self-consumption.
- When the power station supports the Cloud EMS function, the plant-level working mode can be set; otherwise, the working mode can only be set through the device.
- The Cloud EMS function is currently only applicable to certain power stations where a single energy storage unit is installed.

Device-level working mode operation steps

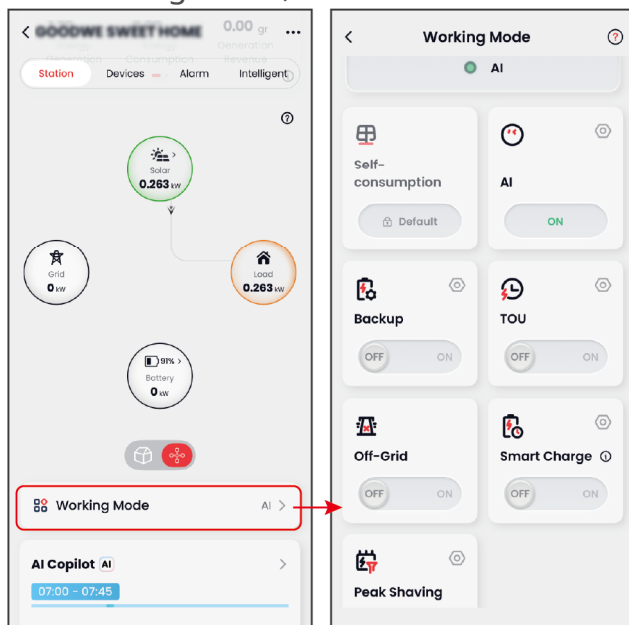
1. In the device details interface, access the Working Mode Settings interface by navigating to "Common Controls" > "Energy Management" > "Working Mode", or by searching for "Working Mode" in the parameter control interface.
2. Please set the working mode according to actual requirements. For details about the working mode, click .



SEMS0159

Steps for plant-level working mode settings

1. On the power station homepage, click "Working Mode".
2. Please set the working mode according to actual requirements. For details about the working mode, click?



SEMS0202

Self-consumption

The basic working mode of system operation.

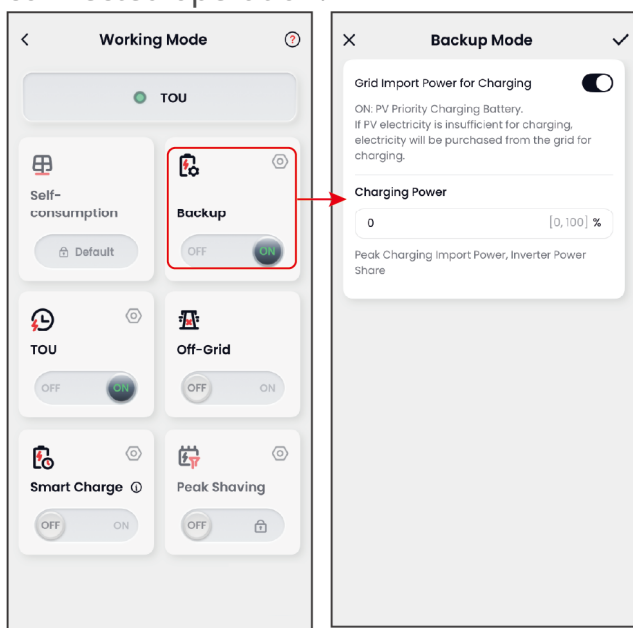
PV power generation is first used to supply the load, excess energy charges the

battery, and any remaining energy is sold to the grid. When PV generation is insufficient, the battery supplies the load; if the battery capacity is also insufficient to meet the load demand, the grid supplies the load.

Backup Mode

Recommended for use in areas with an unstable power grid.

When a grid power outage occurs, the inverter switches to off-grid working mode, and the battery discharges to supply the load, ensuring that the BACKUP load remains powered; when the grid is restored, the inverter switches back to grid-connected operation.



SEMS0189

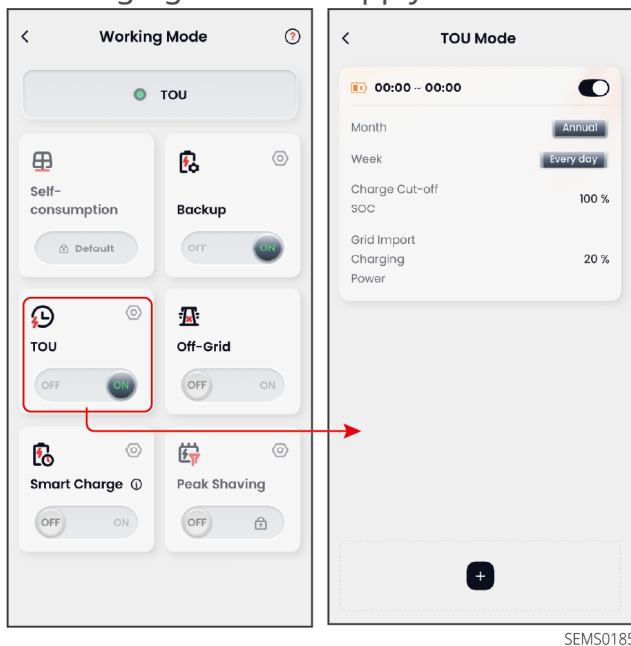
Parameter name.	Description
Purchase electricity from the grid for charging	Enable this function to allow the system to purchase electricity from the grid.
Charging Power	The peak power when purchasing electricity, expressed as a percentage of the inverter's Rated Power.

TOU Mode

Applicable to regions with a large difference between peak and off-peak Tariffs.

Subject to compliance with local laws and regulations, configure the system to purchase or export energy based on the grid's peak and off-peak Tariff periods. For

example, during low-tariff periods, set the battery to charging mode to purchase electricity from the grid for charging; during high-tariff periods, set the battery to discharging mode to supply the load or export energy to the grid.



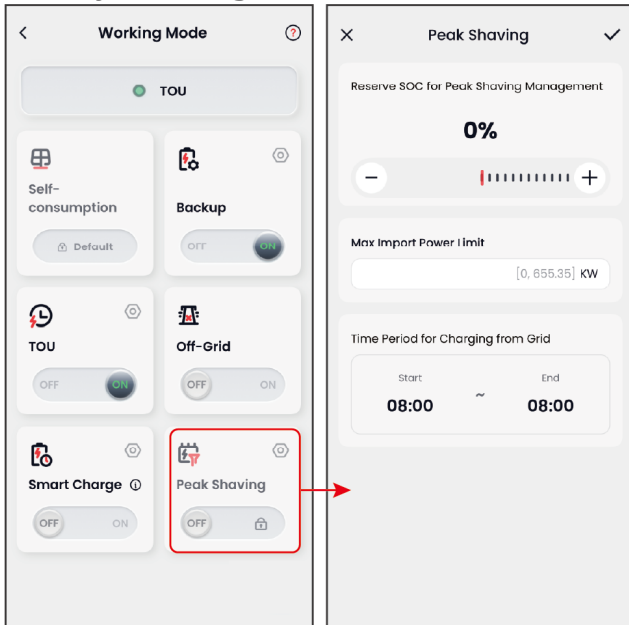
Parameter name.	Description
Start Time	Within the start time and End Time, the battery charges or discharges according to the configured charge/discharge mode and Rated Power. Outside this time period, the system operates in Self-consumption Mode.
End Time	
Charge/Discharge Mode	Set to charge or discharge according to actual requirements.
Charging Cutoff SOC	Charging stops when the battery reaches the set SOC.
Grid Import Charging Power	Charging power, as a percentage of the inverter's Rated Power.
Battery discharge power	Discharging power, as a percentage of the inverter's Rated Power.

Off-grid Mode

Applicable to areas without a power grid. PV and batteries form a pure off-grid system. PV power supplies the load, and excess electricity charges the battery. When PV power cannot meet the load demand, the battery supplies the load.

Demand Control

Applicable to scenarios where the peak power of purchasing electricity is limited. When the total load power approaches the upper limit of the electricity quota, battery discharge is used to reduce the electricity consumption exceeding the quota.

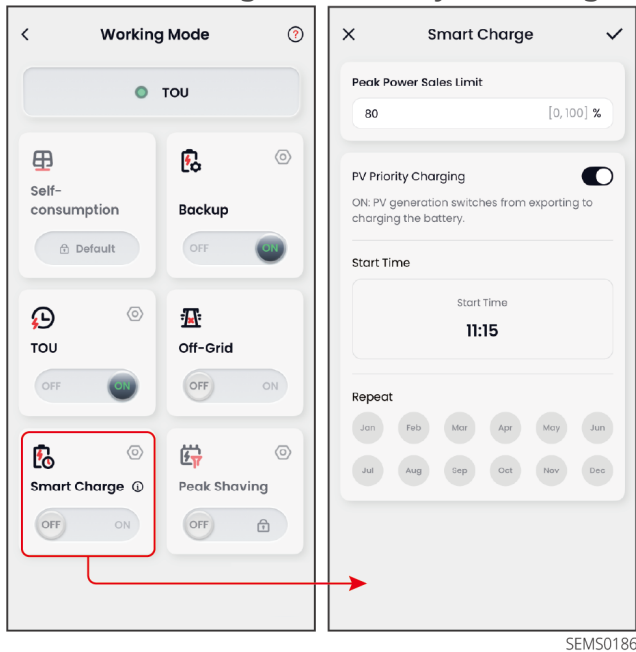


SEMS0187

Parameter name.	Description
Reserved SOC for Demand Control	In Demand Control Mode, the reserved SOC is used for Demand Control. When the battery SOC is higher than the reserved SOC, the Demand Control function is disabled.
Grid Purchase Peak Limit	Set the Max. Power limit allowed for purchasing electricity from the grid. When the load power exceeds the sum of the electricity generated by the PV system and this limit, the battery discharges to supply the excess power.
Time Period for Charging from Grid	During the Time Period for Charging from Grid, when the load consumption does not exceed the grid purchase quota, the battery can be charged from the grid. Outside this time period, the battery can only be charged using PV power.

Smart Charging (Delayed Charging)

Applicable to regions with grid-tied power output limits. By setting the peak power limit and the Charging Time period, PV generation exceeding the grid-tied limit can be used to charge the battery, reducing PV waste.

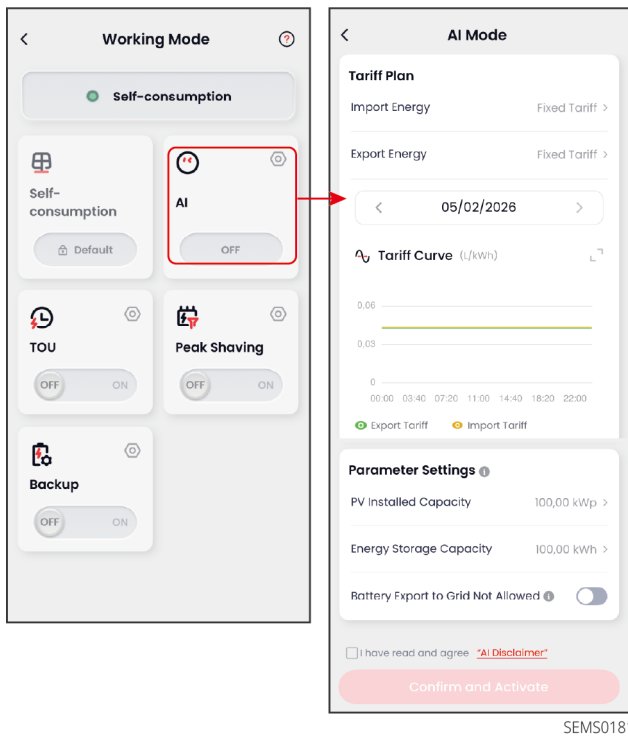


SEMS0186

Parameter name.	Description
Peak Power Sales Limit	Set the peak power limit according to the grid standard requirements of certain countries or regions. The peak power limit must be lower than the locally specified output power limit.
PV Priority Charging	Within the Charging Time period, surplus PV generation after supplying the load is prioritized for charging the battery. Outside the Charging Time period, surplus PV generation after supplying the load is prioritized for Export Energy.
Start Charging Time	

AI Mode

When a Home Energy Management System (HEMS) is used in the system or a cloud EMS function AI Mode is supported.



Set the Tariff according to user needs, and combine AI calculations to optimize scheduling, maximizing energy and economic Efficiency. When using AI Mode, during the initial stage of collecting power station information, there may be deviations between the predicted curve and the actual situation.

Before enabling AI Mode, please set the tariff plan first. When the tariff plan is a fixed Tariff, using AI Mode is not supported.

Select Time-of-Use Tariff or Dynamic Pricing, supports:

- Dynamic Pricing: Obtain Dynamic Pricing from the power company, and combine with the user-set Tariff surcharge to dynamically adjust the actual purchase and Export Energy Tariff.
- Time-of-Use Tariff: Users can set Tariff information for different time periods based on the actual Tariff. Multiple groups of Tariffs can be set.

2.2 Equipment

2.2.1 Device List

The device list screen supports viewing an overview of all devices under the account, including device name, running status, etc.

- When logged in with an installer account, select the desired power station in the

power station list to view the device list under that power station.

- When logged in with an owner account, click the "Devices" tab to view the device list of the current power station.

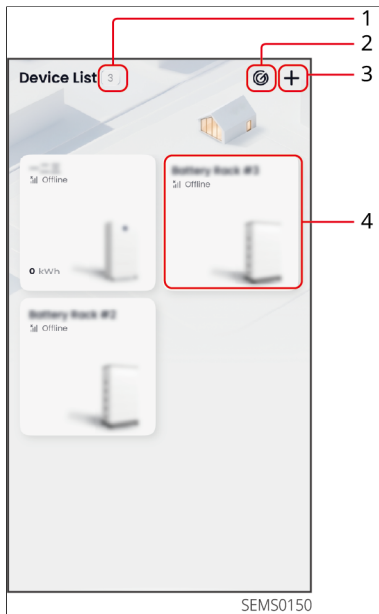


Figure15 Device List

No.	Description
1	The number of devices in the current power station.
2	Scan to discover devices that can be added to the system.
3	Manually add a device to the current power plant.

No.	Description
4	• Device card. Displays data such as device name, device status, device illustration, power, and Energy Generation. • When the device type differs, the card displays different information. Refer to the actual display. • When the power plant type differs, the card layout differs. Refer to the actual display. • The device card image is for reference only. Refer to the actual product. • Long press to rename or delete the device. • When deleting the current device by long press, if there are associated devices, follow the on-screen prompts to choose whether to delete or keep the associated devices.

2.2.2 Device Details

On the device details screen, you can view device information, operating status, Energy Generation, power curves, or set device parameters such as grid connection parameters, safety regulation parameters, and battery parameters.



Figure16 View device details.

No.	Description
1	Device name.
2	Device operation status.
3	Device alarm information. Tap to view detailed alarm information.
4	When logged in with an installer account, you can upgrade the device or view device upgrade records.
5	Energy Generation information. Displays today's Energy Generation, cumulative Energy Generation, etc.
6	Power dashboard. Displays the current power and Rated Power value.
7	- Battery information. Displays battery system SOC, charge/discharge status, charge/discharge power, etc. - Tap to enter the battery details screen.

No.	Description
8	• Remote Control. Displays quick access to common control items. • Tap "More Control" to view all control items of the device. • For details, refer to the Remote Control settings section.
9	• Operating data. Displays current device operating parameters such as active power, reactive power, and Power Factor. • Tap "More" to display all data details. • Different devices display different information. Refer to the actual interface.
10	Display power curves and energy monitoring diagrams in different time dimensions.
11	Device details. Displays basic device information such as device name, SN, device type, firmware version, etc.

2.2.3 Remote Control Device

The controllable parameter items may vary depending on the device model and the Safety Regulation of the country. Please refer to the actual situation.

For definitions of device parameters, please refer to [8.Appendix\(Page 92\)](#).

2.2.3.1 Set Inverter Parameters

- On the device list screen, select the inverter to be configured, and set the inverter parameters according to actual requirements.
- The 'Common Controls' screen provides an entry to quickly access the parameter settings screen. You can adjust the control parameters displayed on the home page by configuring 'Common Controls'.
- Supports searching for the parameters to be set via the search box.

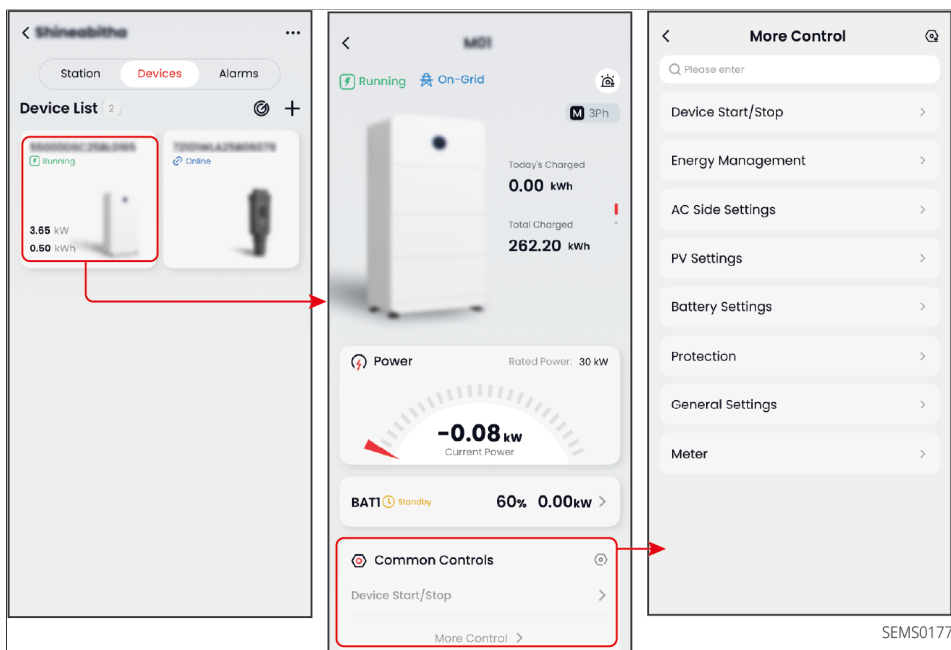


Figure17 Set Inverter Parameters

Set Safety Regulation Parameters

Operating steps

1. Enter the parameter settings screen via 'Protection' > 'Safety Regulations'.
2. Set the safety regulation country and custom safety regulation parameters based on actual conditions. Custom safety regulation parameters can only be modified by installers.

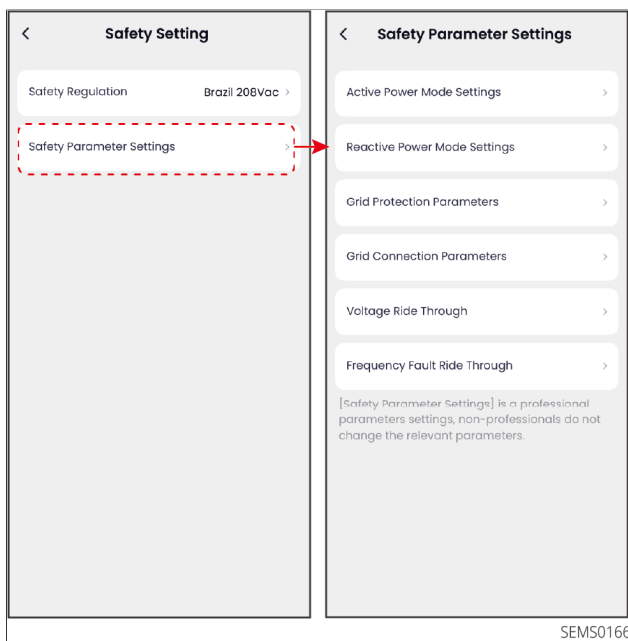


Figure18 Set Safety Regulation Parameters

Set Power Limit Parameters

NOTE

The power limit screen varies by safety regulation country; refer to the actual screen.

Operating steps

1. Enter the power limit settings screen via 'Energy Management' > 'On-grid Power Dispatch' > 'On-grid Power Limit'.
2. Set the power limit parameters according to actual needs.

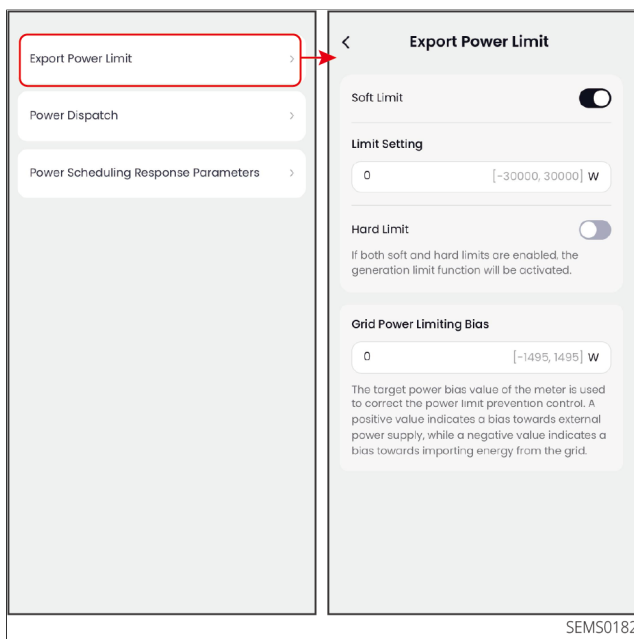


Figure19 Set Power Limit Parameters

2.2.3.2 Set Battery Parameters

- On the device list screen, select the inverter, and on the inverter details screen, select the battery to be configured. Set the battery parameters according to actual requirements.
- The 'Common Controls' screen provides an entry to quickly access the parameter settings screen. You can adjust the control parameters displayed on the home page by configuring 'Common Controls'.
- Supports searching for the parameters to be set via the search box.

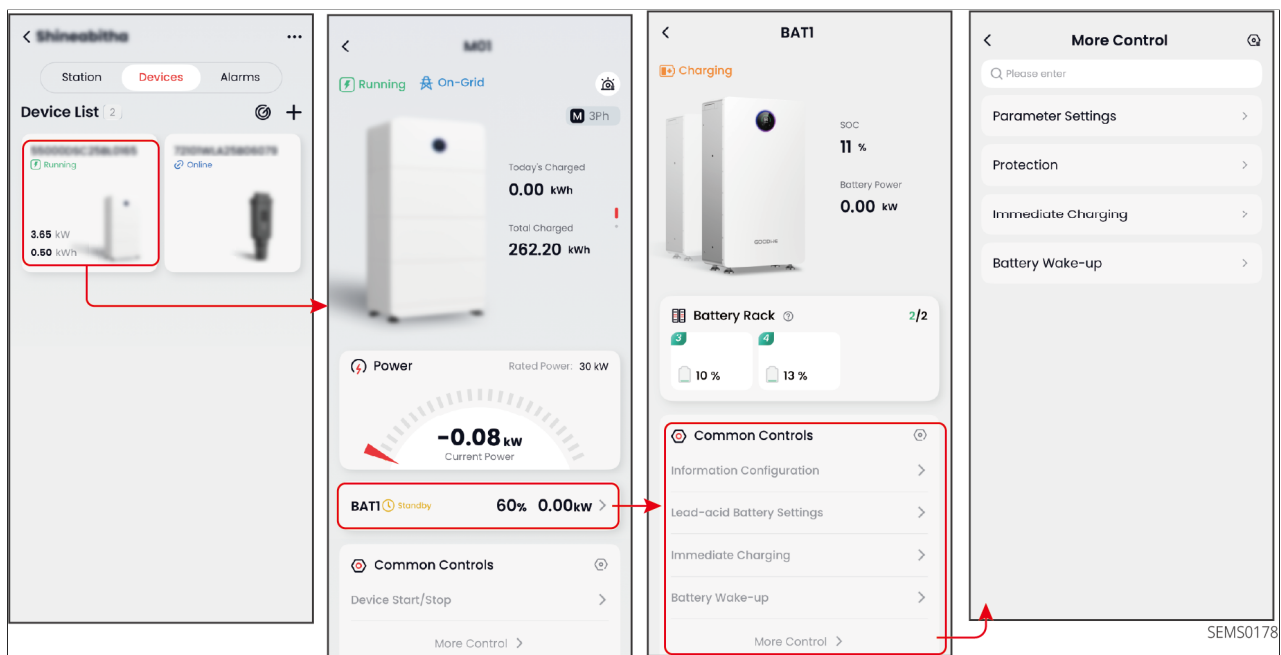


Figure20 Set Battery Parameters

Set JA12 certification parameters.

