

SEMS+ App

User Manual

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Copyright Statement

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NOTICE

Due to product version upgrades or other reasons, the document content will be updated periodically. Unless otherwise agreed, the document content cannot replace the safety precautions on the product label. All descriptions in the document are for guidance only.

About This Manual

Applicable Personnel

Applies to professionals familiar with local regulations and standards, electrical systems, who have undergone specialized training and possess relevant knowledge of this product, or to end-users who have purchased GoodWe products.

Symbol Definition

 DANGER
Indicates a high potential hazard that, if not avoided, will result in death or serious injury.
 WARNING
Indicates a moderate potential hazard that, if not avoided, could result in death or serious injury.
 CAUTION
Indicates a low potential hazard that, if not avoided, could result in moderate or minor injury.
NOTICE
Emphasizes and supplements the content, and may provide tips or tricks for optimal product use, helping you solve a problem or save time.

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1 App Introduction

NOTICE

- The interfaces shown in this manual are based on SEMS+ App V2.6.0. Interfaces in subsequent versions may vary.
- The parameters and operation permissions viewable by different login roles may vary.
- The displayed parameters and functions may vary depending on the device model and the safety standards of the country.
- The manual content is for reference only. Please refer to the actual display in the App.
- If you need to modify power plant or device parameters, please carefully read this manual and the corresponding product manual before making changes to familiarize yourself with the product functions and characteristics. Incorrect grid parameter settings may cause the inverter to fail to connect to the grid or not connect according to grid requirements, affecting the inverter's power generation.

This document introduces the common operations of SEMS+ App.

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

- Remotely monitor the operation of power stations and set parameters for stations and devices.
- Locally connect to devices, view device operation status, and set device parameters.

1.1 Supporting Products

Supports monitoring and managing related devices under the GoodWe brand, such as inverters, Smart Meters, data loggers, charging piles, batteries, etc.

1.2 Download and Install SEMS+ App

Phone Requirements

- Operating system requirements: Android 7.0 and above, iOS 15.1 and above.
- The phone must support a web browser and connect to the Internet.
- The phone must support WLAN/Bluetooth functionality.

Download Methods

Method 1:

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



Method 2:

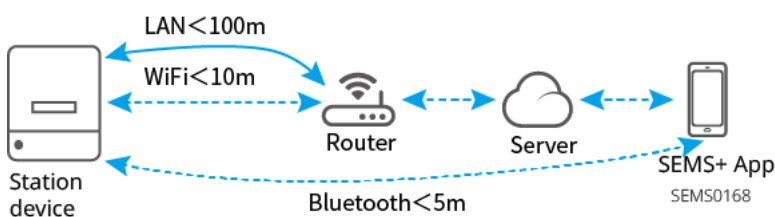
Scan the QR code below to download and install.



Add Desktop Widget

- When the app version is V2.5.2 or above, it supports adding the SEMS+ App to the phone's home screen.
- The steps to add the desktop widget vary by operating system; please follow the actual steps.
- After adding the desktop widget, you can quickly view the power station operation status without opening the app.

1.3 Connection Method



1.4 Common Icon Descriptions

Icon	Description	Icon	Description
	Create Station, add devices, etc.		Scan 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 station list and switch stations.
	Configure. For example: configure common control items.		Switch between 2D/3D energy flow diagram display modes.

1.5 Register Account

Steps

1. On the App home page, click "Register" to enter the account registration interface.
2. Select the server and account type according to your needs, then click "Next".
3. Enter your account information based on your actual situation, then click "Confirm" to complete registration.

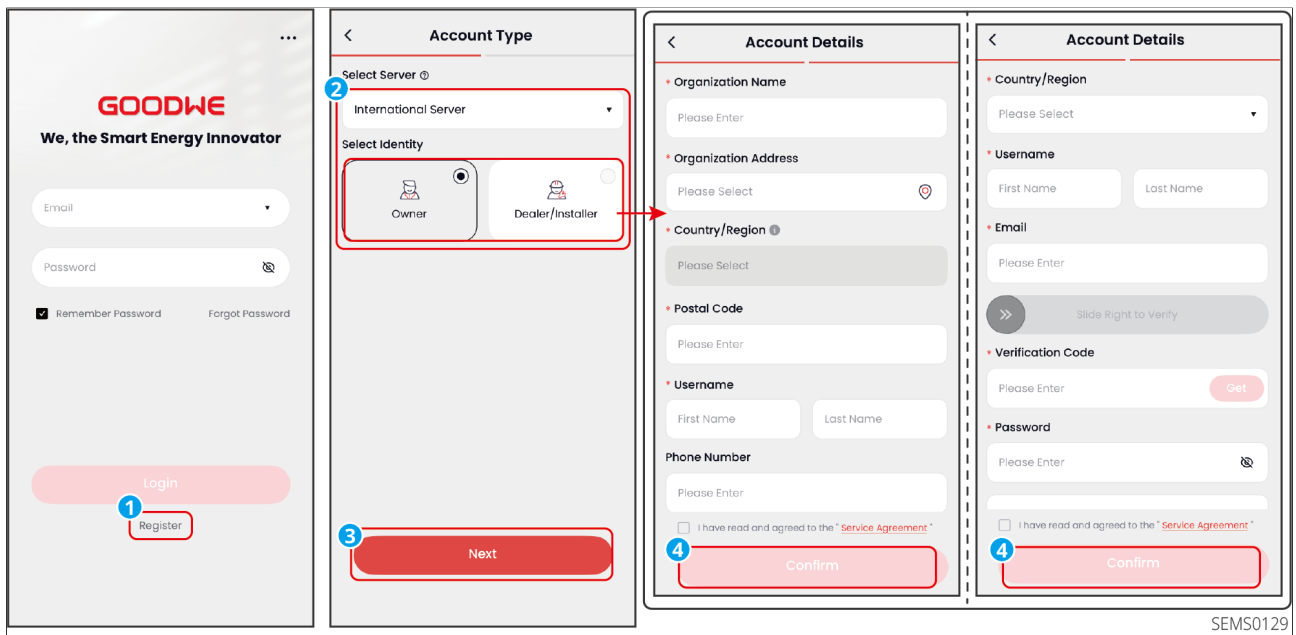


Figure1 Register Account

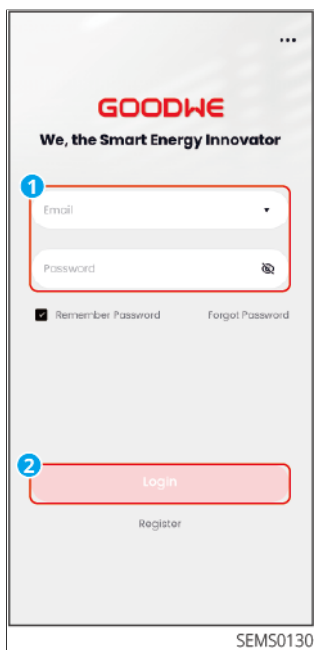
1.6 Login Account

NOTICE

- Before logging into the App, please register an account or obtain your account and password from a dealer.
- After logging in, you can view or manage power plant information. The specific interface may vary. The displayed power plant information differs based on account type, region, power plant type, etc.

Login Steps

1. Enter account and password, click '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 '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 Power Station

NOTICE

Power plant information varies depending on account type, region, power plant type, and other factors.

After logging into the App with your account and password, you can create power stations, Add Device, monitor the operational status of power stations, and view device operation information.

Add the App to your desktop widget to monitor the power station's operation in real-time.

2.1 Power Station

2.1.1 Create Station

Supports creating a station based on actual requirements.

2.1.1.1 Fill in Station Information

Create Station (Installer/Dealer)

Operation Steps

1. After logging into the App, if there is no station under the account, click "Create Station"; if there are stations under the account, click "+" on the station list interface to enter the new station information filling interface.
2. Follow the interface prompts and fill in basic information such as station address, name, capacity, power, etc., according to the actual situation.
3. If you need to add station visitors, you can fill in the organization code and station visitor information. Click "Complete" to create a new station.
4. Choose whether to add station equipment based on actual needs. If needed, please refer to the [2.1.1.2.Add Equipment\(Page 14\)](#) chapter.

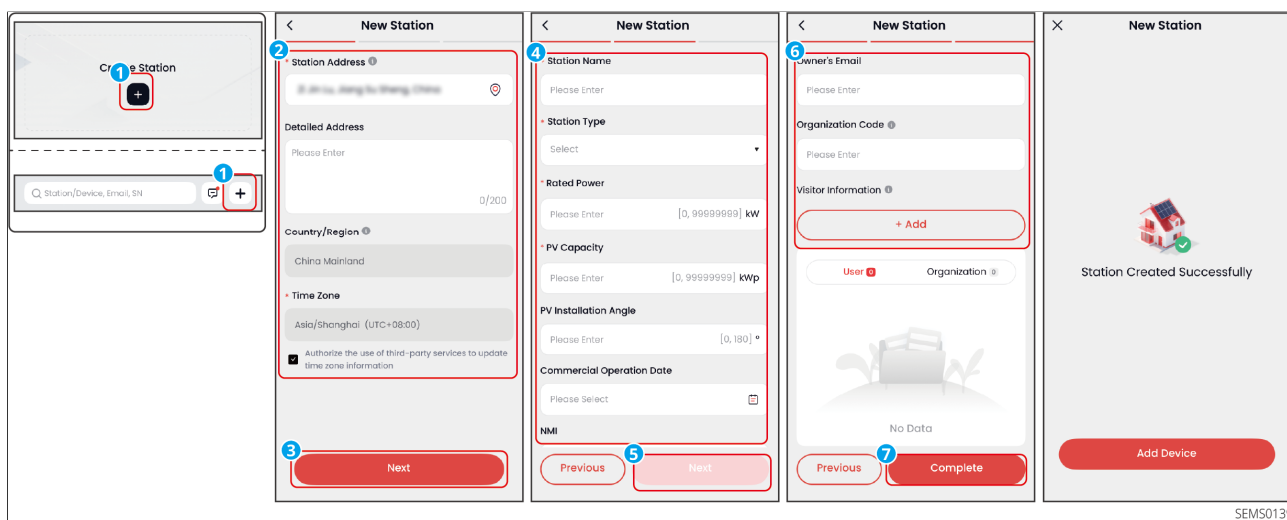


Figure3 Fill in Station Information (Installer/Dealer)

Parameter	Function Description
Station Type	Set according to the actual station type. Supported types: Residential PV Station, Residential Storage Station, Commercial & Industrial Storage Station, Commercial & Industrial PV Station.
Station Name	Set the station name according to actual requirements.
Rated Power	Set the total installed power of the station.
PV Capacity	Set the total installed PV capacity in the station.
Battery Capacity	Set the total battery capacity in the station.
PV Installation Angle	Set the PV panel installation angle.
Commercial Operation Date	Set the station grid connection date

Create Station (Owner)

Operation Steps

1. After logging into the App, follow the interface prompts and click "Create Station"; if there are stations under the account, click "+" on the station list interface to enter the new station information filling interface.
2. Follow the interface prompts and fill in basic information such as station name, address, type, etc., according to the actual situation.

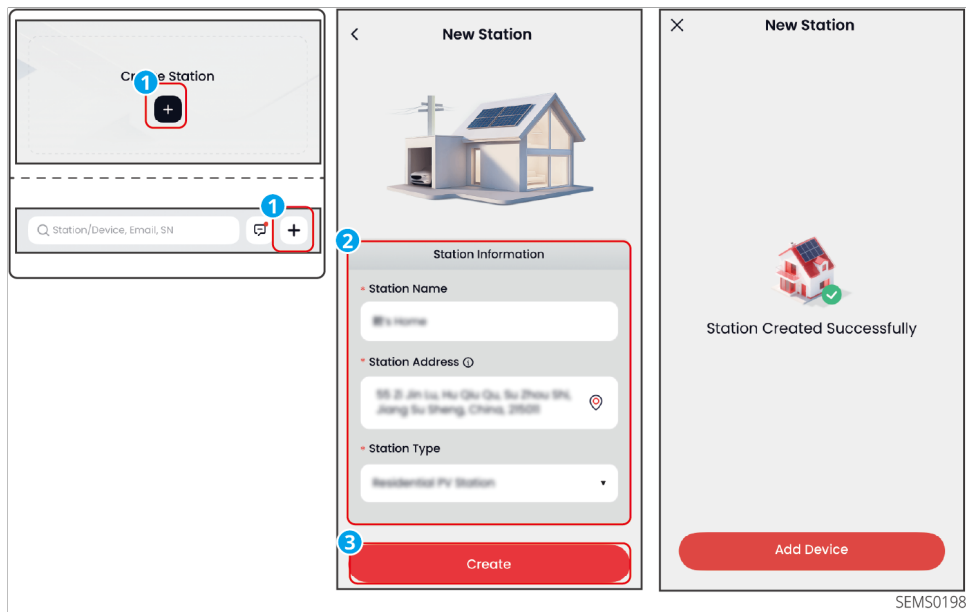


Figure4 Fill in Station Information (Owner)

2.1.1.2 Add Power Station Devices

After the power station is created, you can add power station devices based on actual needs.

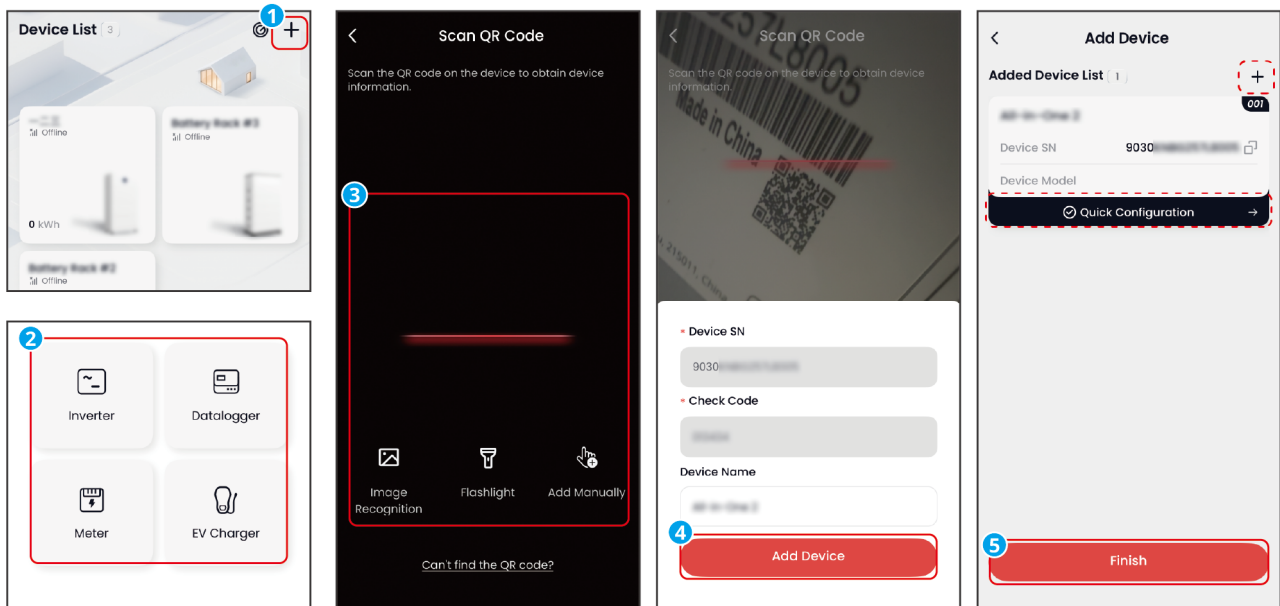
- When a Home Energy Management System (HEMS) has been added to the power station:
 - Supports synchronously adding associated devices under HEMS; or adding devices not associated with HEMS, only monitoring all devices in the same power station.
 - Please use Bluetooth local connection to connect devices in the network such as energy storage inverters, charging piles, smart switches, etc., to the same router as HEMS, otherwise HEMS cannot recognize the above devices. For GoodWe products, please refer to the [3.1. Locally Connected Devices \(Page 49\)](#) chapter; for third-party products, please refer to the device user manual.

Steps For Manual Adding Devices

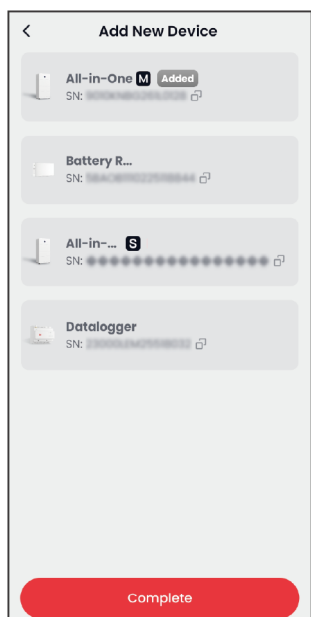
1. On the device list interface, click **+**.
2. Add devices based on actual needs. Select the device type, and scan the device SN or manually enter the device SN.
3. After scanning, confirm whether the device serial number and verification code are correct. And modify the device name based on actual needs. Click "Add Device" to

complete the addition.

4. (Optional) If you need to continue adding devices in the current power station, click **+**, and repeat the step of entering the device SN.
5. (Optional) Click "Quick Configuration" to modify device safety regulations settings, network configuration, etc. For details, please refer to [2.1.1.3.Quick Configuration\(Page 16\)](#).



6. After completing quick configuration, devices in the same system will be recognized, such as meters, batteries, etc., and there is no need to manually add them again. Click "Finish" to complete device addition. After device addition is completed, if there are new devices in the system, they will be automatically scanned and new devices will be prompted.

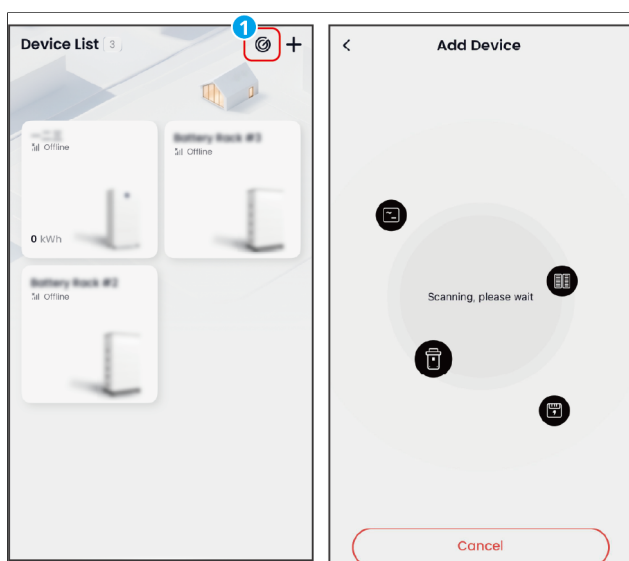


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Steps for Adding Devices via Scanning

After manually adding the inverter to the power station, you can add associated devices of the inverter, such as batteries, via scanning.

1. On the device list interface, click .
2. In the scanned devices, check the devices that need to be added, and click "Add".
3. If you need to continue adding other devices that are not scanned, click "Continue Adding", otherwise click "Finish".



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2.1.1.3 Quick Configure Device

NOTICE

- After a device is first added to the power station, basic operation can be ensured through quick configuration.
- Before performing quick configuration, please confirm all devices are powered on and operating normally.
- The quick configuration content varies depending on the device type. Please refer to the actual interface for details.

Procedure

1. After adding the device, click "Quick Configuration" as prompted on the interface, or go to the device list interface via "Account" > "Local Access".
2. On the device list interface, select the "Bluetooth" or "WiFi" tab based on the smart communication stick signal type.
3. Pull down or click "Search for Device", confirm the inverter signal name according to the inverter serial number, and click to enter the Quick Configuration interface. If you entered the settings interface via "Local Access", please click "Quick Configuration" on the home page.
4. Complete the network configuration, safety code, working mode, etc., as prompted on the interface. For details on working modes, refer to the [2.2.3.5.System Working Mode\(Page 64\)](#) chapter.
5. Click "Finish" to complete the quick configuration.

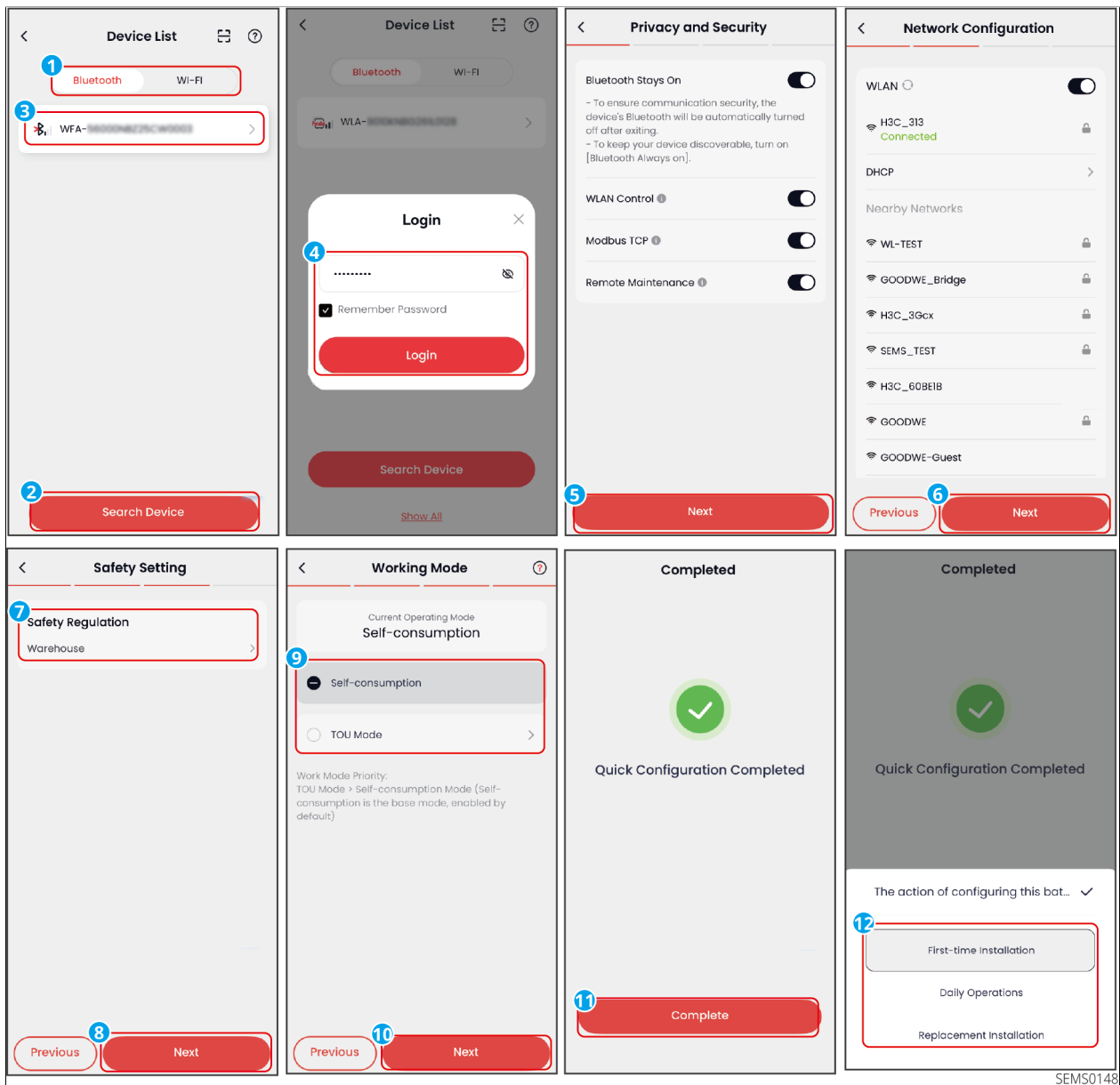


Figure5 Quick Configure Device

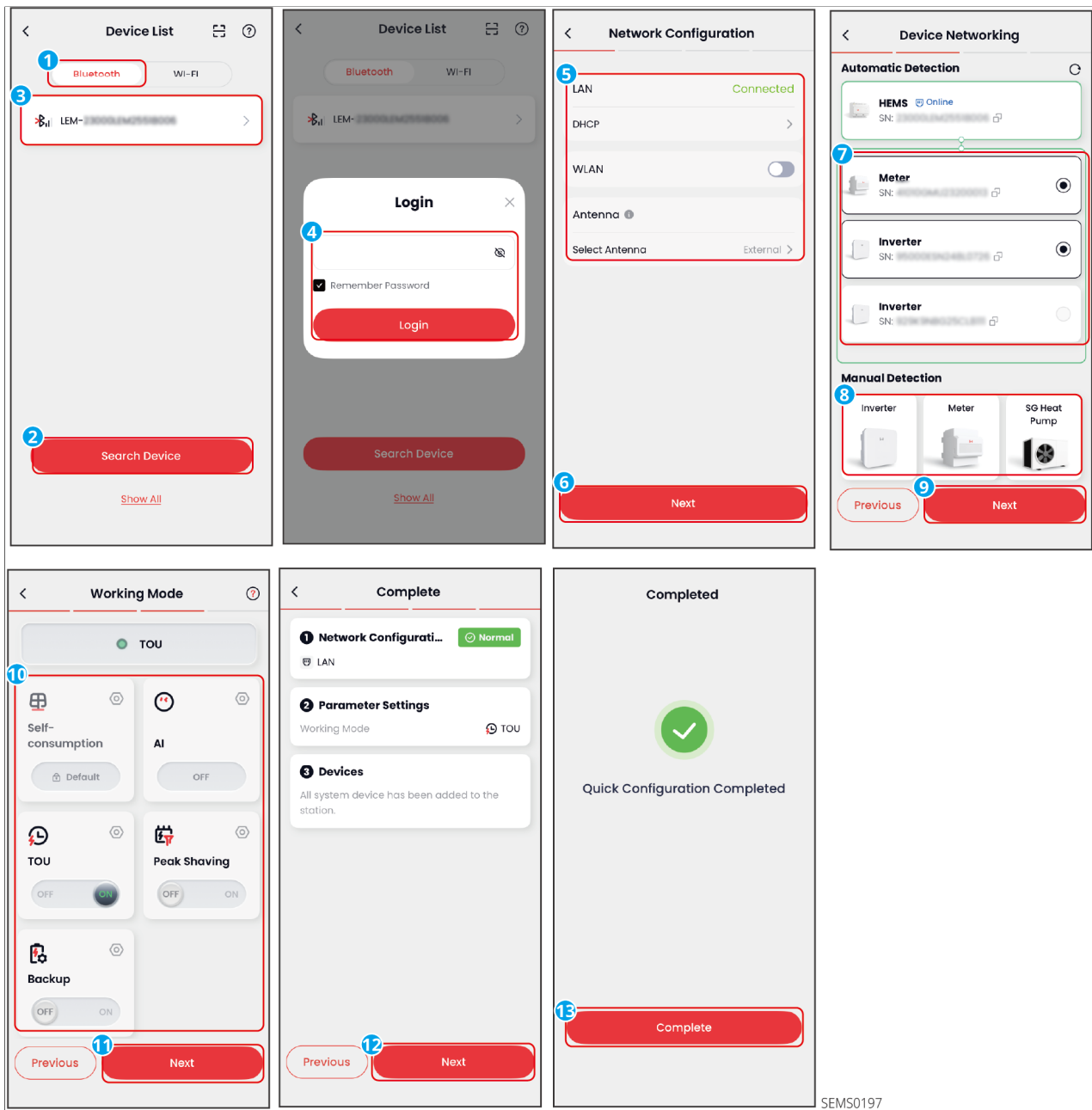
2.1.1.4 Quick Configuration (Home Energy Management System)

NOTICE

- After a device is added to the power station for the first time, basic operation can be ensured through quick configuration.
- Before performing quick configuration, please confirm that all devices are powered on and operating normally.
- If you need to manage and schedule inverters, charging piles, or other smart home devices (such as smart switches, smart sockets, etc.) through the Home Energy Management System (HEMS), please confirm that all devices are connected to the same local area network as the HEMS and have successfully formed a network.

