

# SEMS+ App

## User Manual

# Copyright Statement

Copyright Statement

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## **NOTICE**




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

# About This Manual

## Applicable Personnel

Applicable to professionals familiar with local regulatory standards and electrical systems, who have received specialized training and possess relevant knowledge of this product, or to end-users who purchase GoodWe products.

## Symbol Definition

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

## Table of Contents

1 App Introduction	6
1.1 Supporting products	6
1.2 Downloading and Installing the SEMS+ App	6
1.3 Connection Method	7
1.4 Common Icon Descriptions	7
1.5 Registering an Account	8
1.6 Logging In to Your Account	9
2 Remotely Monitoring Power Station	11
2.1 Power Station	11
2.1.1 Create Station	11
2.1.1.1 Filling in Station Information	11
2.1.1.2 Adding a Device	12
2.1.1.3 Quick Configuration	14
2.1.2 Viewing Power Plant Information (Installer)	15
2.1.2.1 Power Station List	15
2.1.2.2 Power Station Details	17
2.1.2.3 Alarm (Installer)	19
2.1.3 Viewing Power Plant Information(Owner)	20
2.1.3.1 Power Station List	20
2.1.3.2 Power Station Details	21
2.1.4 Modifying Basic Power Station Information	24

2.1.5 Configuring Tariff Information	25
2.1.6 Managing Power Station Sharing	26
2.2 Device	26
2.2.1 Device List	26
2.2.2 Device Details	27
2.2.3 Remote Controlling Devices	29
2.2.3.1 Setting Inverter Parameters	29
2.2.3.2 Setting Battery Parameters	32
2.2.3.3 Setting Smart Meter Parameters	33
2.2.3.4 Setting Home Energy Management Device Parameters	33
2.2.3.5 Setting System Operating Mode	34
3 Local Commissioning Devices	41
3.1 Connecting to Devices Locally	41
3.2 Local Connection Interface Overview	42
3.3 Setting Device Parameters	44
3.3.1 One-Click Configuration	44
3.3.2 Setting Inverter Parameters	45
3.3.3 Setting Smart Communication Stick Parameters	49
3.3.4 Setting Battery Parameters	50
3.3.5 Setting Smart Meter Parameters	52
3.3.6 Setting System Operating Mode	53
4 Service	60

4.1 Setting DNSP Function	61
4.2 Using AI Assistant	63
5 Account	65
5.1 Modifying User Information	65
5.2 Setting App Notification Information	66
5.3 Setting Account Security Information	67
5.4 Setting Monitoring Permissions	67
6 Troubleshooting	69
7 Appendix	71
7.1 Safety Regulation Countries	71
7.2 Inverter Parameters	76
7.2.1 Custom Safety Regulation Parameters	83
7.2.2 Grid Connection Power Scheduling Parameters	96
7.2.3 Grid Remote Scheduling Parameters	100
7.2.4 Multiplex Port Parameters	101
7.3 Battery Parameters	105
7.4 Smart Meter Parameters	109
7.5 Smart Dongle Parameters	110
7.6 Home Energy Management Device Parameters	112
7.7 Operation and Maintenance Parameters	118
7.8 Australia Safety Regulations	118
8 Contact Information	124

# 1 App Introduction

## NOTICE

- The interfaces shown in this manual are based on the SEMS+ App V2.0.1 version. Interfaces in subsequent versions may differ.
- Parameters viewable and operational permissions may vary depending on the login role.
- Displayed parameters and functions may differ based on the device model and the safety regulations of the country it belongs to.
- 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 read this manual and the corresponding product manual carefully before making changes. Familiarize yourself with the product's functions and features. 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 for remote power station monitoring or local device debugging. Installers or owners can:

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

## 1.1 Supporting Products

Supports monitoring and managing GoodWe brand related devices, such as inverters, Smart Meters, data collectors, charging stations, batteries, etc.

## 1.2 Downloading and Installing SEMS+ App

**Phone Requirements:**

- Phone OS requirements: Android 7.0 and above, iOS 15.1 and above.
- Phone supports a web browser and connects to the Internet.
- Phone supports WLAN/Bluetooth functionality.

**Download Methods:**

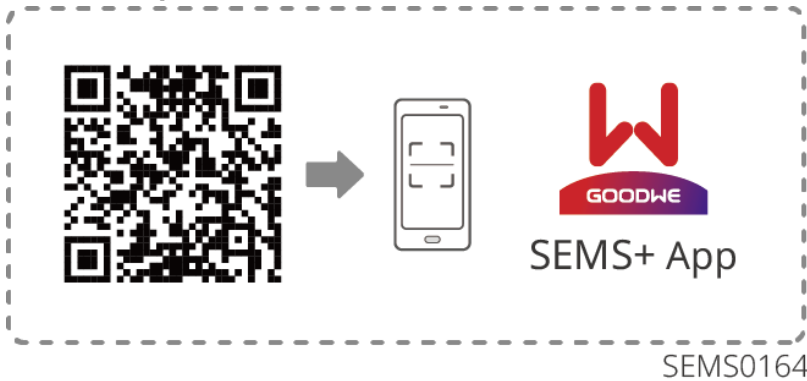
**Method 1:**

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

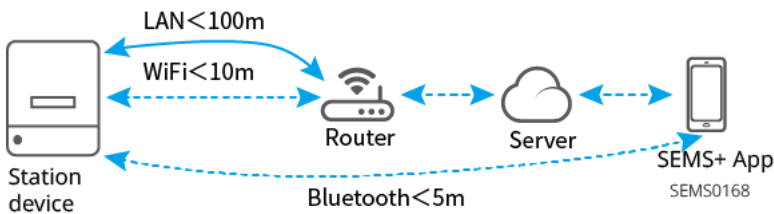


**Method 2:**



















Scan the QR code below to download and install.