When the device is installed in California or other regions, please fill in the plant battery capacity information according to local regulatory requirements to complete the JA12 Certification.

After JA12 certification takes effect, if the battery SOC limit is set to exceed the certified capacity value, it is only valid for 72 hours. After 72 hours, the battery SOC limit will be automatically adjusted to the certified capacity value.

Operating steps:

1. Tap "Settings" > "Battery" > "JA12 Certification".
2. Set the certified capacity and system capacity according to actual conditions. The settings are permanent and cannot be modified. After setup, the JA12 certification mark can be viewed on the "Home" screen.

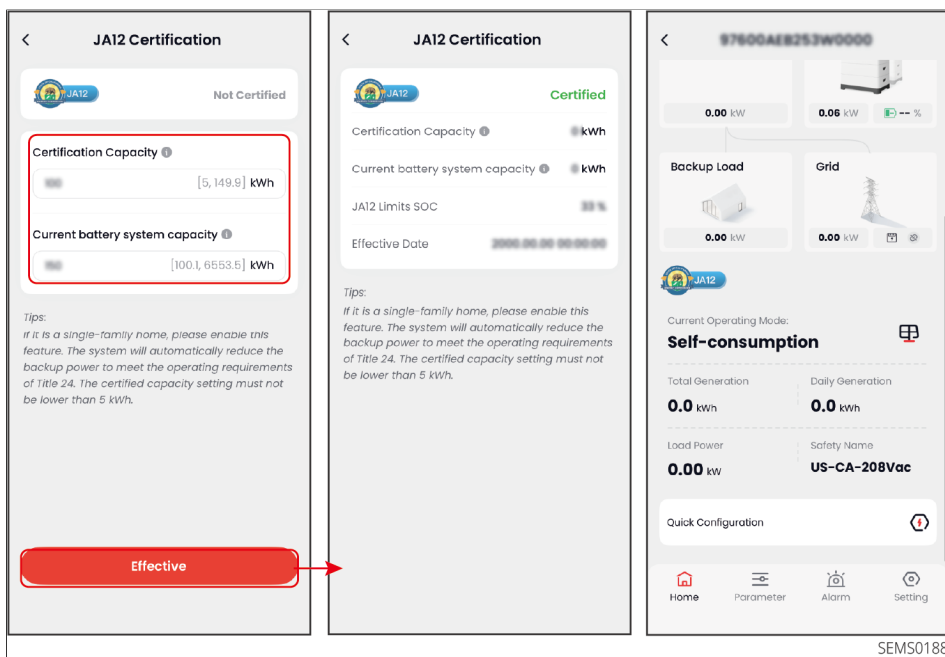


Figure21 Set JA12 certification parameters.

2.2.3.3 Set Meter Parameters

On the device list screen, select the inverter and click 'Common Controls' > 'Meter' to set the meter parameters according to actual requirements.

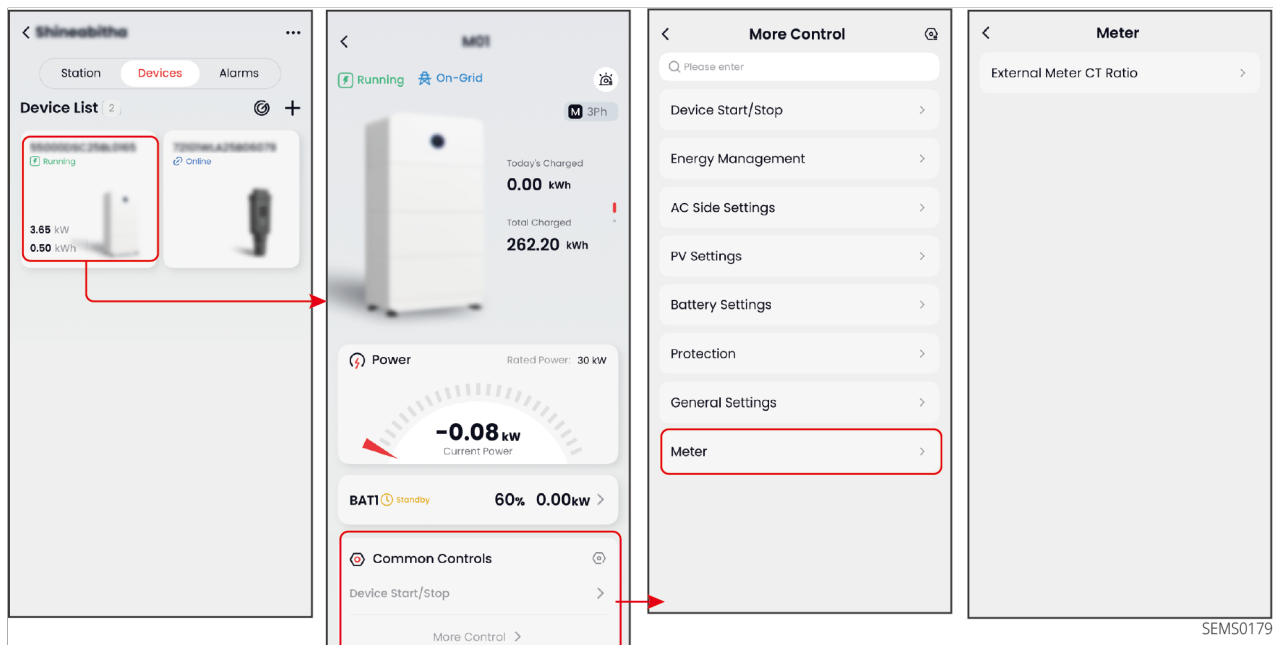


Figure22 Set Meter Parameters

2.2.3.4 Set Home Energy Management System Device Parameters

On the device list screen, select the home energy management device and click 'Settings' to configure parameters according to actual requirements.

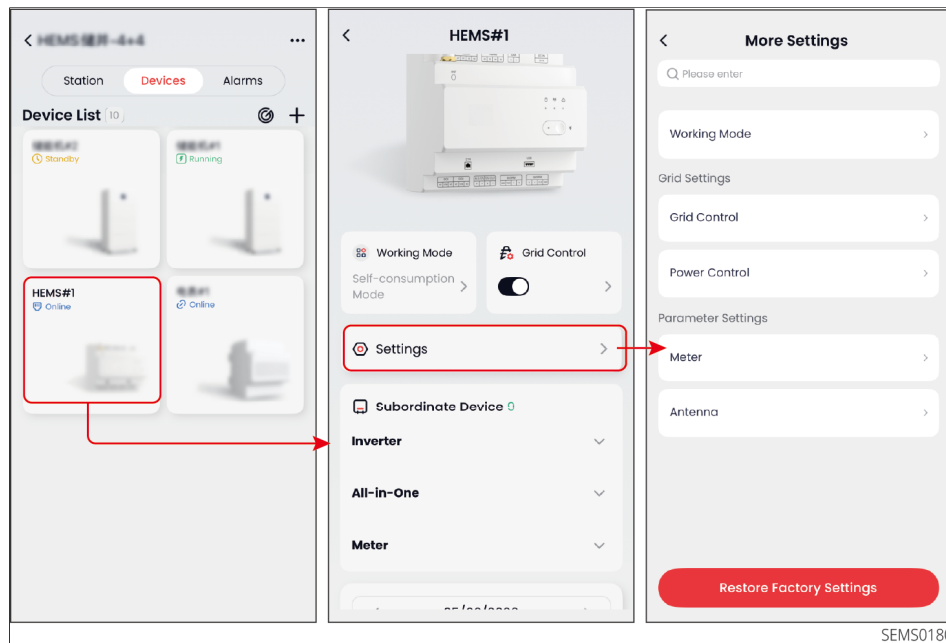
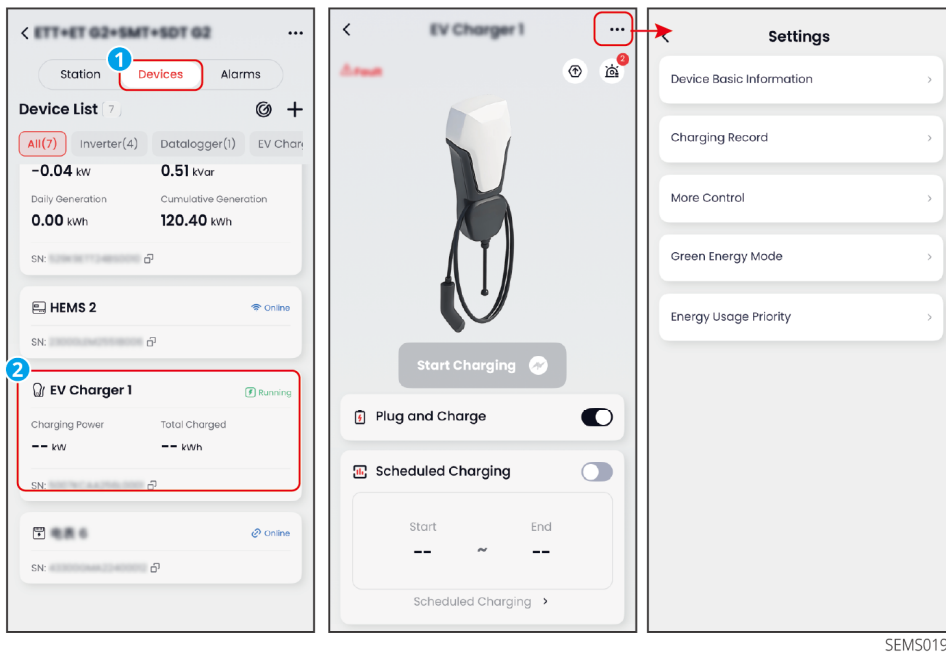


Figure23 Set Home Energy Management System Device Parameters

2.2.3.4.1 Set Charging Pile Parameters

On the device list screen, select a charging pile and click to enter the settings screen. The following charging modes can be set:

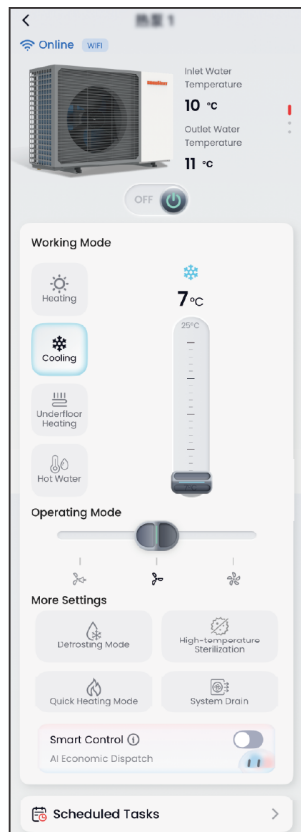
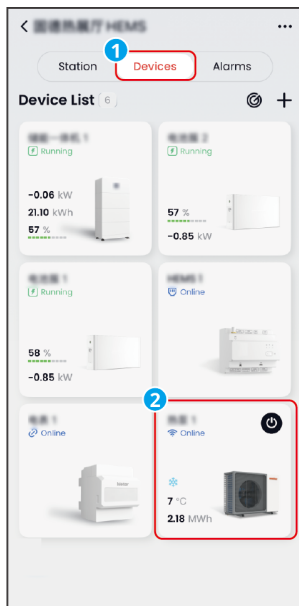
- Plug and Charge: Insert the charging gun into the vehicle to Start Charging.
- Scheduled Charging: Set the scheduled Charging Time as needed. You can choose a single charging session or multiple cycle charging sessions.
- Green Energy Mode: Charging starts when the surplus PV power is greater than the Green Energy Starting Power. To prevent the device from repeatedly starting and stopping due to unstable green energy, set a minimum running time after the device starts.



SEMS0199

2.2.3.4.2 Set Heat Pump Parameters

- On the device list screen, select a heat pump and click to enter the settings screen.
- Different heat pump models used in the system support different control items. Refer to the actual interface.
- When a SG Ready heat pump is connected, you can control heat pump start/stop and set the working mode.
- When connecting a GoodHeat heat pump, support:
 - Control heat pump start/stop. When the heat pump is off, the mode cannot be set; only system drain can be set.
 - Set working modes such as cooling, heating, floor heating, and hot water, and set the Operating Mode based on the working mode.
 - Set scheduled tasks.
 - Set functions such as defrost mode, high-temperature sterilization, quick heating mode, and system drain.
 - Enable AI intelligent control, and the heat pump is scheduled to operate according to the AI Mode set by HEMS.



SEMS0200

3 Local Commissioning and Testing Equipment

NOTE

Power plant information display varies by account type, region, power plant type, etc.

After logging in to the App with your account and password, you can connect the App to the device via Bluetooth or WiFi to view device information and set device parameters locally.

3.1 Local Access Device

NOTE

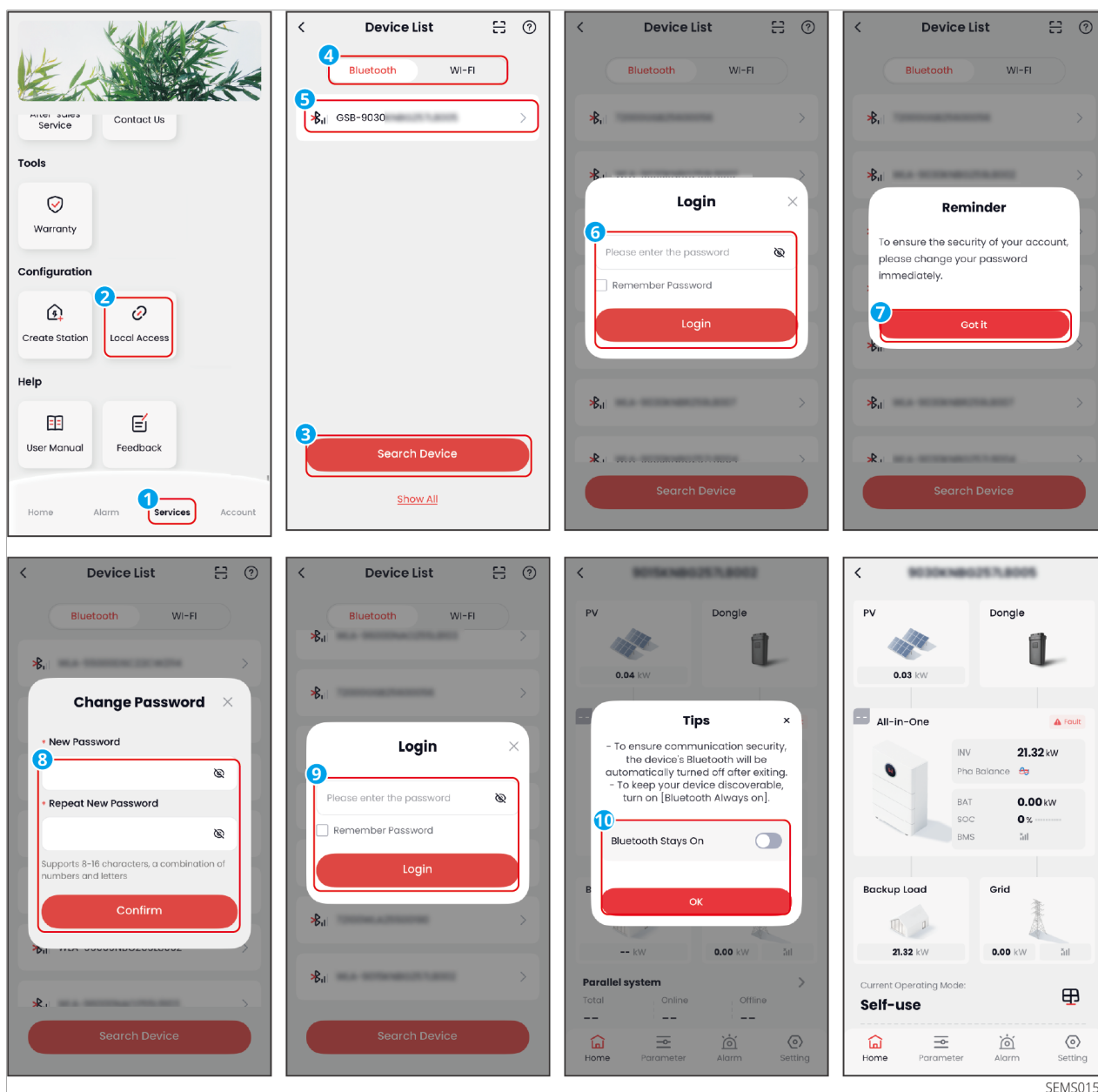
- Before Local Access to the device, make sure the device is powered on and running normally.
- When the equipment type or smart communication stick type differs, the displayed device name will be different, as follows (***) is the device serial number):
 - Wi-Fi/LAN Kit; Wi-Fi Kit; Wi-Fi Box: Solar-WiFi***
 - WiFi/LAN Kit-20: WLA-***
 - WiFi Kit-20: WFA-***
 - Ezlink3000: CCM-BLE***; CCM-***; ***
 - 4G Kit-CN-G20/4G Kit-CN-G21: GSA-***; GSB-***
 - 4G Kit-G20: LGA-***
 - EV Charger: ***
 - EzManager3000: LEM-***

Operating steps

1. After logging in to the App, tap "Service" > "Local Access" to enter the connection

screen.

2. On the "Device List" screen, select the "Bluetooth" or "WiFi" tab according to the signal type of the smart communication stick. Tap "Search Device" to refresh the device list, and select the device to connect by serial number.
3. On first login, enter the initial login password to log in and change the password as prompted on the screen. Initial login password: 1234.
4. When connecting via Bluetooth, enable "Bluetooth Stays On" as prompted on the screen; otherwise, the Bluetooth signal will be turned off after this connection ends.



SEMS0153

Figure24 Local Access Device

3.2 Overview of the Local Access Interface

NOTE

The devices included in the system may vary, and the App interface may display differently. Please refer to the actual interface.

After connecting to the device via Bluetooth or WiFi, you can enter the Local Access

device screen, where you can view or modify device parameters.

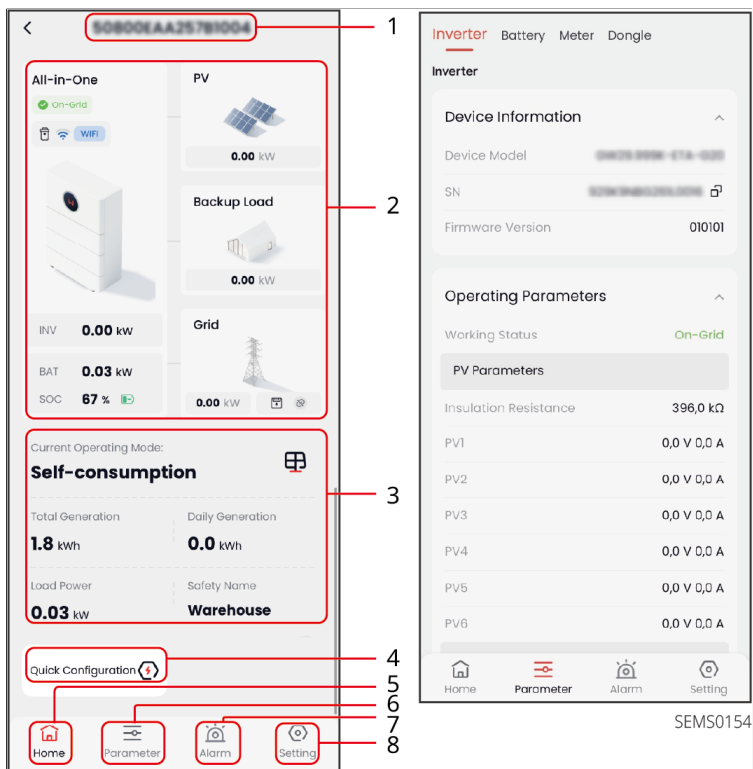


Figure25 Overview of the Local Access Interface

No.	Description
1	Current device serial number.
2	- System module cards, including PV, communication module, inverter, grid, Backup Load, etc. - Tap a card to view related parameters and set parameter values. - When the inverter is an all-in-one machine, tap the all-in-one card to view inverter, battery, and communication stick information separately and set parameter values.
3	Current system operation information, including working mode, Energy Generation, power, etc.

No.	Description
4	Quick access to control items, for example: - Quick Configuration. Quickly complete functions such as network settings, safety code settings, Working Mode Settings, and device self-check to meet basic usage. For specific settings, please refer to 2.1.1.3.Quick Configuration(Page 16) section. - Some models support "One-Click Configuration", which can generate a template based on a completed Quick Configuration.
5	Home. Displays system information, such as the devices included in the system and system operation information, and provides quick access to view and set parameters.
6	Parameters. According to the device type, view device model, serial number, firmware version, device operating parameters, etc.
7	- Alarm. Displays current device alarm information. - Tap to view detailed information such as alarm type, alarm cause, and handling suggestions.
8	Settings. Displays configurable parameters based on device type.