Operation Steps

1. After adding the device, according to the interface prompt, click 'Quick Configuration', or through 'Account' > 'Local Access' enter the device list interface.
2. In the device list interface, select the 'Bluetooth' tab.
3. Pull down or click 'Search Device', confirm the signal name based on the device serial number, click to enter the Quick Configuration interface. If you entered the setup interface through 'Local Access', please click 'Quick Configuration' on the home page.
4. Complete the network configuration according to the interface prompt.
5. If other devices in the system have completed network configuration and are connected to the same local area network as HEMS, they can be automatically searched in the 'Device Networking' interface. It is recommended to select all found devices to complete networking. If devices are not found, manual addition is supported.
6. Set the working mode according to the interface prompt. If you need to know detailed information about the working mode, refer to the [2.2.3.5.System Working Mode\(Page 64\)](#) chapter.
7. Click 'Complete' to finish Quick Configuration.



SEMS0197

Figure6 Quick Configuration for Home Energy Management System

2.1.2 Viewing Power Station Information (Installer)

2.1.2.1 Power Station List

After logging into the App with an installer account, you can view the overview information of all power stations under the current account on the App's homepage.

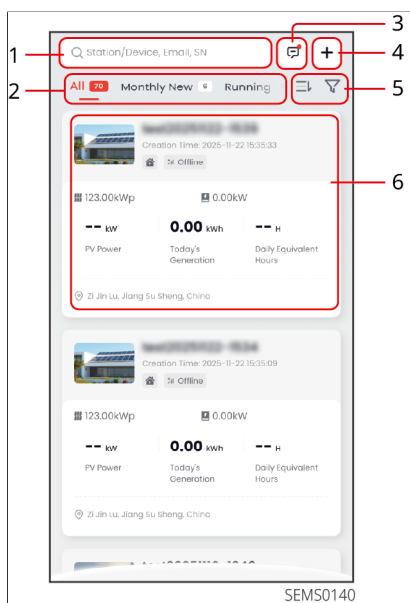


Figure7 Power Plant List

No.	Description
1	Search for power stations. Input station information to quickly locate the plant you need to view.
2	Power station operation status tabs. Click to quickly switch between stations under different operating statuses.
3	Station messages. View notifications such as alarms and events.
4	Click to create a new power station.
5	• Sorting. Sort station in ascending or descending order based on installed capacity or plant creation time. • Filter stations. Filter plants based on conditions such as plant type, Rated Power, and whether they are favorited.

No.	Description
6	- Station card. Displays basic information such as station name, operating status, Energy Generation, and address. - Click to enter the station details page. - Long press to perform quick operations on the station, such as favoriting, sharing, or deleting. - Click the station address to launch the phone's map application for quick navigation.

2.1.2.2 Power Station Details

On the power station list page, click on any power station name to enter the power station details interface. In the power station details interface, you can view basic information, energy generation, revenue, energy flow diagram, environmental contribution, and other information.

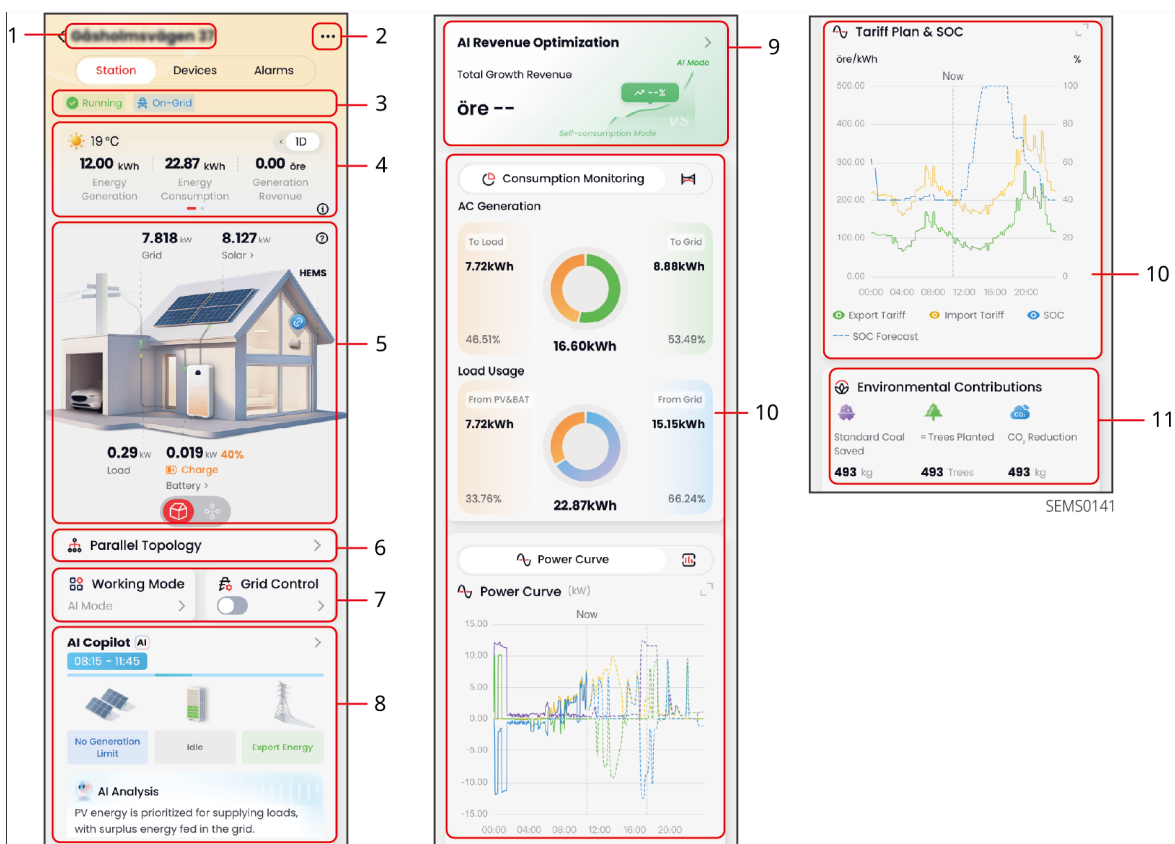


Figure8 Power Station Details

No.	Description
1	Current power station name.
2	Configure power station information. Supports: configuring basic power station information, Share Station, setting electricity price information.
3	Current operating status of the power station.
4	• Current weather, Energy Generation, electricity consumption, power generation revenue, purchased electricity, grid feed-in revenue, etc., for the power station. • Power station revenue statistics require electricity price configuration; otherwise, the system cannot calculate revenue data. • Power Generation Revenue: Displays the estimated power generation revenue for the current power station type. • Energy Generation: Displays the total power generation for the current power station type. • Grid Feed-in Revenue: Displays the estimated electricity sales revenue for the current power station type. • Grid Feed-in Electricity: Displays the total grid feed-in electricity for the current power station type.
5	• Display of the power station energy flow diagram. • Supports switching between 2D/3D energy flow diagrams. After switching in any power station's 2D/3D energy flow diagram, all power stations of the same type within the account switch simultaneously.
6	Parallel unit topology diagram. Click to view the overview of devices in the current system.
7	Quick access entry for common control settings.

No.	Description
8	• AI Energy Manager. Displayed when the system's AI mode is enabled, indicating the system is currently managed and dispatched by AI. • Displays the current time period and the planned dispatch status of PV, energy storage, and grid within that period. • Click the card to enter the AI Energy Manager details interface to view the detailed AI dispatch plan.
9	• Displayed when the system's AI mode is enabled. Compares self-consumption mode with AI mode, showing the economic benefit optimization. • Click the card to enter the economic benefit optimization details interface to view AI operation days, revenue increase, expenditure comparison overview, revenue calendar, etc.
10	Electricity consumption monitoring, energy flow direction, power curve, energy monitoring chart. Visual charts display the power station's operating status and energy dynamics.
11	Environmental Contributions. Displays the environmental benefits generated by photovoltaic power generation, including: carbon dioxide reduction, standard coal savings, equivalent tree planting, etc.

2.1.2.3 Alarm

When logged in with an installer account, click "Alarm" on the homepage to view the Alarm Information for all power plants under the account.

- By default, "All" alarms are displayed. You can switch between "Occurring" and "Recovered" faults via the status tabs.
- Long press an alarm to favorite, delete, or confirm it.

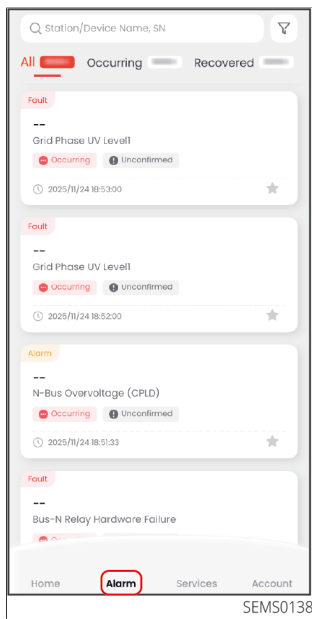


Figure9 Viewing Alarm Information

2.1.3 Viewing Power Station Information

2.1.3.1 Power Station List

When there are multiple power stations under the owner account, you can view all stations via the sidebar and switch the station displayed on the homepage. The Power Station List displays all power stations under the account, including self-built stations and shared stations. Features for shared stations may be limited; please refer to the actual interface.



Figure10 View Power Station List

No.	Description
1	Search for power plants. Enter plant information to quickly locate the power plant you need to view.
2	Click to create a new power plant.
3	- Power Plant Card. Displays basic information such as the power plant name, operational status, Energy Generation, address, etc. - Click to enter the power plant details page. - Long press to perform quick operations on the power plant, such as bookmarking, sharing, or deleting.

2.1.3.2 Power Station Details

After logging into the App with the owner account, you can view the details of a specific power station under the current account on the App's homepage. On the power station details interface, you can view basic information, Energy Generation, revenue, energy flow diagrams, environmental contribution, and other details of the power station.

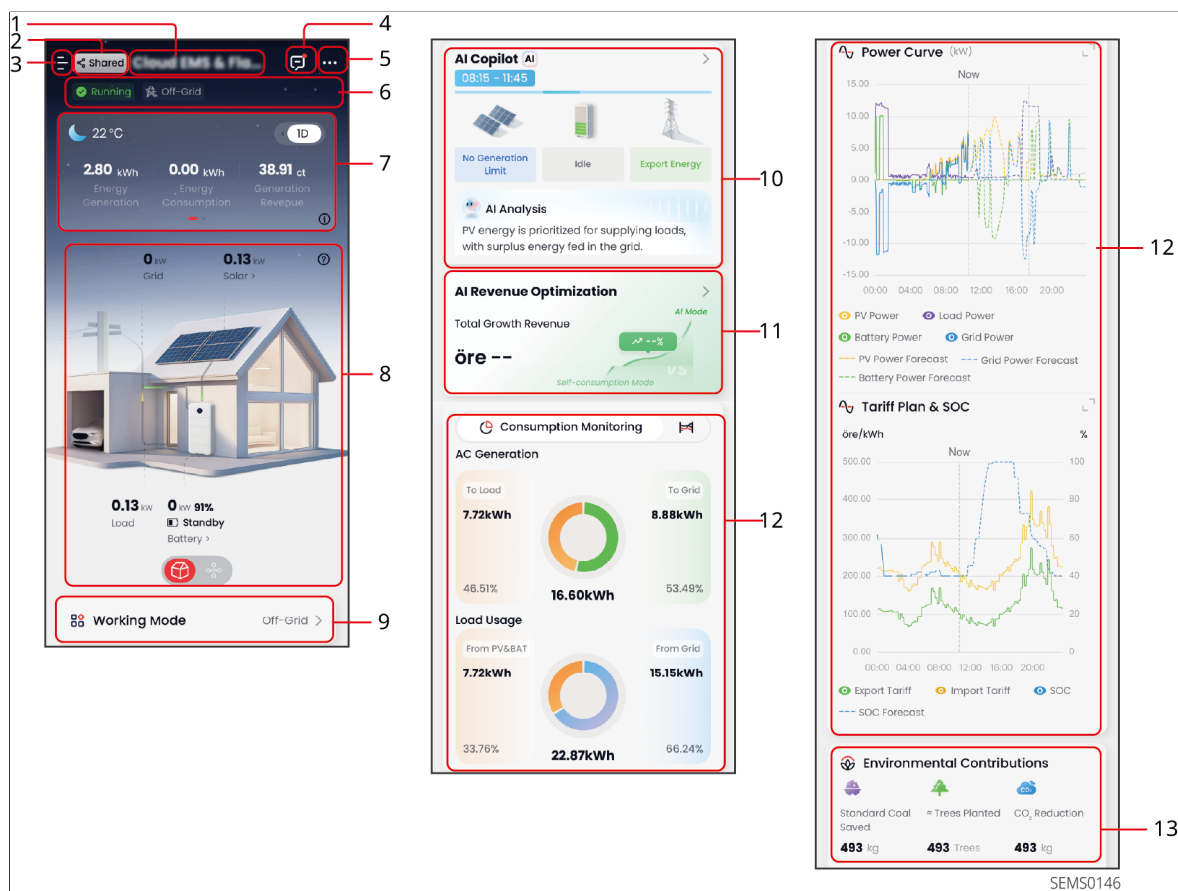


Figure11 View Power Station Details

No.	Description
1	Current power station name.
2	Displayed when the station is a shared station.
3	Power station list. Click to expand all stations under the current account and switch quickly.
4	Station messages. View station alerts, events, and other message notifications.
5	Configure station information. Supports: configuring basic station information, sharing the station, setting electricity price information.
6	Current operating status of the station and update time.

No.	Description
7	• Current weather at the station and energy generation, electricity consumption, generation revenue, grid purchase electricity, feed-in revenue, etc. • Station revenue statistics require electricity price configuration; otherwise, the system cannot calculate revenue data. • Generation Revenue: Displays the total generation revenue under the current station type. • Energy Generation: Displays the total energy generation under the current station type. • Feed-in Revenue: Displays the total feed-in revenue under the current station type. • Feed-in Electricity: Displays the total feed-in electricity under the current station type.
8	• Display of the station's energy flow diagram. • Supports switching between 2D/3D energy flow diagrams. After switching for any station's 2D/3D diagram, all stations of the same type within the account switch simultaneously.
9	Quick access entry for common control settings.
10	• AI Energy Manager. Displayed when the system's AI mode is enabled, indicating the system is currently managed and dispatched by AI. • Displays the current time period and the planned dispatch status of PV, energy storage, and the grid within that period. • Click the card to enter the AI Energy Manager details interface to view the detailed AI dispatch plan.

No.	Description
11	- Displayed when the system's AI mode is enabled. Compares self-consumption mode with AI mode, showing the economic benefit optimization. - Click the card to enter the Economic Benefit Optimization details interface to view AI operation days, revenue increase, expenditure comparison overview, revenue calendar, etc.
12	Electricity consumption monitoring, energy flow, power curve, energy monitoring chart. Visualizes the station's operation status and energy dynamics through charts.
13	Environmental Contributions. Displays the environmental benefits generated by PV power generation, including: CO2 emission reduction, standard coal saved, equivalent trees planted, etc.

2.1.4 Modify Station Basic Information

Supports modifying basic station information, including station name, station type, Rated Power, Battery Capacity, PV capacity, station address, etc.

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

Operation Steps

1. On the station details page, click **...** to enter the station settings page.
2. Click "Station Information" >  to modify the basic station information.
3. After completing the information modifications, click  to save the changes.

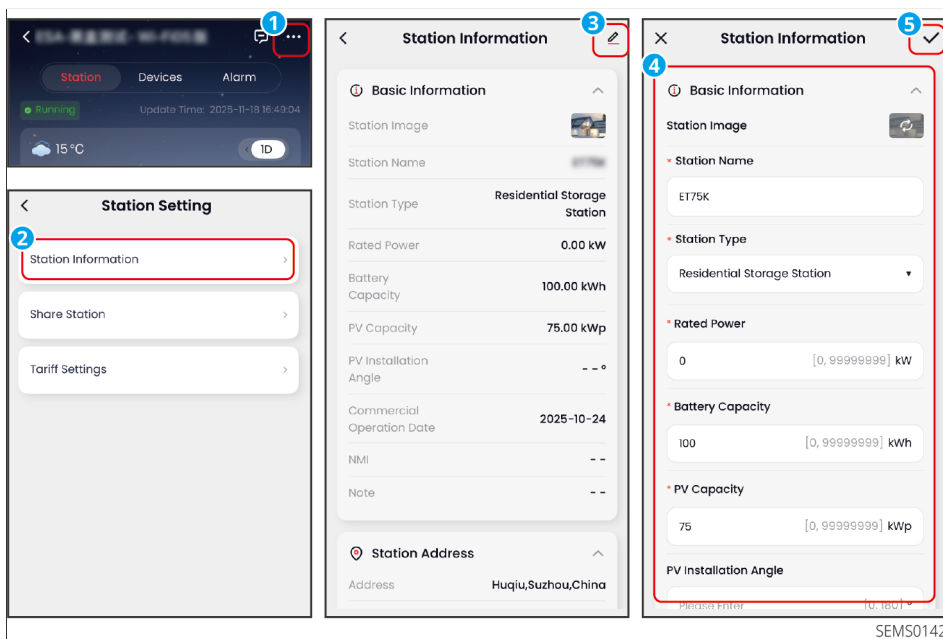


Figure12 Modify Station Information

2.1.5 Configure Tariff Information

Supports viewing or setting the power station tariff information based on actual conditions.

Only some European countries or regions support using electricity market prices; currently, the electricity market only supports Nord Pool.

Operation Steps

1. On the power station details interface, click **...** "Tariff Settings" to enter the tariff settings interface.
2. Select "Export Tariff" or "Import Tariff". Then set the tariff type, which supports "Fixed Tariff", "Time-of-Use Tariff", and "Dynamic Tariff".
 - Fixed Tariff: Set by the user based on the actual tariff.
 - Time-of-Use Tariff: The user sets tariff information for different time periods based on the actual tariff. Supports setting multiple tariff groups. Default tariff will be applied during time periods without specific tariff.
 - Dynamic Tariff: Obtains dynamic tariffs from the power company and dynamically adjusts the actual buying/selling electricity price combined with user-set tariff surcharges. Only applicable to specific regions and certain devices.
3. Click **+** , fill in the tariff information based on actual conditions, and save.

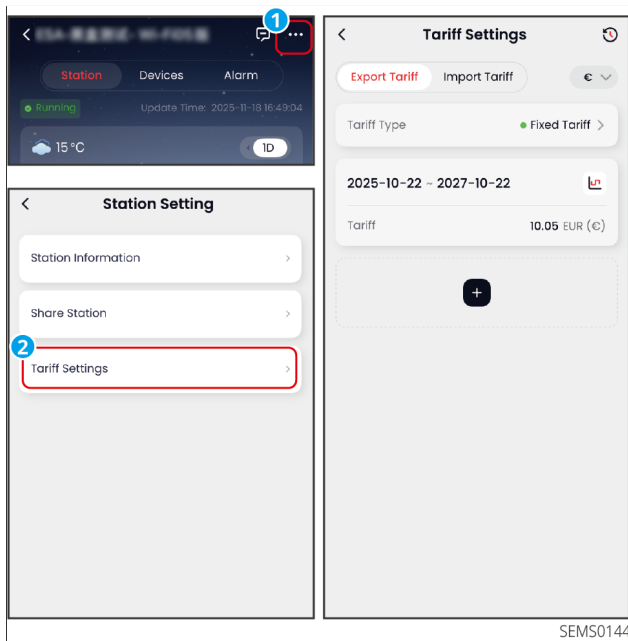


Figure13 Configure Tariff Information

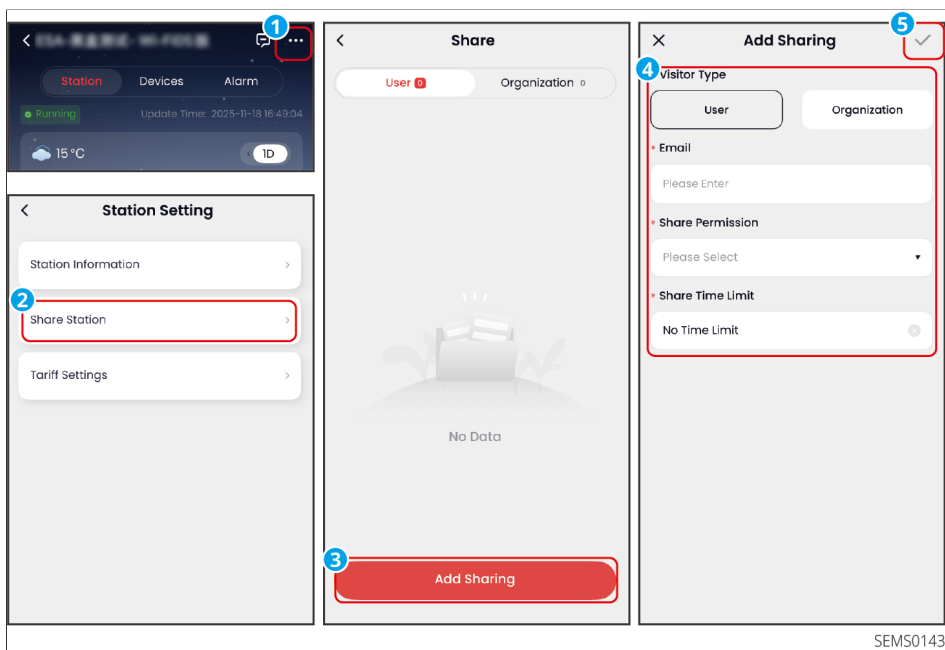
2.1.6 Manage Share Station

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

To share a station with unregistered users, please fill in information such as email address as prompted on the interface, and an account will be automatically registered.