**1.3 Connection Methods**



**1.4 Common Icon Descriptions**

Icon	Description	Icon	Description
	Create Station, add devices, etc.		Scan for nearby devices.
			
	More Information.		Filter.
	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. E.g.: Configure common control items.	-	-

## 1.5 Registering an 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 actual needs, then click "Next".
3. Enter your account information according to the actual situation, then click "Confirm" to complete registration.

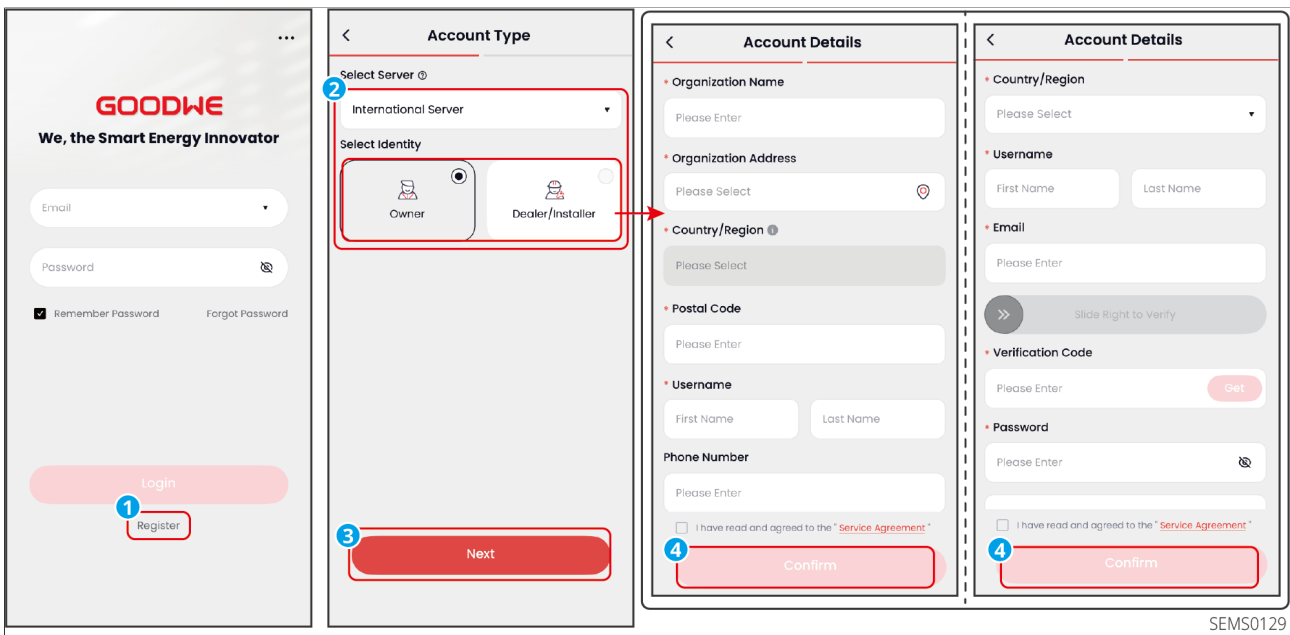


Figure1 Register Account

## 1.6 Log in to Account

### NOTICE

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

### Procedure

1. Enter your account and password, then click 'Log in'.

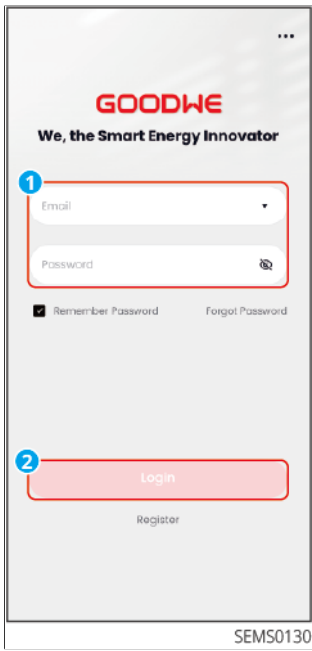


Figure2 Log in to Account

## 2 Remote Monitoring Power Station

### NOTICE

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

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

### 2.1 Power Station

#### 2.1.1 Create Station

Supports Create Station based on actual needs.

##### 2.1.1.1 Filling in Station Information

#### Procedure

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 on-screen prompts to fill in basic information such as station address, name, capacity, and power according to the actual situation.
3. If you need to add station visitors, you can enter the organization code and station visitor information. Click "Finish" to create a new station.
4. Choose whether to add station equipment based on actual needs. If you need to add, please refer to the [2.1.1.2.Add Device\(Page 12\)](#) section.