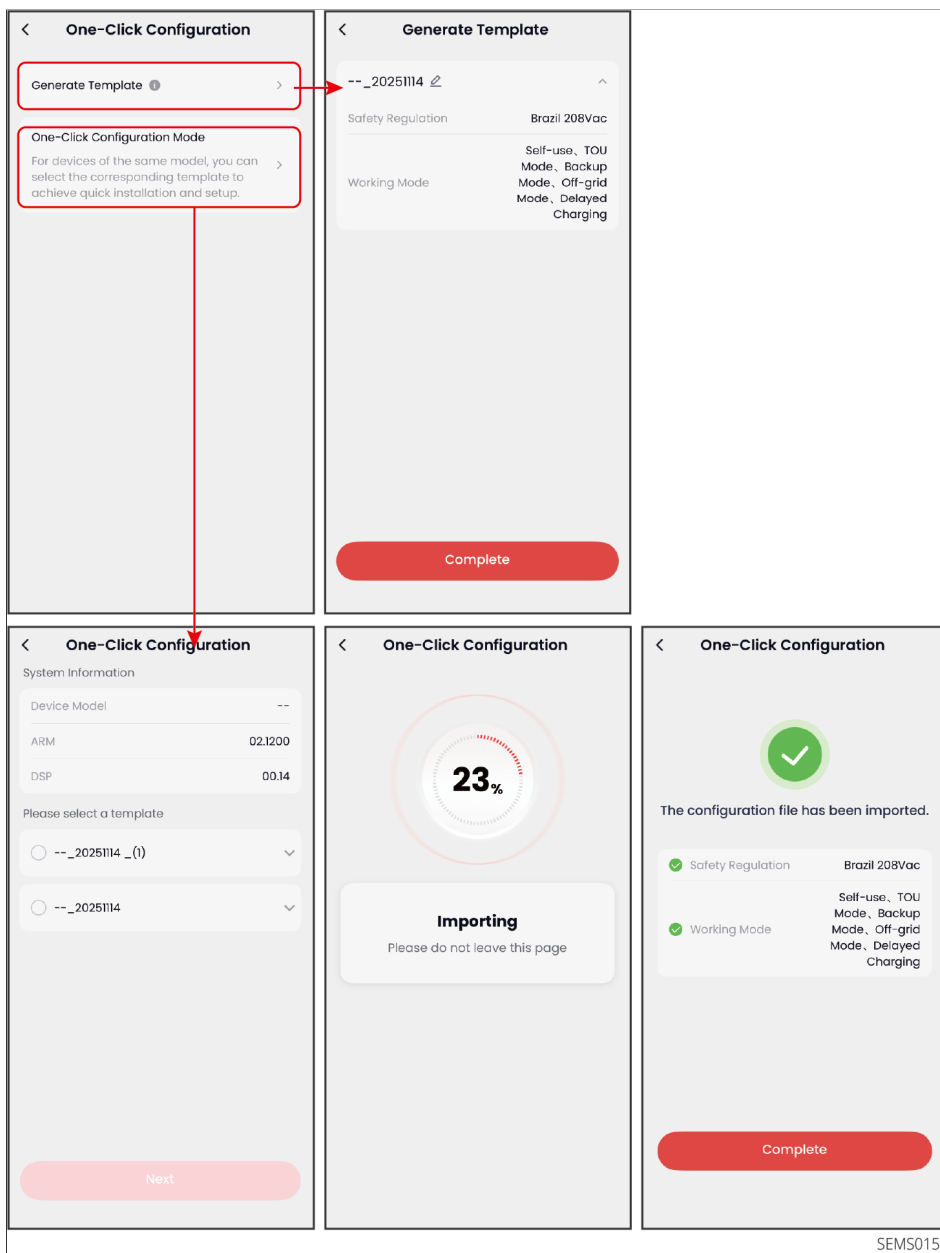
3.3 Set Device Parameters

After connecting to the device locally, you can modify device parameters according to actual needs.

3.3.1 One-Click Configuration

Some models support One-Click Configuration mode, allowing Quick Configuration to be saved as a template and quickly applied.

After completing Quick Configuration, use Local Access to connect to the device, tap 'One-Click Configuration' > 'Generate Template' to save the current configuration as a configuration template. When needed, tap 'One-Click Configuration Mode' to quickly import the saved template.



SEMS0157

Figure26 One-Click Configuration

3.3.2 Set Inverter Parameters

Method 1: On the Home page, select the inverter card, tap "Inverter" > "Settings", and modify device parameters based on actual requirements.

Method 2: Tap "Settings" and modify device parameters based on actual requirements.

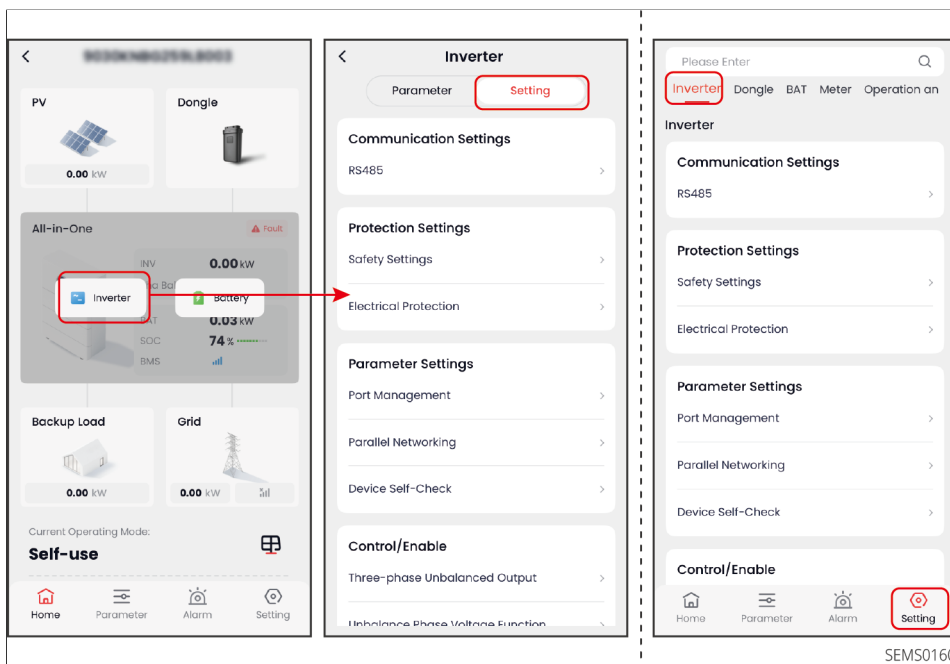


Figure27 Set Inverter Parameters

Set Safety Regulation Parameters

Operating steps

1. Enter the parameter settings screen via "Settings" > "Safety Regulation Settings".
2. Set the safety regulation country and custom safety regulation parameters based on actual conditions. Custom safety regulation parameters can only be modified by installers.

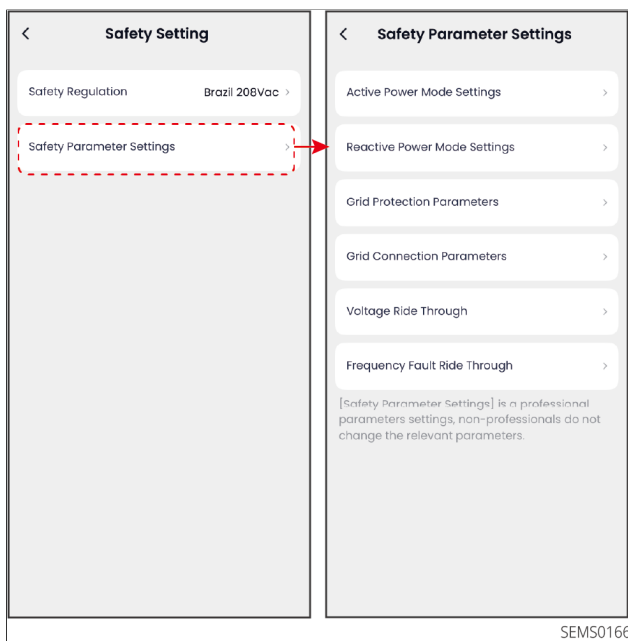


Figure28 Set Safety Regulation Parameters

Set Power Limit Parameters

NOTE

The power limit screen varies by safety regulation country; refer to the actual screen.

Operating steps

1. Go to the power limit setting screen via 'Settings' > 'On-grid Power Dispatch' > 'On-grid Power Limit'.
2. Set the power limit parameters according to actual needs.

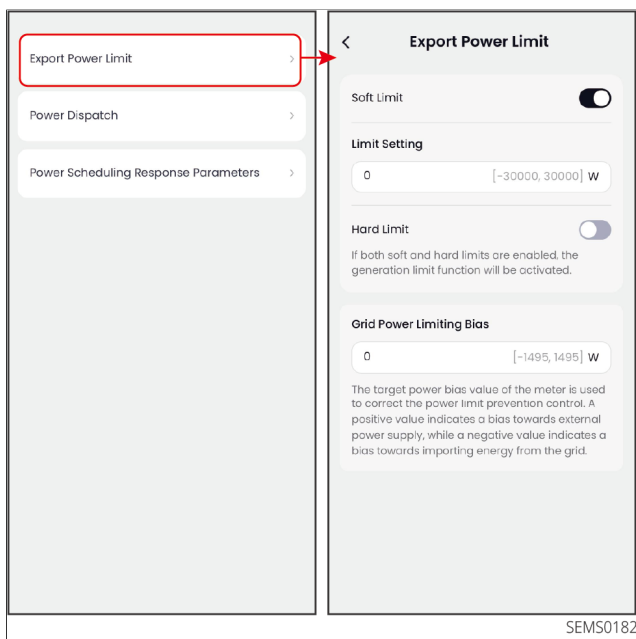


Figure29 Set Power Limit Parameters

Configure RS485 Parallel Networking

NOTE

- Different inverters support different RS485 parallel modes, such as manual networking or self-organizing networking. Refer to the actual product for details.
- When an inverter in a parallel system needs to be used as a standalone unit, you need to set it to standalone mode through the App.
- In a parallel system, the inverter connected to the electricity meter is the master.
- If the device does not support self-organizing networking, first set the slave inverter address, then configure Parallel Networking through the master.
- After completing Parallel Networking, the master settings are delivered to the slave by default. If there are differences, configure the slave parameters separately.

Operating steps

1. Enter the settings screen via 'Settings' > 'Parallel Management' > 'Parallel Networking'.
2. Based on the actual wiring of the inverter, set it as master, slave, or standalone; or

according to the actual parallel scenario, set it as standalone, parallel, or three-phase composed of single-phase units.

- When the device does not support ad hoc networking, the properties of each inverter in the system need to be manually configured:
 - When the inverter is the master, set it as master and then disconnect. After completing the slave inverter address settings, return to this screen, tap 'Parallel Networking', set the number of inverters in the parallel system, and tap 'Networking'.
 - When the inverter is a slave, set the inverter address and then tap v.
- When the inverter supports self-organizing networking, select the number of inverters in the system according to the actual situation.

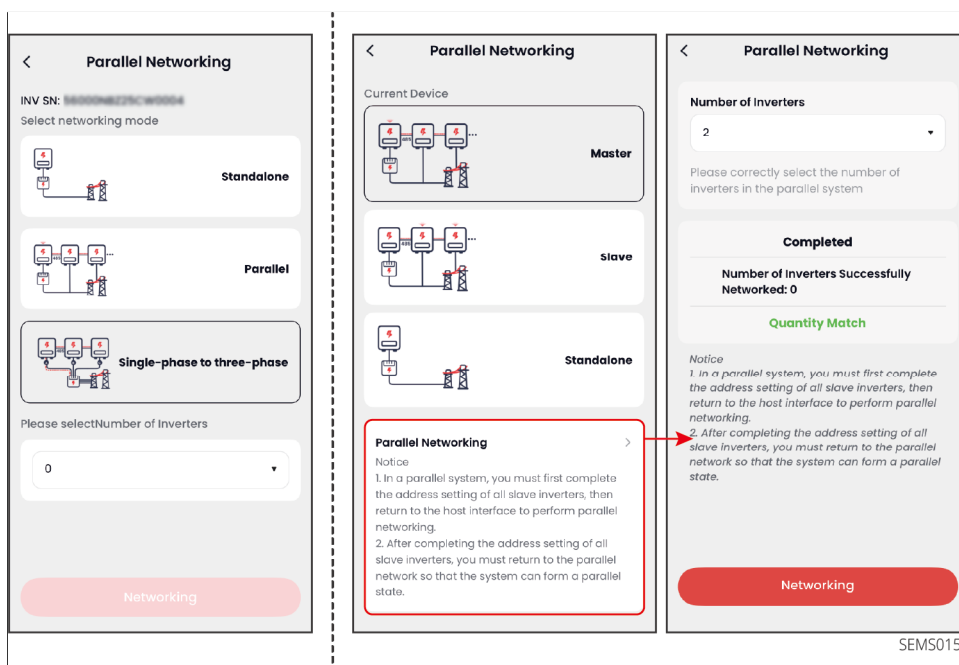


Figure30 Configure RS485 Parallel

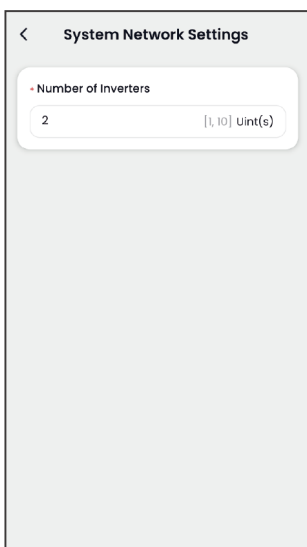
Configure Ezlink Parallel Networking

NOTE

- In a parallel system, the inverter connected to the Ezlink3000 smart communication stick is the master.
- Please set the number of inverters in the parallel system through the master.
- After completing Parallel Networking, the master settings are delivered to the slave by default. If there are differences, configure the slave parameters separately.

Operating steps

1. Access the settings screen via "Settings" > "Parallel Management" > "System Network Settings".
2. Set the number of inverters in the system according to the actual number of parallel units in the system.



SEMS0195

3.3.3 Set Smart Communication Stick Parameters

Method 1: On the "Home" screen, select the communication module card, tap the device card > "Settings", and modify device parameters as required.

Method 2: Tap "Settings" and modify device parameters based on actual requirements.

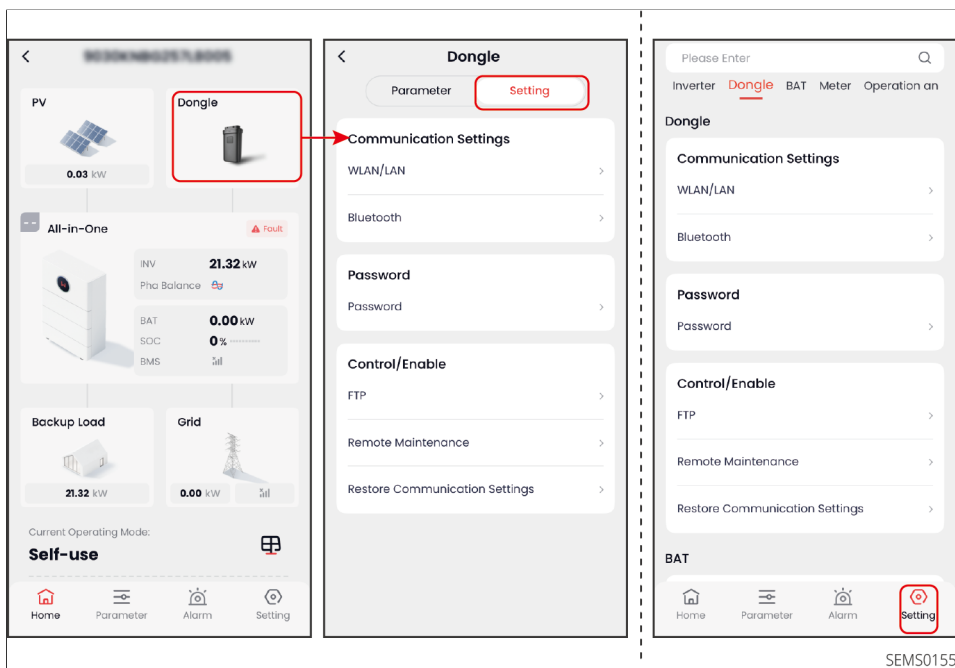


Figure31 Set communication stick parameters.

3.3.4 Set Battery Parameters

Method 1: On the "Home" screen, select the battery card, tap the card > "Settings", and modify device parameters as required.

Method 2: Tap "Settings" and modify device parameters based on actual requirements.

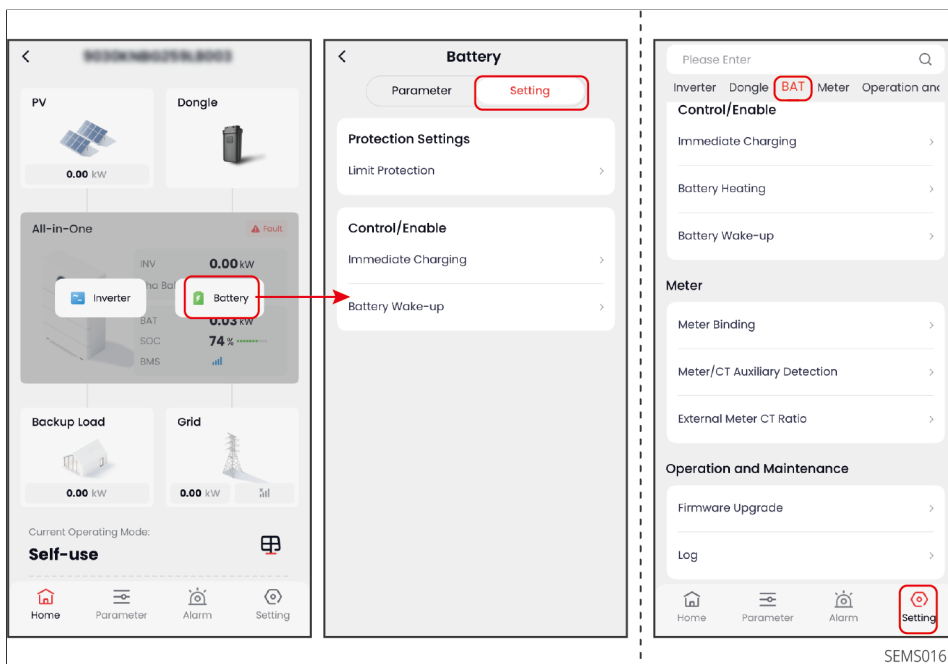


Figure32 Set Battery Parameters

Set JA12 certification parameters.

When the device is installed in California or other regions, please fill in the plant battery capacity information according to local regulatory requirements to complete the JA12 Certification.

After JA12 certification takes effect, if the battery SOC limit is set to exceed the certified capacity value, it is only valid for 72 hours. After 72 hours, the battery SOC limit will be automatically adjusted to the certified capacity value.

Operating steps:

1. Tap "Settings" > "Battery" > "JA12 Certification".
2. Set the certified capacity and system capacity according to actual conditions. The settings are permanent and cannot be modified. After setup, the JA12 certification mark can be viewed on the "Home" screen.

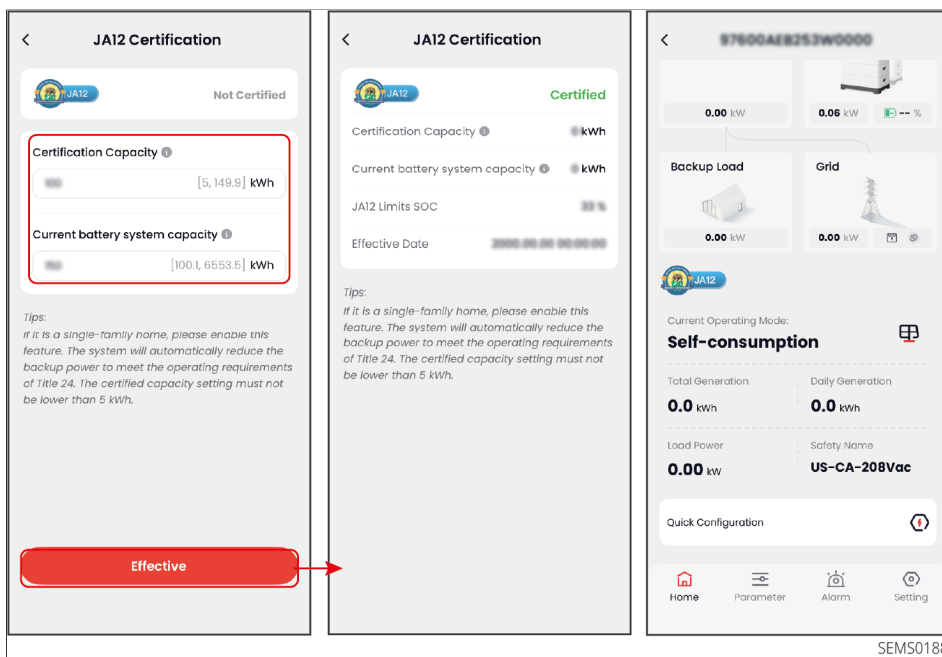


Figure33 Set JA12 certification parameters.

3.3.5 Set Meter Parameters

Method 1: On the "Home" screen, long-press the grid card, tap "Meter" > "Settings", and modify device parameters as required.

Method 2: Tap "Settings" and modify meter parameters as required.

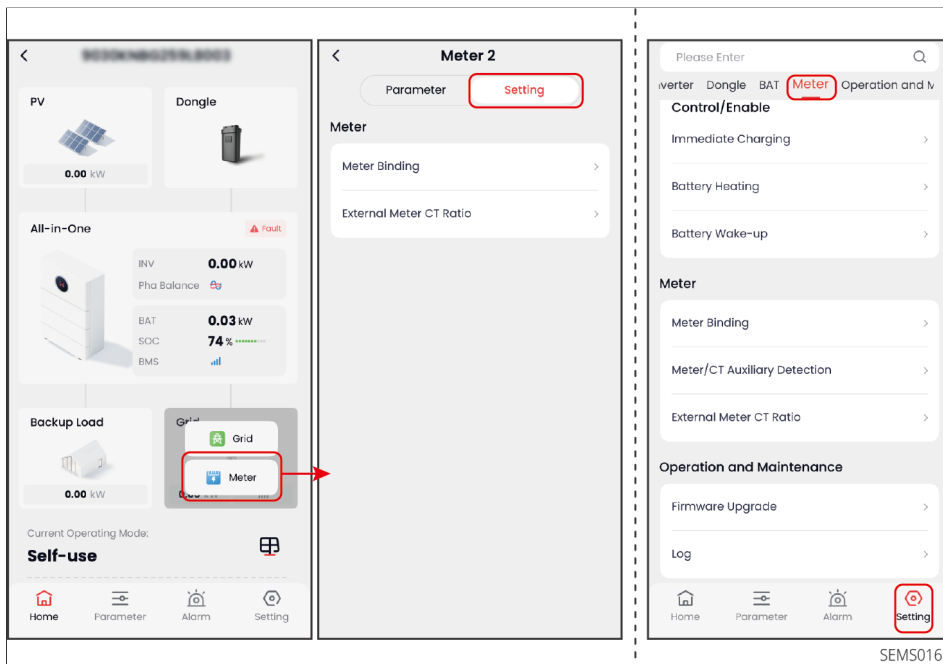


Figure34 Set Meter Parameters

Steps to bind a meter.

1. Tap "Home", long-press the "Grid" card, and select "Meter" > "Settings" > "Meter Binding" to enter the binding screen. Alternatively, enter the binding screen via "Settings" > "Meter" > "Meter Binding".
2. Click the "Meters Number/Location" drop-down list to select the actual application scenario. Supported options: Meter 1 (built-in) without Meter 2; Meter 1 (external) without Meter 2; Meter 1 (built-in) with Meter 2 (external); Meter 1 (external) with Meter 2 (external); built-in CT, external without meter or CT. Refer to the actual interface for specific options. Here, the Meter 1 (external) without Meter 2 interface is used as an example to explain how to bind a meter.
3. As shown in the figure below, when an external meter is selected, you need to manually add the external meter information. Tap "Bind" to bind the meter by manually entering the meter SN or scanning the meter SN QR code. If the bound meter model is GM330, set the meter CT ratio according to the actual situation; for other meters, there is no need to set the meter CT ratio.