Steps

1. On the station details interface, click **...** > "Share Station" to enter the sharing interface.
2. Click "Add Share", fill in the information of the recipient, and set permissions and time limits according to your needs. To revoke a share after adding it, click **⊖**.



SEMS0143

Figure14 Manage Share Station

2.2 Device

2.2.1 Device List

On the Device List page, you can view an overview of all devices under your account, including device name, operation status, etc.

- When logging in with an installer account, select the desired power plant from the plant list to view the device list under that plant.
- When logging in with an owner account, click the "Device" tab to view the device list under the current power plant.

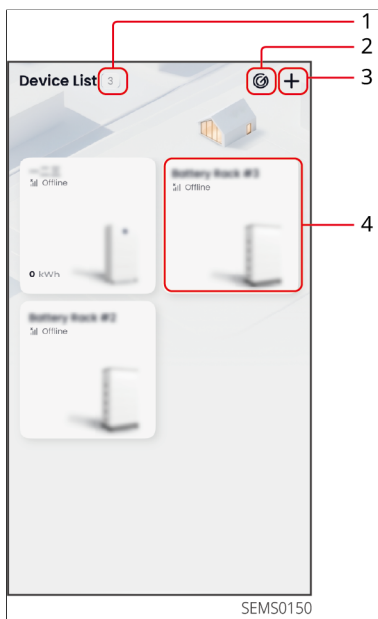


Figure15 Device List

No.	Description
1	The number of devices within the current power station.
2	Scan to add a device to the current power station.
3	Manually add a device to the current power station.
4	• Device Card. Displays data such as device name, device status, device illustration, Power, power generation, etc. • The information displayed on the card varies depending on the device type; please refer to the actual device. • The card format varies depending on the power station type; please refer to the actual station. • The device card images are for reference only; please refer to the physical product. • Long press to rename or delete the device. • When long-pressing to delete the current device, if there are associated devices, please follow the on-screen prompts to choose to delete the associated devices simultaneously or retain them.

2.2.2 Device Details

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

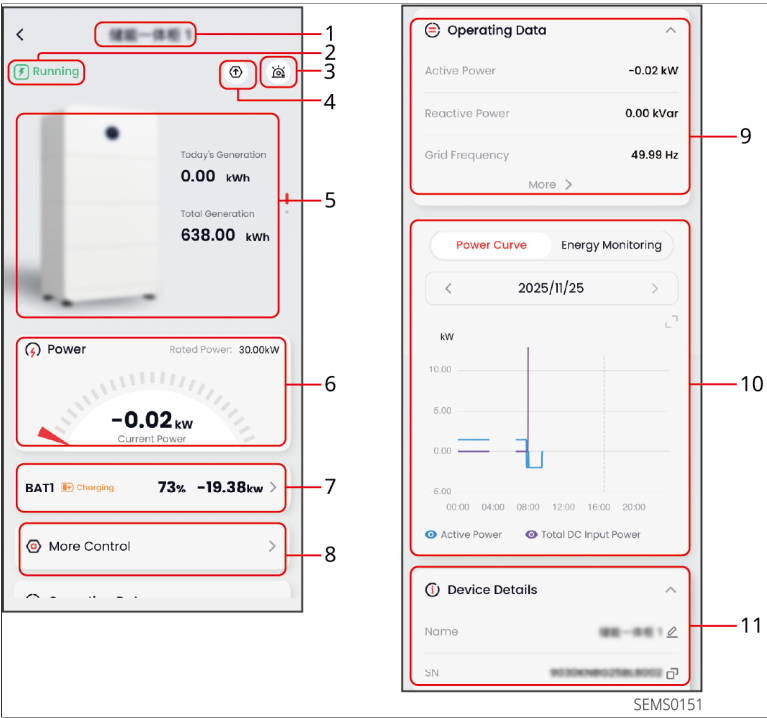


Figure16 View Device Details

No.	Description
1	Device name.
2	Device operation status.
3	Device alarm information. Click to view detailed alarm information.
4	When logged in with an installer account, supports upgrading the device or viewing device upgrade records.
5	Power generation information. Displays today's power generation, cumulative power generation, etc.
6	Power dashboard. Displays current power and rated power values.

No.	Description
7	- Battery information. Displays battery system SOC, charge/discharge status, charge/discharge power, etc. - Click to enter the battery details interface.
8	- Remote Control. Displays quick access to common control items. - Click "More Control" to view all control items of the device. - For details, please refer to the Set Remote Control chapter.
9	- Operation data. Displays current device operation parameters, such as active power, reactive power, power factor, etc. - Click "More" to display all data details. - Different devices display different information, please refer to the actual interface.
10	In different time dimensions, displays power curves, energy monitoring charts.
11	Device details. Displays basic device information, such as device name, SN, device type, firmware version number, etc.

2.2.3 Remote Control Device

The controllable parameters may vary depending on the device model and the safety standards of the country it belongs to. Please refer to the actual device for details. For an explanation of device parameters, please refer to the [7.Appendix\(Page 83\)](#).

2.2.3.1 Setting Inverter Parameters

- On the device list page, select the inverter to be configured and set its parameters according to actual requirements.
- The "Common Controls" interface provides an entry point to quickly access the parameter setting page. It supports adjusting the control parameters displayed on the homepage by configuring "Common Controls".

- Supports searching for parameters to be set via the search box.

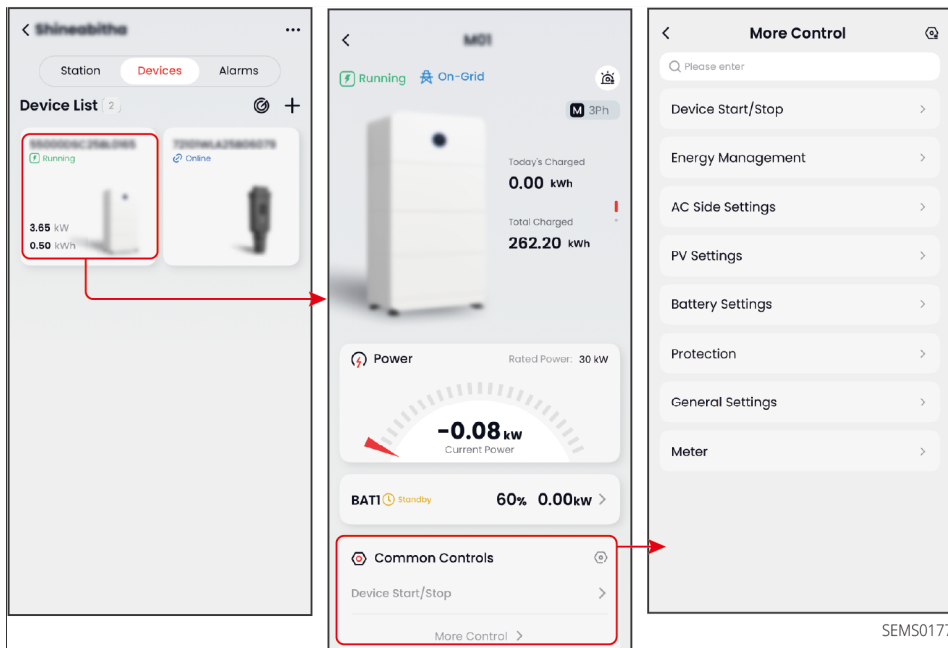


Figure17 Setting Inverter Parameters

Setting Safety Parameters Procedure

1. Access the parameter setting page via "Protection" > "Safety Regulation".
2. Set the Safety Regulation country and customize Safety Regulation parameters as needed. Custom Safety Regulation parameters can only be modified by installers.

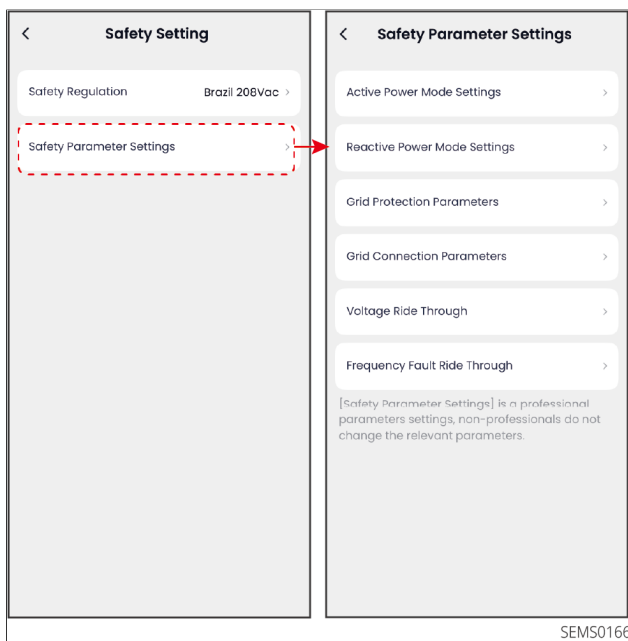


Figure18 Setting Safety Parameters

Setting Power Limit Parameters

NOTICE

The power limit interface varies by country's safety regulations. Please refer to the actual interface.

Procedure

1. Access the power limit setting page via "Energy Management" > "On-grid Power Dispatch" > "Export power limit".
2. Set the power limit parameters according to actual requirements.

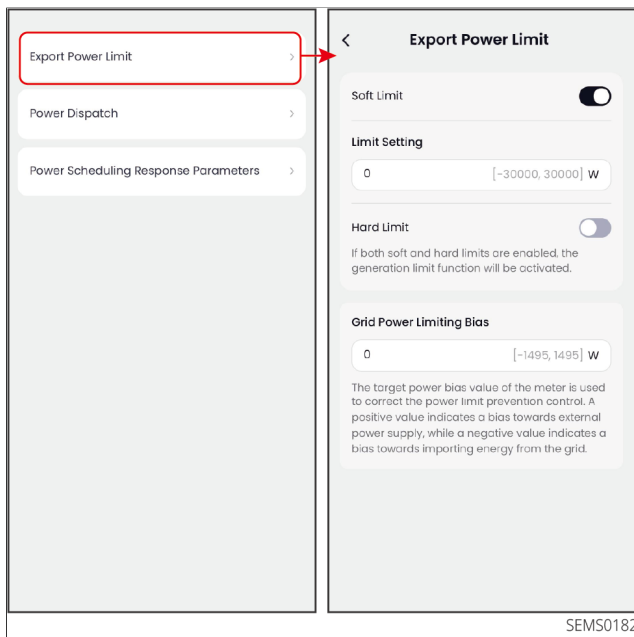


Figure19 Setting Power Limit Parameters

2.2.3.2 Setting Battery Parameters

- Select the inverter on the device list page, then choose the battery you wish to configure on the inverter details page. Set the battery parameters according to your actual requirements.
- The "Common Controls" interface provides an entry point to quickly access the parameter setting page. You can configure the control items displayed on the home page by adjusting the "Common Controls" settings.
- You can search for the parameters you need to set using the search box.

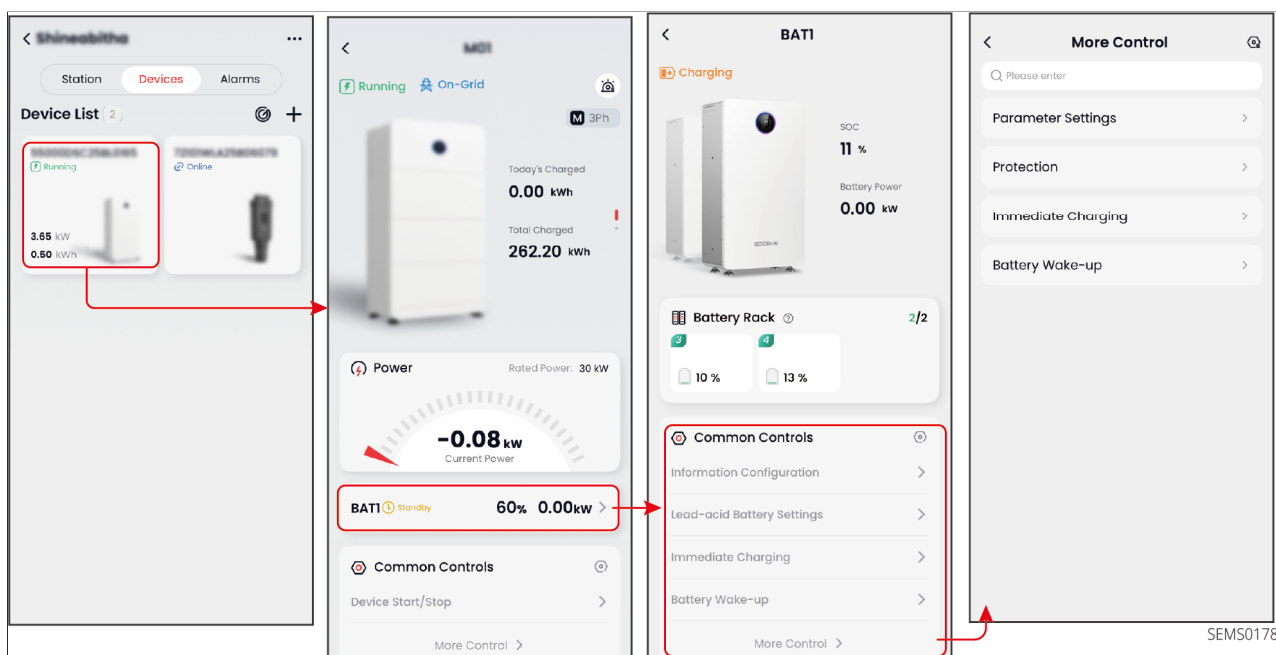


Figure20 Set Battery Parameters

2.2.3.3 Setting Smart Meter Parameters

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

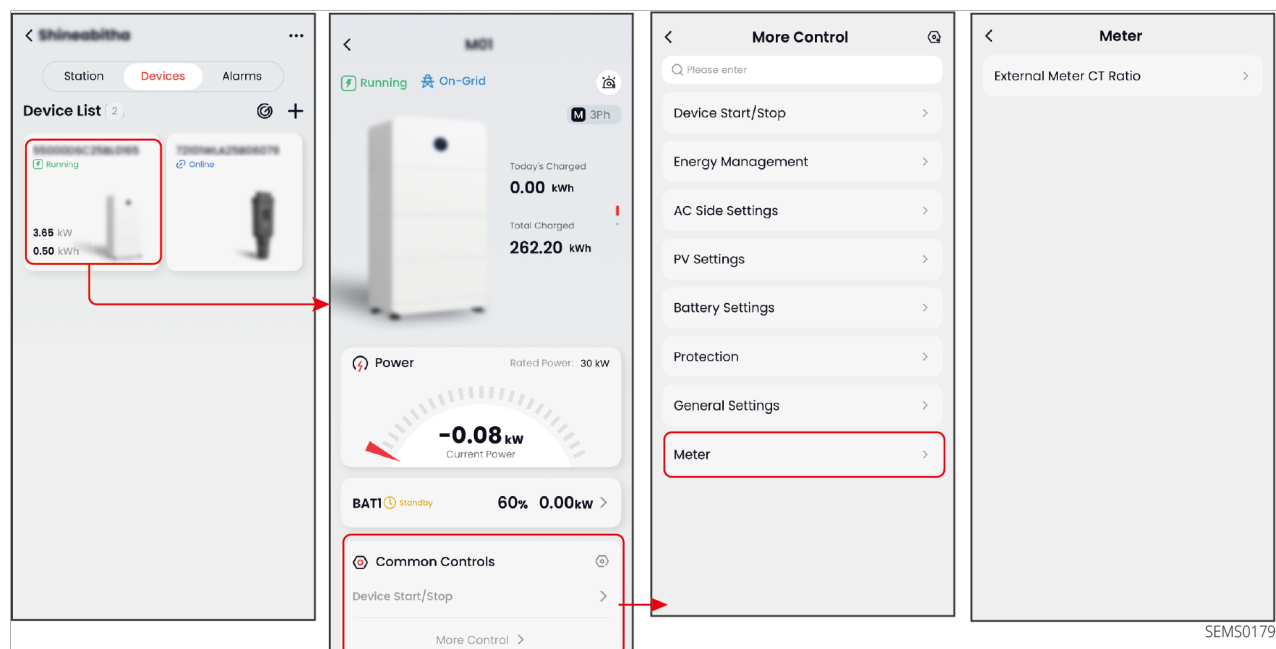


Figure21 Set Meter Parameters

2.2.3.4 Setting Home Energy Management Device Parameters

Select the home energy management device in the device list interface and click "Settings" to configure parameters according to your actual needs.

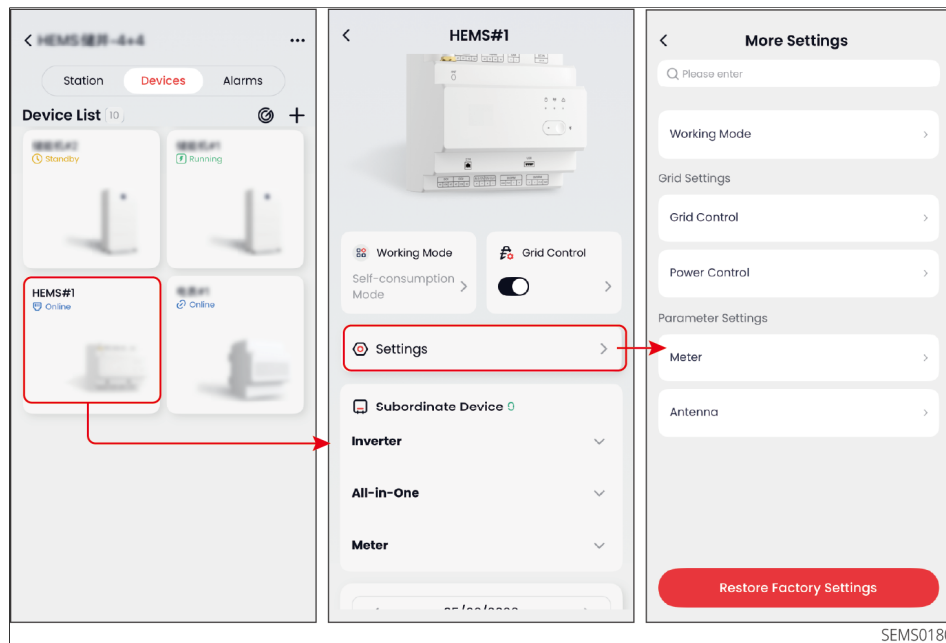


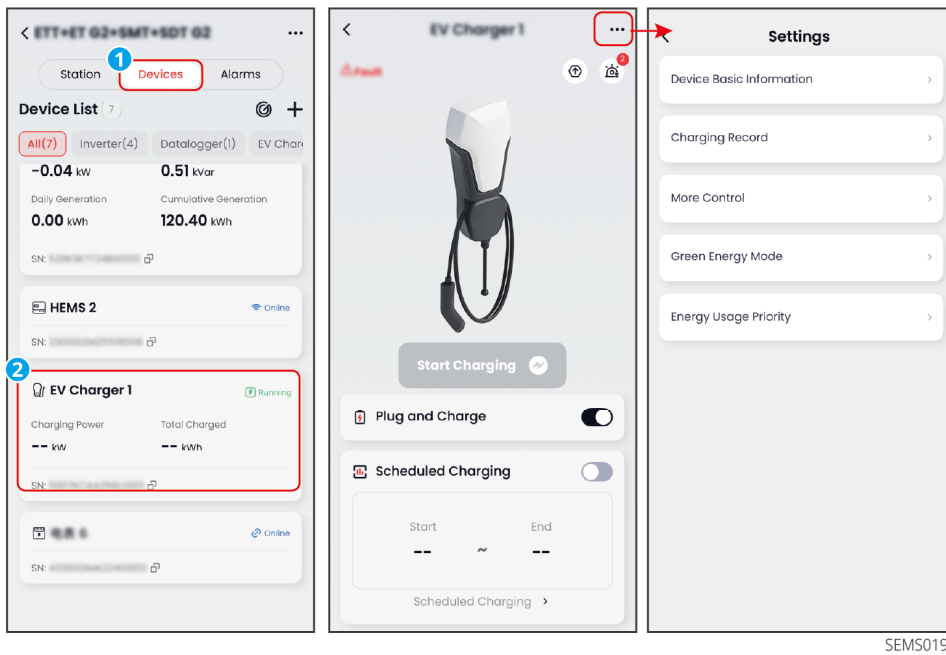
Figure22 Setting Home Energy Management Device Parameters

2.2.3.4.1 Setting AC Charger Parameters

On the device list interface, select the AC charger and click to enter the settings interface.

Supported charging modes:

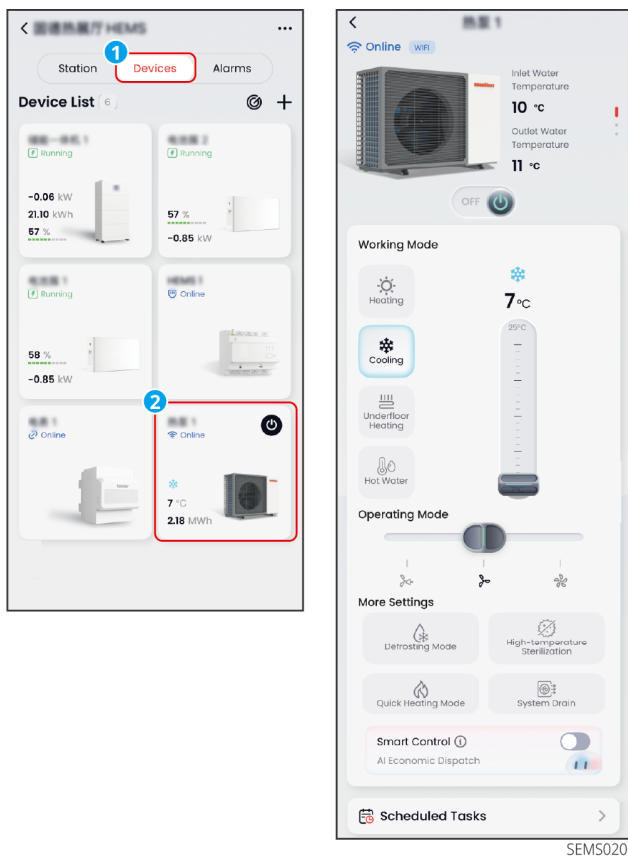
- Plug and Play: Insert the charging gun into the car to start charging.
- Scheduled Charging: Set the scheduled charging time according to actual needs, supporting single charge or multiple cycle charges.
- Green Power Mode: Start charging when the surplus photovoltaic power exceeds the green power start threshold. To prevent the device from repeatedly starting and stopping due to unstable green power, set the minimum runtime period after the device starts.



SEMS0199

2.2.3.4.2 Setting Heat Pump Parameters

- On the device list interface, select a heat pump and click to enter the settings interface.
- Different heat pump models used in the system support different configurable items. Please refer to the actual interface.
- When connecting an SG Ready heat pump, you can control the heat pump's start/stop and set the operating mode.
- When connecting a GudeRe heat pump, the following are supported:
 - Control the heat pump's start/stop. Modes cannot be set when powered off; only system draining can be set.
 - Set operating modes such as cooling, heating, floor heating, and hot water, and set the running mode based on the selected operating mode.
 - Set scheduled tasks.
 - Set functions like defrost mode, high-temperature sterilization, rapid heating mode, and system draining.
 - Enable AI Smart Control, where the heat pump operates according to the AI mode schedule set by HEMS.



2.2.3.5 Setting System Working Mode

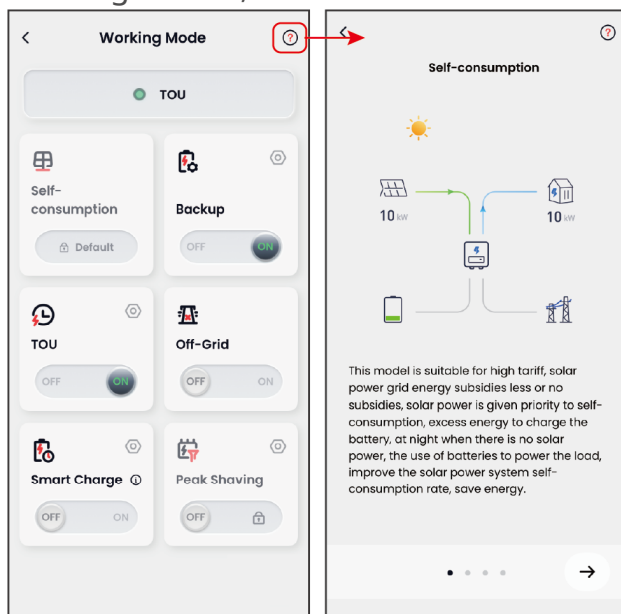
Supports selecting the system operation mode based on electricity price, power demand, or power supply environment. After setting, the system will automatically coordinate photovoltaic, battery, and grid to dispatch power according to actual needs.