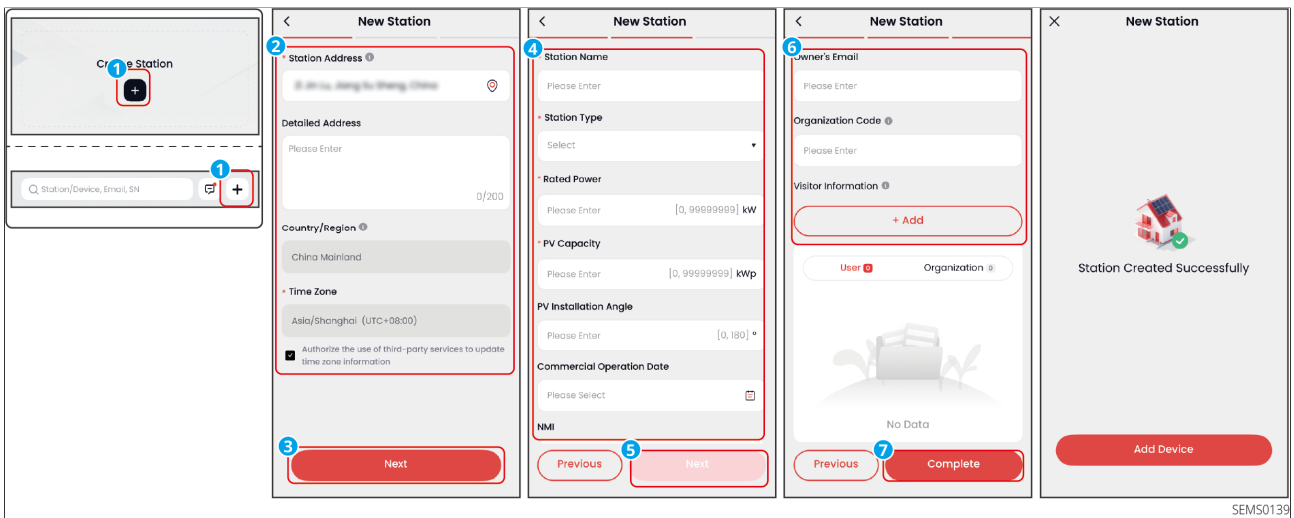


Figure3 Fill in Station Information

Parameter	Function Description
Station Type	Set according to the actual station type. Supported: 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 capacity 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 installation angle of the PV panels.
Commercial Operation Date	Set the grid connection date of the station.

### 2.1.1.2 Adding Power Station Devices

After the power station is created, you can add power station devices according to actual needs.

- When a Home Energy Management System (HEMS) has been added to the power station:
  - Supports 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 these devices. For GoodWe products, please refer to the [3.1.Connecting to Devices Locally\(Page 41\)](#) chapter; for third-party products, please refer to the device user manual.

## Steps for Manually Adding Devices

1. On the device list interface, click **+**.
2. Add devices according to 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. Modify the device name according to actual needs. Click 'Add Device' to complete the addition.
4. (Optional) If you need to continue adding devices to the current power station, click **+**, and repeat the step of entering the device SN.
5. (Optional) Click 'Quick Configuration' to modify the device's safety regulations settings, working mode settings, etc. For details, please refer to [2.1.1.3.Quick Configuration\(Page 14\)](#).
6. Click 'End' to complete device addition.

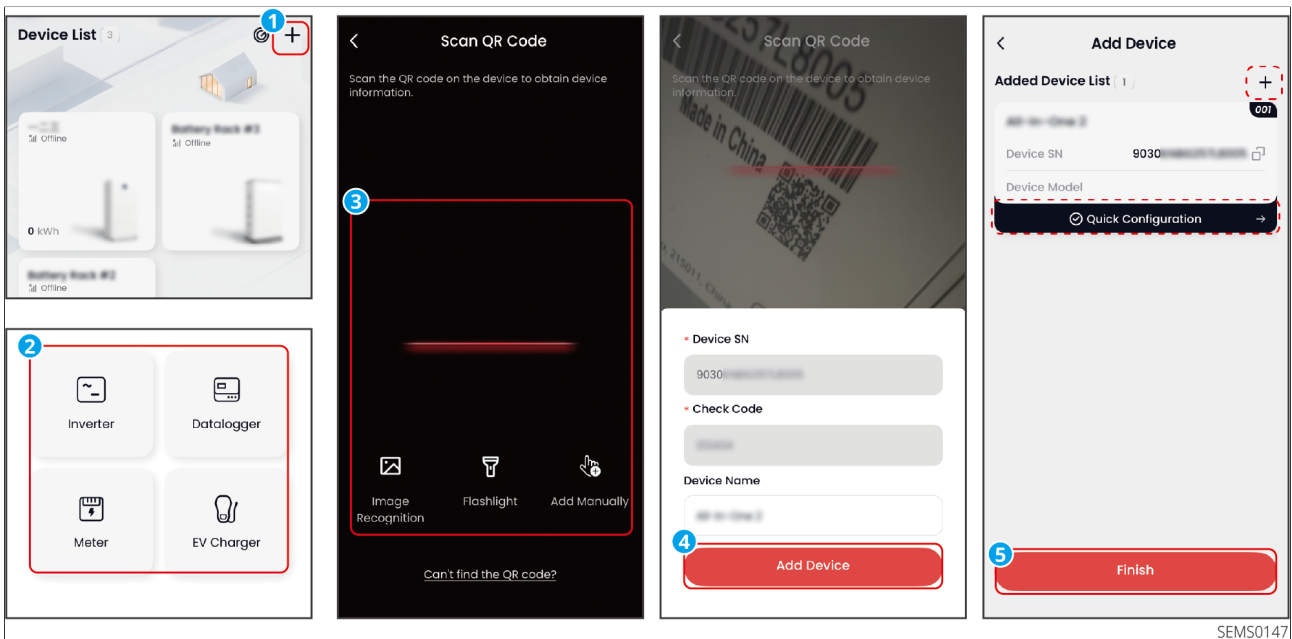



Figure4 Manually Adding Devices

## 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 you need to add, and click 'Add'.
3. If you need to continue adding other unscanned devices, click 'Continue Adding', otherwise click 'Finish'.