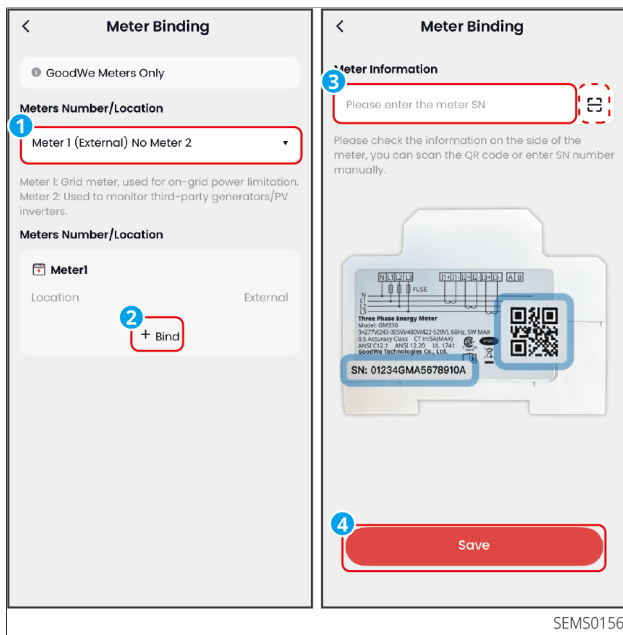


Figure35 Bind Meter

3.3.6 Set System Operating Mode

Supports selecting the system operating mode based on the Tariff, electricity demand, or power supply environment. After configuration, the system automatically coordinates PV, battery, and grid to dispatch energy according to actual needs.

NOTE

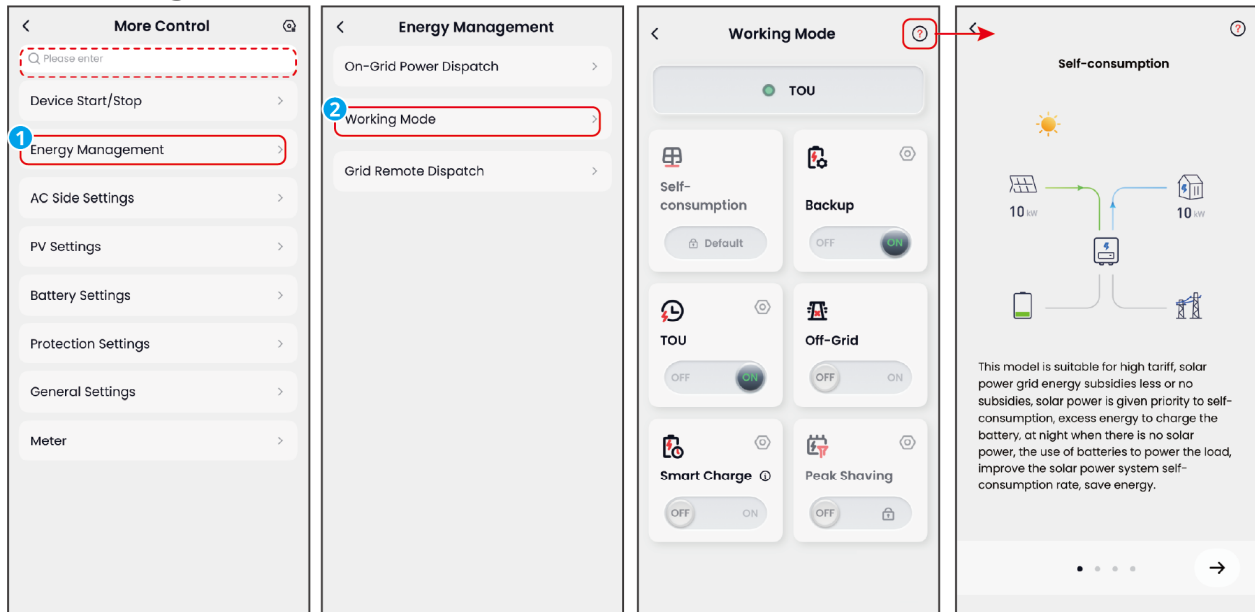
- The default working mode is Self-consumption Mode.
- Different systems support different configurable working modes; refer to the interface for details.
- When setting the working mode via the inverter, the priority of working modes is: Off-grid Mode > Demand Management > Smart Charging > TOU > Backup Mode > Self-consumption.
- When setting the working mode via the Home Energy Management System, the priority of working modes is: Backup Mode > AI Mode > Demand Management > TOU Mode > Self-consumption.

Operating steps

1. Navigate to "Energy Management" > "Working Mode", or search for "Working

Mode" in the parameter control interface to enter the Working Mode Settings interface.

2. Please set the working mode according to actual requirements. For details about the working mode, click?



SEMS0159

Self-consumption

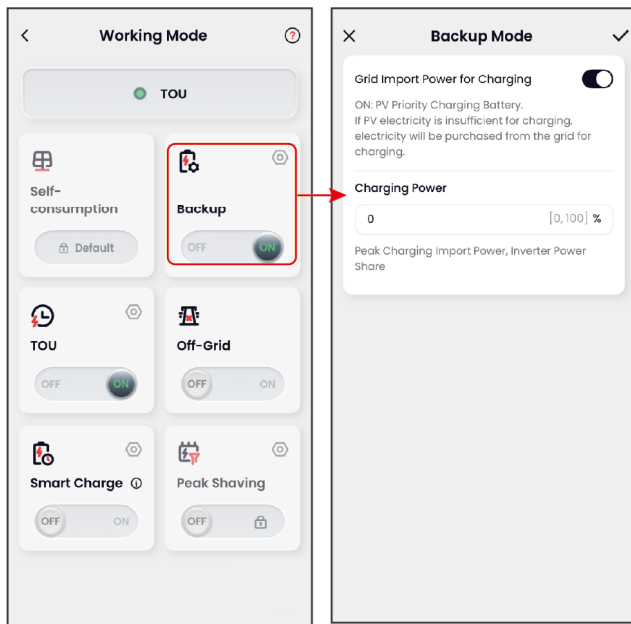
The basic working mode of system operation.

PV power generation is first used to supply the load, excess energy charges the battery, and any remaining energy is sold to the grid. When PV generation is insufficient, the battery supplies the load; if the battery capacity is also insufficient to meet the load demand, the grid supplies the load.

Backup Mode

Recommended for use in areas with an unstable power grid.

When a grid power outage occurs, the inverter switches to off-grid working mode, and the battery discharges to supply the load, ensuring that the BACKUP load remains powered; when the grid is restored, the inverter switches back to grid-connected operation.

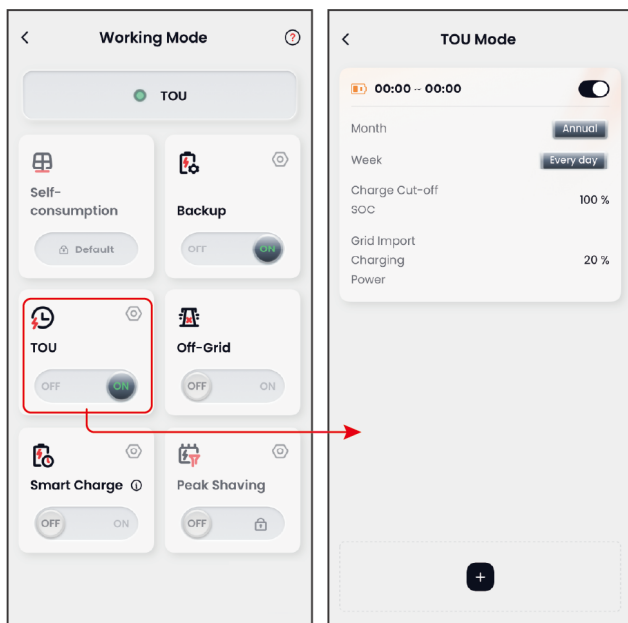


SEMS0189

Parameter name.	Description
Purchase electricity from the grid for charging	Enable this function to allow the system to purchase electricity from the grid.
Charging Power	The peak power when purchasing electricity, expressed as a percentage of the inverter's Rated Power.

TOU Mode

Applicable to regions with a large difference between peak and off-peak Tariffs. Subject to compliance with local laws and regulations, configure the system to purchase or export energy based on the grid's peak and off-peak Tariff periods. For example, during low-tariff periods, set the battery to charging mode to purchase electricity from the grid for charging; during high-tariff periods, set the battery to discharging mode to supply the load or export energy to the grid.



SEMS0185

Parameter name.	Description
Start Time	Within the start time and End Time, the battery charges or discharges according to the configured charge/discharge mode and Rated Power. Outside this time period, the system operates in Self-consumption Mode.
End Time	
Charge/Discharge Mode	Set to charge or discharge according to actual requirements.
Charging Cutoff SOC	Charging stops when the battery reaches the set SOC.
Grid Import Charging Power	Charging power, as a percentage of the inverter's Rated Power.
Battery discharge power	Discharging power, as a percentage of the inverter's Rated Power.

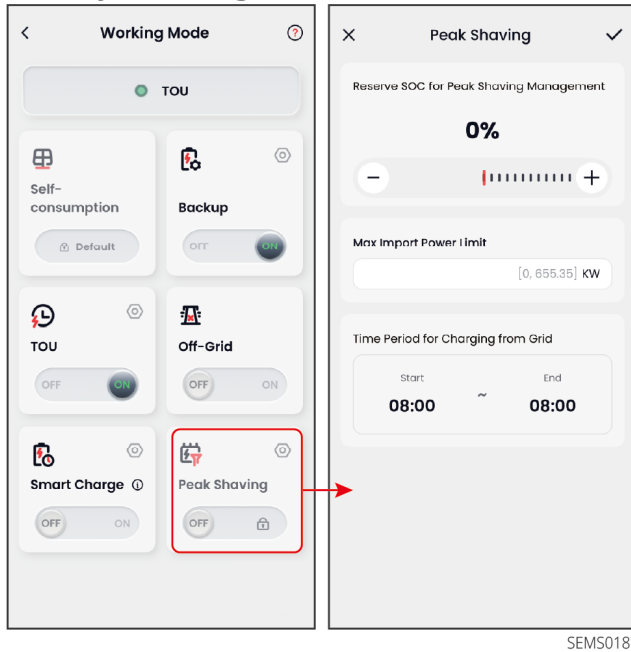
Off-grid Mode

Applicable to areas without a power grid. PV and batteries form a pure off-grid system. PV power supplies the load, and excess electricity charges the battery. When PV power cannot meet the load demand, the battery supplies the load.

Demand Control

Applicable to scenarios where the peak power of purchasing electricity is limited.

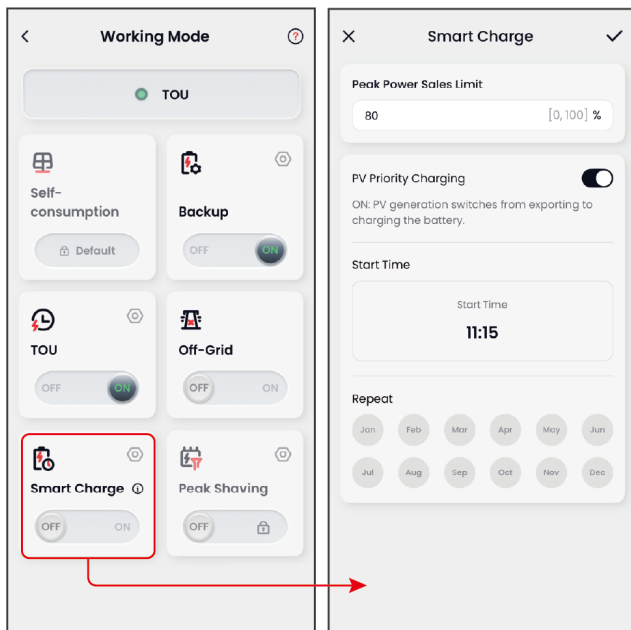
When the total load power approaches the upper limit of the electricity quota, battery discharge is used to reduce the electricity consumption exceeding the quota.



Parameter name.	Description
Reserved SOC for Demand Control	In Demand Control Mode, the reserved SOC is used for Demand Control. When the battery SOC is higher than the reserved SOC, the Demand Control function is disabled.
Grid Purchase Peak Limit	Set the Max. Power limit allowed for purchasing electricity from the grid. When the load power exceeds the sum of the electricity generated by the PV system and this limit, the battery discharges to supply the excess power.
Time Period for Charging from Grid	During the Time Period for Charging from Grid, when the load consumption does not exceed the grid purchase quota, the battery can be charged from the grid. Outside this time period, the battery can only be charged using PV power.

Smart Charging (Delayed Charging)

Applicable to regions with grid-tied power output limits. By setting the peak power limit and the Charging Time period, PV generation exceeding the grid-tied limit can be used to charge the battery, reducing PV waste.

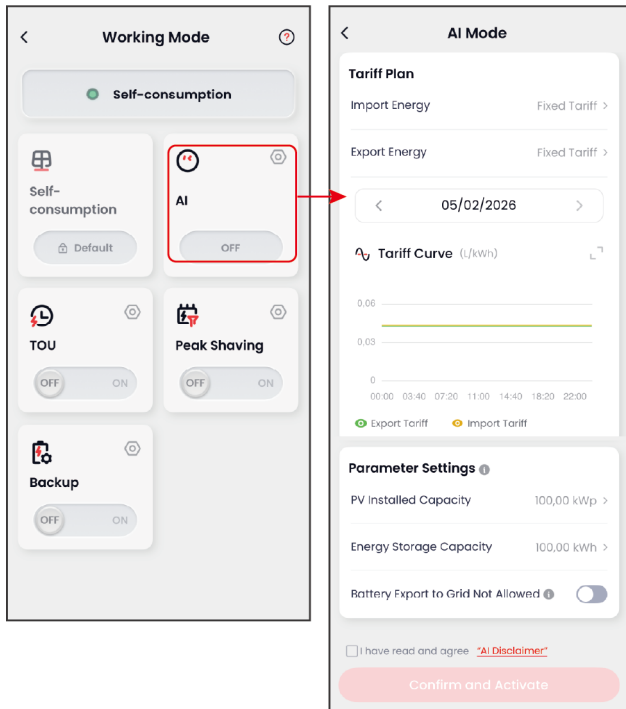


SEMS0186

Parameter name.	Description
Peak Power Sales Limit	Set the peak power limit according to the grid standard requirements of certain countries or regions. The peak power limit must be lower than the locally specified output power limit.
PV Priority Charging	Within the Charging Time period, surplus PV generation after supplying the load is prioritized for charging the battery. Outside the Charging Time period, surplus PV generation after supplying the load is prioritized for Export Energy.
Start Charging Time	

AI Mode

When a Home Energy Management System (HEMS) is used in the system, AI Mode can be enabled.



SEMS0181

Set the Tariff according to user needs, and combine AI calculations to optimize scheduling, maximizing energy and economic Efficiency. When using AI Mode, during the initial stage of collecting power station information, there may be deviations between the predicted curve and the actual situation.

Before enabling AI Mode, please set the tariff plan first. When the tariff plan is a fixed Tariff, using AI Mode is not supported.

Select Time-of-Use Tariff or Dynamic Pricing, supports:

- Dynamic Pricing: Obtain Dynamic Pricing from the power company, and combine with the user-set Tariff surcharge to dynamically adjust the actual purchase and Export Energy Tariff.
- Time-of-Use Tariff: Users can set Tariff information for different time periods based on the actual Tariff. Multiple groups of Tariffs can be set.

4 Intelligently Managed Power Station

4.1 Dispatch Calendar

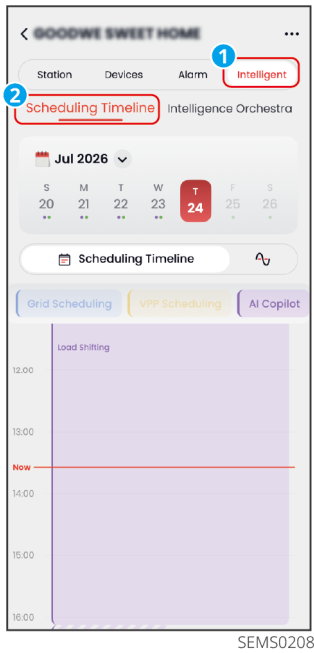
Through the Dispatch Calendar, view the station's historical dispatch information and the day's dispatch plan, such as who initiated the dispatch command, when the dispatch occurred, and what actions were executed.

Currently supported dispatch modes:

- Grid dispatch: The power station responds to grid commands and accepts grid dispatch, such as DNSP in Australia.
- VPP dispatch: The power station accepts virtual power plant dispatch. Applicable only in Europe and Australia.
- AI Copilot: The power station operates according to strategies generated by AI intelligent algorithms.
- Workflow dispatch: The power station operates based on conditions and trigger-based working modes preset by the user's Smart Workshop.

Operating steps:

1. Enter the power station detail interface, and click 'Smart' > 'Dispatch Calendar'.



4.2 Smart Workshop

Through the Smart Workshop, users can quickly create automatic workflows based on actual needs, i.e., preset commands such as scenario trigger conditions and trigger time periods, and execute corresponding operations within the defined conditions and time periods.

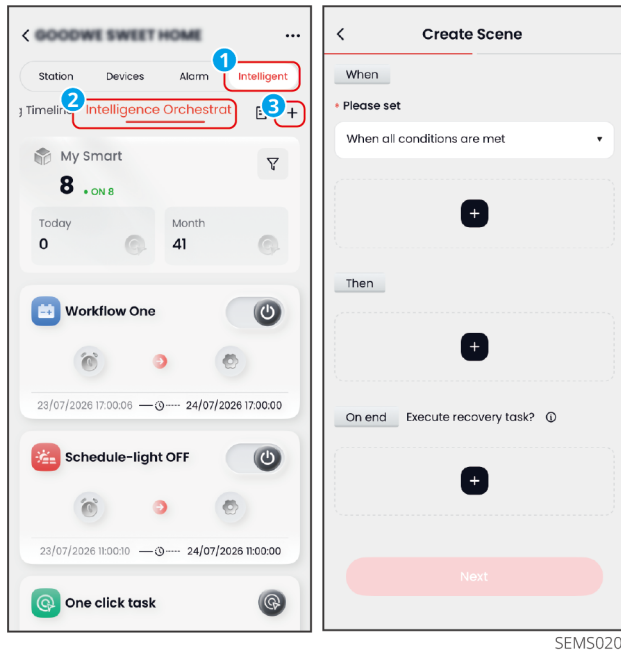
For example: Set the trigger condition to an ambient temperature below 0°C, and the effective time period to 7 PM to 12 AM every night. When both conditions are met at the same time, turn on the heat pump.

NOTE

The priority of workflows created through the Smart Workshop is higher than that of working modes set via devices or the power station.

Operating steps:

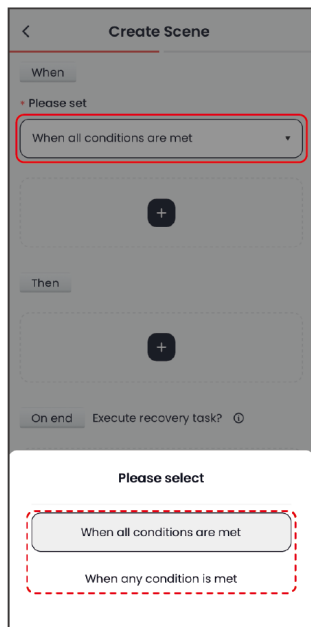
1. Enter the power station details page, and click 'Smart' > 'Smart Workshop' > **+**, Start creating a new scene.



SEMS0203

2. If there are multiple trigger conditions, please select one first:

- When all conditions are met: The task is executed only when all conditions are true.
- When any condition is met: The task can be executed when any one condition is true.

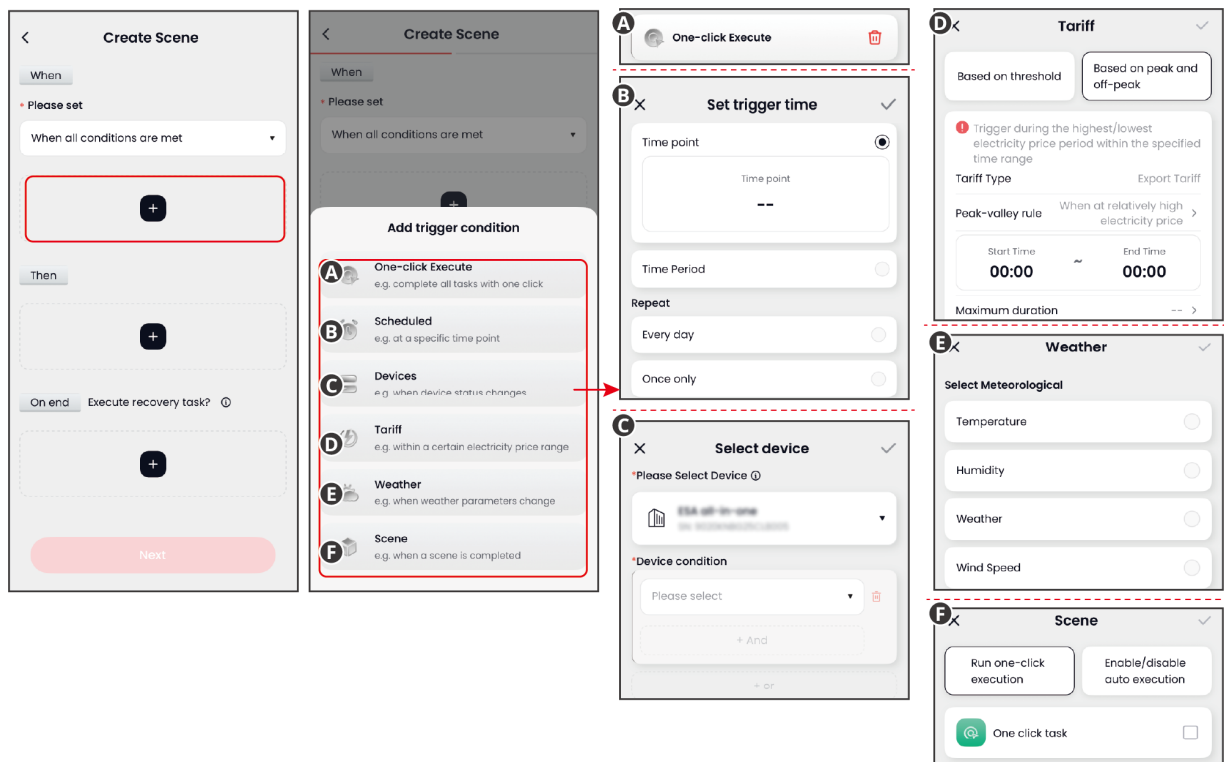


SEMS0204

3. Set the scenario conditions according to the interface prompts. Except for "One-click Execution", other conditions support combined settings:

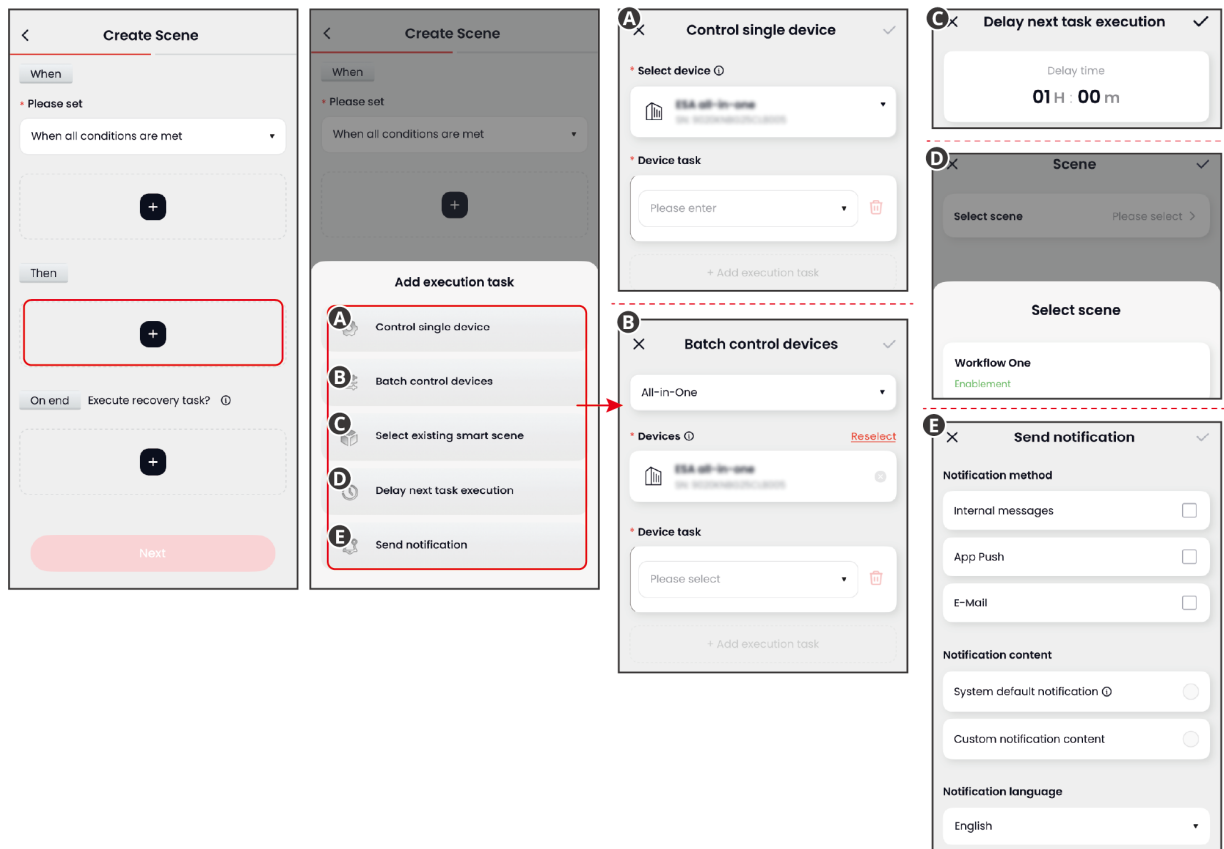
- One-click execution: Manually execute the task without additional trigger conditions.