NOTICE

- The default working mode is Self-consumption.
- Different systems support different settable working modes. Please refer to the actual interface.
- When setting the working mode via the inverter, the priority order is: Off-grid Mode > Peakshaving > Smart Charging > TOU > Backup Mode > Self-consumption.
- When setting the working mode via the Home Energy Management System, the priority order is: Backup Mode > AI Mode > Peakshaving > TOU Mode > Self-consumption.

Operation Steps

1. Via "Energy Management" > "Working Mode", or search for "Working Mode" in the parameter control interface to enter the working mode setting interface.
2. Please set the working mode according to actual needs. To learn more about working modes, click .



SEMS0159

Self-consumption

The basic working mode for system operation.

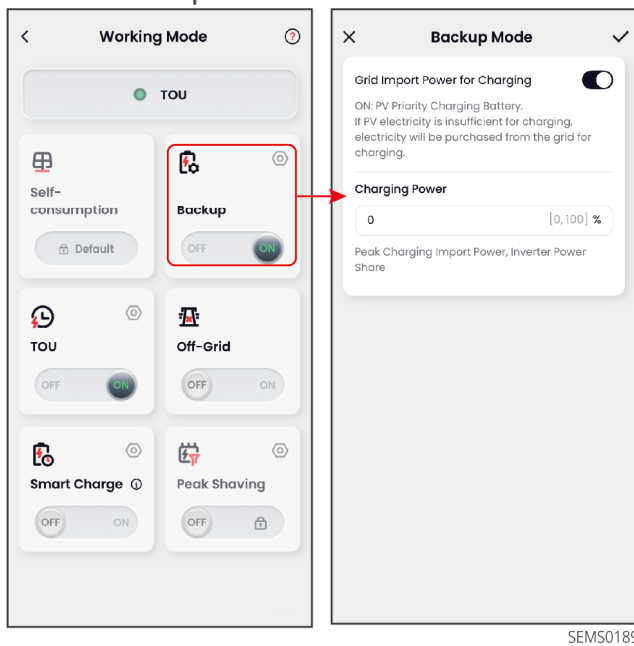
Photovoltaic power generation is prioritized for supplying loads, excess power charges the battery, and any remaining power is sold to the grid. When photovoltaic

power is insufficient, the battery supplies power to the loads; when battery power also cannot meet the load demand, the grid supplies power to the loads.

Backup Mode

Recommended for areas with unstable grid.

When the grid is out, the inverter switches to off-grid working mode, and the battery discharges to supply power to the loads, ensuring BACKUP loads have uninterrupted power; when the grid is restored, the inverter working mode switches back to grid-connected operation.



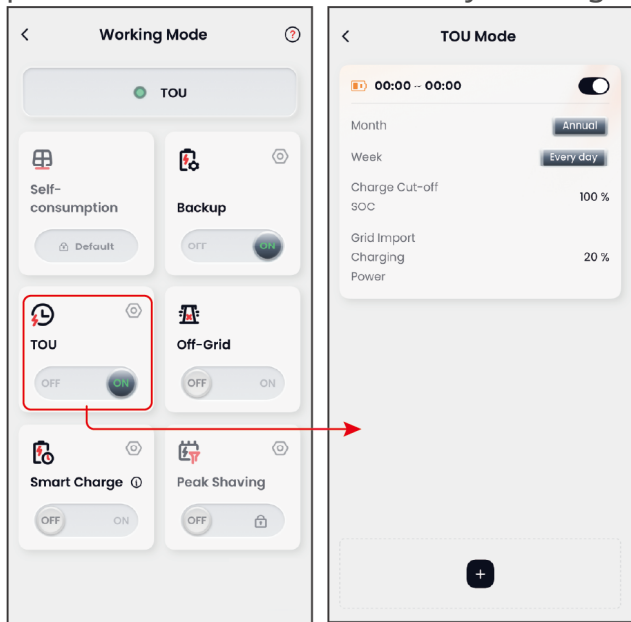
Parameter Name	Description
Grid Purchase Charging	Enable this function to allow the system to purchase electricity from the grid.
Charging Power	The peak power when purchasing electricity, as a percentage of the inverter's rated power.

TOU Mode

Suitable for areas with large peak-valley electricity price differences.

Under compliance with local laws and regulations, set the system to buy or sell electricity based on grid peak and valley price periods. For example, during low-price periods, set the battery to charging mode to buy electricity from the grid for charging; during high-price periods, set the battery to discharging mode to supply

power to loads or sell electricity to the grid.



SEMS0185

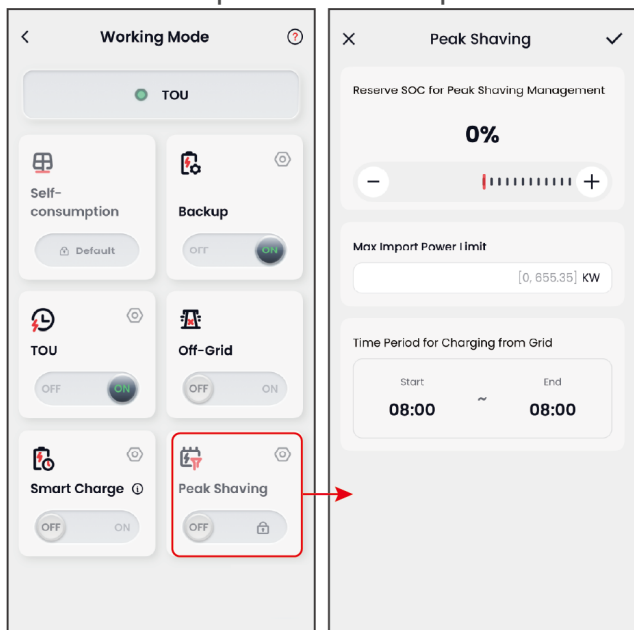
Parameter Name	Description
Start Time	Within the Start Time and End Time, the battery charges or discharges according to the set charging/discharging mode and rated power. Outside this period, it operates in self-consumption mode.
End Time	
Charging/Discharging Mode	Set to either charge or discharge based on actual requirements.
Charge Cut-off SOC	Stops charging when the battery reaches the set SOC.
Grid Import Charging Power	Power during charging, expressed as a percentage of the inverter's rated power.
Battery Discharge Power	Power during discharging, expressed as a percentage of the inverter's rated power.

Off-grid Mode

Suitable for areas without grid. Photovoltaic and battery form a pure off-grid system; photovoltaic power generation supplies loads, and excess power charges the battery. When photovoltaic power cannot meet load demand, the battery supplies power to the loads.

Peakshaving

Suitable for scenarios with limited peak power purchase. When the total load power consumption approaches the upper limit of the power quota, use battery discharge to reduce the power consumption exceeding the quota.



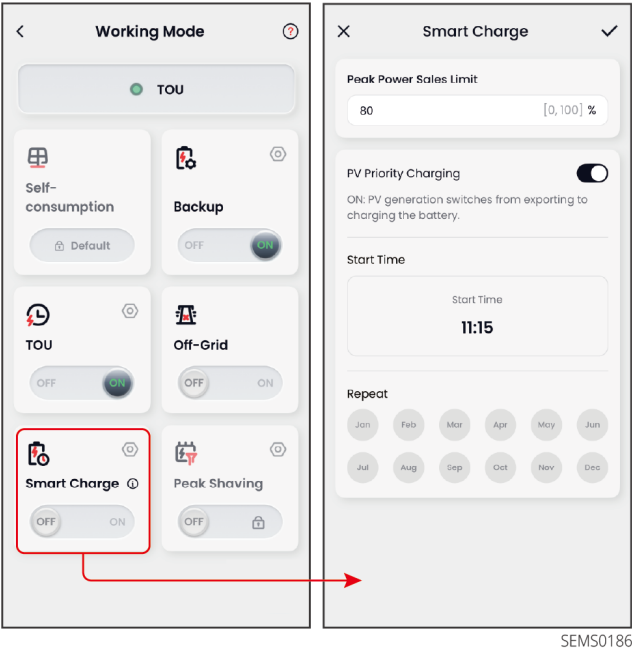
SEMS0187

Parameter Name	Description
Reserved SOC for Demand Management	In Demand Management mode, this SOC is reserved for demand management. The demand management function becomes ineffective when the battery SOC is higher than this reserved SOC.
Peak Grid Charging Limit	Sets the maximum power limit allowed for charging from the grid. When the load consumption exceeds the sum of the power generated by the PV system and this limit, the battery discharges to supplement the excess power.
Time Period for Charging from Grid	During the time period for charging from the grid, the battery can be charged from the grid when the load consumption does not exceed the grid charging quota. Outside this time range, the battery can only be charged using the PV generation power.

Smart Charging (Delayed Charging)

Suitable for areas with grid-connected power output limits. Set peak power limits and

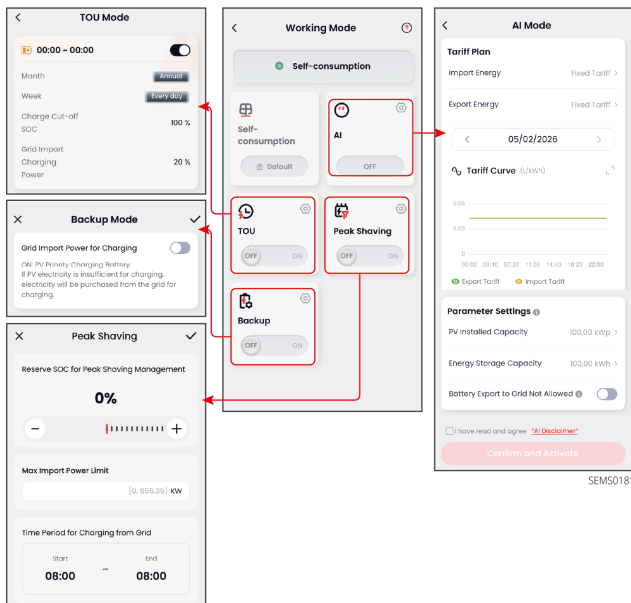
charging time periods to use photovoltaic power exceeding the grid connection limit for charging the battery, reducing photovoltaic waste.



Parameter Name	Description
Peak Power Sales Limit	Sets the peak power limit according to the grid standard requirements of certain countries or regions. The peak power limit value must be lower than the local regulated output power limit.
PV Priority Charging	Within the charging time range, surplus power from PV generation after supplying the load is prioritized for charging the battery. Outside the charging time range, surplus power from PV generation after supplying the load is prioritized for selling power to the grid.
Start Charging Time	

AI Mode

AI Mode is supported when a Home Energy Management System (HEMS) is used in the system.



Set electricity prices based on user needs, combined with 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 predicted curves and actual data.

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

Select Time-of-Use Tariff or Dynamic Tariff, supporting:

- **Dynamic Tariff:** Obtain dynamic tariffs from the power company, and combine with user-set tariff surcharges to dynamically adjust the actual buy and sell electricity prices.
- **Time-of-Use Tariff:** Users set electricity price information for different time periods based on actual tariffs. Supports setting multiple tariff groups.

3 Local Commissioning Device

NOTICE

The display of power station information varies depending on account type, region, power station type, etc.

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

3.1 Local Access Devices

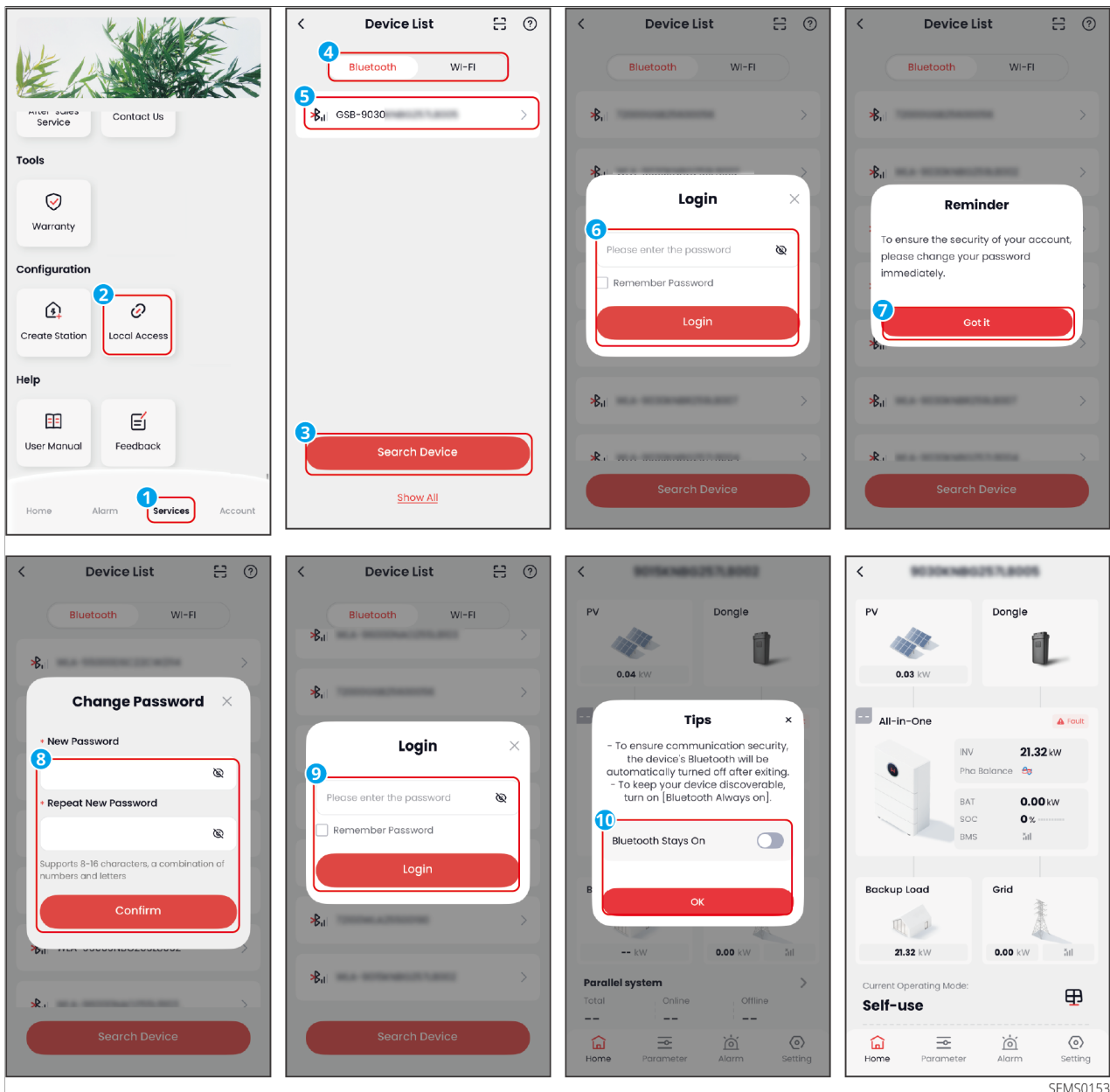
NOTICE

- Before connecting to the device locally, please confirm the device is powered on and operating normally.
- The displayed device name varies depending on the device type or smart communication kit type, 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-***
 - Charging Pile: ***
 - EzManager3000: LEM-***

Procedure

1. After logging into the App, tap "Service" > "Local Access" to enter the connection interface.
2. On the "Device List" interface, select the "Bluetooth" or "WiFi" tab based on the smart communication stick signal type. Tap "Search for Devices" to refresh the

- device list, and select the device you need to connect to by its serial number.
- During the first login, enter the initial login password to log in and change the password as prompted on the interface. Initial login password: 1234.
 - When connecting via Bluetooth, please enable "Bluetooth Stays On" as prompted on the interface, otherwise the Bluetooth signal will be turned off after this connection ends.



SEMS0153

Figure23 Local Access Devices

3.2 Local Connection Interface Overview

NOTICE

The App interface varies depending on the devices included in your system. Please refer to the actual interface.

After connecting to the device via Bluetooth or WiFi, you can access the local connection device interface. It supports viewing or modifying device parameters.

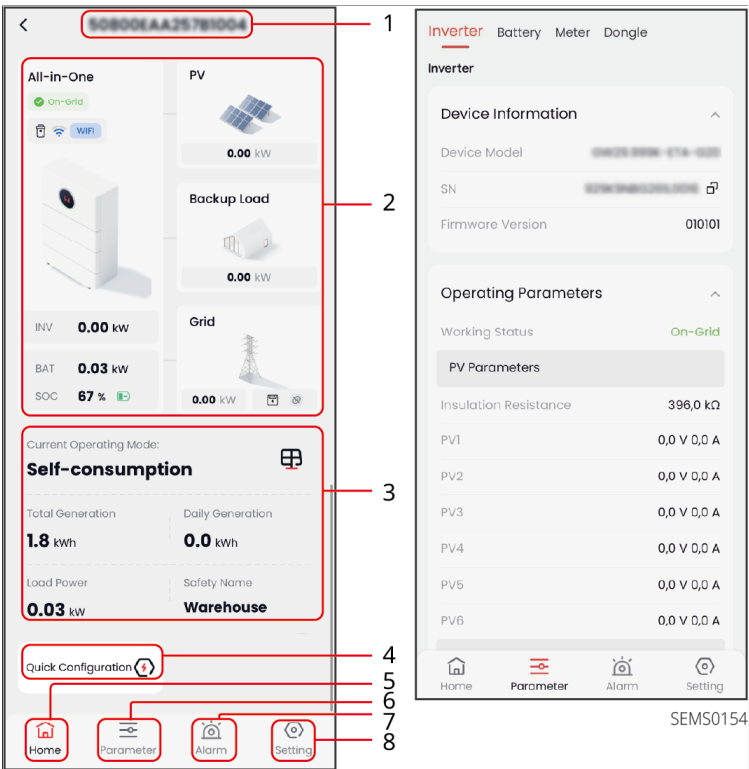


Figure24 Local Connection Interface Overview

No.	Description
1	Current device serial number.

No.	Description
2	• System module cards. Including PV, communication module, Inverter, Utility grid, Backup load, and other cards. • Click a card to view related parameters and set parameter values. • When the inverter is an integrated unit, click the integrated unit card to view information for the inverter, Battery, and communication stick separately and set parameter values.
3	Current system operation information. Includes Working Mode, Energy Generation, power, etc.
4	Quick access to control items, for example: • Quick Configuration. Quickly complete network settings, safety code settings, Working Mode Settings, device self-check, and other functions to meet basic usage needs. For specific settings, please refer to the 2.1.1.3.Quick Configuration(Page 16) section. • Some models support "One-Click Configuration", which can generate a template based on the completed Quick Configuration.
5	Home. Displays system information, such as devices included in the system, system operation information, and provides quick access to view parameters and set parameters.
6	Parameters. View device model, serial number, firmware version, device operating parameters, etc., according to the device type.
7	• Alarm. Displays current device alarm information. • Click to view detailed information such as alarm type, alarm cause, and handling suggestions.
8	Settings. Displays configurable parameters according to the device type.

3.3 Configure Device Parameters

After connecting to the device locally, you can modify the device parameters

according to your actual needs.

3.3.1 One-Click Configuration

Some models support the One-Click Configuration mode, which saves quick configurations as templates and applies them rapidly.

After completing the quick configuration, locally connect the device, click 'One-Click Configuration' > 'Generate Template' to save the current configuration as a configuration template. When needed, click 'One-Click Configuration Mode' to quickly import the saved template.

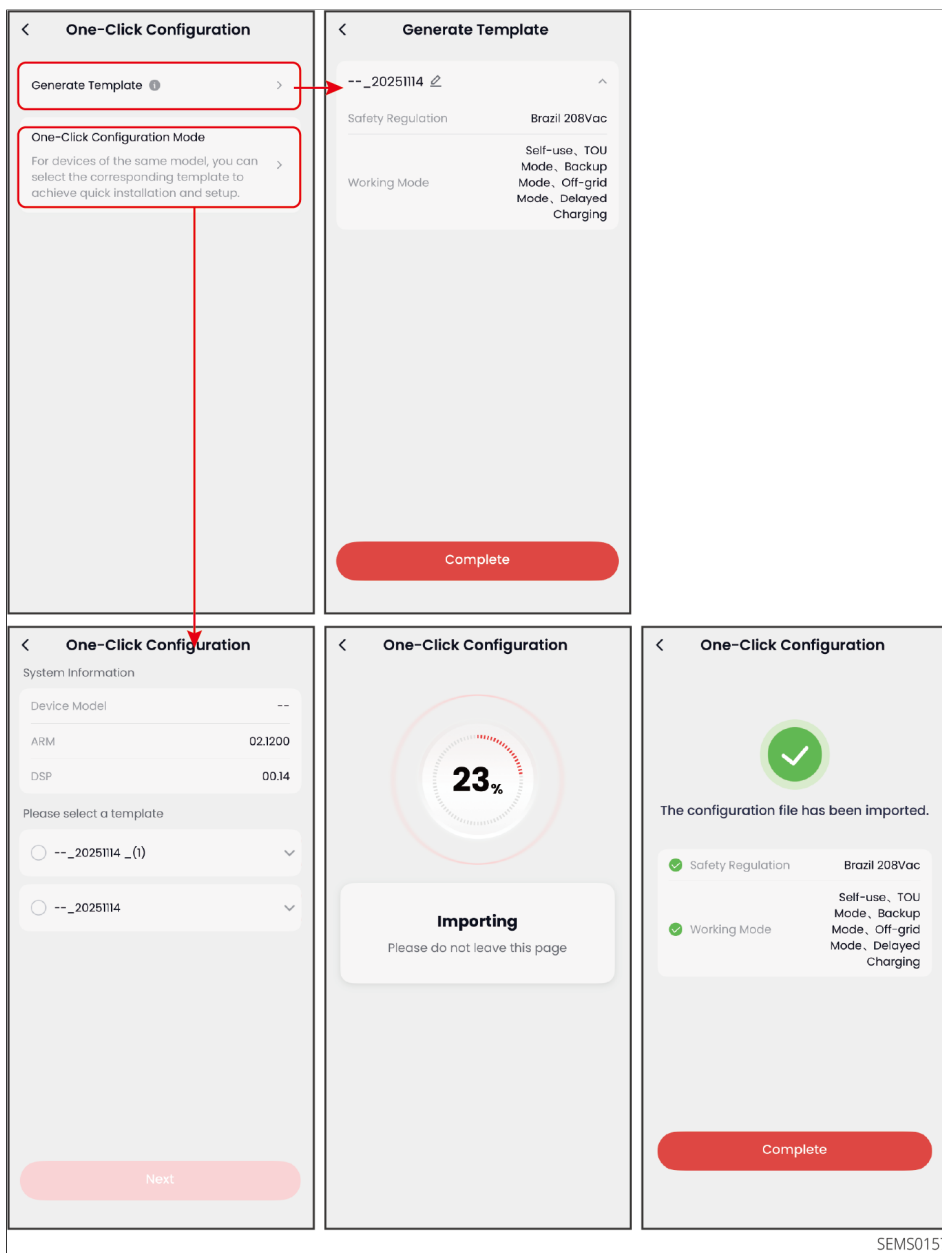


Figure25 One-Click Configuration

3.3.2 Set Inverter Parameters

Method 1: On the "Home" page, select the inverter card, click "Inverter" > "Settings", and modify the device parameters according to actual requirements.

Method 2: Click "Settings", and modify the device parameters according to actual requirements.

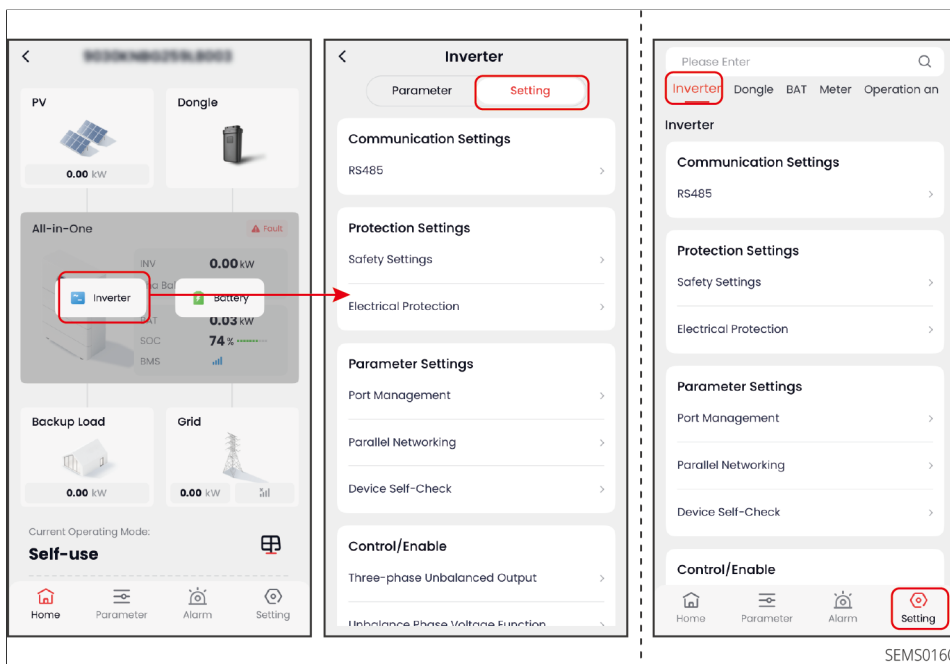


Figure26 Set Inverter Parameters

Setting Safety Parameters Procedure

1. Access the parameter setting interface via "Settings" > "Safety Settings".
2. Set the safety country and customize safety parameters according to actual needs.
Custom safety parameters can only be modified by installers.