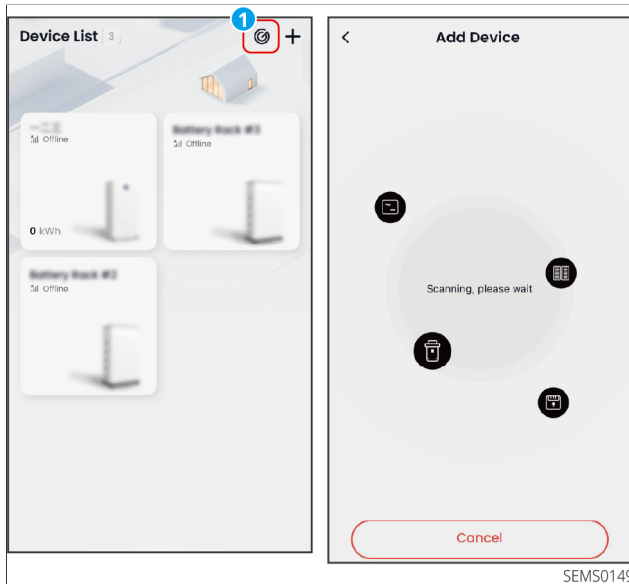


Figure5 Adding Devices via Scanning

### 2.1.1.3 Quick Configuration

#### NOTICE

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

#### 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 type of smart communication stick signal.

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.
4. Complete network configuration, safety code, working mode, etc., as prompted on the interface. For details about the working mode, refer to the [2.2.3.5.System Working Mode\(Page 53\)](#) chapter.
5. Click "Finish" to complete the Quick Configuration.