- **Timer:** Set the time point or time range, and repeat cycle for triggering the task. If a time point is selected, the current task will continue to run by default after that time; if a time range is selected, you can choose to continue the current task or switch to a new task after the range ends.
- **Device:** Select a device and set conditions. The task is triggered when the selected device meets the conditions.
- **Tariff:** Triggers tasks based on tariff changes. Not applicable to fixed tariffs.
 - **Based on threshold:** The task is triggered when the Export Energy Tariff or purchase Tariff is higher/lower than the set Tariff threshold.
 - **Based on peak-valley:** Within a specified time period, select time periods when the Export Energy Tariff is relatively high or the purchase Tariff is relatively low. The selected time periods can be non-contiguous. For example: The time period is 8 AM to 2 PM, within which you need to select 2 hours with a relatively high Export Energy Tariff. According to Tariff fluctuations, the time periods with a relatively high Export Energy Tariff are 11 AM to 12 PM and 1 PM to 2 PM.
- **Weather:** The task is triggered when meteorological conditions such as weather, temperature, humidity, and wind speed are met.
- **Scene:** After an existing scene executes successfully, fails, or completes, set a subsequent task to be executed.



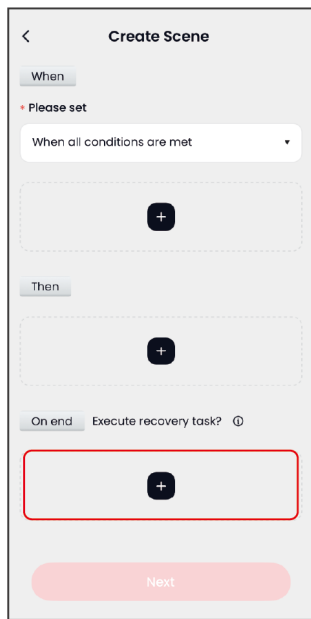
SEMS0205

4. Preset the tasks to be executed according to the interface prompts:
- Control a single device: Specify one device and its task.
 - Batch control devices: Control multiple devices and their tasks simultaneously.
 - Select an existing smart scene: Invoke the currently existing scene.
 - Delayed execution of next task: set a delay time, and after the time elapses, execute subsequent tasks.
 - Send notification alerts: send notifications via in-site messages, message notifications, email, etc.



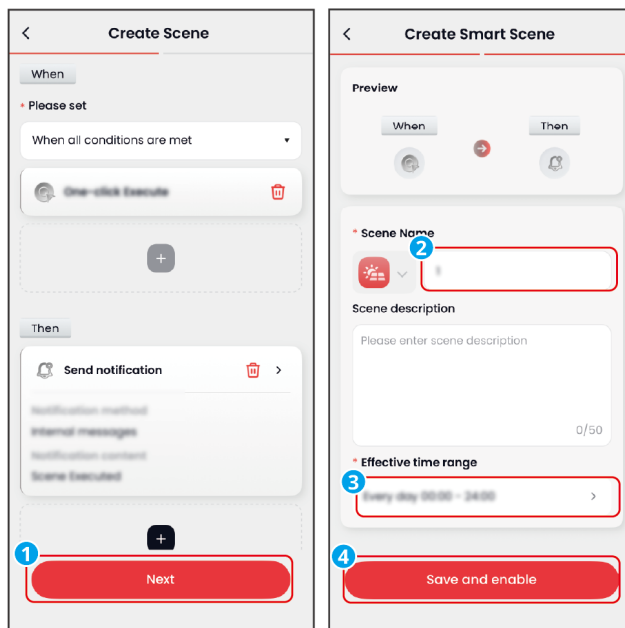
SEMS0206

5. When the set condition is a scheduled time period or Tariff, you can set the next task after the current task according to actual needs. The supported task types are the same as in Step 4.



SEMS0216

- Set the scene name and describe the current scene, and select the effective time period. Click "Save and Enable" to create and activate the scene, or click "Save" to create the scene without activating it.



SEMS0207

5 Service Maintenance Service

Click "Service" to enter the service interface, where you can perform operations such as warranty inquiry, pre-sales and after-sales service, power station configuration, manual viewing, issue feedback, and AI invocation.

NOTE

Different accounts have different function permissions; please refer to the actual interface.

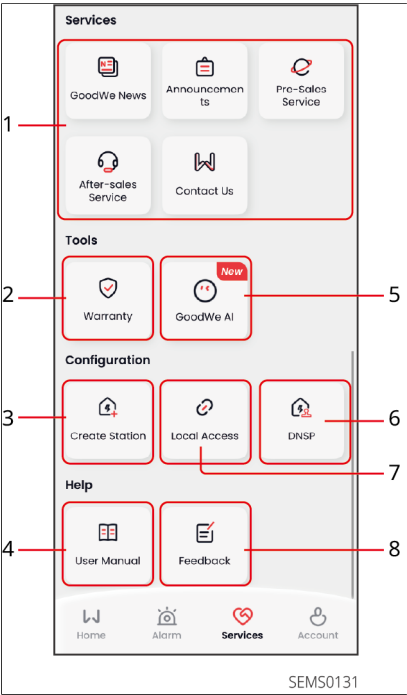


Figure36 Service Interface

No.	Description
1	Entrance to news, announcements, and pre-sales/after-sales services.

No.	Description
2	• Query the warranty period by device serial number. • Supports querying battery product performance guarantee parameters, such as health index and discharge capacity by type.
3	Create a power station. For detailed steps, refer to the Create Power Station chapter.
4	View the App user manual.
5	• AI Assistant. Through intelligent Q&A, quickly access knowledge base information, query business data, etc. • Supports enabling the AI Assistant floating window for quick access to the chat interface.
6	DNSP settings. Only applicable to the Australian region.
7	Local Access. For detailed steps, refer to the Communication Settings chapter.
8	Provide feedback on issues encountered during product use, optimization suggestions, etc.

5.1 Set DNSP Function

NOTE

- Only applicable to Australia.
- Register the user's power station to DNSP network, allowing the electricity service provider to remotely limit the output power value of the PV power station.
- After DNSP Registration, if there are operational abnormalities, you can use the installer account to detect DNSP abnormality issues, such as communication problems, firmware version problems, device time difference problems, etc.

DNSP Registration Procedure

1. Tap 'Services' > 'DNSP' to enter the DNSP settings screen.
2. Select an unregistered power station and tap to enter the registration screen.
3. Fill in the registration information and submit.

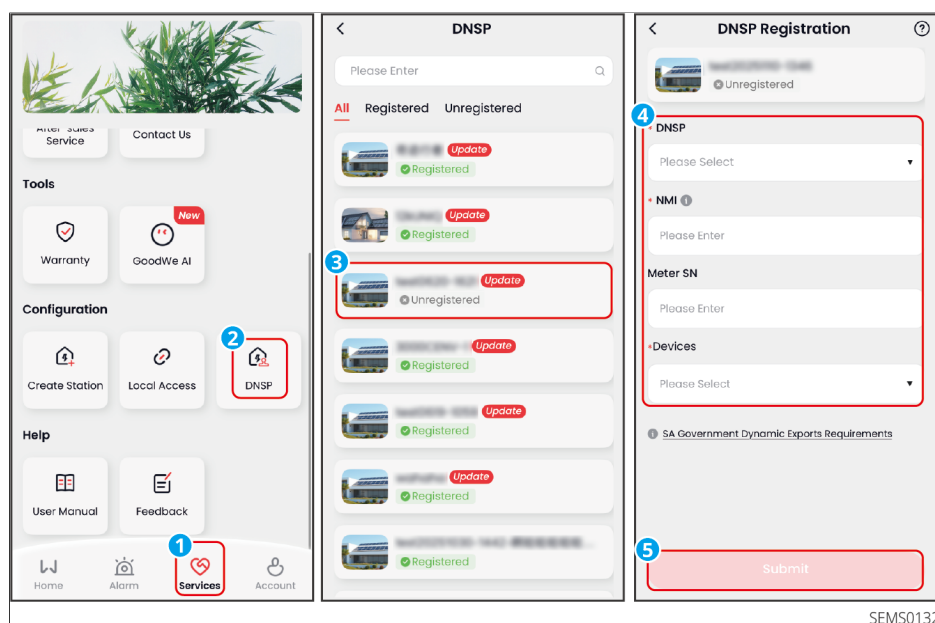


Figure37 DNSP Registration

Parameter name.	Description
DNSP	Set the grid company.
NMI	National Meter Identifier.SettingsNMINumber.
Meter SN	Set the SN number of the connected meter.
Equipment	Select a device already added in the power station. After selection, the device serial number and other information can be automatically filled in.

DNSP check operation steps

1. Tap 'Services' > 'DNSP' to enter the DNSP settings screen.
2. Select a registered power station and click to enter the inspection interface.
3. Check whether there is any abnormal alarm information, for example:
 - Whether the NMI number is correct;

- Whether there is a time difference between the server and the device;
- Whether the device status is online;
- Whether the device version needs to be upgraded;
- Whether the device operating power is within the set range, etc.

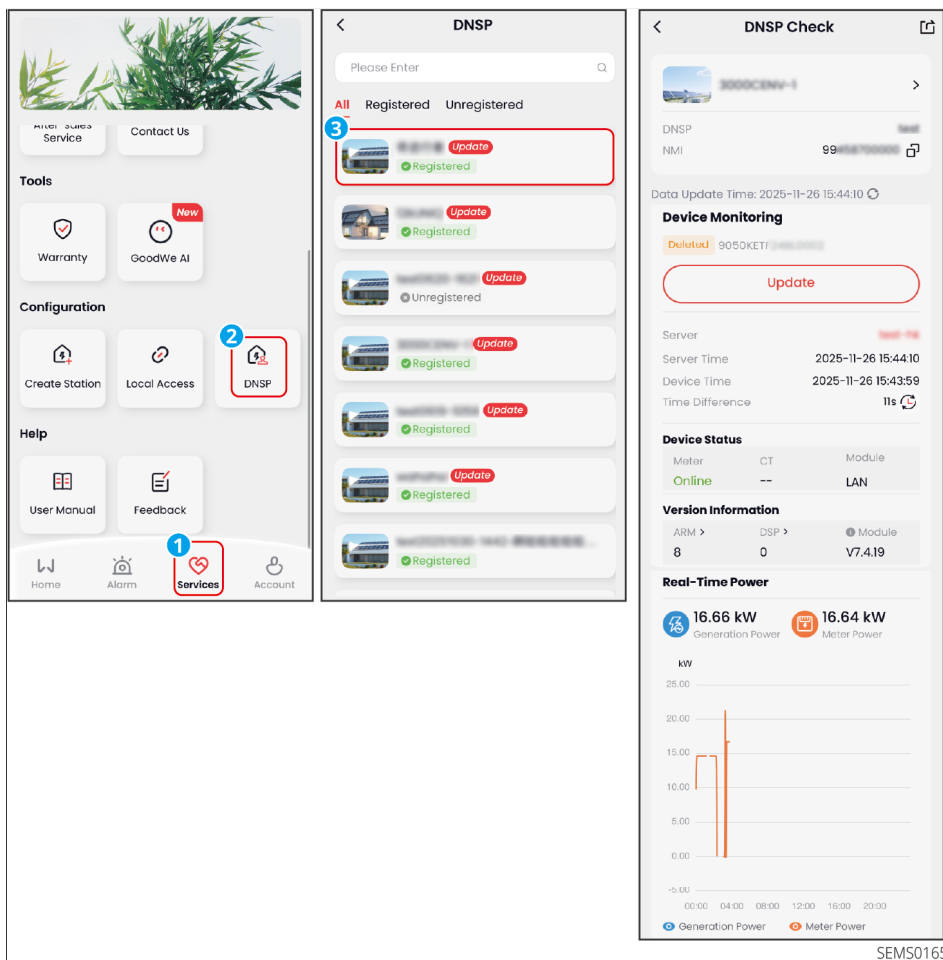


Figure38 DNSP Verification

5.2 Use AI Assistant

Quickly obtain textual and visual information through AI assistant Q&A.

- Supports querying knowledge base information, such as GoodWe product and equipment manuals, etc.
- Supports querying business data, such as Energy Generation information, fault information, power information, etc.

- Supports querying external data, such as weather information, date information, etc.
- Supports providing feedback and suggestions on AI responses. When AI cannot resolve the issue, it can be transferred to manual handling with one click and generate an after-sales work order.

Operating steps

1. Click 'Services' > 'GoodWe AI' to enter the AI assistant interface.
2. Enter questions via text or voice in the dialog box to quickly generate answers.

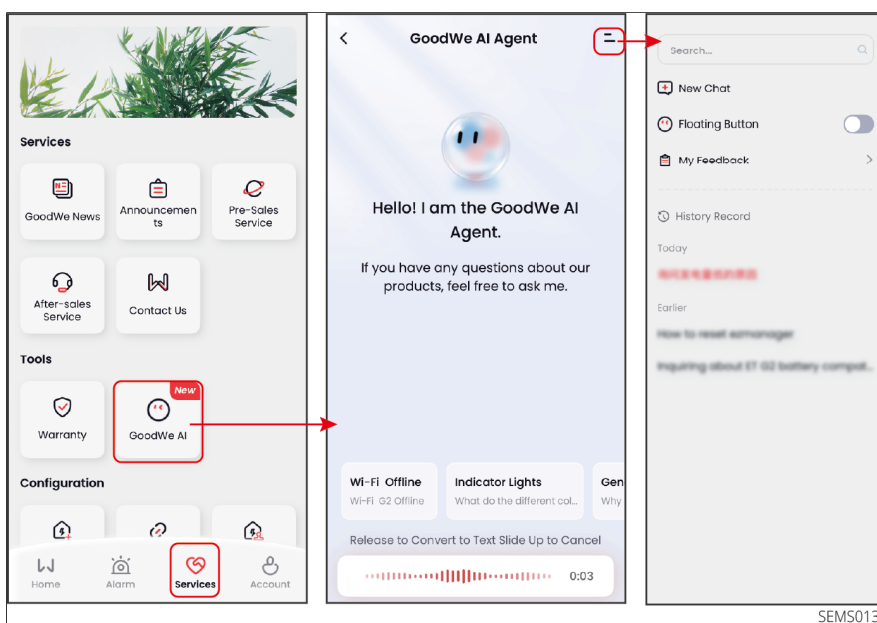


Figure39 AI Assistant

6 Account

6.1 Edit User Information

Supports modifying user-related information, such as username, avatar, country/region, etc.

Operating steps:

Click 'Account' > 'User Information' to enter the user information settings screen, where you can modify user-related information.

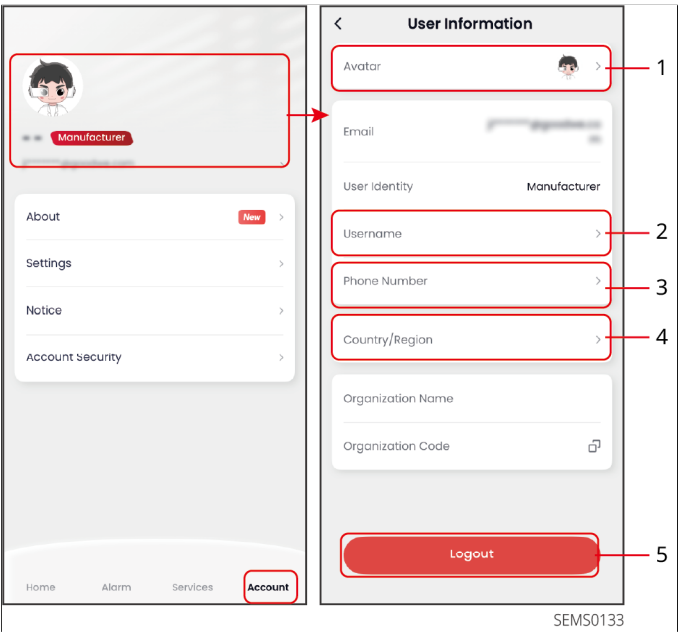


Figure40 Edit User Information

No.	Description
1	Modify the account avatar.
2	Modify the account username.
3	Bind a phone number to the account.
4	Modify country and region information.

No.	Description
5	Log out of the current account.

6.2 Set App Notification Information

Supports modifying app notification message types, receiving methods, time periods, etc.

Operating steps

Click 'Account' > 'Notifications' to enter the notification settings screen, where you can enable or disable message notifications, set message types, etc.

- Event subscription: When enabled, users can receive notifications promptly when alarms, faults, or operating status changes occur on the device.
 - Supports setting push channels, i.e., receiving notifications via the App message center, email, etc.
 - Supports setting when alarm notifications are pushed.
 - Supports setting the alarm types and time periods for which notifications are not received.
- Shared Station Subscription: receive a notification when a new station is shared with you.
- Tariff expiration reminder: disabled by default. After enabling, a notification will be sent when the Tariff expires.

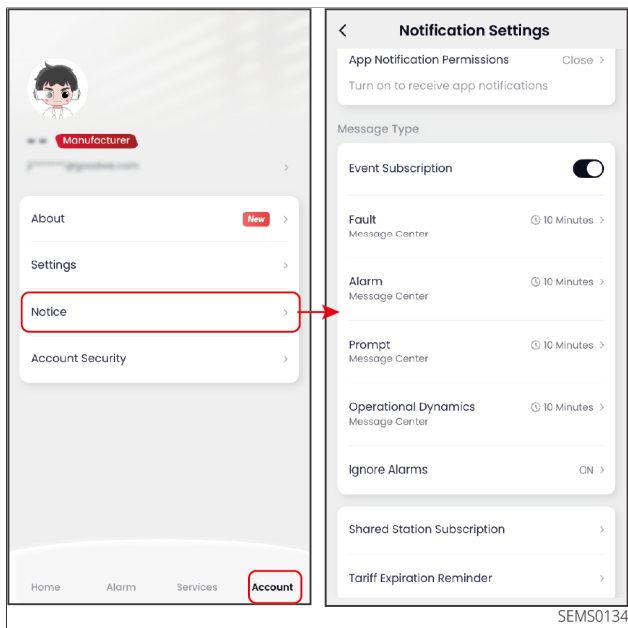


Figure41 Configure App notification messages.

6.3 Set Account Security Information

To ensure account security, it supports modifying the account-bound email, login password, and other information, and also supports deregistering accounts without any power stations.

Operating steps

Click 'Account' > 'Account Security' to enter the security settings interface.

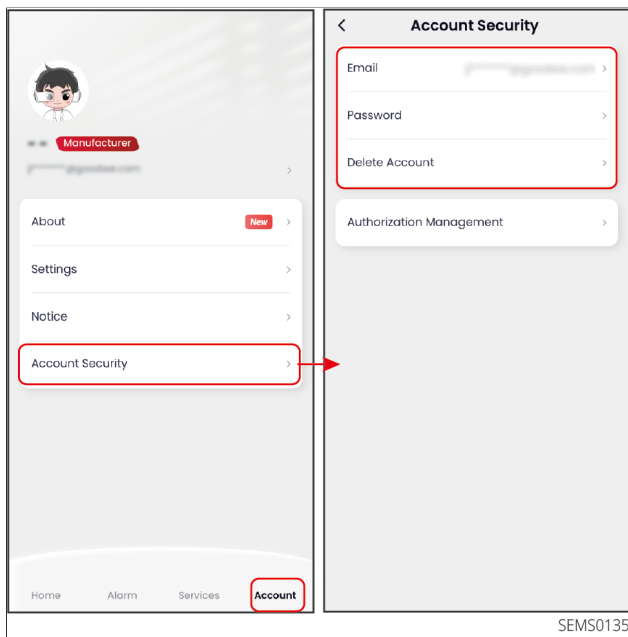


Figure42 Set Account Security Information

6.4 Set Monitoring Permissions

NOTE

- Only applicable to Europe and Australia servers.
- If third-party Remote Control is required, contact the manufacturer to add authorization, and fill in battery capacity and other information as prompted on the interface.
- Monitoring Authorization applies only to owner accounts. According to European GDPR regulations, owners can set monitoring permissions and Remote O&M permissions as needed. Except for the owner and authorized visitors, no other accounts can monitor or operate this power station.

Operating steps

1. Click 'Account' > 'Account Security' > 'Authorization Management' to enter the security settings interface.
2. Set monitoring permissions according to actual needs.