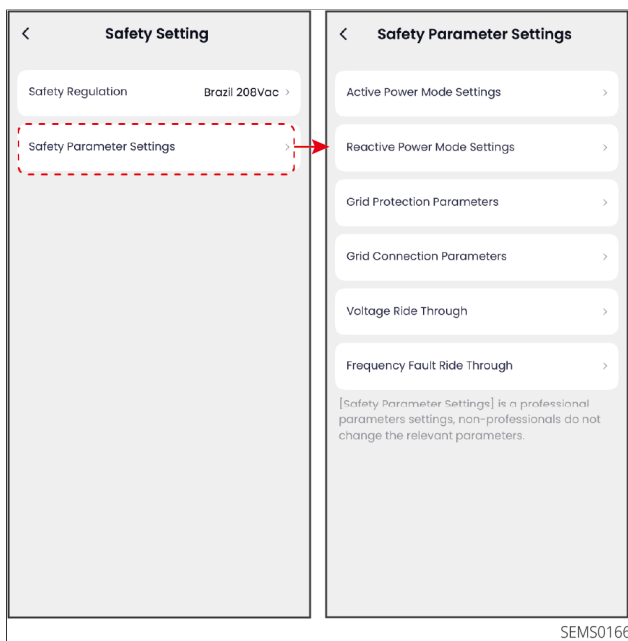


Figure27 Setting Safety Parameters

Setting Power Limit Parameters

NOTICE

The power limit interface varies by country's safety regulations. Please refer to the actual interface displayed.

Procedure

1. Access the power limit setting interface via "Settings" > "On-grid Power Dispatch" > "Export power limit".
2. Set the power limit parameters according to actual requirements.

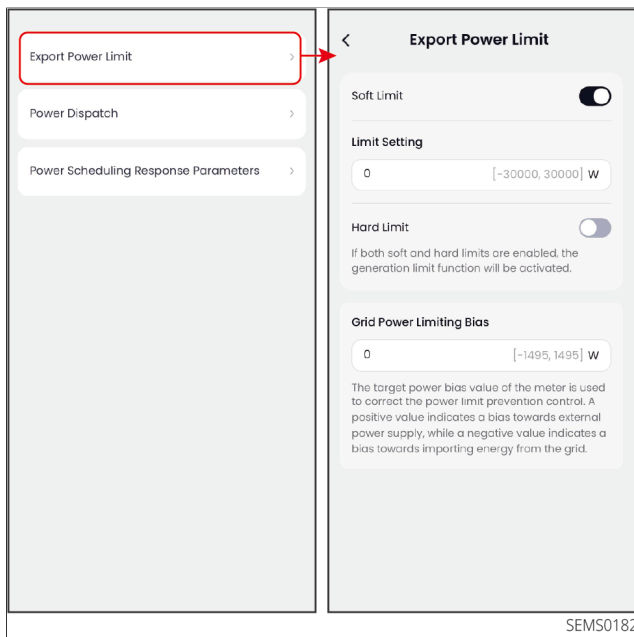


Figure28 Set Power Limit Parameters

Setting RS485 Parallel Networking

NOTICE

- Different inverters support different RS485 parallel connection methods, such as manual networking or self-networking. Please refer to the actual product for details.
- When an inverter in a parallel system needs to be used as a standalone unit, it must be set to standalone mode via the App.
- In a parallel system, the inverter connected to the meter is the master unit.
- If the device does not support self-networking, please first set the slave inverter address, then configure the parallel network via the master unit.
- After completing the parallel network setup, the master unit's settings are typically applied to the slave units by default. If there are discrepancies, please configure the slave unit parameters separately.

Procedure

1. Access the setting interface 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 Single-phase to Three-phase.
- When the device does not support self-networking, the properties of each inverter in the system need to be set manually:
 - When the inverter is the Master, set it as Master and then disconnect. After setting the addresses for the Slave inverters, return to this interface, click "Parallel Networking", set the number of inverters in the parallel system, and then click "Network Setup".
 - When the inverter is a Slave, set the inverter address and then click √.
 - When the inverter supports self-networking, select the actual number of inverters in the system.

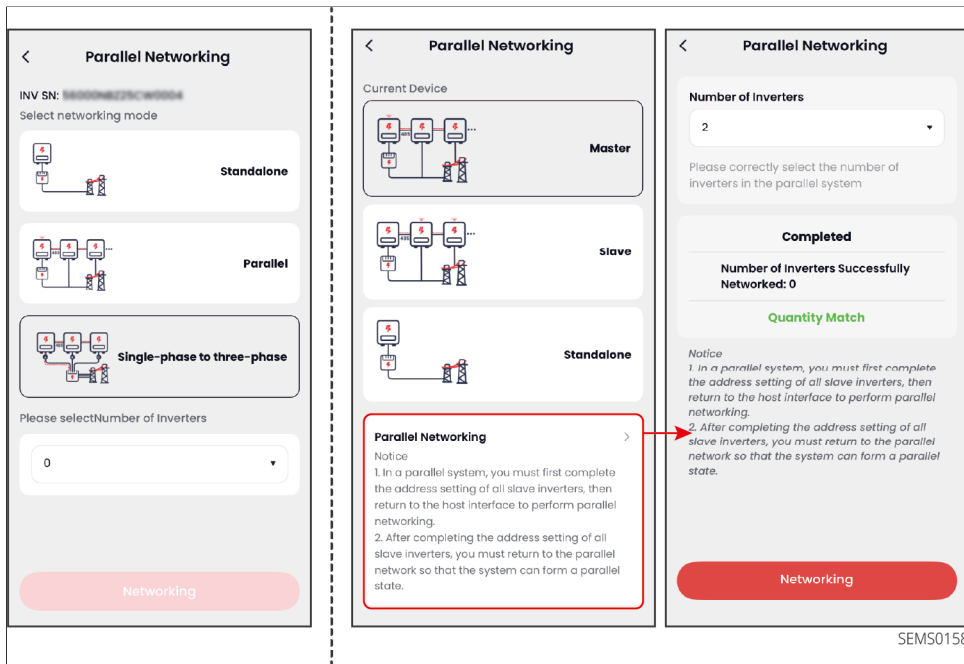


Figure29 Set RS485 Parallel Operation

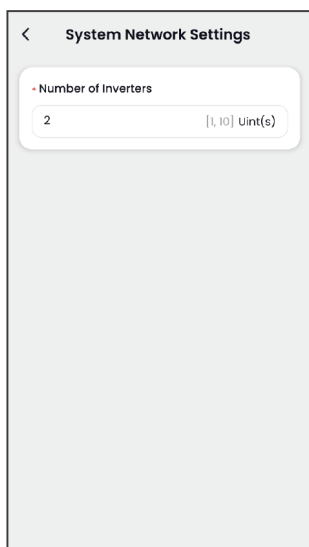
Setting Ezlink Parallel Networking

NOTICE

- In a parallel system, the inverter connected to the Ezlink3000 smart communication stick is the host.
- Please set the number of inverters in the parallel system via the host.
- After completing the parallel networking, the host settings are defaultly distributed to the slaves. If there are differences, please set the slave parameters separately.

Procedure

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



SEMS0195

3.3.3 Configuring Smart Dongle Parameters

Method 1: On the "Home" page, select the smart dongle card, click on the device card > "Settings", and modify the device parameters according to actual needs.

Method 2: Click "Settings" and modify the device parameters according to actual needs.

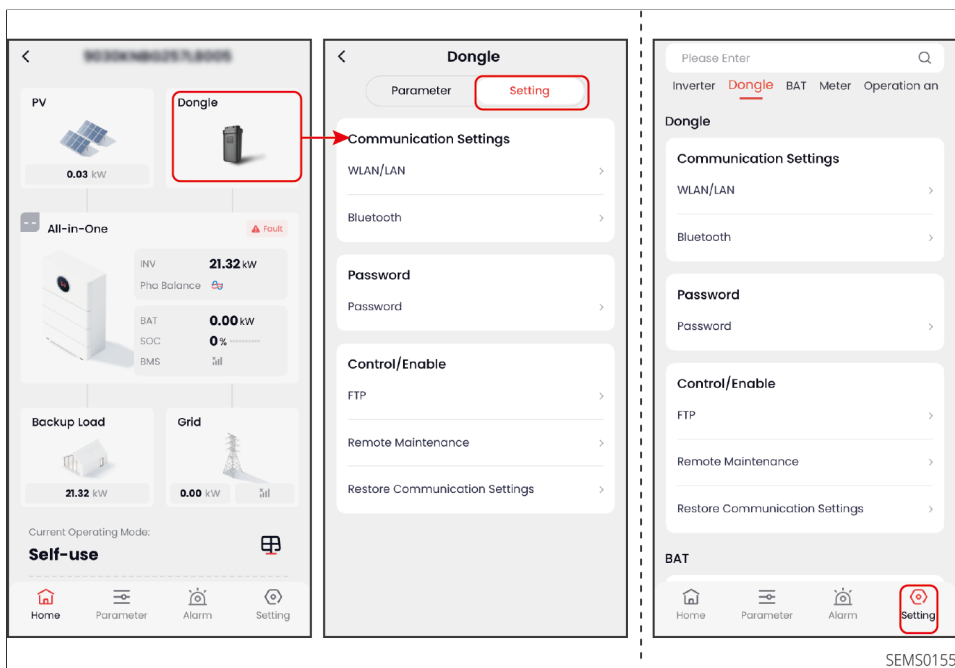


Figure30 Setting Communication Stick Parameters

3.3.4 Setting Battery Parameters

Method 1: On the "Home" page, select the battery card, click on the card > "Settings", and modify the device parameters according to actual requirements.

Method 2: Click "Settings", and modify the device parameters according to actual requirements.

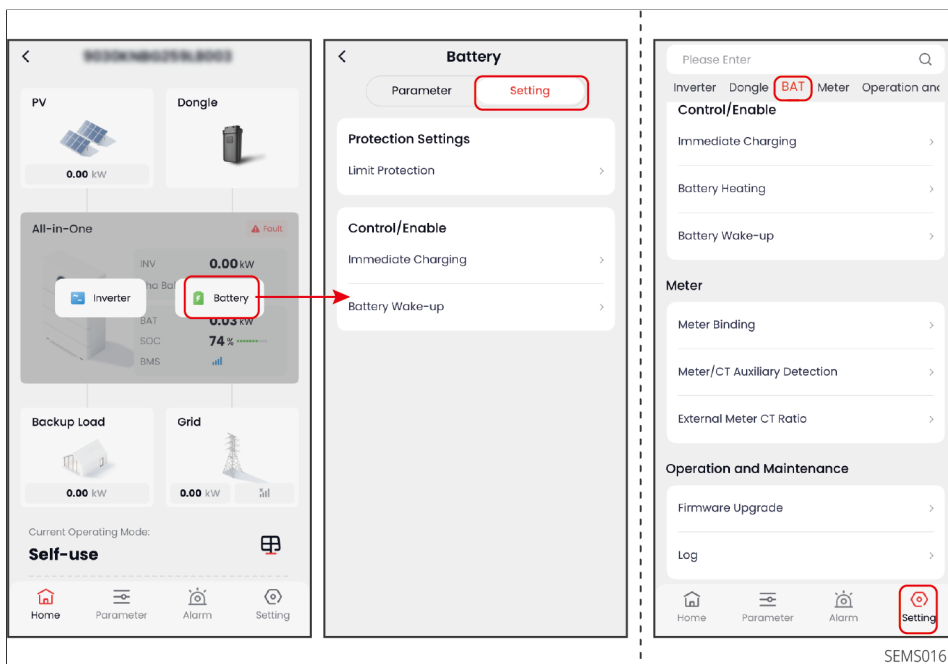


Figure31 Set Battery Parameters

Set JA12 Certification Parameters

When the device is installed in areas such as California, please fill in the power station battery capacity information according to local regulations to complete the JA12 Certification.

After the JA12 Certification takes effect, if the battery SOC limit setting exceeds 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.

Procedure:

1. Click "Settings" > "Battery" > "JA12 Certification".
2. Set the certified capacity and system capacity according to the actual situation. The settings take permanent effect and cannot be modified. After setup is complete, you can view the JA12 Certification mark on the home page.

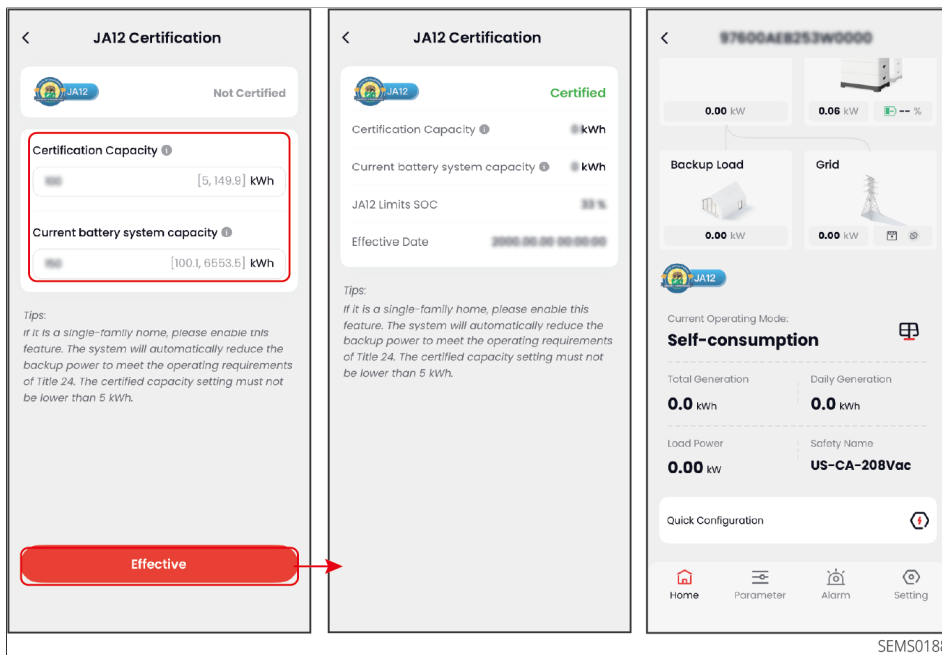


Figure32 Set JA12 Certification Parameters

3.3.5 Setting Smart Meter Parameters

Method 1: On the home page, long press the Utility grid card, click "Meter">"Settings", and modify device parameters according to actual needs.

Method 2: Click "Settings", and modify meter parameters according to actual needs.

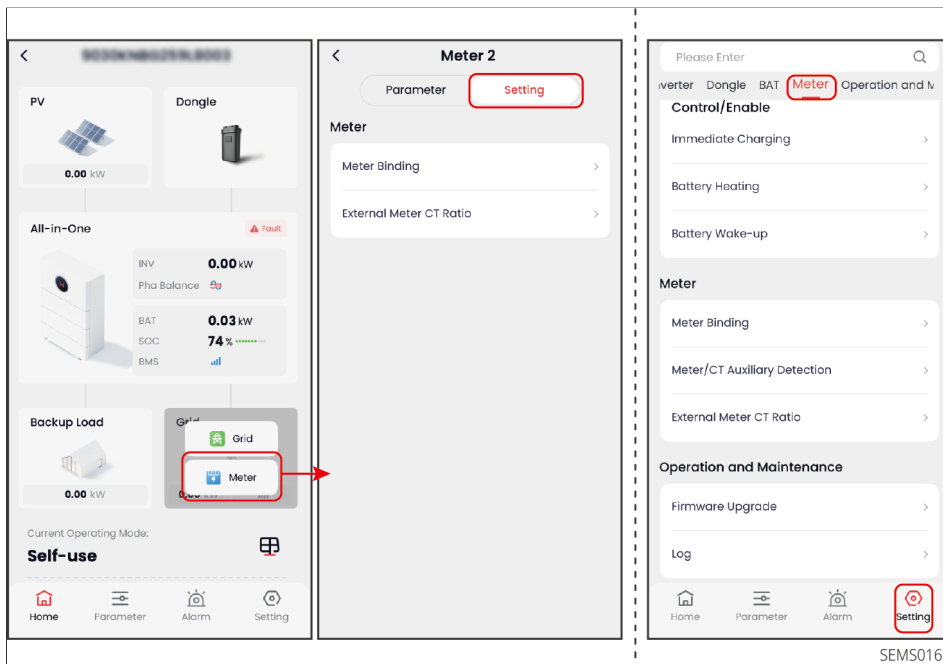


Figure33 Set Meter Parameters

Meter Binding Operation Steps

1. Click "Home", long press the "Utility grid" card, select "Meter"> "Settings">"Meter Binding", and enter the binding interface. Or via "Settings"> "Meter">"Meter Binding" to enter the binding interface.
2. Click "Meters Number/Location" drop-down to select the actual application scenario. Supported selections: Meter 1 (built-in) No Meter 2; Meter 1 (external) No Meter 2; Meter 1 (built-in) Meter 2 (external); Meter 1 (external) Meter 2 (external); Built-in CT, external no meter no CT. Specific options are subject to the actual interface. Here, the Meter 1 (external) No Meter 2 interface is used as an example to introduce how to bind the meter.
3. As shown in the figure below, when selecting to use an external meter, manually add external meter information is required. Click "Bind", bind the meter by manually entering the meter SN or scanning the meter SN QR code. When the bound meter model is GM330, please set the meter CT ratio according to the actual situation; if using other meters, there is no need to set the meter CT ratio.

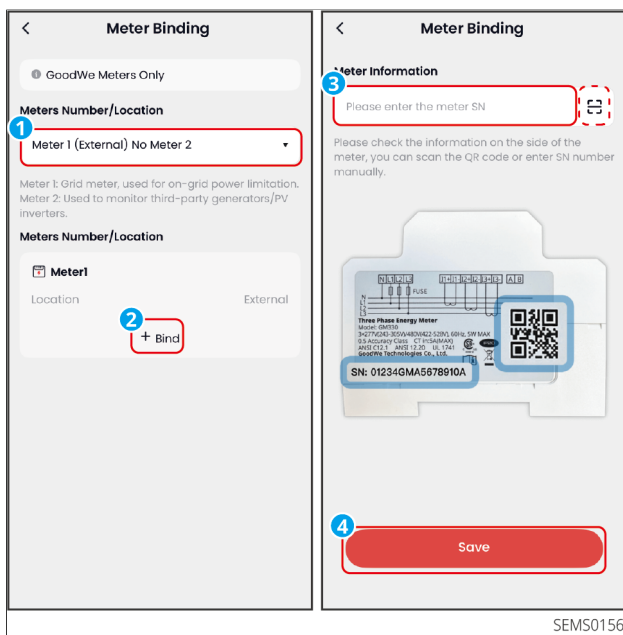


Figure34 Meter Binding

3.3.6 Setting System Working Mode

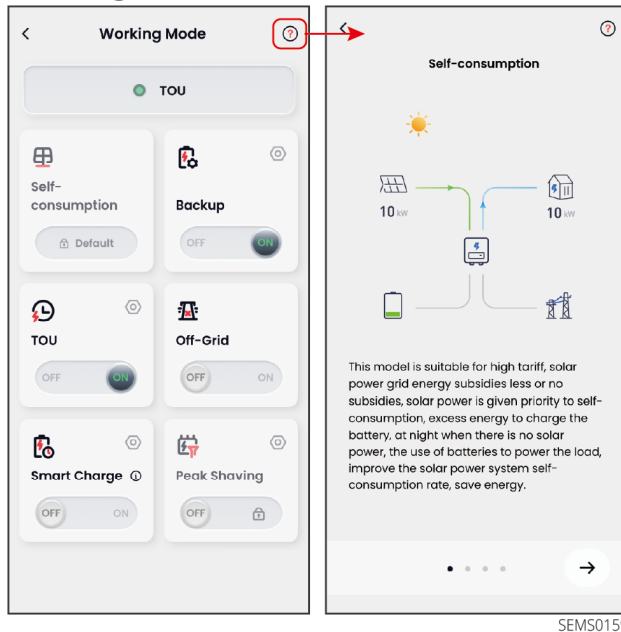
Supports selecting the system operation mode based on electricity price, power demand, or power supply environment. After setting, the system will automatically coordinate photovoltaic, battery, and grid to dispatch power according to actual needs.

NOTICE

- The default working mode is Self-consumption.
- Different systems support different settable working modes. Please refer to the actual interface.
- When setting the working mode via the inverter, the priority order is: Off-grid Mode > Peakshaving > Smart Charging > TOU > Backup Mode > Self-consumption.
- When setting the working mode via the Home Energy Management System, the priority order is: Backup Mode > AI Mode > Peakshaving > TOU Mode > Self-consumption.

Operation Steps

1. Via "Energy Management" > "Working Mode", or search for "Working Mode" in the parameter control interface to enter the working mode setting interface.
2. Please set the working mode according to actual needs. To learn more about working modes, click .



Self-consumption

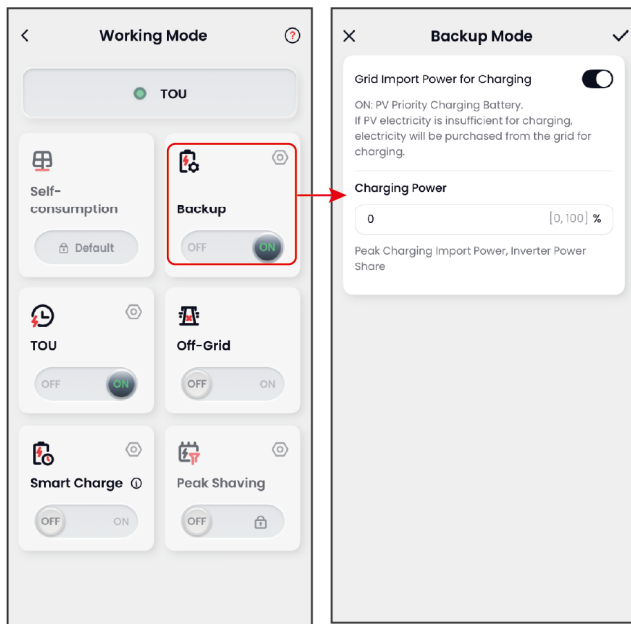
The basic working mode for system operation.

Photovoltaic power generation is prioritized for supplying loads, excess power charges the battery, and any remaining power is sold to the grid. When photovoltaic power is insufficient, the battery supplies power to the loads; when battery power also cannot meet the load demand, the grid supplies power to the loads.

Backup Mode

Recommended for areas with unstable grid.

When the grid is out, the inverter switches to off-grid working mode, and the battery discharges to supply power to the loads, ensuring BACKUP loads have uninterrupted power; when the grid is restored, the inverter working mode switches back to grid-connected operation.



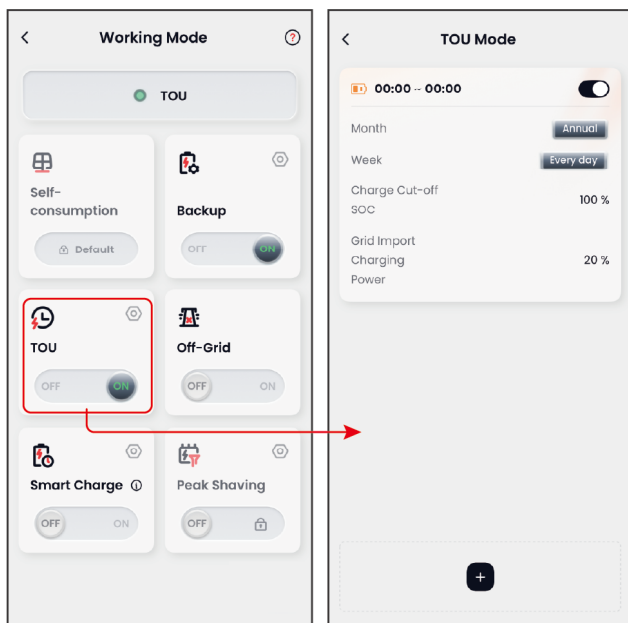
SEMS0189

Parameter Name	Description
Grid Purchase Charging	Enable this function to allow the system to purchase electricity from the grid.
Charging Power	The peak power when purchasing electricity, as a percentage of the inverter's rated power.

TOU Mode

Suitable for areas with large peak-valley electricity price differences.