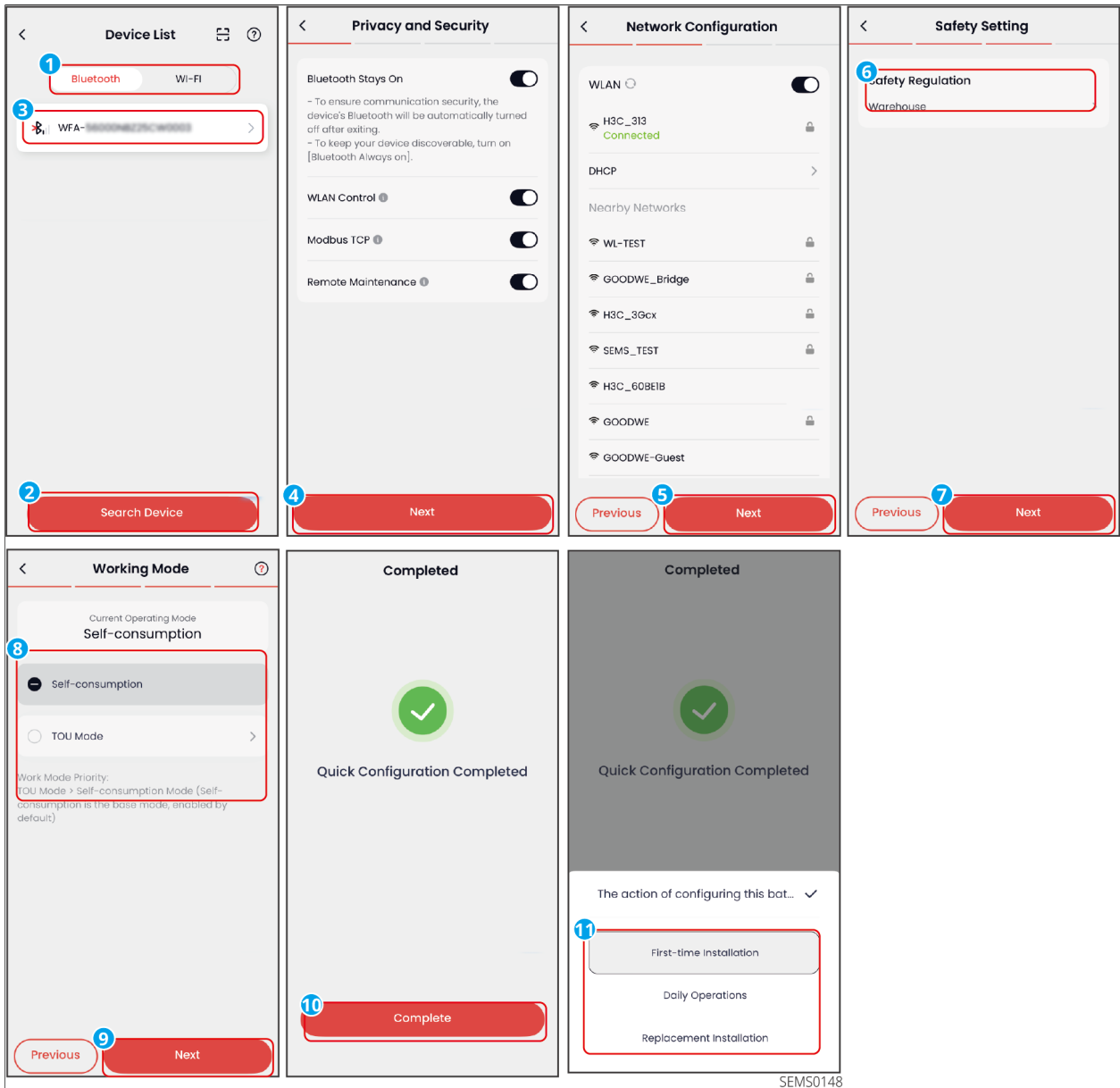


Figure6 Quickly Configure the Device

## 2.1.2 Viewing Power Plant Information (Installer)

### 2.1.2.1 Power Station List

After logging into the App with your installer account, you can view an overview of all plants in the current account on the App's homepage.

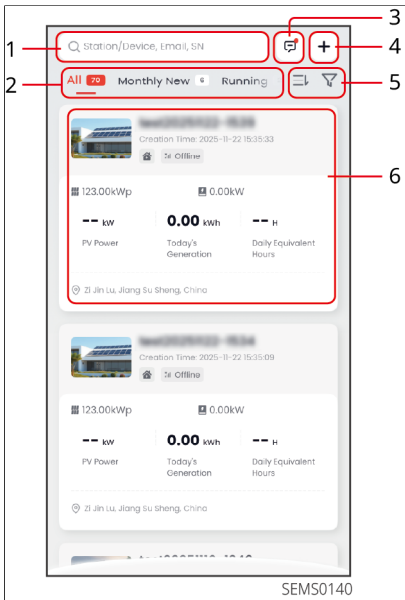


Figure7 Power Station List

No.	Description
1	Search for power stations. Enter station information to quickly locate the desired station.
2	Power station operation status tab. Click to quickly switch between power stations in different operation states.
3	Power station messages. View notifications for station alarms, events, etc.
4	Click to create a new power station.
5	<ul style="list-style-type: none"> <li>Power station sorting. Sort in ascending or descending order based on installed capacity or station creation time.</li> <li>Filter power stations. Filter stations based on conditions such as station type, Rated Power, whether it's favorited, etc.</li> </ul>

No.	Description
6	<ul style="list-style-type: none"> <li>Power station card. Displays basic station information such as station name, operation status, Energy Generation, address, etc.</li> <li>Click to enter the station details interface.</li> <li>Long press to perform quick operations on the station such as favoriting, sharing, and deleting.</li> </ul>

### 2.1.2.2 Power Station Details

On the power station list page, click on any station name to enter the power station details interface. On the power station details interface, you can view basic station information, Energy Generation, revenue, energy flow diagrams, environmental contributions, and other information.