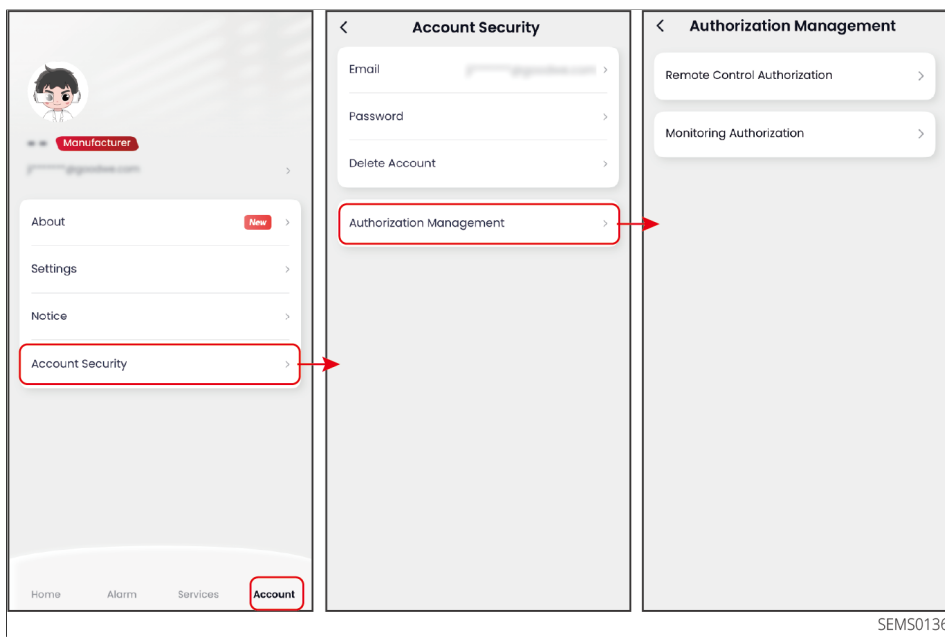


Figure43 Set Monitoring Permissions

7 Troubleshooting

No.	Fault Name	Fault cause	Corrective Actions
1	Unable to install the App	1. The mobile phone operating system version is too low. 2. The phone is blocking installation of the software package.	1. Upgrade the mobile phone operating system. 2. On your phone, go to Settings > Security and check 'Allow installation of apps from unknown sources'.
2	The device's WiFi signal is not displayed in the App device list.	App Not Connected to WiFi signal.	1. Confirm that the WiFi communication stick is working properly. 2. Refresh the device list. If there is still no device in the list, exit the App and log in again.
3	Login failed.	1. Phone Not Connected to the Internet. 2. The App is under maintenance.	1. Check whether the phone's mobile data is enabled and can access the Internet. 2. The App is under maintenance. Try again later.
4	Unable to start the App.	1. The mobile phone operating system version is too low. 2. App version is too low.	1. Upgrade the mobile phone operating system. 2. Confirm whether the App version is the latest version.

No.	Fault Name	Fault cause	Corrective Actions
5	Failed to acquire data during operation.	Communication between the device and the App is interrupted.	1. Check whether communication between the device and the router is normal. 2. Check whether communication between the router and the cloud is normal.

8 Appendix

8.1 Safety Regulation Country

No.	Safety Regulation Name	No.	Safety Regulation Name
Europe			
1	IT-CEI 0-21	56	IE-LV-72A
2	IT-CEI 0-16	57	IE-ESB-C&D(< 110kV)
3	DE LV with PV	58	IE-EirGrid-110kV
4	DE LV without PV	59	PT-D
5	DE-MV	60	EE
6	ES-A	61	NO
7	ES-B	62	FI-A
8	ES-C	63	FI-B
9	ES-D	64	FI-C
10	ES-island	65	FI-D
11	BE	66	UA-A1
12	FR-LV	67	UA-A2
13	FR-island-50Hz	68	EN 50549-1
14	FR-island-60Hz	69	EN 50549-2
15	type A-PL_V.1.1	70	DK-West-B-MVHV
16	type B-LV-PL_V.1.1	71	DK-East-B-MVHV
17	type C-PL_V.1.1	72	DK-West-C-MVHV
18	type D-PL_V.1.1	73	DK-East-C-MVHV
19	NL-16/20A	74	DK-West-D-MVHV

No.	Safety Regulation Name	No.	Safety Regulation Name
20	NL-A	75	DK-East-D-MVHV
21	NL-B	76	FR-Reunion
22	NL-C	77	BE-LV (>30kVA)
23	NL-D	78	BE-HV
24	SE-A	79	CH-B
25	SE MV	80	NI-G99-A
26	SK-A	81	NI-G99-B
27	SK-B	82	NI-G99-C
28	SK-C	83	NI-G99-D
29	HU	84	IE-LV-170kVA
30	CH-A	85	IE-MV&HV-200kVA
31	CY	86	DE-HV
32	GR	87	FR-MV
33	DK-West-A	88	CZ-A1/A2-09
34	DK-East-A	89	DE-EHV
35	DK-West-B	90	IE-EirGrid-400KV
36	DK-East-B	91	IE-EirGrid-220KV
37	AT < 1kV	92	IE-EirGrid-66KV
38	AT > 1kV	93	IE-ESB-B
39	BG	94	IE-ESB-D(≥ 110 kV)
40	Czech	95	type B-MV-PL_V.1.1
41	CZ-A1-09	96	GB-G99-A HV
42	CZ-A2-09	97	GB-G99-B LV

No.	Safety Regulation Name	No.	Safety Regulation Name
43	CZ-B1/B2-09	98	GB-G99-C LV
44	CZ-C	99	UA-B
45	CZ-D	100	UA-C
46	RO-A	101	UA-D
47	RO-B	102	UK-G98
48	RO-D	103	UK-G99-A LV
49	GB-G98	104	UK-G99-B LV
50	GB-G99-A LV	105	UK-G99-C LV
51	GB-G99-B HV	106	CZ-A1
52	GB-G99-C HV	107	UK-A-MV
53	GB-G99-D	108	UK-B-MV
54	NI-G98	109	UK-C-MV
55	IE-LV-16/25A	-	-
Global			
1	60Hz-Default	6	IEC 61727-60Hz
2	50Hz-Default	7	Warehouse
3	127Vac-60Hz-Default	8	IEC61727-480Vac-60Hz
4	127Vac-50Hz-Default	9	IEC61727-480Vac-50Hz
5	IEC 61727-50Hz		
Americas			
1	Argentina-220V-LV	38	LUMAPR-2024-220Vac-3P
2	US-208Vac	39	LUMAPR-2024-240Vac-3P
3	US-240Vac	40	Cayman
4	Mexico-220Vac	41	Brazil-220Vac

No.	Safety Regulation Name	No.	Safety Regulation Name
5	Mexico-440Vac	42	Brazil-208Vac
6	US-480Vac	43	Brazil-230Vac
7	US-208Vac-3P	44	Brazil-240Vac
8	US-220Vac-3P	45	Brazil-254Vac
9	US-240Vac-3P	46	Brazil-127Vac
10	US-CA-208Vac	47	Brazil-ONS
11	US-CA-240Vac	48	Barbados
12	US-CA-480Vac	49	Chile-BT
13	US-CA-208Vac-3P	50	Chile-MT-A
14	US-CA-220Vac-3P	51	Chile MT-B
15	US-CA-240Vac-3P	52	Colombia
16	US-HI-208Vac	53	Colombia<0.25MW-208Vac-1P
17	US-HI-240Vac	54	Colombia<0.25MW-120Vac-3P
18	US-HI-480Vac	55	IEEE 1547-208Vac
19	US-HI-208Vac-3P	56	IEEE 1547-220Vac
20	US-HI-220Vac-3P	57	IEEE 1547-240Vac
21	US-HI-240Vac-3P	58	IEEE 1547-230Vac
22	US-Kauai-208Vac	59	Colombia<0.25MW-127Vac-3P
23	US-Kauai-240Vac	60	Colombia>5MW
24	US-Kauai-480Vac	61	Mexico-127V
25	US-Kauai-208Vac-3P	62	Mexico-240V
26	US-Kauai-220Vac-3P	63	US-O&R-208Vac
27	US-Kauai-240Vac-3P	64	US-O&R-240Vac

No.	Safety Regulation Name	No.	Safety Regulation Name
28	US-ISO-NE-208Vac	65	US-O&R-480Vac
29	US-ISO-NE-240Vac	66	US-O&R-208Vac-3P
30	US-ISO-NE-480Vac	67	US-O&R-220Vac-3P
31	US-ISO-NE-208Vac-3P	68	US-O&R-240Vac-3P
32	US-ISO-NE-220Vac-3P	69	Brazil-277Vac
33	US-ISO-NE-240Vac-3P	70	Chile-BT ≤ 9 MW
34	LUMAPR-2024-208Vac	71	Chile-MT ≤ 9 MW
35	LUMAPR-2024-240Vac	72	Chile > 9MW
36	LUMAPR-2024-480Vac	73	Mexico-277Vac
37	LUMAPR-2024-208Vac-3P		
Oceania			
1	Australia-A	4	Newzealand
2	Australia-B	5	Newzealand:2015
3	Australia-C	6	NZ-GreenGrid
Asia			
1	China A	33	Israel-MV
2	China B	34	Israel-HV
3	China Higher Voltage	35	Vietnam
4	China Highest Voltage	36	Malaysia-LV
5	China Power Station	37	Malaysia-MV
6	China Shandong	38	DEWA-LV
7	China Hebei	39	DEWA-MV
8	China PCS	40	Saudi Arabia-220V-LV
9	Taiwan	41	JP-690Vac-50Hz

No.	Safety Regulation Name	No.	Safety Regulation Name
10	Hong Kong	42	JP-690Vac-60Hz
11	China Northeast	43	Srilanka-MV/HV
12	Thailand-MEA	44	IEC 61727-127Vac-50Hz
13	Thailand-PEA	45	IEC 61727-127Vac-60Hz
14	Mauritius	46	JP-550Vac-50Hz
15	Korea	47	JP-550Vac-60Hz
16	India	48	India-Higher
17	India-CEA	49	JP-220Vac-50Hz
18	Pakistan	50	JP-220Vac-60Hz
19	Philippines	51	Saudi Arabia-127V-LV
20	Philippines-127Vac	52	Srilanka-LV >1MW
21	JP-200Vac-50Hz	53	China-YN
22	JP-200Vac-60Hz	54	GB/T 29319-LV
23	JP-440Vac-50Hz	55	GB/T 29319-MV
24	JP-440Vac-60Hz	56	Philippines-277Vac
25	JP-420Vac-50Hz	57	JP-360Vac-50Hz
26	JP-420Vac-60Hz	58	JP-360Vac-60Hz
27	JP-480Vac-50Hz	59	JP-320Vac-50Hz
28	JP-480Vac-60Hz	60	JP-320Vac-60Hz
29	Srilanka-LV<1MW	61	JP-340Vac-50Hz
30	Singapore	62	JP-340Vac-60Hz
31	Israel-OG	63	JP-380Vac-50Hz
32	Israel-LV	64	JP-380Vac-60Hz

No.	Safety Regulation Name	No.	Safety Regulation Name
Africa			
1	Mauritius	5	Ghana-LV
2	South Africa-LV	6	Ghana-HV
3	South Africa-B-MV	7	South Africa-A3-LV
4	South Africa-C-MV	8	Nigeria

8.2 Inverter Parameters

Communication parameters.

Parameter name.	Description
RS485 Settings	Set the host communication address of the inverter. For a single inverter, set the communication address according to the actual situation; when multiple inverters are connected, the address of each inverter must be different, and no inverter can set its communication address to 247.
PLC	Only applicable to devices communicating via PLC. Set according to the box-type transformer actually connected to the inverter.

Device Start/Stop Parameters

Parameter name.	Description
Start	Controls device start, stop, and restart.
Stop	
Restart	

Environmental Control Parameters

Parameter name.	Description
Fan Control	
Fan reverses to remove dust	After being enabled, the fan will automatically reverse periodically for dust removal.
External fan turn-on temperature setting value	When the device temperature reaches the set value, the external fan starts running.
Fan Detection	Check whether the fan operates normally.
Silent Mode	
Silent Mode	• Enabling Silent Mode can reduce equipment noise. • Before enabling Silent Mode, ensure that the device is connected to a stable and reliable power grid; otherwise, it will not take effect. • After enabling Silent Mode, if the load power consumption in the system is too high and Energy Generation cannot meet the demand, the system may automatically purchase electricity from the grid to ensure load operation. • During Silent Mode, some PV Energy Generation may be lost. • Supports setting the Silent Mode time period according to actual requirements.

AC Side Settings Parameters

Parameter name.	Description
AC Port Connection Settings	Depending on the inverter port characteristics, it supports connection of loads, generators, microgrid devices, etc. For details, please refer to 8.2.4.Multiplexed Port Parameters(Page 122) .

Parameter name.	Description
Backup Function Settings	• Backup: After enabling, when the power grid fails, the load connected to the inverter BACK-UP port can be powered by the battery, ensuring uninterrupted power supply to the load. • The following detection modes are supported: ◦ UPS Mode - Full-Wave Detection: Detects whether the grid voltage is too high or too low. ◦ UPS Mode - Half-Wave Detection: Detects whether the grid voltage is too low. ◦ EPS Mode - Low Voltage Ride-Through Supported: Disables the grid voltage detection function. • Off-grid First Cold Start: Takes effect only once. After enabling this function, the battery or PV can be used to output backup power in off-grid mode. • Off-grid Cold Start Holding: Takes effect multiple times. After enabling this function, the battery or PV can be used to output backup power in off-grid mode. • Clear Overload Fault: When the power of the load connected to the inverter BACK-UP port exceeds the rated load power, the inverter will restart and check the load power again. If not handled in time, the inverter will restart multiple times and perform load detection, with the interval between restarts continuously increasing. After the BACK-UP port load power drops within the Rated Power range, you can click this switch to clear the inverter restart interval, and the inverter will restart immediately.

Parameter name.	Description
Parallel Management	- When the inverter achieves parallel operation via RS485, set the Parallel Management parameters. - Manually set the master or slave attributes of the inverter, and set information such as the slave address. - Through self-organizing networking, automatically form a parallel system or a three-phase system composed of single-phase units. - When inverters achieve parallel operation through the Ezlink3000 intelligent communication stick, set the number of paralleled units in the system.
Type of Electrical Supply System	According to the Type of Electrical Supply System actually adapted by the inverter, select single-phase, split-phase, or two-phase grid.
Output Method	When the connected grid is a three-phase grid, select three-phase three-wire or three-phase four-wire according to the actual grid type to which the inverter is connected.
Three-Phase Unbalanced Output	When a three-phase inverter is connected to unbalanced loads, such as when L1, L2, and L3 are respectively connected to loads with different power, the three-phase unbalanced output function must be enabled.
Unbalanced Phase Voltage Function	After enabling, the inverter will perform power Derating or power distribution according to the voltage values of each phase grid to maximize power utilization.

PV Setting Parameters

Parameter name.	Description
PV Access Mode	For some models, the PV string access mode of the inverter MPPT ports can be manually set to avoid incorrect identification of the string access mode. Supported: • Independent access: External PV strings are connected one-to-one to the PV input ports on the inverter side. • Partial parallel access: When one PV string is connected to multiple MPPT ports on the inverter side, other PV strings are also connected to other MPPT ports on the inverter side. • Parallel access: When external PV strings are connected to the PV input ports on the inverter side, multiple PV strings are connected through Y terminals and then split into multiple connections to multiple PV input ports.
PID Settings	• During operation of PV panels, due to the potential difference between the output electrodes and the grounded frame of the panel, the power generation Efficiency of the panel may attenuate over time, namely potential-induced degradation (PID). • The PID function of the product raises the voltage difference between the PV panel and the frame, making it a positive voltage difference (referred to as positive voltage boosting), thereby achieving PID suppression. It is applicable to P-type panels and N-type panels that require positive voltage boosting to suppress the PID effect. For N-type panels that require reducing negative voltage to suppress the PID effect, it is recommended to disable this function. For whether an N-type module belongs to the type that needs positive voltage boosting for PID suppression, consult the module supplier.
Shadow Scan Function	When PV panels are severely shaded, enabling the Shadow Scan function can optimize the inverter's power generation Efficiency.

Battery Settings

Parameter name.	Description
Battery Activation	If you purchased an unactivated battery, you need to enter the activation code to activate the battery function.
BAT Connection Configuration	Select the battery Access Mode according to the actual battery connection status.

Protection Parameters

Parameter name.	Description
Electrical Protection	
Lightning Protection Alarm	After enabling the Lightning Protection Alarm function, if the lightning protection module becomes abnormal, an alarm will be prompted to indicate the abnormality.
AFCI Detection	• After enabling AFCI Detection, you can monitor whether there is an arc hazard in the device. • Click "Arc Failure self-test" to start the self-test of the Arc Detection module to confirm whether the status is normal, and view the result through "AFCI Detection status". • If the inverter triggers Arc Failure alarms less than 5 times within 24 hours, the alarm can be automatically cleared. After the 5th Arc Failure alarm, the inverter stops for Protection. The inverter can only resume normal operation after clicking "Clear Arc Alarm" to clear the fault.
Backup N-PE Relay Switch	According to grid standard requirements in certain countries or regions, it is necessary to ensure that the internal relay of the BACK-UP port remains closed during off-grid operation, thereby connecting the N and PE lines.
DC Tripping Detection	After enabling this function, when the machine fails, the inverter DC Switch can automatically trip to disconnect the connection.

Parameter name.	Description
On-Grid Point Rated Current Protection	To prevent excessive current from the inverter's grid purchase and Export Energy from damaging or tripping the incoming circuit breaker, set the Rated Current at the grid connection point to limit the input and output current values.
Grid/On-Grid Protection	
Anti-islanding Protection	Enable or disable the Anti-islanding Protection function as required.
NS Protection	Enable or disable the NS Protection Function in accordance with the standard requirements of certain countries or regions.
Grid Code	
Grid Standard Code	Select the grid code based on the country or region where the inverter is installed.
Grid Code Parameter Settings	Safety regulation parameters must be set according to the requirements of the grid company. If changes are required, the consent of the grid company must be obtained.

General Setting Parameters

Parameter name.	Description
Device Self-test	Start the device status self-test.
Restore Factory Settings	Restore some functions to the factory state.

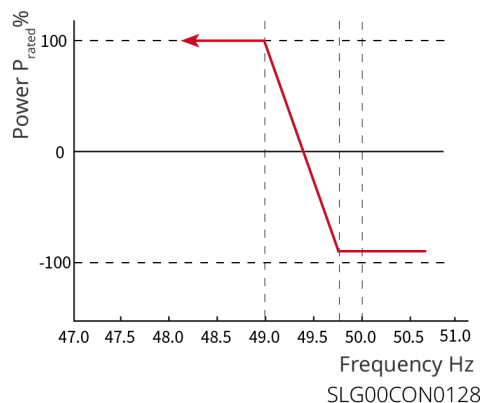
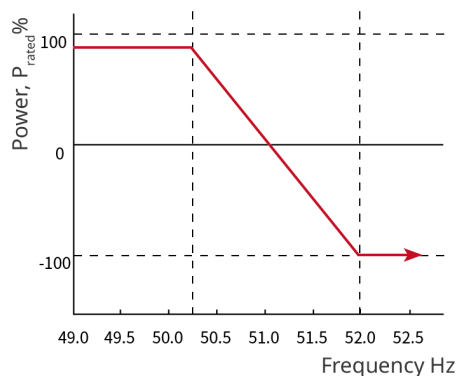
8.2.1 Custom Safety Regulation Parameters

NOTE

Safety regulation parameters must be set according to the requirements of the grid company. If changes are required, the consent of the grid company must be obtained.

Active Power Mode

P(F) curve



P(U) curve

Parameter name.	Description
Output Active Power Setting	Set the output power limit value of the inverter.
Power change gradient	Set the change slope for active output power increase or decrease.
Overfrequency Derating	
P(F) curve	According to grid standard requirements in certain countries or regions, enable this function when the P(F) curve needs to be set.
Overfrequency Derating mode	Set the overfrequency Derating mode according to actual requirements. - Slope mode: Regulate power based on the overfrequency point and the Derating slope. - Stop mode: Regulate power based on the overfrequency start point and overfrequency end point.
Overfrequency start point	When the grid frequency is too high, the inverter output active power decreases. When the grid frequency is greater than this value, the inverter output power begins to decrease.

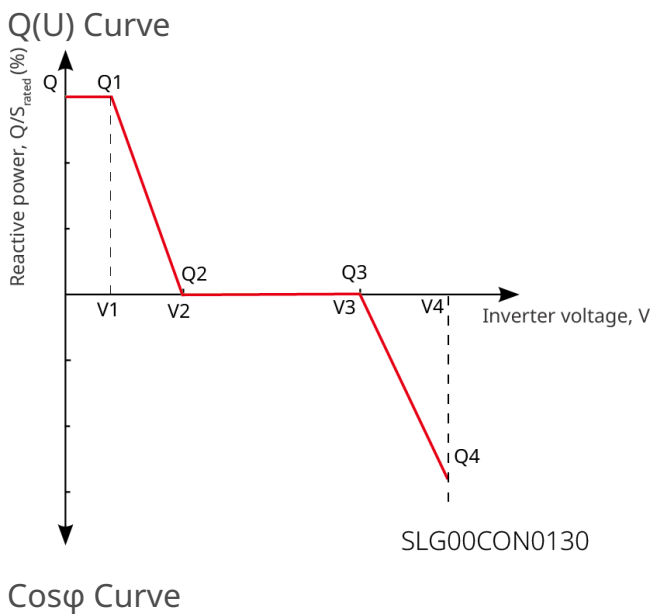
Parameter name.	Description
Import/Export Energy transition frequency	When the set frequency value is reached, the system switches from Export Energy to buying electricity.
Overfrequency end point	When the grid frequency is too high, the inverter output active power decreases. When the grid frequency is greater than this value, the inverter output power does not continue to decrease.
Over-frequency power slope reference power	Adjust the inverter output active power based on Rated Power, current power, Apparent Power, or maximum active power.
Over-frequency power slope	When the grid frequency is higher than the over-frequency point, the inverter output power is reduced according to the slope.
Silent Time	The delayed response time for the inverter output power change when the grid frequency is higher than the over-frequency point.
Hysteresis function enable	Enable the hysteresis function.
Frequency hysteresis point	During over-frequency derating, if the frequency decreases, the power is output at the lowest value of the derated power until the frequency drops below the hysteresis point, and then the power recovers.
Hysteresis waiting time	For over-frequency derating when the frequency decreases, when the frequency drops below the hysteresis point, the waiting time for power recovery, i.e., the power recovers only after waiting for a certain period.
Hysteresis power recovery slope reference power	For over-frequency derating when the frequency decreases, when the frequency drops below the hysteresis point, the reference for power recovery, i.e., power recovery is carried out at the rate of change of recovery slope * reference power. Supported: Pn Rated Power, Ps Apparent Power, Pm current power, Pmax Max. Power, power difference (ΔP).

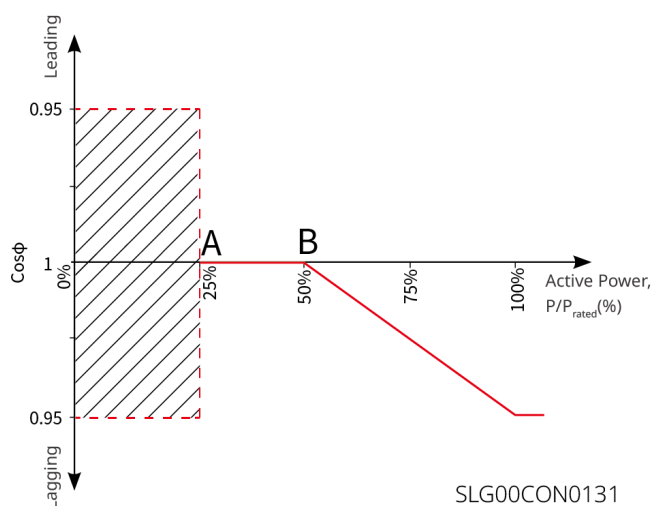
Parameter name.	Description
Hysteresis power recovery slope	For over-frequency derating, when the frequency decreases and falls below the hysteresis point, the power change slope during power recovery.
Under-frequency loading	
P(F) curve	According to grid standard requirements in certain countries or regions, enable this function when the P(F) curve needs to be set.
Under-frequency loading mode	Set the under-frequency loading mode according to actual requirements. • Slope mode: adjusts power based on the under-frequency point and loading slope. • Stop mode: adjusts power based on the under-frequency start point and under-frequency end point.
Under-frequency start point	When the grid frequency is too low, the inverter output active power increases. When the grid frequency is lower than this value, the inverter output power starts to increase.
Import/Export Energy transition frequency	When the set frequency value is reached, the system switches from Export Energy to buying electricity.
Under-frequency end point	When the grid frequency is too low, the inverter output active power increases. When the grid frequency is lower than this value, the inverter output power will no longer increase.
Over-frequency power slope reference power	Adjust the inverter output active power based on Rated Power, current power, Apparent Power, or maximum active power.
Under-frequency power slope	When the grid frequency is too low, the inverter output active power increases. The slope at which the inverter output power rises.