Under compliance with local laws and regulations, set the system to buy or sell electricity based on grid peak and valley price periods. For example, during low-price periods, set the battery to charging mode to buy electricity from the grid for charging; during high-price periods, set the battery to discharging mode to supply power to loads or sell electricity to the grid.



SEMS0185

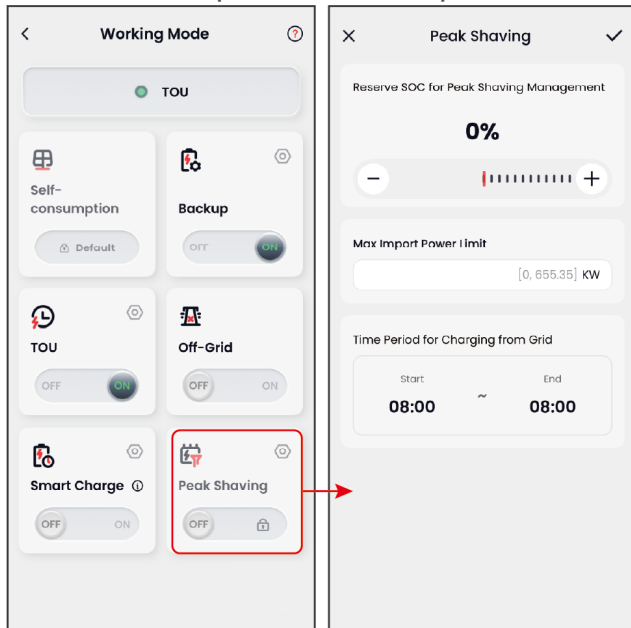
Parameter Name	Description
Start Time	Within the Start Time and End Time, the battery charges or discharges according to the set charging/discharging mode and rated power. Outside this period, it operates in self-consumption mode.
End Time	
Charging/Discharging Mode	Set to either charge or discharge based on actual requirements.
Charge Cut-off SOC	Stops charging when the battery reaches the set SOC.
Grid Import Charging Power	Power during charging, expressed as a percentage of the inverter's rated power.
Battery Discharge Power	Power during discharging, expressed as a percentage of the inverter's rated power.

Off-grid Mode

Suitable for areas without grid. Photovoltaic and battery form a pure off-grid system; photovoltaic power generation supplies loads, and excess power charges the battery. When photovoltaic power cannot meet load demand, the battery supplies power to the loads.

Peakshaving

Suitable for scenarios with limited peak power purchase. When the total load power consumption approaches the upper limit of the power quota, use battery discharge to reduce the power consumption exceeding the quota.



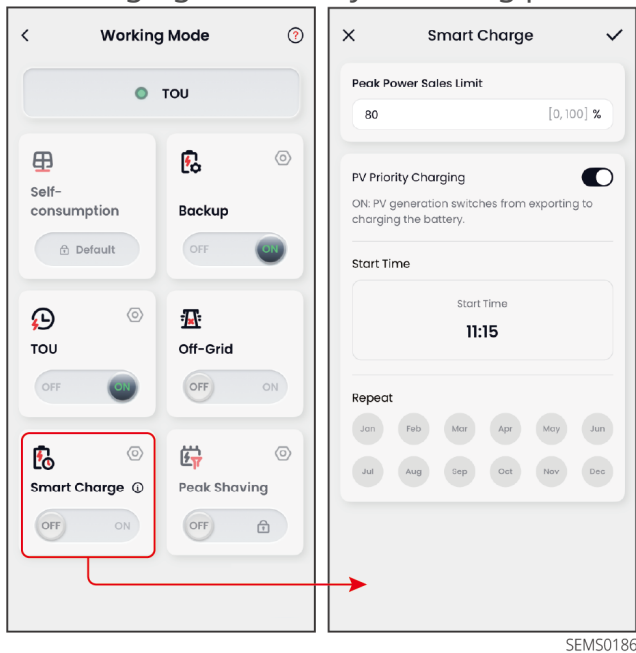
SEMS0187

Parameter Name	Description
Reserved SOC for Demand Management	In Demand Management mode, this SOC is reserved for demand management. The demand management function becomes ineffective when the battery SOC is higher than this reserved SOC.
Peak Grid Charging Limit	Sets the maximum power limit allowed for charging from the grid. When the load consumption exceeds the sum of the power generated by the PV system and this limit, the battery discharges to supplement the excess power.
Time Period for Charging from Grid	During the time period for charging from the grid, the battery can be charged from the grid when the load consumption does not exceed the grid charging quota. Outside this time range, the battery can only be charged using the PV generation power.

Smart Charging (Delayed Charging)

Suitable for areas with grid-connected power output limits. Set peak power limits and charging time periods to use photovoltaic power exceeding the grid connection limit

for charging the battery, reducing photovoltaic waste.

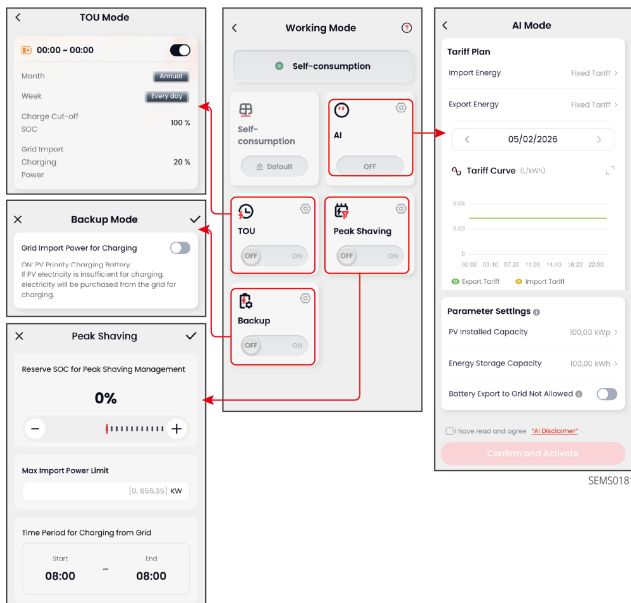


SEMS0186

Parameter Name	Description
Peak Power Sales Limit	Sets the peak power limit according to the grid standard requirements of certain countries or regions. The peak power limit value must be lower than the local regulated output power limit.
PV Priority Charging	Within the charging time range, surplus power from PV generation after supplying the load is prioritized for charging the battery. Outside the charging time range, surplus power from PV generation after supplying the load is prioritized for selling power to the grid.
Start Charging Time	

AI Mode

AI Mode is supported when a Home Energy Management System (HEMS) is used in the system.



Set electricity prices based on user needs, combined with 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 predicted curves and actual data.

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

Select Time-of-Use Tariff or Dynamic Tariff, supporting:

- **Dynamic Tariff:** Obtain dynamic tariffs from the power company, and combine with user-set tariff surcharges to dynamically adjust the actual buy and sell electricity prices.
- **Time-of-Use Tariff:** Users set electricity price information for different time periods based on actual tariffs. Supports setting multiple tariff groups.

4 Services

Click "Services" 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 feedback.

NOTICE

Different accounts have different functional permissions. Please refer to the actual interface.

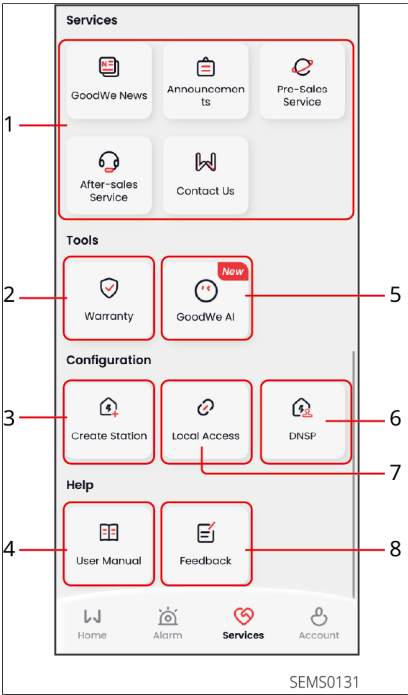


Figure35 Service Interface

No.	Description
1	Entry point for news, announcements, and pre-sales & after-sales services.

No.	Description
2	• Query warranty period by device serial number. • Supports querying battery product performance guarantee parameters, such as health index, typical discharge capacity, etc.
3	Create Station. For detailed steps, please refer to the Create Station chapter.
4	View the App user manual.
5	• AI Assistant. Quickly obtain knowledge base information, query business data, etc., through intelligent Q&A. • Supports enabling the AI Assistant floating window for quick access to the conversation interface.
6	DNSP Settings. Applicable only to the Australia region.
7	Local Access. For detailed steps, please refer to the Communication Settings chapter.
8	Provide feedback on issues encountered during product use, optimization suggestions, etc.

4.1 Setting DNSP Function

NOTICE

- Applicable to Australia only.
- Registering the user's power station with the DNSP network allows the electricity service provider to remotely limit the output power value of the photovoltaic power station.
- After DNSP registration, if operational abnormalities occur, support is available through the installer account to detect DNSP issues, such as communication problems, firmware version issues, device time difference problems, etc.

DNSP Registration Steps

1. Click "Service" > "DNSP" to enter the DNSP settings interface.
2. Select an unregistered power station and click to enter the registration interface.
3. Fill in the registration information and submit.

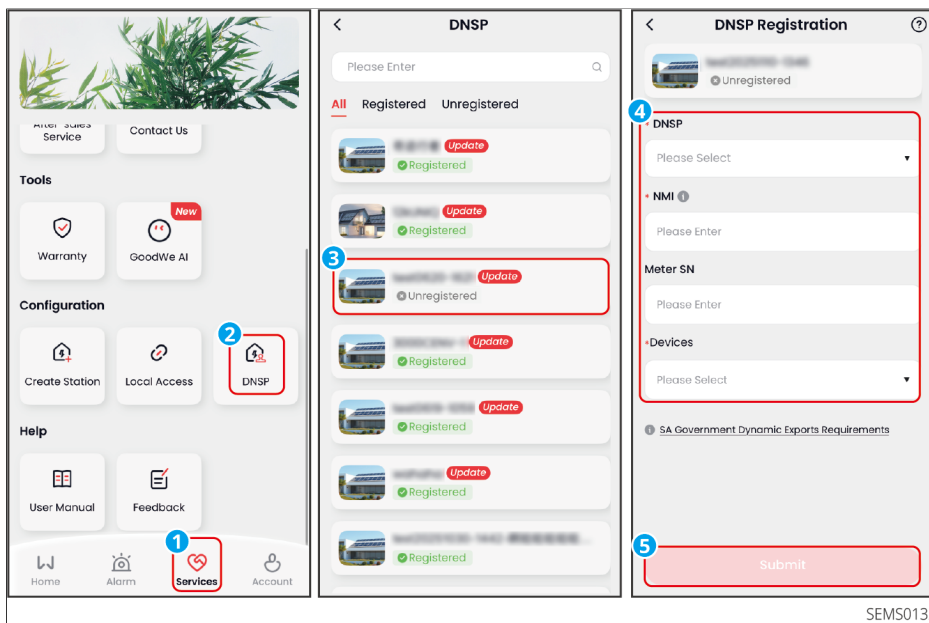


Figure36 DNSP Registration

Parameter Name	Description
DNSP	Set the grid company.
NMI	National Meter Identifier. Set the NMI number.
Meter SN	Set the connected meter's SN number.
Device	Select a device already added in the power station. After selection, information such as the device serial number will be automatically filled.

DNSP Check Steps

1. Click "Service" > "DNSP" to enter the DNSP settings interface.
2. Select a registered power station and click to enter the check interface.
3. Check if there are any abnormal information prompts, for example:

- Is the NMI number correct?
- Is there a time difference between the server and the device?
- Is the device status online?
- Does the device version need an upgrade?
- Is the device operating power within the set range, etc.?

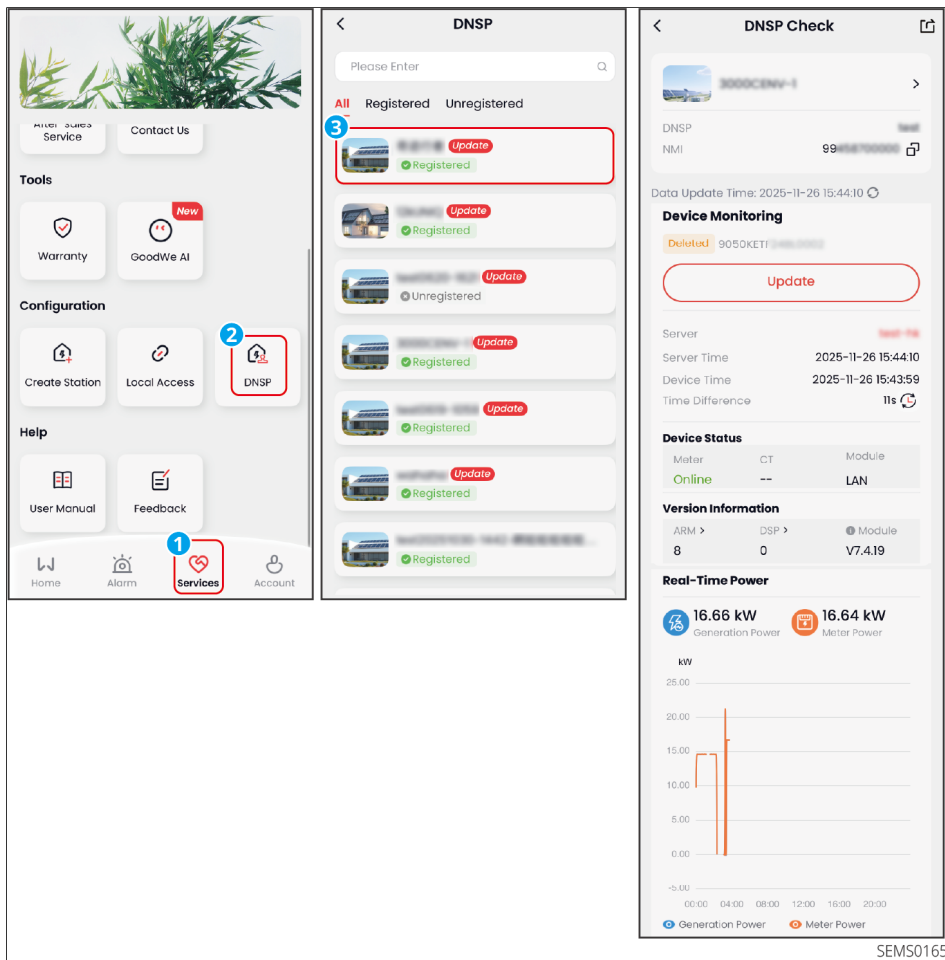


Figure37 DNSP Check

4.2 Using AI Assistant

Quickly obtain information with text and images through the AI assistant's Q&A format.

- Supports querying knowledge base information, such as GoodWe product manuals.

- Supports querying business data, such as power generation information, fault information, power information, etc.
- Supports querying external data, such as weather information, date information, etc.
- Supports providing feedback on AI responses. When the AI cannot solve the problem, you can switch to manual processing with one click and generate an after-sales work order.

Operation Steps

1. Click "Services" > "GoodWe AI" to enter the AI assistant interface.
2. Enter your question via text or voice in the dialog box to quickly generate an answer.

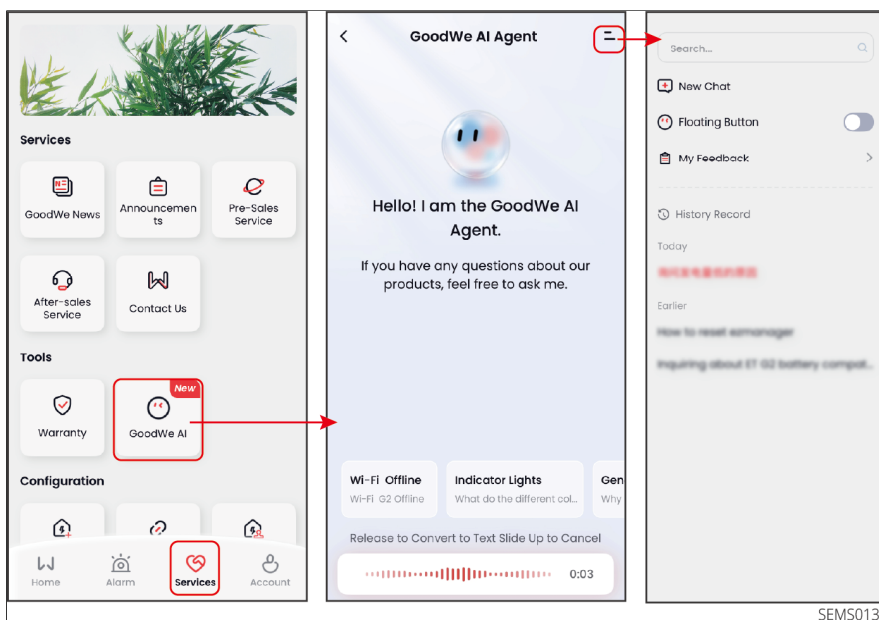


Figure38 AI Assistant

5 Account

5.1 Modify User Information

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

Steps:

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

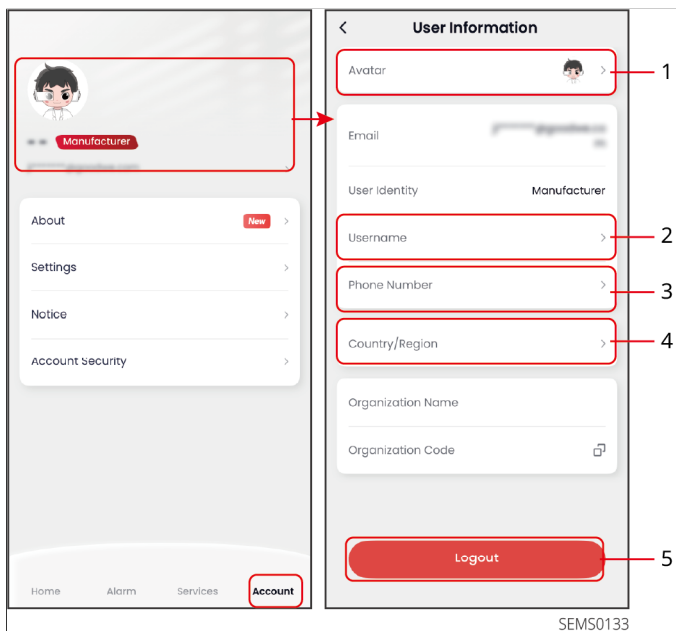


Figure39 Modify User Information

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

No.	Description
5	Log out of the current account.

5.2 Set App Notification Information

Supports modifying App notification message types, reception methods, time periods, etc.

Operation Steps

Click "Account" > "Notifications" to enter the notification settings interface, where you can turn on or off message notifications, set message types, etc.

- Event Subscription: After enabling, users can promptly receive notifications when devices generate alarms, fault, or changes in operational status.
 - Supports setting push channels, such as receiving notifications via App message center, email, etc.
 - Supports setting when to push alarm notifications.
 - Supports setting alarm types and time periods for which notifications are not received.
- Shared Station Subscription: Receive notifications when new shared stations are available.
- Electricity Price Expiry Reminder: Default is off. After enabling, notifications will be sent when electricity prices expire.

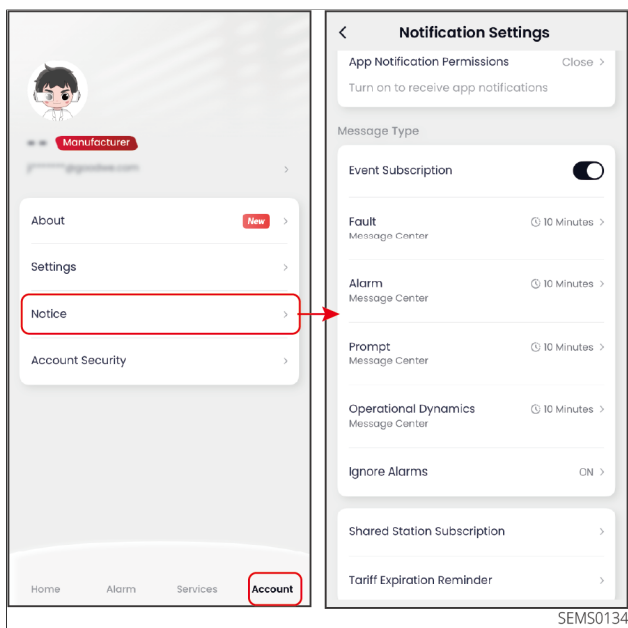


Figure40 Setting App Notification Messages

5.3 Set Account Security Information

To ensure account security, you can modify the bound email, login password, and other information, and also cancel accounts without power plants.

Operation Steps

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

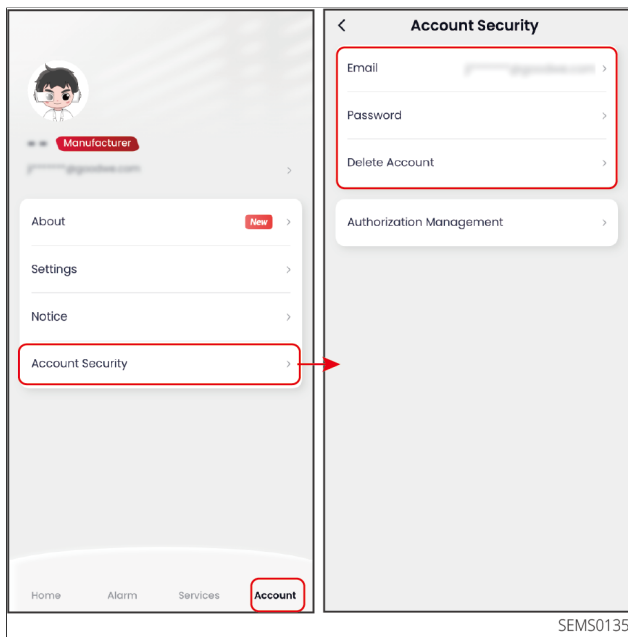


Figure41 Set Account Security Information

5.4 Set Monitoring Permissions

NOTICE

- Applicable only to European and Australian servers.
- For third-party remote control requirements, please contact the manufacturer to add authorization, and fill in information such as battery capacity as prompted on the interface.
- Monitoring authorization is only applicable to the owner account. According to European GDPR regulations, the owner can set monitoring permissions and remote operation and maintenance permissions as needed. Except for the owner and authorized visitors, other accounts cannot monitor or perform operation and maintenance on this power station.

Procedure

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

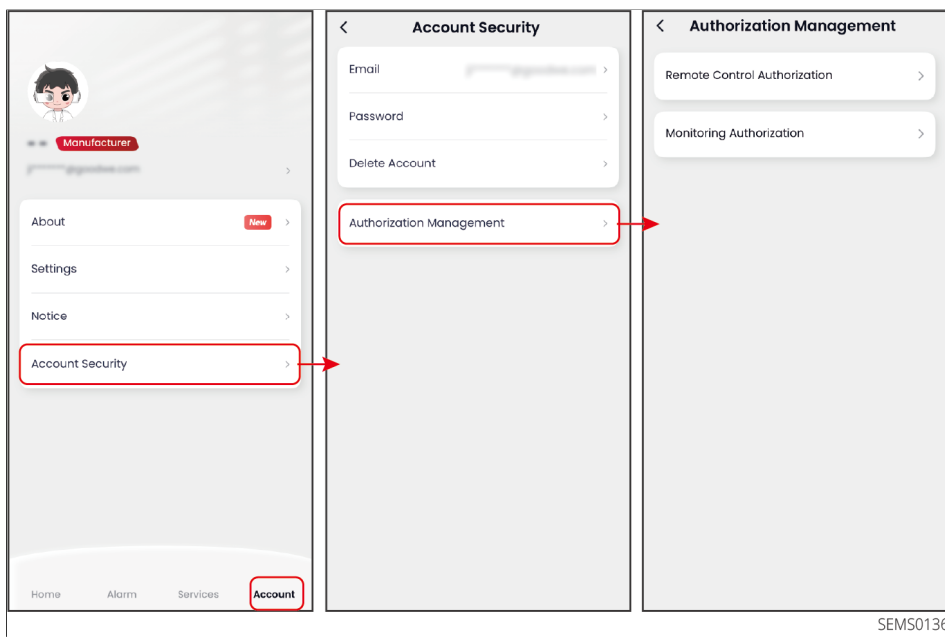


Figure42 Set Monitoring Permissions

6 Troubleshooting

No.	Fault Name	Fault Cause	Handling Measures
1	Unable to Install App	1. The mobile phone operating system version is too low. 2. The phone is blocking the installation of the software package.	1. Upgrade the mobile phone operating system. 2. In the phone's Settings > Security interface, check "Allow installation of apps from unknown sources".
2	Device WiFi Signal Not Displayed in App Device List	The App is not connected to a WiFi signal.	1. Confirm the WiFi communication stick is working normally. 2. Refresh the device list. If the device still does not appear in the list, exit the App and log in again.
3	Login Failed	1. The phone is not connected to the internet. 2. The App is under maintenance.	1. Check if the phone's mobile data is turned on and can access the internet. 2. The App is under maintenance. Please try again later.
4	Unable to Launch App	1. The mobile phone operating system version is too low. 2. The App version is too low.	1. Upgrade the mobile phone operating system. 2. Confirm if the App version is the latest.