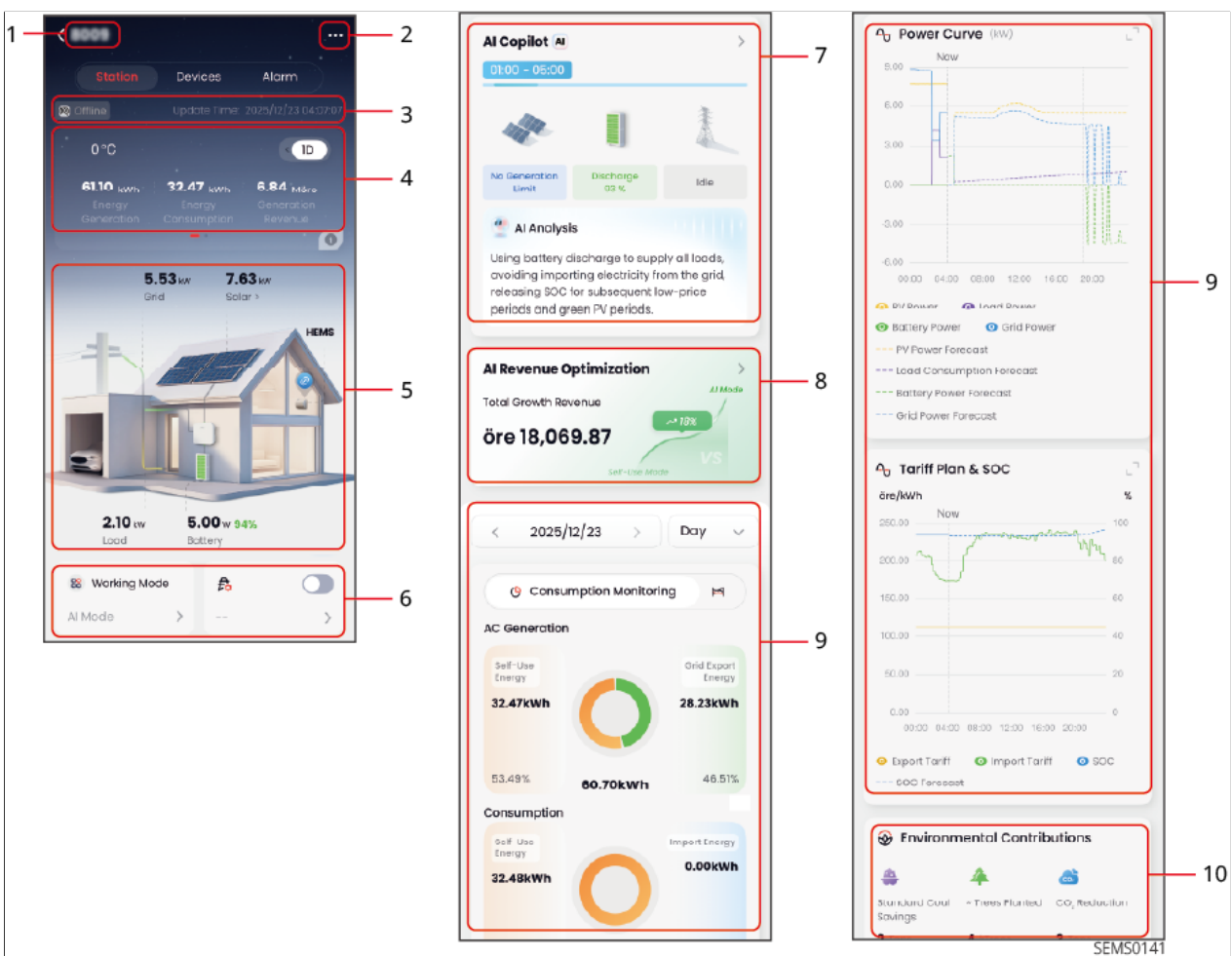


Figure8 Power Station Details

No.	Description
1	Current power station name.
2	Configure power station information. Supports: configuring basic power station information, Share Station, and setting electricity price information.
3	Current operating status and update time of the power station.
4	<ul style="list-style-type: none"> <li>• Current weather at the power station and Energy Generation, electricity consumption, power generation revenue, electricity purchased, grid feed-in revenue, etc.</li> <li>• Power station revenue statistics require electricity price configuration; otherwise, the system cannot calculate revenue data.</li> <li>• Currently, only revenue estimation via fixed electricity price is supported.</li> <li>• Power generation revenue: displays the estimated power generation revenue for the current power station type.</li> <li>• Energy Generation: displays the total power generation for the current power station type.</li> <li>• Grid feed-in revenue: displays the estimated electricity sales revenue for the current power station type.</li> <li>• Grid feed-in electricity: displays the total electricity fed into the grid for the current power station type.</li> </ul>
5	Display of the power station energy flow diagram.
6	Quick access for common control settings.

No.	Description
7	<ul style="list-style-type: none"> <li>• AI Energy Butler. Displayed when the system's AI mode is enabled, indicating the system is currently being managed and dispatched by AI.</li> <li>• Displays the current time period and the planned dispatch status of PV, energy storage, and the grid during this period.</li> <li>• Click the card to enter the AI Energy Butler details interface to view the detailed AI dispatch plan.</li> </ul>
8	<ul style="list-style-type: none"> <li>• Displayed when the system's AI mode is enabled. Compares self-consumption mode with AI mode, showing economic revenue optimization.</li> <li>• Click the card to enter the economic revenue optimization details interface, view AI operation days, revenue increase, expenditure comparison overview, revenue calendar, etc.</li> </ul>
9	<p>Power consumption monitoring, energy flow, power curve, energy monitoring charts. Visual charts display the power station's operating status and energy dynamics.</p>
10	<p>Environmental Contributions. Displays the environmental benefits generated by PV power generation, including: CO2 emission reduction, standard coal savings, equivalent trees planted, etc.</p>

### 2.1.2.3 Alarm

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

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

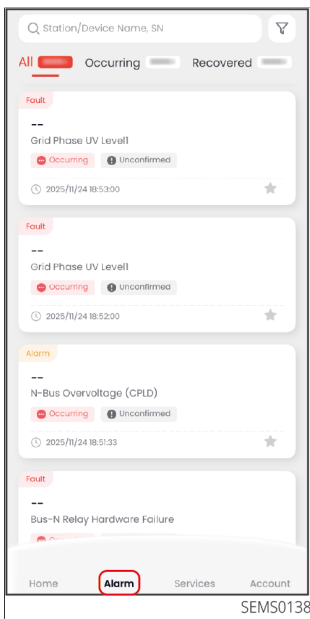


Figure9 Viewing Alarm Information

## 2.1.3 Viewing Power Plant Information (Owner)

### 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 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 plant you need to view.
2	Click to create a new power plant.
3	<ul style="list-style-type: none"> <li>Power plant card. Displays basic plant information such as plant name, operational status, Energy Generation, address, etc.</li> <li>Click to enter the plant details interface.</li> <li>Long press to perform quick operations on the plant, such as favoriting, sharing, or deleting.</li> </ul>

### 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 within the current account on the App's homepage. On the power station details interface, you can view basic station information, Energy Generation, earnings, energy flow diagrams, environmental contributions, and other information.