Parameter name.	Description
Silent Time	When the grid frequency is below the under-frequency point, the delay response time of the inverter output power change.
Hysteresis function enable	Enable the hysteresis function.
Frequency hysteresis point	During under-frequency loading, if the frequency increases, the power is output at the minimum point of the loading power until the frequency rises above the hysteresis point, and then the power recovers.
Hysteresis waiting time	For underfrequency loading, when the frequency increases and becomes higher than the hysteresis point, the waiting time before power recovery, i.e., a certain time must elapse before power recovery begins.
Hysteresis power recovery slope reference power	For underfrequency loading, when the frequency increases and becomes higher than the hysteresis point, the reference for power recovery, i.e., power recovery is performed according to the rate of change of recovery slope $\times$ reference power. Supports: Pn Rated Power, Ps Apparent Power, Pm current power, Pmax Max. Power, power difference (ΔP).
Hysteresis power recovery slope	For underfrequency loading, when the frequency increases and becomes higher than the hysteresis point, the power change slope during power recovery.
P(U) curve enable	According to grid standard requirements in certain countries or regions, enable this function when the P(U) curve needs to be set.
Vn voltage	The ratio of the actual voltage at point Vn to the nominal voltage, $n=1, 2, 3, 4$. For example, when set to 90, it indicates: $V/V_{rated}\% = 90\%$.
Vn active power	The ratio of active power output by the inverter at point Vn to apparent power, $n=1, 2, 3, 4$. For example, when set to 48.5, it indicates: $P/P_{rated}\% = 48.5\%$.

Parameter name.	Description
Output response mode	Set the active output response mode. Supported: - First-order low-pass filter: within the response time constant, output regulation is implemented according to the first-order low-pass curve. - Slope dispatch: output regulation is implemented according to the set power change slope.
Power change gradient	When the output response mode is set to slope dispatch, Active Dispatch is implemented according to the power change gradient.
First-Order Low-Pass Filter Time parameter	When the output response mode is set to first-order low-pass filter, this is the time constant for active power changing according to the first-order low-pass filter curve.
Overload Function Switch	When enabled, the maximum active power output is 1.1 times the Rated Power; otherwise, the maximum active power output is consistent with the Rated Power value.

Reactive Power Mode





Parameter name.	Description
Fixed PF	
Fixed PF	According to the grid standard requirements of some countries or regions, enable this function when a fixed PF value is required. After the parameter settings are successful, the Power Factor remains unchanged during inverter operation.
Under-excitation	According to the grid standard requirements of the country or region and actual usage needs, set the Power Factor to a positive or negative number.
Over-excitation	
Power Factor	Set the Power Factor according to actual needs, ranging from -1 to -0.8 and +0.8 to +1.
Fixed Q	
Fixed Q	According to the grid standard requirements of some countries or regions, enable this function when Fixed Reactive Power is required.
Over-excitation/Under-excitation	According to the grid standard requirements of the country or region and actual usage needs, set the reactive power as inductive reactive power or capacitive reactive power.
Reactive Power	Set the ratio of reactive power to Apparent Power.
Q(U) Curve	

Parameter name.	Description
Q(U) Curve	According to the grid standard requirements of some countries or regions, enable this function when the Q(U) curve needs to be set.
Mode Selection	Set the Q(U) curve mode, supporting basic mode and slope mode.
Vn voltage	The ratio of the actual voltage at point Vn to the Nominal Voltage, n=1, 2, 3, 4.
	For example, when set to 90, it means: $V/V_{rated}\%=90\%$.
Vn Reactive Power	The ratio of the reactive power output by the inverter at point Vn to the Apparent Power, n=1, 2, 3, 4. For example, when set to 48.5, it means: $Q/S_{rated}\%=48.5\%$.
Voltage Dead Band Width	When the Q(U) curve mode is set to slope mode, set the voltage dead band. Within the dead band range, there is no requirement for reactive power output.
Over-excitation Slope	When the Q(U) curve mode is set to slope mode, set the power change slope to a positive or negative number.
Under-excitation slope	
Vn Reactive Power	The ratio of the reactive power output by the inverter at point Vn to the Apparent Power, n=1, 2, 3, 4. For example, when set to 48.5, it means: $Q/S_{rated}\%=48.5\%$.
Q(U) curve response time constant	The power must reach 95% within 3 response time constants according to a first-order low-pass curve.
Extended function enable	Enable the extended function and set the corresponding parameters.
Enter curve power	When the ratio of the inverter output reactive power to Rated Power is between the enter curve power and the exit curve power, the Q(U) curve requirements are met.
Exit curve power	

Parameter name.	Description
cosφ(P) curve	
cosφ(P) curve	Select this function when it is necessary to set the Cosφ curve according to the grid standard requirements of certain countries or regions.
Mode Selection	Set the cosφ(P) curve mode, supporting basic mode and slope mode.
N-point power	Inverter output active power as a percentage of Rated Power at point N. N=A, B, C, D, E.
cos φ value at point N	Power Factor at point N. N=A, B, C, D, E.
Over-excitation Slope	When the cosφ(P) curve mode is set to Slope mode, set the power change slope to a positive or negative number.
Under-excitation slope	
Power at point n	Inverter output active power as a percentage of Rated Power at point N. N=A, B, C.
cos φ value at point n	Power Factor at point N. N=A, B, C.
cosφ(P) curve response time constant	The power must reach 95% within 3 response time constants according to a first-order low-pass curve.
Extended function enable	Enable the extended function and set the corresponding parameters.
Enter Curve Voltage	When the grid voltage is between the Enter Curve Voltage and the Exit Curve Voltage, the voltage meets the cosφ curve requirements.
Exit Curve Voltage	
Q(P) curve	

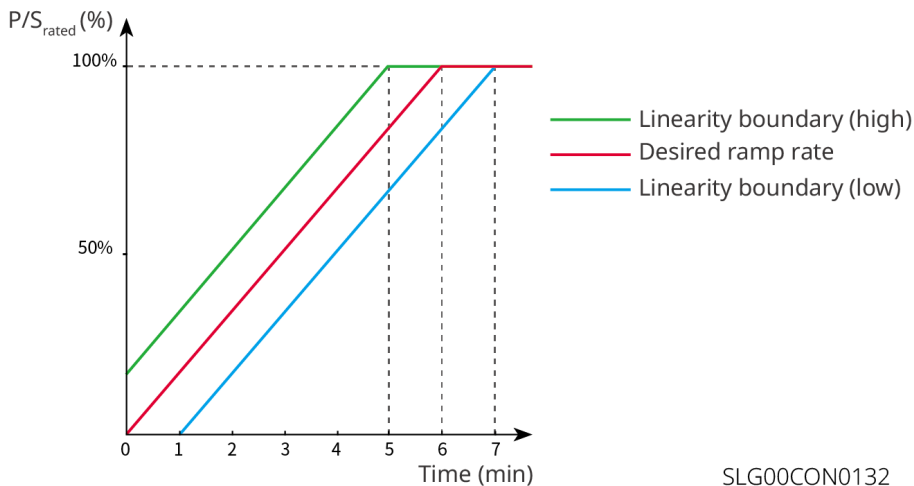
Parameter name.	Description
Q(P) Curve Enable	According to the grid standard requirements of some countries or regions, enable this function when the Q(P) curve needs to be set.
Mode Selection	Set the Q(P) curve mode, supporting Basic mode and Slope mode.
Power at point P _n	Ratio of reactive power at point P _n to Rated Power, n=1, 2, 3, 4, 5, 6. For example: when set to 90, it indicates: Q/Prated%=90%.
Reactive power at point P _n	Ratio of active power at point P _n to Rated Power, n=1, 2, 3, 4, 5, 6. For example: when set to 90, it indicates: P/Prated%=90%.
Over-excitation Slope	When the Q(P) curve mode is set to slope mode, set the power change slope to a positive or negative number.
Under-excitation slope	
Power at point P _n	Ratio of reactive power at point P _n to Rated Power, n=1, 2, 3. For example: when set to 90, it indicates: Q/Prated%=90%.
Reactive power at point P _n	Ratio of active power at point P _n to Rated Power, n=1, 2, 3. For example: when set to 90, it indicates: P/Prated%=90%.
Response time constant	The power must reach 95% within 3 response time constants according to a first-order low-pass curve.

Grid Protection Parameters

Parameter name.	Description
Overvoltage trigger n-step value	Set the grid overvoltage trigger n-step Protection point, n=1, 2, 3, 4.

Parameter name.	Description
Overvoltage trigger n-step trip time	Set the grid over-voltage trigger stage n trip time, n=1, 2, 3, 4.
Under-voltage trigger stage n value	Set the grid under-voltage trigger stage n Protection point, n=1, 2, 3, 4.
Under-voltage trigger stage n trip time	Set the grid under-voltage trigger stage n trip time, n=1, 2, 3, 4.
10min Over-voltage Trigger Value	Set the 10min Over-voltage Trigger Value.
10min Over-voltage Trip Time	Set the 10min Over-voltage Trip time.
Over-frequency trigger stage n value	Set the grid over-frequency trigger stage n Protection point, n=1, 2, 3, 4.
Over-frequency trigger stage n trip time	Set the grid over-frequency trigger stage n trip time, n=1, 2, 3, 4.
Under-frequency trigger stage n value	Set the grid under-frequency trigger stage n Protection point, n=1, 2, 3, 4.
Under-frequency trigger stage n trip time	Set the grid under-frequency trigger stage n trip time, n=1, 2, 3, 4.

Grid Connection Parameters



Parameter name.	Description
Startup On-Grid	
Connection Voltage Upper Limit	When the inverter first connects to the grid, if the grid voltage is higher than this value, the inverter will not be able to connect to the grid.
Connection Voltage Lower Limit	When the inverter first connects to the grid, if the grid voltage is lower than this value, the inverter will not be able to connect to the grid.
Connection Frequency Upper Limit	When the inverter first connects to the grid, if the grid frequency is higher than this value, the inverter will not be able to connect to the grid.
Connection Frequency Lower Limit	When the inverter first connects to the grid, if the grid frequency is lower than this value, the inverter will not be able to connect to the grid.
Grid Connection Waiting Time	When the inverter first connects to the grid, the waiting time before connecting to the grid after the grid voltage and frequency meet the grid connection requirements.
Soft Ramp Up Slope Enable	Enable the start-up ramp function.

Parameter name.	Description
Soft Ramp Up Slope	According to the standard requirements of certain countries or regions, the percentage of power increment that can be output per minute when the inverter is powered on for the first time.
Fault Reconnection	
Connection Voltage Upper Limit	When the inverter reconnects to the grid after a fault, if the grid voltage is higher than this value, the inverter will be unable to connect to the grid.
Connection Voltage Lower Limit	When the inverter reconnects to the grid after a fault, if the grid voltage is lower than this value, the inverter will be unable to connect to the grid.
Connection Frequency Upper Limit	When the inverter reconnects to the grid after a fault, if the grid frequency is higher than this value, the inverter will be unable to connect to the grid.
Connection Frequency Lower Limit	When the inverter reconnects to the grid after a fault, if the grid frequency is lower than this value, the inverter will be unable to connect to the grid.
Grid Connection Waiting Time	When the inverter reconnects to the grid after a fault, the waiting time to connect to the grid after the grid voltage and frequency meet the grid connection requirements.
Reconnection load ramp enable	Enable the start-up ramp function.
Reconnection load ramp	According to the standard requirements of certain countries or regions, the percentage of power increment that can be output per minute when the inverter is not connected to the grid for the first time. For example: when set to 10, it means the reconnection load ramp is: 10%P/Strated/min.

Voltage fault ride-through parameters

Parameter name.	Description
Low voltage ride-through	
UVn point voltage	During low voltage ride-through, the ratio of the ride-through voltage at the LVRT characteristic point to Nominal Voltage. $n=1, 2, 3, 4, 5, 6, 7$.
UVn point time	During low voltage ride-through, the ride-through time at the LVRT characteristic points. $n=1, 2, 3, 4, 5, 6, 7$.
LVRT entry threshold	When the grid voltage is between the LVRT entry threshold and the LVRT exit threshold, the inverter does not immediately perform a Grid Power Outage.
LVRT exit threshold	
Slope K1	During low voltage ride-through, the K value coefficient for reactive power support.
Zero Current Mode enable	After enabling, during low voltage ride-through, the system outputs zero current.
Entry threshold	Threshold for entering Zero Current Mode.
High voltage ride-through	
OVn point voltage	During high voltage ride-through, the ratio of the ride-through voltage at the HVRT characteristic points to the Nominal Voltage. $n=1, 2, 3, 4, 5, 6, 7$.
OVn point time	During high voltage ride-through, the ride-through time at the HVRT characteristic points. $n=1, 2, 3, 4, 5, 6, 7$.
HVRT entry threshold	When the grid voltage is between the HVRT entry threshold and the HVRT exit threshold, the inverter does not immediately perform a Grid Power Outage.
HVRT exit threshold	
Slope K2	During high voltage ride-through, the K value coefficient for reactive power support.
Zero Current Mode enable	During high voltage ride-through, the system outputs zero current.

Parameter name.	Description
Entry threshold	Threshold for entering Zero Current Mode.

Frequency fault ride-through parameters

Parameter name.	Description
Frequency ride-through enable	Enable the frequency ride-through function.
UFn point frequency	Set the frequency at under-frequency point n. n=1, 2, 3.
UFn point time	Set the under-frequency time at under-frequency point n. n=1, 2, 3.
OFn point frequency	Set the frequency at over-frequency point n. n=1, 2, 3.
OFn point time	Set the overfrequency time of overfrequency point n. n = 1, 2, 3.

8.2.2 On-Grid Power Dispatch Parameters

Grid-Connected Power Limit (General)

Parameter name.	Description
Grid-Connected Power Limit	According to the grid standard requirements of certain countries or regions, turn on this function when output power limit is required.
Power Limit Value	Set according to the actual Max. Power that can be input to the grid.

Grid-Connected Power Limit (Australia)

Parameter name.	Description
Software Power Limit	According to the grid standard requirements of certain countries or regions, turn on this function when output power limit is required.

Parameter name.	Description
Power Limit Value	• Set according to the actual Max. Power that can be input to the grid. • Supports setting a fixed power value or percentage. The set percentage is the percentage of the limited power relative to the inverter Rated Power. • After a fixed value is set, the percentage changes automatically; after a percentage is set, the fixed value changes automatically.
Hardware Power Limit	After this function is enabled, when the energy fed into the grid exceeds the limit value, the inverter will automatically disconnect from the grid.

Grid-Connected Power Limit (UK)

Parameter name.	Description
Grid-Connected Power Limit	According to the grid standard requirements of certain countries or regions, turn on this function when output power limit is required.
Mode Selection	• Some models require selecting a current limit mode. Supported: per-phase current, total current. • When set to per-phase current, the current of each phase is limited; when set to total current, the total three-phase current is limited.
Current Limit	Set according to the actual maximum current that can be fed into the grid.

Grid-Connected Power Limit (Brazil)

In regions such as Brazil, users are allowed to set different power limits in different time periods to meet grid requirements.

Please download the template as prompted on the interface, configure power limit information for different time periods. After filling in the template, upload it to the App to complete time-of-use power limiting.

Power Dispatch

Parameter name.	Description
Active Power Dispatch	
Active Dispatch Mode	According to the requirements of the power grid company in the country/region where the inverter is located, control the active power according to the selected dispatch mode. Supported: • Disabled: Active Dispatch is not enabled. • Active power (W): dispatch at a fixed value. • Active Power (%Pn): Dispatching is performed according to the percentage of active power to Rated Power.
Reactive Power Dispatch	
Reactive Dispatch Mode	According to the requirements of the power grid company in the country/region where the inverter is located, the reactive power is controlled according to the selected dispatch mode. Supported: • Disabled: Reactive power dispatch is not enabled. • Reactive Power (Var): Dispatch according to a fixed value. • Reactive Power (%Pn): Dispatch according to the percentage of reactive power to Rated Power. • PF Compensation.
Night Reactive Power	
Night Reactive Power Enable	Enable the nighttime reactive power function.

Parameter name.	Description
Night Reactive Dispatch Mode	According to the requirements of the grid company in the country/region where the inverter is located, control the nighttime reactive power according to the selected dispatch mode. Supports: • Disabled: Reactive power dispatch is not enabled. • Night Reactive Dispatch (Var): Dispatch according to a fixed value. • Night Reactive Dispatch (%Pn): Dispatch according to the percentage of reactive power relative to Rated Power.

Power Dispatch Response Parameters

Parameter name.	Description
Active Power Dispatch Response	Achieve the active power dispatch value through the dispatch response method. Supports: • First-order low-pass filtering, i.e., implement Active Dispatch according to the first-order low-pass curve within the response time constant, and set the time constant when the active power changes according to the first-order low-pass filter curve. • Slope mode, i.e., implement Active Dispatch according to the power change slope, and set the active power dispatch change slope.

Parameter name.	Description
Reactive Power Dispatch Response	Achieve the reactive power dispatch value through the dispatch response method. Supports: • First-order low-pass filtering, i.e., implement Reactive Dispatch according to the first-order low-pass curve within the response time constant, and set the time constant when the reactive power changes according to the first-order low-pass filter curve. • Slope mode, i.e., implement Reactive Dispatch according to the power change slope, and set the reactive power dispatch change slope.

8.2.3 Grid Remote Dispatch Parameters

According to the grid standard requirements of certain countries or regions, it is necessary to connect third-party dispatch equipment to realize the remote dispatch function of the PV system.

- Remote Shutdown: The remote shutdown function is realized through the signal control port. When an accident occurs, the device can be controlled to stop working.
- DRED (Demand Response Enabling Device): PassedDREDThe signal control port controls the device to meet requirements in Australia and other regions.DREDCertification requirements.
- RCR (Ripple Control Receiver): PassedRCRThe signal control port controls the device to meet grid dispatch requirements in Germany and other regions.
- EnWG (Energy Industry Act) 14a:All controllable loads must accept emergency dimming from the grid. The grid operator may temporarily reduce the maximum grid-import power of controllable loads to 4.2kW.

8.2.4 Multiplexed Port Parameters

Load Control Parameters

When the inverter supports the load control function, the load can be controlled via the App.

For the ET40-50kW series inverters, the load control function is supported only when the inverter is used with an STS. The inverter supports load control on the

GENERATOR port or the BACKUP LOAD port.

- Dry Contact Mode: When the switch state is set to ON, power supply to the load starts; when the switch state is set to OFF, power supply to the load stops. Please set the switch state to ON or OFF according to actual needs.
- Time Mode: In Time Mode, power to the load will be automatically turned on or off within the set time period. You can select Standard Mode or Smart Mode.

Parameter name.	Description
Standard Mode	Power will be supplied to the load during the set time period.
Smart Mode	Within the set time period, when the surplus energy generated by PV exceeds the preset load rated power, power supply to the load will start.
On Time	Time Mode will be enabled during the time period between the On Time and the Off Time.
Off Time	
Repeat	Set the repeat frequency.
Minimum Load Operating Time	Only applicable to Smart Mode. The minimum run time after the load is turned on to prevent frequent switching due to energy fluctuations.
Load Rated Power	Only applicable to Smart Mode. When the surplus energy generated by PV exceeds this load's Rated Power, power supply to the load begins.

- SOC Mode: The inverter built-in relay dry contact control port (for ET40-50kW series inverters, the STS built-in control port) controls whether to supply power to the load. In off-grid mode, if an Overload is detected on the BACK-UP or GENERATOR port, or the battery SOC Protection Function is triggered, power supply to loads connected to the port can be stopped.

Diesel Generator Control Parameters

When the inverter supports the Diesel Generator Control function, the generator can be controlled via the App.

For ET40-50kW series inverters, generator connection and control are supported only when the inverter is used with an STS.

For ET50-100kW series inverters, generator connection and control are supported only when the inverter is used with an STS.

- **Generator Not Connected:** When there is no Diesel Generator Connection to the energy storage system, please select Generator Not Connected.
- **Manual generator control (dry contact connection not supported):** The generator must be manually started and stopped; the inverter cannot control the generator start/stop.
- **Automatic Diesel Generator Control (supports dry contact connection):** When the generator has a dry contact control port and is connected to the inverter, the inverter's Diesel Generator Control Mode should be set to Switch Control Mode or Automatic Control Mode in the App.
 - **Switch Control Mode:** When the switch is on, the generator operates; after running for the set running time, it automatically stops.
 - **Automatic Control Mode:** The generator is prohibited from working during the set prohibited working time period, and works during the Running Time Period.

Parameter name.	Description
Dry Node Control Method	Switch Control Mode / Automatic Control Mode.
Switch Control Mode	
Diesel Generator Dry Node Switch	Only applicable to Switch Control Mode.
Running Time	The continuous running time of the generator. After the time is reached, the generator stops running.
Automatic Control Mode	
Prohibited Working Time	Set the Running Time Period during which the generator is prohibited from running.
Running Time	The generator runs continuously for a set period after starting, and stops after that time is reached. If the generator's running time period includes the prohibited working time, the generator stops running during that period; after the prohibited working time, the generator resumes running and timing.

Parameter name.	Description
Generator Information Settings	

Parameter name.	Description
Rated Power	Set the Rated Power for generator operation.
Running Time	Set the generator's continuous running time; after the continuous running time ends, the generator is shut down.
Voltage Upper Limit	Set the Voltage Range for generator operation.
Voltage Lower Limit	
Frequency Upper Limit	Set the Frequency Range for generator operation.
Lower Frequency Limit	
Preheat Time	Set the generator no-load preheat time.
Diesel Generator Battery Charging Setting	
Switch	Select whether to use the generator to charge the battery.
Max. Charging Power (%)	The charging power when the generator generates electricity to charge the battery.
Start Charging SOC	When connecting a lithium battery, set the SOC threshold for generator start. When Battery SOC Low is below the set value, start the generator to charge the battery.
Stop Charging SOC	When connecting a lead-acid battery, set the voltage threshold for generator shutdown. When the battery voltage is higher than the set value, shut down the generator to stop charging the battery.
Start Charging Voltage	When connecting a lead-acid battery, set the voltage threshold for generator start. When Battery Voltage is lower than the set value, start the generator to charge the battery.
Stop Charging Voltage	When connecting a lead-acid battery, set the voltage threshold for generator shutdown. When Battery Voltage is higher than the set value, shut down the generator to stop charging the battery.