No.	Fault Name	Fault Cause	Handling Measures
5	Failed to Obtain Data During Operation	Communication between the device and the App is interrupted.	1. Check if communication between the device and the router is normal. 2. Check if communication between the router and the cloud is normal.

7 Appendix

7.1 Safety Regulation Countries

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 ≤9MW
34	LUMAPR-2024-208Vac	71	Chile-MT ≤9MW
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

7.2 Inverter Parameters

Communication Parameters

Parameter Name	Description
RS485 Settings	Sets 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, each inverter's address must be different, and all inverters cannot set the communication address to 247.
PLC	Only applicable to devices communicating via PLC. Set according to the actual box transformer that the inverter is connected to.

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 Reverse Cleaning	When enabled, the fan will periodically and automatically reverse to clean dust.
External Fan Activation Temperature Setting	When the device temperature reaches the set value, the external fan starts running.
Fan Detection	Detects whether the fan can operate normally.
Silent Mode	
Silent Mode	• Enabling Silent Mode can reduce device noise. • Before enabling Silent Mode, please confirm the device is connected to a stable and reliable power grid, otherwise it will not take effect. • After enabling Silent Mode, if the system load power consumption is too high and the power generation cannot meet the demand, it may automatically purchase power from the grid to ensure load operation. • During the use of Silent Mode, there may be some loss in photovoltaic power generation. • Supports setting the Silent Mode time period according to actual needs.

AC Side Setting Parameters

Parameter Name	Description
AC Port Connection Settings	Supports connecting loads, generators, microgrid equipment, etc., based on the Inverter port characteristics. For details, refer to 7.2.4.Multiport Parameters(Page 113) .

Parameter Name	Description
Backup Function Settings	• Backup: When enabled, if the grid power fails, loads connected to the inverter's BACK-UP port can be powered by the battery, ensuring uninterrupted power supply to the loads. • Supports the following detection modes: ◦ 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 - supports low voltage ride-through: 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 load power connected to the inverter's BACK-UP port exceeds the rated load power, the inverter will restart and detect the load power again. If not handled promptly, the inverter will restart multiple times for load detection, with the interval between each restart continuously increasing. After the BACK-UP port load power is reduced to within the rated power range, click this switch to clear the inverter restart interval, and the inverter will restart immediately.

Parameter Name	Description
Parallel Management	- When inverters are paralleled via RS485, set the Parallel Management parameters. - Manually set the inverter's master or slave attributes, and set information such as the slave address. - Automatically form a parallel system or a single-phase to three-phase system through self-networking. - When inverters are paralleled via the Ezlink3000 smart communication stick, the number of parallel units in the system needs to be set.
Type of Electrical Supply System	Select single-phase, split-phase, or two-phase grid based on the actual grid type the inverter is adapted to.
Output Method	When the connected grid is a three-phase grid, select three-phase three-wire or three-phase four-wire based on the actual grid type the inverter is connected to.
Three-phase Unbalanced Output	For three-phase inverters connected to unbalanced loads, such as L1, L2, L3 connected to loads of different power levels, the Three-phase Unbalanced Output function needs to be enabled.
Unbalance Phase Voltage Function	When enabled, the inverter will perform power derating or power distribution based on each phase's grid voltage value to maximize power utilization.

PV Setting Parameters

Parameter Name	Description
PV Access Mode	For certain models, the photovoltaic string connection method for the inverter's MPPT ports can be manually set to avoid misidentification of the connection method. Supported modes: • Independent Access: External photovoltaic strings are connected one-to-one with the inverter-side PV input ports. • Partial Parallel Access: When one photovoltaic string is connected to multiple MPPT ports on the inverter side, other photovoltaic modules are simultaneously connected to other MPPT ports on the inverter side. • Parallel Access: When external photovoltaic strings are connected to the inverter-side PV input ports, multiple photovoltaic strings are first connected via Y-cables and then split into multiple circuits connected to multiple PV input ports.
PID Settings	• During operation, a potential difference exists between the output electrodes of a photovoltaic panel and its grounded frame, which over time can lead to a decrease in the panel's power generation efficiency, known as Potential Induced Degradation (PID). • The product's PID function works by raising the voltage differential between the photovoltaic panel and its frame, making it a positive differential (referred to as raising positive voltage), achieving PID suppression. This is suitable for P-type panels and N-type panels that require raising positive voltage to suppress PID effects. For N-type panels that require lowering negative voltage to suppress PID effects, it is recommended to disable this function. Please consult the module supplier to determine if an N-type module is the type that requires raising positive voltage for PID suppression.
Shadow Scan Function	When photovoltaic panels are severely shaded, turning on the Shadow Scan Function can optimize the inverter's power generation efficiency.

Battery Settings

Parameter Name	Description
Battery Activate	If you purchased an unactivated battery, you need to enter an activation code to activate the battery function.
BAT Connection Configuration	Select the battery connection mode based on the actual connection status of the battery.

Protection Parameters

Parameter Name	Description
Electrical Protection	
SPD Alarm	After enabling the SPD Alarm function, an alarm will be triggered to indicate an abnormality when the surge protective device module malfunctions.
AFCI Detection	• After enabling the AFCI Detection function, you can monitor whether there is an arc fault hazard in the equipment. • Click "Arc Self-Test" to start the self-test of the arc detection module and confirm its status. View the result via the "AFCI Detection Status". • If the inverter triggers an arc alarm less than 5 times within 24 hours, the alarm can be cleared automatically. After the 5th arc alarm, the inverter will shut down for protection. You need to click "Clear Arc Alarm" to clear the fault before the inverter can resume normal operation.
Backup N-PE Relay Switch	According to the grid standard requirements of some 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, the inverter's DC switch can automatically trip and disconnect when a machine fault occurs.

Parameter Name	Description
On-Grid Point Rated Current Protection	To prevent damage or tripping of the household circuit breaker due to excessive current flow between the inverter and the grid, set the on-grid point rated current to limit the input and output current values.
Grid/On-Grid Protection	
Anti-islanding Protection	Enable or disable the anti-islanding protection function according to actual requirements.
NS Protection	Enable or disable the NS protection function according to the standard requirements of some countries or regions.
Safety Regulation	
Grid Standard Code	Select the grid standard code according to the country or region where the inverter is located.
Safety Regulation Parameter Settings	Safety regulation parameters must be set according to the requirements of the grid company. Any changes require approval from the grid company.

General Setting Parameters

Parameter Name	Description
Device Self-Check	Initiates device self-check.
Restore Factory Settings	Restores some functions to factory state.

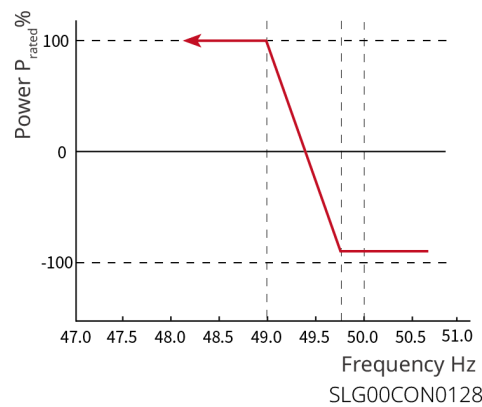
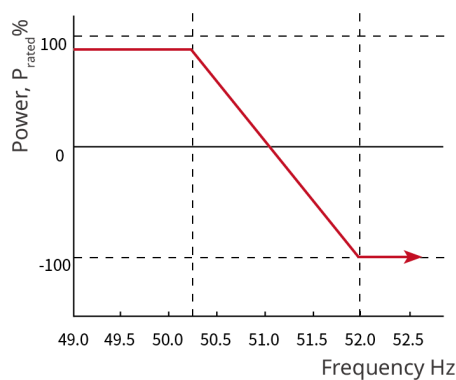
7.2.1 Custom Safety Parameters

NOTICE

Safety regulation parameters must be set according to the requirements of the power grid company. If changes are needed, approval from the power grid company must be obtained.

Active Power Mode

P(F) Curve



P(U) Curve

Parameter Name	Description
Active Power Output Setting	Sets the limit value for the inverter output power.
Power Change Gradient	Sets the slope of change when the active output power increases or decreases.
Over-Frequency Power Reduction	
P(F) Curve	Enable this function when setting the P(F) curve is required according to grid standards in certain countries or regions.
Over-Frequency Power Reduction Mode	Set the over-frequency power reduction mode according to actual requirements. - Slope Mode: Adjusts power based on the over-frequency point and reduction slope. - Stop Mode: Adjusts power based on the over-frequency start point and end point.
Over-Frequency Start Point	When the grid frequency is too high, the inverter reduces active power output. When the grid frequency exceeds this value, the inverter output power starts to decrease.

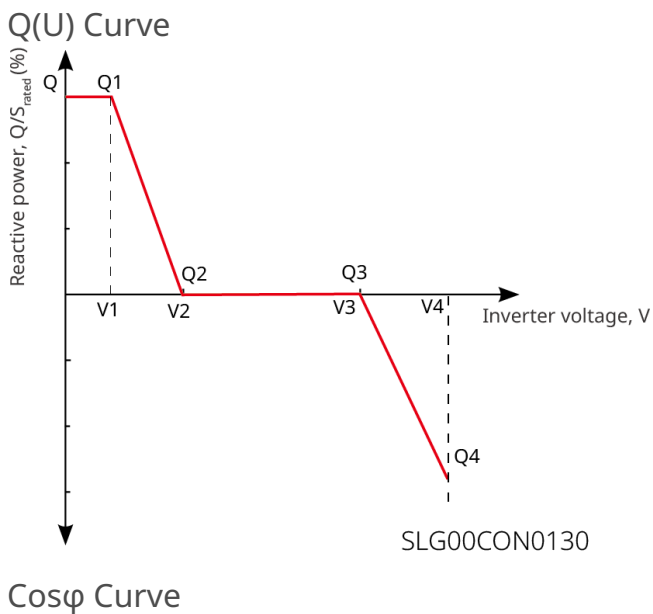
Parameter Name	Description
Buy/Sell Power Conversion Frequency	When the set frequency value is reached, the system switches from selling power to buying power.
Over-Frequency End Point	When the grid frequency is too high, the inverter reduces active power output. When the grid frequency exceeds this value, the inverter output power does not continue to decrease.
Over-Frequency Power Slope Reference Power	Adjusts the inverter active power output based on reference power such as rated power, current power, apparent power, or maximum active power.
Over-Frequency Power Slope	When the grid frequency is above the over-frequency point, the inverter output power decreases according to the slope.
Tentional Delay Ta	When the grid frequency is above the over-frequency point, the delay response time for inverter output power changes.
Hysteresis Function Enable	Enable the hysteresis function.
Frequency Hysteresis Point	During over-frequency power reduction, if the frequency decreases, the power output is based on the lowest point of the reduction power until the frequency is below the hysteresis point, then the power recovers.
Hysteresis Wait Time	For over-frequency power reduction with decreasing frequency, when the frequency is below the hysteresis point, the wait time for power recovery, meaning a certain time must be waited before power recovers.
Hysteresis Power Recovery Slope Reference Power	For over-frequency power reduction with decreasing frequency, when the frequency is below the hysteresis point, the reference for power recovery, i.e., power recovery is performed according to the recovery slope multiplied by the rate of change of the reference power. Supported: Pn rated power, Ps apparent power, Pm current power, Pmax maximum power, power difference (ΔP).

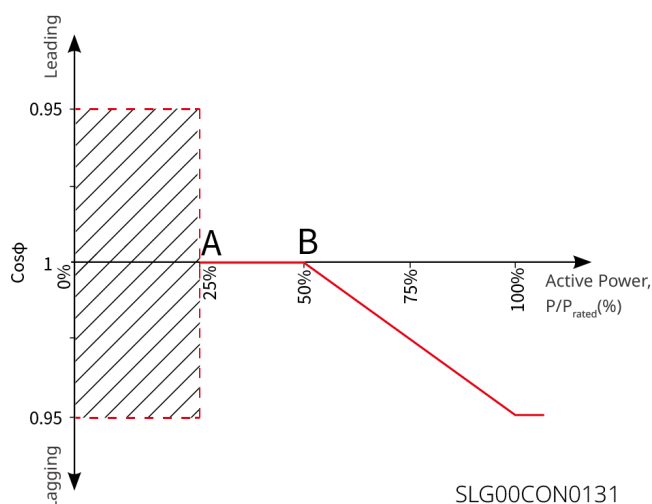
Parameter Name	Description
Hysteresis Power Recovery Slope	For over-frequency power reduction with decreasing frequency, when the frequency is below the hysteresis point, the slope of power change during power recovery.
Under-Frequency Power Loading	
P(F) Curve	Enable this function when setting the P(F) curve is required according to grid standards in certain countries or regions.
Under-Frequency Power Loading Mode	Set the under-frequency power 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 end point.
Under-Frequency Start Point	When the grid frequency is too low, the inverter increases active power output. When the grid frequency is below this value, the inverter output power starts to increase.
Buy/Sell Power Conversion Frequency	When the set frequency value is reached, the system switches from selling power to buying power.
Under-Frequency End Point	When the grid frequency is too low, the inverter increases active power output. When the grid frequency is below this value, the inverter output power does not continue to increase.
Over-Frequency Power Slope Reference Power	Adjusts the inverter active power output based on reference power such as rated power, current power, apparent power, or maximum active power.
Under-Frequency Power Slope	When the grid frequency is too low, the inverter increases active power output. The slope when the inverter output power rises.
Tentional Delay Ta	When the grid frequency is below the under-frequency point, the delay response time for inverter output power changes.

Parameter Name	Description
Hysteresis Function Enable	Enable the hysteresis function.
Frequency Hysteresis Point	During under-frequency power loading, if the frequency increases, the power output is based on the lowest point of the loading power until the frequency is above the hysteresis point, then the power recovers.
Hysteresis Wait Time	For under-frequency power loading with increasing frequency, when the frequency is above the hysteresis point, the wait time for power recovery, meaning a certain time must be waited before power recovers.
Hysteresis Power Recovery Slope Reference Power	For under-frequency power loading with increasing frequency, when the frequency is above the hysteresis point, the reference for power recovery, i.e., power recovery is performed according to the recovery slope multiplied by the rate of change of the reference power. Supported: P _n rated power, P _s apparent power, P _m current power, P _{max} maximum power, power difference (ΔP).
Hysteresis Power Recovery Slope	For under-frequency power loading with increasing frequency, when the frequency is above the hysteresis point, the slope of power change during power recovery.
P(U) Curve Enable	Enable this function when setting the P(U) curve is required according to grid standards in certain countries or regions.
V _n Voltage	The ratio of the actual voltage at point V _n to the rated voltage, n=1,2,3,4. For example: when set to 90, it means: $V/V_{rated}\%=90\%$.
V _n Active Power	The ratio of the active power output by the inverter at point V _n to the apparent power, n=1,2,3,4. For example: when set to 48.5, it means: $P/P_{rated}\%=48.5\%$.

Parameter Name	Description
Output Response Mode	Set the active output response mode. Supported: - First-order low-pass filter, within the response time constant, output adjustment is achieved according to the first-order low-pass curve. - Slope scheduling, output adjustment is achieved according to the set power change slope.
Power Change Gradient	When the output response mode is set to slope scheduling, active power scheduling is achieved according to the power change gradient.
PT-1 Behavior Tau	When the output response mode is set to first-order low-pass filter, the time constant for active power change according to the first-order low-pass filter curve.
Overload Function Switch	When turned on, the maximum active power output is 1.1 times the rated power; otherwise, the maximum active power output is the same as the rated power value.

Reactive Power Mode





Parameter Name	Description
Fixed PF	
Fixed PF	Turn on this function when a fixed PF value is required according to the grid standards of certain countries or regions. After the parameters are set successfully, the power factor remains unchanged during inverter operation.
Under-excited	Set the power factor as positive or negative according to the grid standards and actual usage requirements of the country or region.
Over-excited	
Power Factor	Set the power factor according to actual needs, with a range from -1 to -0.8 and +0.8 to +1.
Fixed Q	
Fixed Q	Turn on this function when fixed reactive power is required according to the grid standards of certain countries or regions.
Over-excited/Under-excited	Set the reactive power as inductive or capacitive according to the grid standards and actual usage requirements of the country or region.
Reactive Power	Set the ratio of reactive power to apparent power.
Q(U) Curve	
Q(U) Curve	Turn on this function when setting the Q(U) curve is required according to the grid standards of certain countries or regions.

Parameter Name	Description
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 rated voltage, where n=1, 2, 3, 4. For example: when set to 90, it means: $V/V_{rated}\% = 90\%$.
Vn Reactive Power	The ratio of reactive power output by the inverter at point Vn to the apparent power, where n=1, 2, 3, 4. For example: when set to 48.5, it means: $Q/S_{rated}\% = 48.5\%$.
Voltage Deadband Width	Set the voltage deadband when the Q(U) curve mode is set to slope mode. Within the deadband, there is no requirement for reactive power output.
Over-excited Slope	When the Q(U) curve mode is set to slope mode, set the power change slope as positive or negative.
Under-excited Slope	
Vn Reactive Power	The ratio of reactive power output by the inverter at point Vn to the apparent power, where 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.
Extension Function Enable	Enable the extension function and set the corresponding parameters.
Entry Curve Power	When the ratio of reactive power output by the inverter to the rated power is between the entry curve power and exit curve power, the Q(U) curve requirements are met.
Exit Curve Power	
cosφ(P) Curve	
cosφ(P) Curve	Select this function when setting the Cosφ curve is required according to the grid standards of certain countries or regions.

Parameter Name	Description
Mode Selection	Set the cosφ(P) curve mode, supporting basic mode and slope mode.
N Point Power	The percentage of active power output by the inverter at point N to the rated power. N=A, B, C, D, E.
N Point cosφ Value	The power factor at point N. N=A, B, C, D, E.
Over-excited Slope	When the cosφ(P) curve mode is set to slope mode, set the power change slope as positive or negative.
Under-excited Slope	
n Point Power	The percentage of active power output by the inverter at point N to the rated power. N=A, B, C.
n Point cosφ Value	The 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.
Extension Function Enable	Enable the extension function and set the corresponding parameters.
Entry Curve Voltage	When the grid voltage is between the entry curve voltage and exit curve voltage, the voltage meets the Cosφ curve requirements.
Exit Curve Voltage	
Q(P) Curve	
Q(P) Curve Enable	Turn on this function when setting the Q(P) curve is required according to the grid standards of certain countries or regions.
Mode Selection	Set the Q(P) curve mode, supporting basic mode and slope mode.

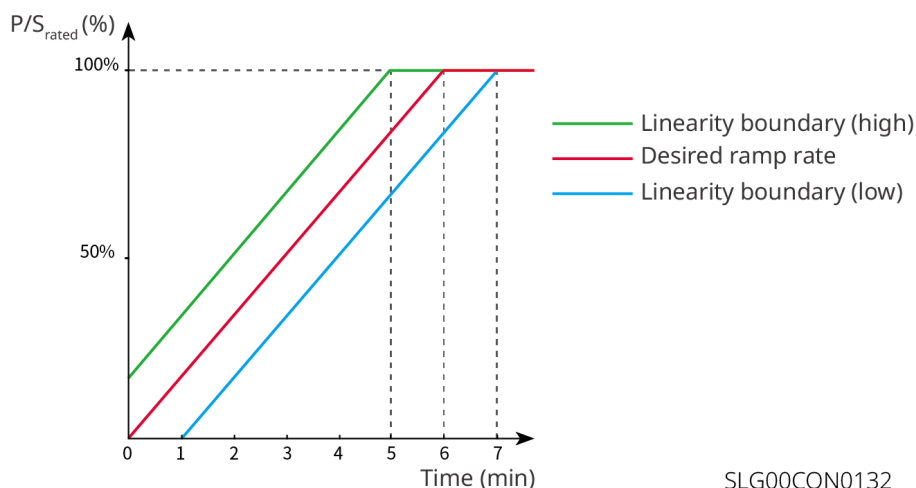
Parameter Name	Description
Pn Point Power	The ratio of reactive power at point Pn to the rated power, where n=1, 2, 3, 4, 5, 6. For example: when set to 90, it means: $Q/Prated\% = 90\%$.
Pn Point Reactive Power	The ratio of active power at point Pn to the rated power, where n=1, 2, 3, 4, 5, 6. For example: when set to 90, it means: $P/Prated\% = 90\%$.
Over-excited Slope	When the Q(P) curve mode is set to slope mode, set the power change slope as positive or negative.
Under-excited Slope	
Pn Point Power	The ratio of reactive power at point Pn to the rated power, where n=1, 2, 3. For example: when set to 90, it means: $Q/Prated\% = 90\%$.
Pn Point Reactive Power	The ratio of active power at point Pn to the rated power, where n=1, 2, 3. For example: when set to 90, it means: $P/Prated\% = 90\%$.
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
Over-voltage Trigger n-stage Value	Set the grid over-voltage trigger n-stage protection point, n=1, 2, 3, 4.
Over-voltage Trigger n-stage Trip Time	Set the grid over-voltage trigger n-stage trip time, n=1, 2, 3, 4.

Parameter Name	Description
Under-voltage Trigger n-stage Value	Set the grid under-voltage trigger n-stage protection point, n=1, 2, 3, 4.
Under-voltage Trigger n-stage Trip Time	Set the grid under-voltage trigger n-stage 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 trigger trip time.
Over-frequency Trigger n-stage Value	Set the grid over-frequency trigger n-stage protection point, n=1, 2, 3, 4.
Over-frequency Trigger n-stage Trip Time	Set the grid over-frequency trigger n-stage trip time, n=1, 2, 3, 4.
Under-frequency Trigger n-stage Value	Set the grid under-frequency trigger n-stage protection point, n=1, 2, 3, 4.
Under-frequency Trigger n-stage Trip Time	Set the grid under-frequency trigger n-stage trip time, n=1, 2, 3, 4.

Grid Connection Parameters



Parameter Name	Description
Startup On-Grid	
Connection Voltage Upper Limit	When the inverter connects to the grid for the first time, 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 connects to the grid for the first time, 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 connects to the grid for the first time, 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 connects to the grid for the first time, if the grid frequency is lower than this value, the inverter will be unable to connect to the grid.
On-Grid Waiting Time	When the inverter connects to the grid for the first time, the waiting time before connecting to the grid after the grid voltage and frequency meet the on-grid requirements.
Soft Ramp Up Slope Enable	Enable the Soft Ramp Up Slope function.
Soft Ramp Up Slope	According to the standard requirements of certain countries or regions, the percentage increase in output power per minute when the inverter is started for the first time.

Parameter Name	Description
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.
On-Grid Waiting Time	When the inverter reconnects to the grid after a fault, the waiting time before connecting to the grid after the grid voltage and frequency meet the on-grid requirements.
Reconnection Ramp Up Slope Enable	Enable the Soft Ramp Up Slope function.
Reconnection Ramp Up Slope	According to the standard requirements of certain countries or regions, the percentage increase in output power per minute when the inverter connects to the grid (not for the first time). For example: When set to 10, it indicates a reconnection ramp up slope of: 10% P/Srated/min.

Voltage Fault Ride-Through Parameters

Parameter Name	Description
Low Voltage Ride-Through	
UVn Point Voltage	During the low voltage ride-through process, the ratio of the ride-through voltage at the LVRT characteristic point to the rated voltage. n=1, 2, 3, 4, 5, 6, 7.

Parameter Name	Description
UVn Point Time	During the low voltage ride-through process, the ride-through time at the LVRT characteristic point. 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 disconnect from the grid.
LVRT Exit Threshold	
Slope K1	The K-value coefficient for reactive power support during the low voltage ride-through process.
Zero-Current Mode Enable	When enabled, the system outputs zero current during the low voltage ride-through process.
Entry Threshold	The threshold for entering zero-current mode.
High Voltage Ride-Through	
OVn Point Voltage	During the high voltage ride-through process, the ratio of the ride-through voltage at the HVRT characteristic point to the rated voltage. n=1, 2, 3, 4, 5, 6, 7.
OVn Point Time	During the high voltage ride-through process, the ride-through time at the HVRT characteristic point. 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 disconnect from the grid.
HVRT Exit Threshold	
Slope K2	The K-value coefficient for reactive power support during the high voltage ride-through process.
Zero-Current Mode Enable	During the high voltage ride-through process, the system outputs zero current.
Entry Threshold	The 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 for the n-th under-frequency point. n=1, 2, 3.
UFn Point Time	Set the under-frequency duration for the n-th under-frequency point. n=1, 2, 3.
OFn Point Frequency	Set the frequency for the n-th over-frequency point. n=1, 2, 3.
OFn Point Time	Set the over-frequency duration for the n-th over-frequency point. n=1, 2, 3.