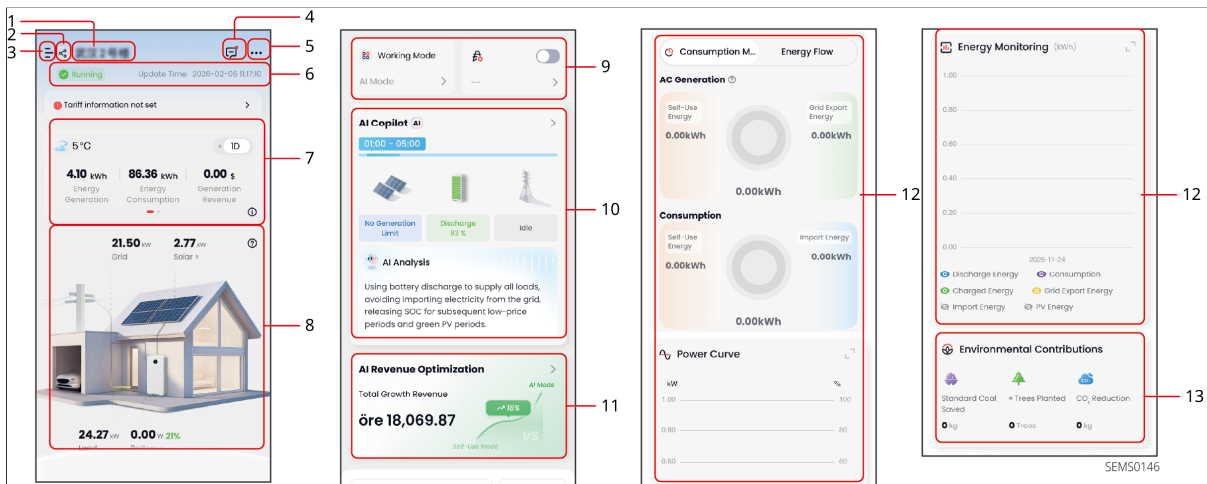


Figure11 View Power Station Details

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

No.	Description
7	<ul style="list-style-type: none"> <li>• Current weather at the station, as well as energy generation, energy consumption, power generation revenue, purchased electricity, grid feed-in revenue, etc.</li> <li>• Electricity prices must be configured for station revenue statistics; otherwise, the system cannot calculate revenue data.</li> <li>• Currently, only fixed electricity prices are supported for revenue estimation.</li> <li>• Power Generation Revenue: Displays the total power generation revenue under the current station type.</li> <li>• Energy Generation: Displays the total energy generation under the current station type.</li> <li>• Grid Feed-in Revenue: Displays the total grid feed-in revenue under the current station type.</li> <li>• Grid Feed-in Energy: Displays the total grid feed-in energy under the current station type.</li> </ul>
8	Display of the station's energy flow diagram.
9	Quick access entry for common control settings.
10	<ul style="list-style-type: none"> <li>• AI Energy Manager. Displayed when the system's AI mode is enabled, indicating the system is currently being scheduled and managed by AI.</li> <li>• Displays the current time period and the planned scheduling status of PV, energy storage, and the grid during this period.</li> <li>• Click the card to enter the AI Energy Manager details interface to view the detailed AI scheduling plan.</li> </ul>
11	<ul style="list-style-type: none"> <li>• Displayed when the system's AI mode is enabled. Compares self-consumption mode with AI mode, showing economic benefit optimization.</li> <li>• Click the card to enter the economic benefit optimization details interface, viewing AI operation days, revenue increase, expenditure comparison overview, revenue calendar, etc.</li> </ul>



No.	Description
12	Power consumption monitoring, energy flow, power curve, energy monitoring chart. Visual charts display the station's operating status and energy dynamics.
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 Modifying Station Basic Information

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

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

### Operation Steps

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

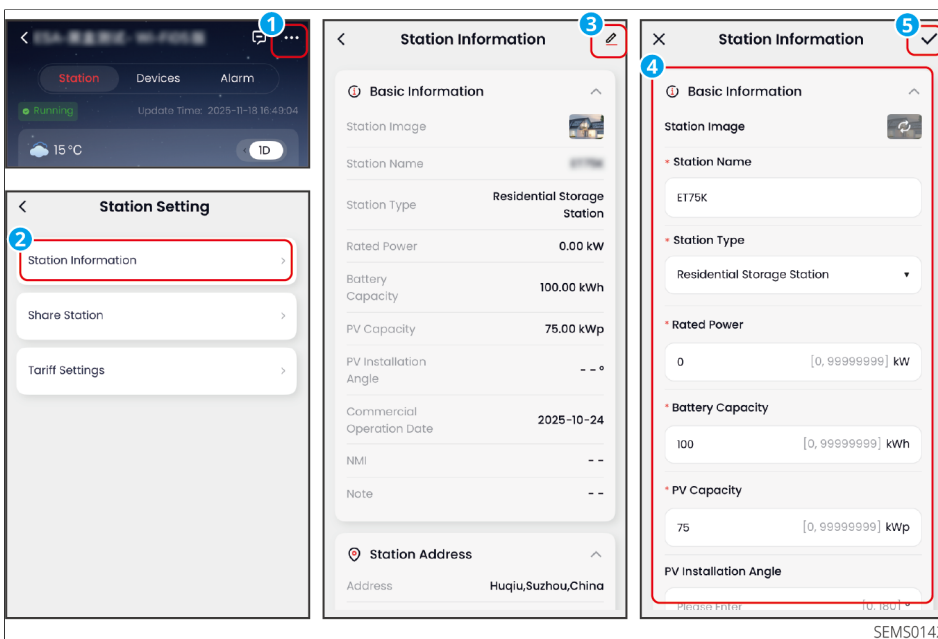



Figure12 Modify Station Information

## 2.1.5 Configure Tariff Information

Supports viewing or setting the station's tariff information according to actual needs. Only some European countries or regions support using the electricity market tariff; currently, the electricity market only supports Nord Pool.