Micro-grid Control Parameters

Parameter name.	Description
Maximum Battery Charging SOC	When the Battery Type is lithium battery, set the Charging SOC upper limit; charging stops when the upper limit is reached.
Maximum Battery Charging Voltage	When the Battery Type is lead-acid battery, set the charging voltage upper limit; charging stops when the upper limit is reached.
Microgrid Forced Start Charging	• When the grid fails, if the battery level is low and cannot support off-grid operation of the energy storage inverter, tap this button to force start the energy storage inverter to output voltage to the grid-tied inverter, thereby starting the grid-tied inverter. • Takes effect once.
Hourly Trigger	• When the grid fails, if the battery level is low and cannot support off-grid operation of the energy storage inverter, enabling this function causes the system to force start the energy storage inverter to output voltage to the grid-tied inverter at fixed times, thereby starting the grid-tied inverter. • Takes effect multiple times.
Grid Power Limit Offset Value	Set the adjustable range of the Max. Power that the device can actually purchase from the grid.

8.3 Battery Parameters

Parameter Settings - Information Configuration

Select the battery model according to the actual connected Battery Type.

When the device is installed in California or other regions, please fill in the plant battery capacity information according to local regulatory requirements to complete the JA12 Certification.

Parameter Settings - Lead-Acid Settings

When connecting a lead-acid battery, you need to set the lead-acid battery parameters.

Parameter name.	Description
Battery Parameters	
Battery capacity	Set the battery capacity based on actual parameters.
Battery internal resistance	Set the battery internal resistance based on actual parameters.
Temperature compensation	- When the battery temperature changes, the battery charging voltage is affected. With 25°C as the reference, for each degree of battery temperature change, the charging voltage upper limit is adjusted according to the set value. - For example, if the charging temperature influence coefficient is set to 10, when the battery temperature rises to 26°C, the charging voltage upper limit decreases by 10 mV.
Discharge parameters	
Discharge parameters	Set the battery discharge parameters according to actual requirements.
Charging parameters	
Constant charging voltage	Set the voltage value for constant charging according to actual requirements.
Float charging voltage	Set the voltage value for float charging according to actual requirements.
Float charging current	The maximum Charging Current after the battery charging mode switches from constant/equalizing charging to float charging.
Switch to Float Charging Mode	The duration required for the battery charging mode to switch from constant/equalizing charging to float charging.

Parameter name.	Description
Equalizing charge cycle	Set the interval days for battery equalizing charging.

Parameter Settings - Lithium Battery Settings

When a lithium battery is connected, it is necessary to set the lithium battery parameters.

Parameter name.	Description
Maximum Charging Current	Applicable to some models. Set the maximum Charging Current during battery charging according to actual requirements.
Maximum discharge current	Applicable to some models. Set the maximum discharge current during battery discharging according to actual requirements.

Parameter name.	Description
Battery heating	• Optional. When a battery supporting the heating function is connected, this option is displayed on the interface. After enabling the battery heating function, if the battery temperature does not support battery starting, PV power or purchased electricity will be used to heat the battery. • Different battery models have different Heating Mode temperatures. Please refer to the actual product. • Enabling the battery heating function will consume a portion of system power. By default, the battery heating function operates in Low Power Mode; if needed, it can be switched to other power modes. • The start and stop of the battery heating function are determined byBMSAutomatically controlled based on ambient temperature; therefore, differences in the installation environment and location of the equipment can affect the start/stop of the heating function. • Supports setting heating time periods based on actual needs, but within the time period, the heating function will still start/stop automatically under the influence of ambient temperature. • If PV and ACIf the power only meets the load consumption and the battery power is insufficient to support self-heating, the heating function cannot be enabled.
Battery Wake-up	• After enabling, when the battery shuts down due to under-voltage Protection, the battery can be awakened. • Only applicable to lithium batteries without a circuit breaker. After enabling, the output voltage of the battery port is about 60V.

Parameter name.	Description
Breathing Light	• Only applicable to ESA 3-10kW series inverters. • Set the flashing duration of the device Breathing Light. Supported: always on, always off, 3 min. • The default mode is to light up for 3 minutes after power-on and then automatically turn off.

Protection Parameters - Limit Protection

Parameter name.	Description
SOC Upper Limit	The upper limit value for battery charging. When the battery SOC reaches the SOC upper limit, charging stops.
SOC Protection	After enabling, when the battery capacity is lower than the set depth of discharge, the Protection Function for the battery can be enabled.
Grid-connected SOC Lower Limit	The minimum SOC that the battery needs to maintain when the inverter operates in grid-connected mode.
Off-grid SOC Lower Limit	The minimum SOC that the battery needs to maintain when the inverter operates in off-grid mode.
Backup SOC Maintenance	To ensure that the battery SOC is sufficient to maintain normal operation of the system during off-grid operation, when the system is in grid-connected operation, the battery will purchase electricity from the grid to charge to the set SOC Protection value.
Off-grid Recovery SOC	When the inverter is operating off-grid, if the battery SOC drops to the SOC lower limit, the inverter stops output and is only used to charge the battery until the battery SOC recovers to the off-grid recovery SOC value. If the SOC lower limit value is higher than the off-grid recovery SOC value, the battery is charged to SOC lower limit +10%.

Immediate Charging Parameters

Parameter name.	Description
Immediate Charging	After enabling, the grid immediately charges the battery. It takes effect only once.
SOC for stopping charging	When the battery SOC reaches the immediate charging SOC upper limit, charging of the battery will stop.
Immediate Charging Power	When Immediate Charging starts, the charging power as a percentage of the inverter rated power. For example, for an inverter with a rated power of 10 kW, when set to 60, the charging power is 6 kW.
Start	Start Charging immediately.
Stop	Stop the current charging task immediately.

JA12 Certification

Only applicable in California.

Parameter name.	Description
Certification Capacity	Maintain the battery capacity for Certification according to actual needs and the JA12 Certification requirements.
Current Battery System Capacity	Total capacity of batteries currently installed in the system.

8.4 Meter Parameters

Parameter name.	Description
Meter Binding	- When grid-tied inverters and energy storage inverters are used simultaneously in a PV system to implement coupling or microgrid functions, dual meters may be used in the system. Please set the Meter Binding information according to actual usage. - Only applicable to GoodWe meters.

Parameter name.	Description
Meter/CT Auxiliary Detection	Using this function, you can detect whether the meter CT is connected correctly and its current operating status.
External Meter CT Ratio	Set the current ratio between the primary side and the secondary side of the external CT of the meter.

8.5 Smart Communication Stick Parameters

NOTE

When the communication module connected to the inverter differs, the communication configuration interface may differ. Refer to the actual interface.

Communication parameters.

Parameter name.	Description
WLAN/LAN	
WLAN Control	Disabled by default. After this feature is enabled, when the App and the device are on the same LAN, they can connect via WLAN; otherwise, they cannot connect even if they are on the same LAN.
Modbus TCP	After this feature is enabled, third-party platforms can access the inverter via the Modbus TCP protocol for monitoring.
LAN	Automatically identify the LAN network to which the device is connected.
WLAN	Based on the actual situation, select the WiFi network the device connects to, and enable communication between the device and the router or switch.
4G	

Parameter name.	Description
APN Settings	• APN settings are only applicable to configuring SIM card information for 4G communication devices. • If the 4G module does not provide Bluetooth signal, configure APN parameters via the Bluetooth module or WiFi module first to enable 4G communication.
Bluetooth	
Bluetooth Stays On	Disabled by default. When this feature is enabled, the device's Bluetooth Stays On to maintain connection with the App. Otherwise, the device's Bluetooth will turn off after 5 minutes and disconnect from the App.
WLAN Networking	
WLAN Networking	• Only applicable to microinverters. • It is recommended to set the inverter with high RSSI in the network as the master node.

Password

Supports modifying the App login password when using Local Access.

When Local Access is performed via WiFi, the hotspot password of the WiFi communication stick can be modified.

Control/Enable Parameters

Parameter name.	Description
FTP	When this function is enabled, system operation data can be uploaded to a designated server via FTP protocol, enabling remote monitoring.

Parameter name.	Description
Remote Maintenance	When this function is enabled, remote maintenance of the device is supported, such as remote upgrade.
Restore Factory Settings	Restore the smart communication stick to factory settings, including password, network configuration information, etc.

8.6 Home Energy Management Device Parameters

NOTE

Please set parameters in accordance with local laws, regulations, and grid standard requirements.

Grid Control parameters

No.	Parameter name.	Description
1	Enable Function	According to the grid standard requirements of certain countries or regions, turn on this function when output power limit is required.
2	Power Limit	According to the requirements of certain countries or regions, set the Max. Power that the device can actually feed into the grid.
3	Power Limited Type	Select the method for controlling the device output power according to actual conditions. • Total power: Control the total power at the grid connection point so that it does not exceed the output power limit. • Single-phase power: Control the power of each phase at the grid connection point so that none exceeds the output power limit.

No.	Parameter name.	Description
4	Grid-connected power limit offset	Set the adjustable range for the Max. Power the device can actually feed into the grid. Max. Power delivered to the grid = Maximum feed-in grid power + Maximum feed-in grid power offset value.
5	Reverse current Protection handling method	When the system experiences reverse current for longer than the maximum Protection time (default 5s), the following Protection measures can be taken: • Power limitation: The device continues to operate at a percentage of its Rated Power. • The device disconnects from the grid.
6	Power Limit Protection Handling	The device continues to operate at a percentage of its Rated Power.
7	Meter communication exception handling	When this function is enabled, Protection measures will be taken if communication between the meter and the device is abnormal.
8	Meter Abnormality Handling Method	When abnormal meter communication occurs in the system, the following Protection measures can be taken: • Power limitation: The device continues to operate at a percentage of its Rated Power. • EquipmentGrid Disconnection.
9	Meter Handling Power Limit	The device continues to operate at a percentage of its Rated Power.

Power Control Parameters

No.	Parameter name.	Description
RCR: According to standards in Germany and other regions, the device must provide an RCR (Ripple Control Receiver) signal control port to meet grid dispatch requirements.		
1	RCR	Enable or disable the RCR function.
2	Active Dispatch	• According to grid company requirements and the RCR fixture type, select one or more DI ports and set the corresponding percentage. The percentage refers to the percentage of system output power relative to the rated power. • Supports configuration of 16 percentage levels; set according to actual grid company requirements. • Do not set duplicate status combinations for DI1-DI4, otherwise the function will not operate correctly. • If the actual DI port wiring does not match the set values, the operating status will not take effect.
3	Reactive Dispatch	• According to grid company requirements and the RCR fixture type, select one or more DI ports and set the corresponding PF value. • Supports configuration of 16 Power Factor levels; set according to actual grid company requirements. • PF value range requirements: [-100, -80] or [80, 100]; the corresponding power factor for [-100, -80] is lagging [-0.99, -0.8], and for [80, 100] it is leading [0.8, 1]. • Do not set duplicate status combinations for DI1-DI4, otherwise the function will not operate correctly. • If the actual DI port wiring does not match the set values, the operating status will not take effect.

No.	Parameter name.	Description
RCR&EnWG 14a: - According to standards in Germany and other regions, the device must provide an RCR (Ripple Control Receiver) signal control port to meet grid dispatch requirements. - For regions subject to EnWG 14a, all controllable loads must accept emergency curtailment by the grid. The grid operator can temporarily reduce the maximum grid purchase power of controllable loads to 4.2 kW.		
4	RCR&EnWG 14a	Enable or disable the RCR & EnWG 14a function.
5	Import Power Limit	Set the upper limit of power purchased from the grid according to local grid regulations.
6	Active Dispatch	- The DI4 port is fixed for EnWG 14a. - According to grid company requirements and the RCR fixture type, select one or more DI ports and set the corresponding percentage. The percentage refers to the percentage of system output power relative to the rated power. - Supports configuration of 8 percentage levels; set according to actual grid company requirements. - Do not set duplicate status combinations for DI1-DI3, otherwise the function will not operate correctly. - If the actual DI port wiring does not match the set values, the operating status will not take effect.

No.	Parameter name.	Description
7	Reactive Dispatch	- The DI4 port is fixed for EnWG 14a. - According to grid company requirements and the RCR fixture type, select one or more DI ports and set the corresponding PF value. - Supports configuration of 8 Power Factor levels; set according to actual grid company requirements. - PF value range requirements: [-100, -80] or [80, 100]; the corresponding power factor for [-100, -80] is lagging [-0.99, -0.8], and for [80, 100] it is leading [0.8, 1]. - Do not set duplicate status combinations for DI1-DI3, otherwise the function will not operate correctly. - If the actual DI port wiring does not match the set values, the operating status will not take effect.
Remote Shutdown: According to the requirements of certain countries or regions, the device must provide a Remote Shutdown function to stop the device in emergency situations.		
8	Remote Shutdown	Enable or disable the Remote Shutdown function.
9	Recovery On-Grid Immediate	To restore the grid-connected state after the device is shut down, first manually power on the device, then click Recovery On-Grid Immediate.

Other Parameters

No.	Parameter name.	Description
Meter Settings		
1	Select Meter	Select the model of the meter actually connected.

No.	Parameter name.	Description
2	Wiring Mode	Set the wiring mode of the meter. Supported: • Single-phase single-wire • Three-phase three-wire • Three-phase four-wire
3	CT Ratio	• Set when the meter model is GM330. • Set the CT ratio value of the meter.
Antenna Settings		
4	Select Antenna	Select the built-in antenna or external antenna according to the actual situation.
Time Settings		
5	Network Time Synchronization	After enabling, select a time synchronization server, and the time will be synchronized according to the selected time source.
6	Time Server	Set the time synchronization server. Supported: • time.google.com • pool.ntp.org • ntp.aliyun.com

Export Logs

Supports exporting device operation logs. Before exporting logs, confirm that the HEMS and the phone are connected to the same router.

8.7 Charging Pile Parameters

Parameter name.	Description
Plug and Charge	• After Plug and Charge is enabled, insert the charging gun into the vehicle to Start Charging. • If charging is interrupted, insert and remove the charging gun again or manually start charging.
Scheduled Charging	Set the scheduled Charging Time as needed. You can choose a single charging session or multiple cycle charging sessions.
Distance per kWh Setting	Set the energy mileage conversion ratio.

8.8 Operation and Maintenance Parameters

Parameter name.	Description
Firmware Upgrade	• Supports viewing or upgrading firmware versions such as the device's DSP version, ARM version, BMS version, AFCI version, STS version, communication module, etc. • Supports viewing firmware upgrade records. • Firmware upgrade methods: one-click upgrade of all firmware, individual firmware upgrade, and manual import firmware upgrade. Different devices support different upgrade methods; please refer to the actual device. • Some devices do not support upgrading the software version via the App; please refer to the actual device.

Parameter name.	Description
Log Export	• Supports exporting, downloading, and sharing logs. • Supports exporting different types of logs, such as communication module logs, inverter logs, etc. • Some models support exporting the safety regulation parameter file after selecting the safety regulation country.
Grid	
Auto Test	According to the grid standard requirements of certain countries or regions, enable this function when an automatic grid-connection test needs to be set.

8.9 Australia Safety Regulations

For the Australian market, to comply with AS/NZS 4777.2:2020, please select from Australia A, Australia B, Australia C, or New Zealand. Please contact your local electricity grid operator on which Region to select.

Selecting a Region B should then automatically load all region B setpoints for volt-watt, volt-var, underfrequency, overfrequency, etc.

Volt-var response set-point values

Region	Default value	U1	U2	U3	U4
Australia A	Voltage	207V	220V	240V	258V
	Inverter reactive power level (Q) % of S_{rated}	44 % supplying	0%	0%	60 % absorbing
Australia B	Voltage	205V	220V	235V	255V
	Inverter reactive power level (Q) % of S_{rated}	30 % supplying	0%	0%	40 % absorbing

Region	Default value	U1	U2	U3	U4
Australia C	Voltage	215V	230V	240V	255V
	Inverter reactive power level (Q) % of S_{rated}	44 % supplying	0%	0%	60 % absorbing
New Zealand	Voltage	207V	220V	235V	244 V
	Inverter reactive power level (Q) % of S_{rated}	60 % supplying	0%	0%	60 % absorbing
Allowed range	Voltage	180 to 230 V	180 to 230 V	230 to 265 V	230 to 265 V
	Inverter reactive power level (Q) % of S_{rated}	30 to 60 % supplying	0%	0%	30 to 60 % absorbing

NOTE 1: Inverters may operate at a reactive power level with a range up to 100 % supplying or absorbing.

NOTE 2: Australia C parameter set is intended for application in isolated or remote power systems.

Volt-watt response default set-point values

Region	Default value	U3	U4
Australia A	Voltage	253V	260V
	Inverter maximum active power output level (P) % of S_{rated}	100%	20%
Australia B	Voltage	250V	260V
	Inverter maximum active power output level (P) % of S_{rated}	100%	20%
Australia C	Voltage	253V	260V

Region	Default value	U3	U4
	Inverter maximum active power output level (P) % of S_{rated}	100%	20%
New Zealand	Voltage	242 V	250V
	Inverter maximum active power output level (P) % of S_{rated}	100%	20%
Allowed range	Voltage	235 to 255 V	240 to 265 V
	Inverter maximum active power output level (P) % of S_{rated}	100%	20%

NOTE: Australia C parameter set is intended for application in isolated or remote power systems.

Passive anti-islanding voltage limit values

Protective function	Protective function limit	Trip delay time	Maximum disconnection time
Undervoltage 2 (V < <)	70 V	1 s	2 s
Undervoltage 1 (V <)	180 V	10 s	11 s
Overvoltage 1 (V >)	265 V	1 s	2 s
Overvoltage 2 (V > >)	275V	-	0.2 s

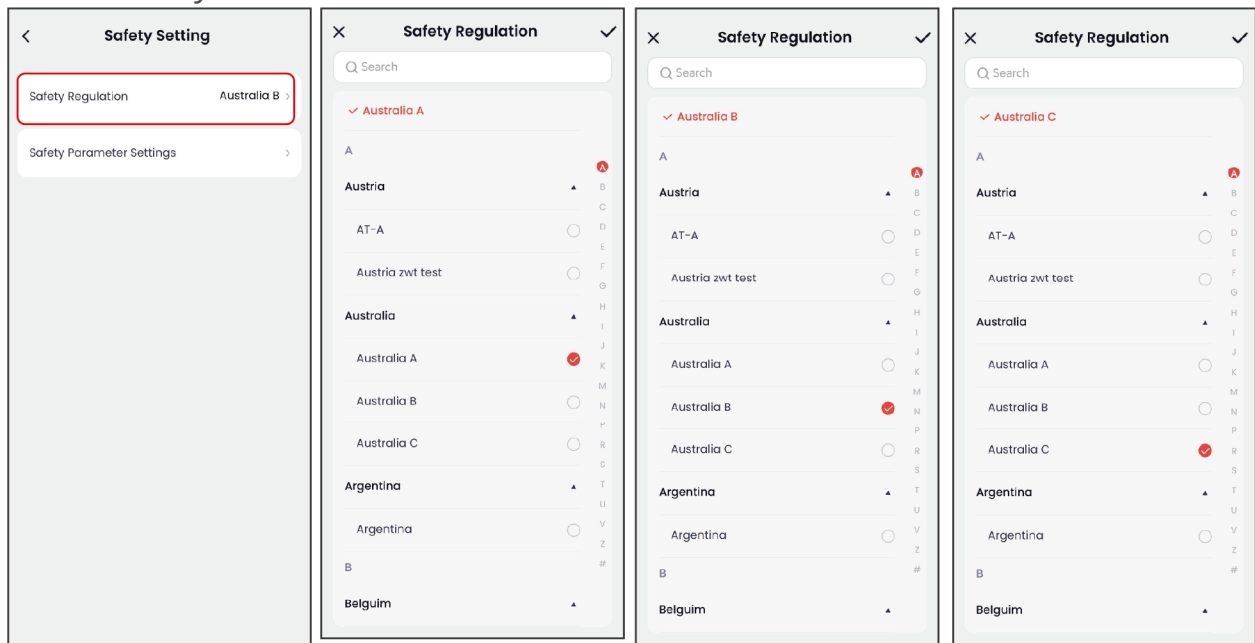
Upper connection and reconnection frequency (f_{URF})

Region	f_{URF}
Australia A	50.15 Hz
Australia B	50.15 Hz

Australia C	50.50 Hz
New Zealand	50.15 Hz

Steps to set the safety country:

1. Login to the App. Go to "Protection" > "Safety Setting" > "Safety Regulation" on the device details interface.
2. Set the safety code to Australia A/B/C/New Zealand based on actual needs.



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Steps to set the customized safety parameters:

1. Login to the App. Go to "Protection" > "Safety Setting" > "Safety Parameter Settings" on the device details interface.
2. Set the parameters based on actual needs. Supports the following parameters:
 - Active Power Mode Settings
 - Overfrequency Derating
 - P(U) Curve
 - Underfrequency Loading
 - Reactive Power Mode Settings
 - Q(U) Curve
 - Grid Protection Parameters
 - Grid Connection Parameters

- Voltage Fault Ride-Through
- Frequency Fault Ride Through

Safety Setting

Safety Regulation

Australia B

Safety Parameter Settings

Safety Parameter Settings

Active Power Mode Settings

Reactive Power Mode Settings

Grid Protection Parameters

Grid Connection Parameters

Voltage Fault Ride-Through

Frequency Fault Ride Through

Safety Parameter Settings is a professional parameters settings, non-professionals do not change the relevant parameters.

Active Power Mode Settings

Overfrequency Derating

Over-Frequency Start Point

Import/Export Switch Frequency

Over-Frequency End Point

Response Delay Time

Hysteresis Function

Frequency Hysteresis Point

Hysteresis Waiting Time

Hysteretic Power Recovery Slope

Active Power Mode Settings

P(U) Curve

V1 Voltage

V1 Active Power

V2 Voltage

V2 Active Power

V3 Voltage

V3 Active Power

V4 Voltage

V4 Active Power

Output Response Mode

Active Power Mode Settings

Under-Frequency Loading

Under-Frequency Start Point

Import/Export Switch Frequency

Under-Frequency End Point

Response Delay Time

Hysteresis Function

Frequency Hysteresis Point

Hysteresis Waiting Time

Hysteretic Power Recovery Slope

FSM (Frequency Stabilization Mode)

Reactive Power Mode Settin...

Mode Selection

Q(U) Curve

Q(U) Curve Basic Model

V1 Voltage

V1 Reactive Power

V2 Voltage

V2 Reactive Power

V3 Voltage

V3 Reactive Power

V4 Voltage

Grid Protection Parameters

Voltage Protection Parameters

OV Trigger L1 Value

Over-voltage Stage 1 Trip Time

UV Trigger L1 Value

UV Trigger L1 Trip Time

OV Trigger L2 Value

Over-voltage Stage 2 Trip Time

UV Trigger L2 Value

UV Trigger L2 Trip Time

Grid Connection Parameters

Startup On-Grid

Connection Voltage Upper Limit

Connection Voltage Lower Limit

Connection Frequency Upper Limit

Connection Frequency Lower Limit

On-Grid Waiting Time

Startup Ramp Rate

Startup Ramp Rate

Fault Reconnection

Voltage Fault Ride-Through

LVRT

UV1 Voltage

UV1 Time

UV2 Voltage

UV2 Time

UV3 Voltage

UV3 Time

UV4 Voltage

Voltage Fault Ride-Through

HVRT

OV1 Voltage

OV1 Time

OV2 Voltage

OV2 Time

OV3 Voltage

OV3 Time

OV4 Voltage

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9 Contact Information

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