7.2.2 Export Power Scheduling Parameters

Export power limit (General)

Parameter Name	Description
Export power limit	Enable this function when it is necessary to limit the output power according to the grid standards of certain countries or regions.
Power limit	Set based on the actual maximum power that can be fed into the grid.

Export power limit (Australia)

Parameter Name	Description
Soft Power Limit	Enable this function when it is necessary to limit the output power according to the grid standards of certain countries or regions.

Parameter Name	Description
Power Limit	• Set according to the actual maximum power that can be fed into the grid. • Supports setting a fixed power value or a percentage. The set percentage is the ratio of the limited power to the inverter's rated power. • After setting a fixed value, the percentage changes automatically; after setting a percentage, the fixed value changes automatically.
Hard Power Limit	After enabling this function, the inverter will automatically disconnect from the grid when the power fed into the grid exceeds the limit value.

Export power limit (UK)

Parameter Name	Description
Export power limit	Enable this function when it is necessary to limit the output power according to the grid standards of certain countries or regions.
Mode Selection	• Some models require selecting the current limit mode. Supported modes: 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 based on the actual maximum current that can be input to the grid.

Export power limit (Brazil)

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

Please download the template according to the interface prompts, configure the power limit information for different time periods. After filling out the template, upload it to the App to complete the time-of-use power limit.

Power scheduling

Parameter Name	Description
Active Power Dispatch	
Active power mode	According to the requirements of the grid company in the country/region where the inverter is located, control the active power according to the selected dispatch mode. Supports: • Disabled: Do not enable active power dispatch. • Active Power (W): Dispatch according to a fixed value. • Active Power (%Pn): Dispatch according to the percentage of active power to rated power.
Reactive Power Dispatch	
Reactive power mode	According to the requirements of the grid company in the country/region where the inverter is located, control the reactive power according to the selected dispatch mode. Supports: • Disabled: Do not enable reactive power dispatch. • 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.
Nighttime Reactive Power	
Nighttime Reactive Power Enable	Enable the nighttime reactive power function.

Parameter Name	Description
Nighttime Reactive Power Dispatch	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: Do not enable reactive power dispatch. • Nighttime Reactive Power Dispatch (Var): Dispatch according to a fixed value. • Nighttime Reactive Power Dispatch (%Pn): Dispatch according to the percentage of reactive power to rated power.

Power scheduling response parameters

Parameter Name	Description
Active Power Dispatch Response	Achieves the active power dispatch value through a dispatch response method. Supports: • First-order low-pass filtering, i.e., achieving active power dispatch according to a first-order low-pass curve within the response time constant, and setting the time constant for when the active power changes along the installed first-order low-pass filter curve. • Slope mode, i.e., achieving active power dispatch according to a power change slope, and setting the active power dispatch change slope.

Parameter Name	Description
Reactive Power Dispatch Response	Achieves the reactive power dispatch value through a dispatch response method. Supports: • First-order low-pass filtering, i.e., achieving reactive power dispatch according to a first-order low-pass curve within the response time constant, and setting the time constant for when the reactive power changes along the installed first-order low-pass filter curve. • Slope mode, i.e., achieving reactive power dispatch according to a power change slope, and setting the reactive power dispatch change slope.

7.2.3 Grid Remote Dispatch Parameters

According to the grid standards of certain countries or regions, it is necessary to connect third-party dispatch equipment to achieve remote dispatch functionality for photovoltaic systems.

- Remote Shutdown: Achieve remote shutdown function via the signal control port. When an incident occurs, the device can be controlled to stop operation.
- DRED (Demand Response Enabling Device): Control the device via the DRED signal control port to meet DRED certification requirements in regions such as Australia.
- RCR (Ripple Control Receiver): Control the device via the RCR signal control port to meet grid dispatch requirements in regions such as Germany.
- EnWG (Energy Industry Act) 14a: All controllable loads must accept emergency dimming from the grid. Grid operators can temporarily reduce the maximum grid power purchase of controllable loads to 4.2kW.

7.2.4 Multiport 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 Inverter, the load control function is supported only when the Inverter is used with STS. The Inverter supports load control for the GENERATOR port or BACKUP LOAD port.

- **Dry Contact Mode:** When the switch status is set to ON, power supply to the load starts; when the switch status is set to OFF, power supply to the load stops. Please set the switch status to ON or OFF according to actual needs.
- **Time Mode:** Within the set time period, power will be automatically supplied to or cut off from the load. Standard mode or smart mode can be selected.

Parameter Name	Description
Standard Mode	Supplies power to the load within the set time period.
Smart Mode	Within the set time period, power supply to the load begins when the surplus energy generated by photovoltaics exceeds the preset Load Rated Power.
Start Time	The time mode will be active during the period between the Start Time and the End Time.
End Time	
Repeat	Set the repetition frequency.
Minimum Load Operating Time	Applies only to Smart Mode. The minimum operating time for the load after it is turned on, preventing frequent switching due to energy fluctuations.
Load Rated Power	Applies only to Smart Mode. Power supply to the load begins when the surplus energy generated by photovoltaics exceeds this Load Rated Power.

- **SOC Mode:** The Inverter has a built-in relay dry contact control port (for the ET40-50kW series Inverter, it is the STS built-in control port), which can control whether to supply power to the load. In off-grid mode, if overload is detected at the BACK-UP port or GENERATOR port, or if the battery SOC protection function is triggered, power supply to the load connected to the port can be stopped.

Generator Control Parameters

When the Inverter supports the generator control function, the generator can be controlled via the App.

For the ET40-50kW series Inverter, generator access and control are supported only when the Inverter is used with STS.

For the ET50-100kW series Inverter, generator access and control are supported only when the Inverter is used with STS.

- No Generator Connected: When no generator is connected to the energy storage system, please select no generator connected.
- Manual Control Generator (Dry Contact Connection Not Supported): The generator needs to be manually started and stopped, and the Inverter cannot control the generator start and stop.
- Automatic Control Generator (Dry Contact Connection Supported): When the generator has a dry contact control port and is connected to the Inverter, the generator control mode of the Inverter needs to be set to switch control mode or automatic control mode in the App.
 - Switch Control Mode: When the switch status is turned on, the generator works; the generator can automatically stop working after running for the set time.
 - Automatic Control Mode: During the set prohibited working time period, the generator is prohibited from working; during the running time period, the generator works.

Parameter Name	Description
Dry Node Control Method	Switch Control Mode / Automatic Control Mode.
Switch Control Mode	
Diesel Generator Dry Node Switch	Applicable only to Switch Control Mode.
Operation Time	The continuous operation time of the generator. The generator stops running after this time is reached.
Automatic Control Mode	
Prohibited Operation Time	Set the time period when generator operation is prohibited.
Operation Time	The continuous operation time after the generator starts. The generator stops running after this time is reached. If the generator's scheduled operation time includes the prohibited operation period, the generator will stop running during that period; after the prohibited operation time ends, the generator restarts operation and timing.

Parameter Name	Description
Generator Information Settings	
Rated Power	Set the rated operating power of the generator.
Operating Time	Set the continuous operating time of the generator. The generator will shut down after this duration.
Voltage Upper Limit	Set the operating voltage range for the generator.
Voltage Lower Limit	
Frequency Upper Limit	Set the operating frequency range for the generator.
Frequency Lower Limit	
Warm-up Time	Set the no-load warm-up time for the generator.
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 is charging the battery.
Start Charging SOC	When connected to a lithium battery, set the SOC threshold for generator start. The generator starts to charge the battery when the battery SOC falls below this set value.
Stop Charging SOC	When connected to a lithium battery, set the SOC threshold for generator stop. The generator stops charging the battery when the battery SOC rises above this set value.
Start Charging Voltage	When connected to a lead-acid battery, set the voltage threshold for generator start. The generator starts to charge the battery when the battery voltage falls below this set value.
Stop Charging Voltage	When connected to a lead-acid battery, set the voltage threshold for generator stop. The generator stops charging the battery when the battery voltage rises above this set value.

Microgrid Control Parameters

Parameter Name	Description
Battery Max Charging SOC	When the battery type is lithium battery, set the upper limit for charging SOC. Charging stops once this upper limit is reached.
Battery Max Charge Voltage	When the battery type is lead-acid battery, set the upper limit for charging voltage. Charging stops once this upper limit is reached.
Microgrid Forced Charging Start	- During a grid fault, if the battery level is too low to support the energy storage inverter operating off-grid. Click this button to forcibly start the energy storage inverter to output voltage to the grid-tied inverter, thereby starting the grid-tied inverter. - Effective for a single instance.
Hourly Trigger	- During a grid fault, if the battery level is too low to support the energy storage inverter operating off-grid. After enabling this function, the system will forcibly start the energy storage inverter at a fixed time to output voltage to the grid-tied inverter, thereby starting the grid-tied inverter. - Effective for multiple instances.
Grid Limit Power Offset	Sets the adjustable range for the maximum actual power the device can draw from the grid.

7.3 Battery Parameters

Parameter Settings - Information Configuration

Select the battery model according to the actual connected battery type.

When the device is installed in areas such as California, please fill in the station battery capacity information according to local regulatory requirements to complete JA12 Certification.

Parameter Settings - Lead-Acid Settings

When connecting lead-acid batteries, it is necessary to set the lead-acid battery parameters.

Parameter Name	Description
Battery Parameters	
Battery Capacity	Set the battery capacity according to actual parameters.
Battery Internal Resistance	Set the battery internal resistance according to actual parameters.
Temperature Compensation	- When the battery temperature changes, the battery charging voltage is affected. Using 25°C as the baseline, for every degree of change in battery temperature, 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 degrees, the charging voltage upper limit decreases by 10mV.
Discharge Parameters	
Discharge Parameters	Set the parameters for battery discharge according to actual requirements.
Charging Parameters	
Constant Charging Voltage	Set the voltage value for constant battery charging according to actual requirements.
Float voltage	Set the voltage value for battery float charging according to actual requirements.
Floating Charge Current	The maximum charging current after the battery charging mode switches from constant/equalized charging to float charging.
Switch to Float Charging Mode	The time required for the battery charging mode to switch from constant/equalized charging to float charging.
Equalized Charging Cycle	Set the interval in days for battery equalized charging.

Parameter Settings - Lithium Battery Settings

When connecting lithium batteries, it is necessary to set the lithium battery parameters.

Parameter Name	Description
Max Charging Current	Applicable to some models. Set the maximum charging current for the battery according to actual requirements.
Max Discharging Current	Applicable to some models. Set the maximum discharging current for the battery according to actual requirements.
Battery Heating	• Optional. This option is displayed when a battery with heating function is connected. When the battery heating function is enabled, if the battery temperature does not support startup, PV power generation or grid power will be used to heat the battery. • The temperature thresholds for heating modes vary by battery model. Please refer to the actual product. • Enabling the battery heating function consumes a portion of system power. By default, the battery heating function runs in low-power mode. It can be switched to other power modes if needed. • The start and stop of the battery heating function are automatically controlled by the BMS based on ambient temperature. Therefore, the installation environment and location of the device will affect the activation and deactivation of the heating function. • Supports setting heating time periods according to actual needs, but within these periods, the heating function is still automatically started/stopped based on ambient temperature. • If PV and AC power only meet the load consumption, and the battery power is insufficient to support self-heating, the heating function cannot be enabled.

Parameter Name	Description
Battery Wake-up	- When enabled, the battery can be woken up after it shuts down due to undervoltage protection. - Only applicable to lithium batteries without a circuit breaker. When enabled, the output voltage at the battery port is about 60V.
Breathing Light	- Only applicable to ESA 3-10kW series inverters. - Set the breathing light flashing duration. Supported: Always On, Always Off, 3min. - The default mode is to light up for three minutes after power-on and then automatically turn off.

Protection Parameters - Limit Protection

Parameter Name	Description
SOC Upper Limit	The maximum value for battery charging. Battery charging stops when the SOC reaches the SOC upper limit.
SOC Protection	When enabled, if the battery capacity falls below the set Depth of Discharge (DOD), the battery protection function can be activated.
Grid-connected DOD	The maximum allowable discharge value for the battery when the inverter is operating in grid-connected mode.
Off-grid DOD	The maximum allowable discharge value for the battery when the inverter is operating in off-grid mode.
Backup SOC Maintenance	To ensure the battery SOC is sufficient to maintain normal system operation during off-grid periods, the system will charge the battery via grid power to the set SOC protection value when operating in grid-connected mode.

Parameter Name	Description
POff-grid Recovery SOC	When the inverter operates in off-grid mode, if the battery SOC drops to the SOC lower limit, the inverter stops output and is used solely to charge the battery until the battery SOC recovers to the Off-grid Recovery SOC value. If the SOC lower limit is higher than the Off-grid Recovery SOC value, charging continues until SOC lower limit + 10%.

Battery Charging Parameters

Parameter Name	Description
Immediate Charging	When enabled, the battery is charged immediately from the grid. Only takes effect once.
Stop Charging SOC	When the battery SOC reaches the upper limit of immediate charging SOC, charging will stop.
Immediate Charging Power	When immediate charging starts, the charging power as a percentage of the inverter's rated power. For example, for an inverter with a rated power of 10kW, if set to 60, the charging power is 6kW.
Start	Start charging immediately.
Stop	Stop the current charging task immediately.

JA12 Certification

Applicable only to the California region.

Parameter Name	Description
Certification Capacity	Maintain the certified battery capacity according to actual requirements and JA12 certification requirements.
Current battery system capacity	The total installed battery capacity of the current system.

7.4 Smart Meter Parameters

Parameter Name	Description
Meter Binding	- When a grid-tied inverter and an energy storage inverter are used simultaneously in a PV system to achieve coupling or microgrid functions, dual meters may be used in the system. Please set the meter binding information according to the actual usage. - Only applicable to GoodWe meters.
Meter/CT Auxiliary Detection	Using this function, you can detect whether the meter CT is correctly connected and its current operating status.
External Meter CT Ratio	Set the ratio of the primary side current to the secondary side current for the externally connected meter CT.

7.5 Smart Dongle Parameters

NOTICE

The communication configuration interface may vary depending on the communication module connected to the inverter. Please refer to the actual interface.

Communication Parameters

Parameter Name	Description
WLAN/LAN	
WLAN Control	Disabled by default. When this function is enabled, the App can connect to the device via WLAN when they are on the same local area network. Otherwise, connection is not possible even on the same network.
Modbus TCP	When enabled, third-party platforms can access the inverter via the Modbus TCP protocol to achieve monitoring functions.

Parameter Name	Description
LAN	Automatically identifies the LAN network to which the device is connected.
WLAN	Select the actual WiFi network for the device to connect to, enabling communication between the device and the router or switch.
4G	
APN Settings	• APN settings are only applicable for configuring SIM card information for 4G communication devices. • If the 4G module does not provide a Bluetooth signal, first configure the APN parameters via the Bluetooth module or WiFi module to enable 4G communication.
Bluetooth	
Bluetooth Stays On	Disabled by default. When enabled, the device's Bluetooth stays on continuously, maintaining the connection with the App. Otherwise, the device's Bluetooth will turn off after 5 minutes, disconnecting from the App.
WLAN Networking	
WLAN Networking	• Applicable only to micro inverters. • It is recommended to set the inverter with the highest RSSI strength in the network as the master node.

Password

Supports modifying the password for logging into the App during local connection. When connected locally via WiFi, supports modifying the hotspot password of the WiFi communication stick.

Control/Enable Parameters

Parameter Name	Description
FTP	After enabling this function, system operation data can be uploaded to a specified server via the FTP protocol, enabling remote monitoring.
Remote Maintenance	After enabling this function, remote maintenance of the device is supported, such as remote upgrades.
Restore Factory Settings	Restores the smart communication stick to its factory settings, including passwords, network configuration information, etc.

7.6 Home Energy Management Device Parameters

NOTICE

Please set the parameters according to local laws, regulations, and grid standard requirements.

Grid Control Parameters

No.	Parameter Name	Description
1	Enable Function	Enable this function when it is necessary to limit the output power according to the grid standards of certain countries or regions.
2	Power Limit	Set the maximum actual power the equipment can feed into the grid according to the requirements of certain countries or regions.

No.	Parameter Name	Description
3	Power Limited Type	Select the method for controlling the equipment's output power based on the actual situation. • Total Power: Control the total power at the grid connection point not to exceed the output power limit. • Single-phase Power: Control the power of each phase at the grid connection point not to exceed the output power limit.
4	Grid Connection Power Limit Offset	Set the adjustable range for the maximum actual power the equipment can feed into the grid. Maximum power delivered to grid = Maximum grid feed-in power + Maximum grid feed-in power offset value.
5	Reverse Power Protection Handling Method	When a reverse power condition occurs in the system and exceeds the maximum protection time (default 5s), the following protective measures can be taken: • Power Limit: The equipment continues to operate at a percentage of the rated power. • Equipment disconnects from the grid.
6	Power Limit Protection Handling	The equipment continues to operate at a percentage of the rated power.
7	Meter Communication Anomaly Handling	Enable this function to take protective measures when communication between the meter and the equipment is abnormal.
8	Meter Abnormality Handling Method	When a meter communication anomaly occurs in the system, the following protective measures can be taken: • Power Limit: The equipment continues to operate at a percentage of the rated power. • Equipment disconnects from the grid.

No.	Parameter Name	Description
9	Meter Handling Power Limit	The equipment continues to operate at a percentage of the rated power.

Power Control Parameters

No.	Parameter Name	Description
RCR: According to regional standards such as those in Germany, 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	• Select one or more DI ports and set the corresponding percentage according to the grid company's requirements and the type of RCR fixture. The percentage refers to the system output power as a percentage of the rated power. • Supports configuration of 16 percentage levels. Please set according to the actual requirements of the grid company. • Do not duplicate the state combinations for DI1-DI4, otherwise the function will not execute properly. • If the actual wiring of the connected DI port does not match the set value, the operating status will not take effect.

No.	Parameter Name	Description
3	Reactive Dispatch	• Select one or more DI ports and set the corresponding PF value according to the grid company's requirements and the type of RCR fixture. • Supports configuration of 16 power factor levels. Please set according to the actual requirements of the grid company. • PF value range requirement: [-100, -80] or [80,100]. [-100, -80] corresponds to a lagging power factor of [-0.99, -0.8], and [80,100] corresponds to a leading power factor of [0.8,1]. • Do not duplicate the state combinations for DI1-DI4, otherwise the function will not execute properly. • If the actual wiring of the connected DI port does not match the set value, the operating status will not take effect.
RCR&EnWG 14a: • According to regional standards such as those in Germany, the device must provide an RCR (Ripple Control Receiver) signal control port to meet grid dispatch requirements. • For regions subject to the EnWG 14a regulation, all controllable loads must accept emergency dimming from the grid. Grid operators can temporarily reduce the maximum grid import power of controllable loads to 4.2kW.		
4	RCR&EnWG 14a	Enable or disable the RCR&EnWG 14a function.
5	Import Power Limit	Set the upper limit for the power purchased from the grid according to local grid regulations.

No.	Parameter Name	Description
6	Active Dispatch	• The DI4 port is fixed for EnWG 14a use. • Select one or more DI ports and set the corresponding percentage according to the grid company's requirements and the type of RCR fixture. The percentage refers to the system output power as a percentage of the rated power. • Supports configuration of 8 percentage levels. Please set according to the actual requirements of the grid company. • Do not duplicate the state combinations for DI1-DI3, otherwise the function will not execute properly. • If the actual wiring of the connected DI port does not match the set value, the operating status will not take effect.
7	Reactive Dispatch	• The DI4 port is fixed for EnWG 14a use. • Select one or more DI ports and set the corresponding PF value according to the grid company's requirements and the type of RCR fixture. • Supports configuration of 8 power factor levels. Please set according to the actual requirements of the grid company. • PF value range requirement: [-100, -80] or [80,100]. [-100, -80] corresponds to a lagging power factor of [-0.99, -0.8], and [80,100] corresponds to a leading power factor of [0.8,1]. • Do not duplicate the state combinations for DI1-DI3, otherwise the function will not execute properly. • If the actual wiring of the connected DI port does not match the set value, the operating status will not take effect.
Remote Shutdown: According to requirements in certain countries or regions, the device must provide a remote shutdown function to control the device to stop working in emergency situations.		
8	Remote Shutdown	Enable or disable the remote shutdown function.

No.	Parameter Name	Description
9	Recovery On-Grid Immediate	If you need to restore the on-grid status after the device is shut down, please 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 actual connected meter model.
2	Wiring Mode	Set the meter's wiring method. 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 meter's CT ratio value.
Antenna Settings		
4	Select Antenna	Select built-in or external antenna based on actual situation.
Time Settings		
5	Network Time Sync	After enabling, select a time server to synchronize time based on the chosen time source.

No.	Parameter Name	Description
6	Time Server	Set the time synchronization server. Supported: - time.google.com - pool.ntp.org - ntp.aliyun.com

Export Log

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

7.7 Charging Pile Parameters

Parameter Name	Description
Plug and Charge	- When Plug and Charge is enabled, charging starts immediately upon plugging the charging gun into the vehicle. - If charging is interrupted, please unplug and replug the charging gun or manually restart charging.
Scheduled Charging	Set the scheduled charging time according to actual needs, supporting single charging or multiple repeated charging cycles.
Distance per kWh Setting	Set the energy-to-distance conversion ratio.

7.8 Operational Maintenance Parameters

Parameter Name	Description
Firmware Upgrade	• Supports viewing or upgrading firmware versions such as DSP version, ARM version, BMS version, AFCI version, STS version, communication module, etc. • Supports viewing firmware upgrade records. • Firmware upgrade methods: one-click upgrade for all firmware, single firmware upgrade, manual import firmware upgrade. Different devices support different upgrade methods, please refer to the actual situation. • Some devices do not support upgrading software versions via the App, please refer to the actual situation.
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 safety regulation parameter files after selecting the safety regulation country.
Utility grid	
Auto Test	According to the Utility grid standards of some countries or regions, when it is necessary to set up grid connection automatic testing, turn on this function.

7.9 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
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
	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

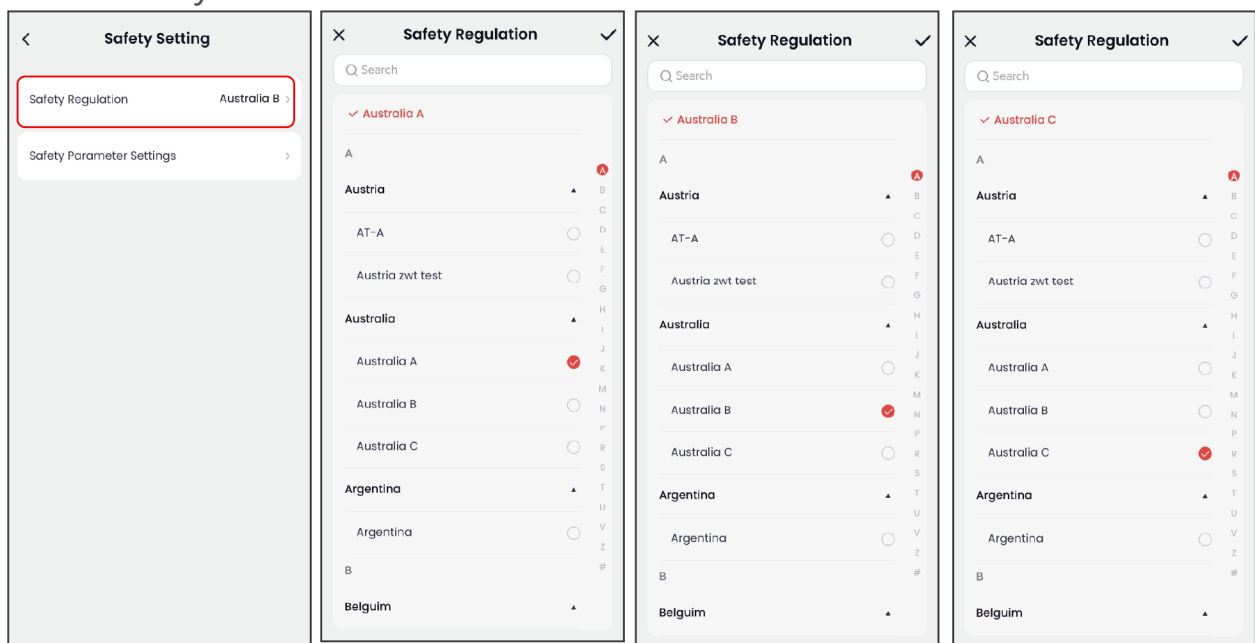
Protective function	Protective function limit	Trip delay time	Maximum disconnection time
Overvoltage 2 (V > >)	275V	-	0.2 s

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 Trip Time

OV Trigger L2 Value

Over-voltage Stage 2 Trip Time

UV Trigger L2 Value

UV 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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8 Contact Information

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