### Operation Steps

1. On the station details interface, click **...** > "Tariff Settings" to enter the tariff settings interface.
2. Select "Export Tariff" or "Import Tariff". Then set the tariff type, supporting "Fixed Tariff", "Time-of-Use Tariff", and "Dynamic Tariff".
  - Fixed Tariff: The user sets it according to the actual tariff.
  - Time-of-Use Tariff: The user sets tariff information for different time periods according to the actual tariff. Supports setting multiple tariff groups.
  - Dynamic Tariff: Obtains dynamic tariff from the power company and dynamically adjusts the actual buying/selling tariff by combining user-set tariff surcharges. Only applicable to certain regions and specific devices.

3. Click , fill in the tariff information according to the actual situation, and save.

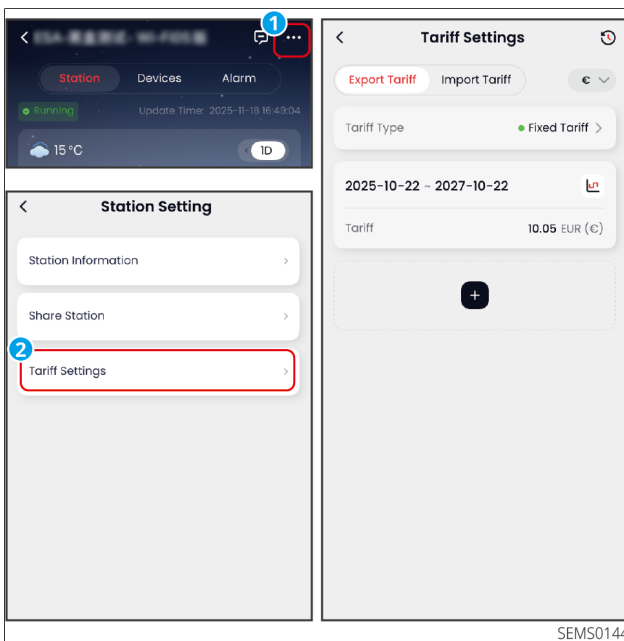



Figure13 Configure Tariff Information

## 2.1.6 Managing Station Sharing

After creating a station, it supports sharing the station with other organizations or individual users, and setting sharing permissions and time limits.

### Operation Steps

1. On the station details interface, click **...** > 'Share Station' to enter the sharing interface.
2. Click 'Add Share', and fill in the recipient's information, set permissions and time limits according to the actual situation. After adding, if you need to remove the share, click .

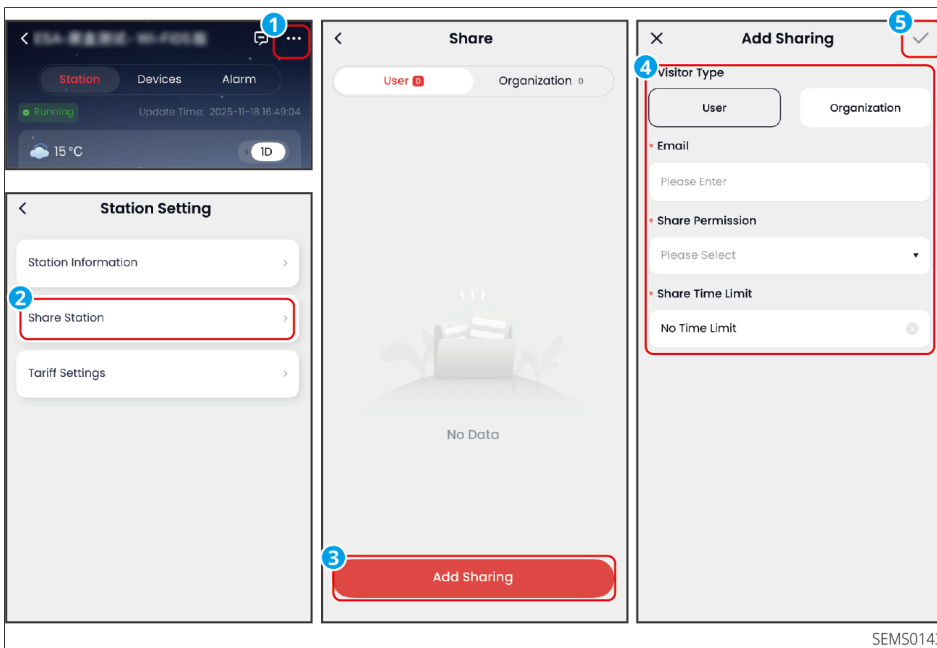


Figure14 Managing Station Sharing

## 2.2 Device

### 2.2.1 Device List

You can view an overview of all devices under your account on the Device List page, including device names, operational status, and more.

- 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 devices to the current power station.
3	Manually add devices to the current power station.
4	<ul style="list-style-type: none"> <li>• Device card. Displays data such as device name, device status, device illustration, Power, and power generation.</li> <li>• When the device type is different, the information displayed on the card varies. Please refer to the actual device.</li> <li>• When the power station type is different, the card form varies. Please refer to the actual station.</li> <li>• The image on the device card is for reference only. Please refer to the physical product.</li> </ul>

## 2.2.2 Device Details

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



Figure16 View Device Details

No.	Description
1	Device name.
2	Device operating 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	<ul style="list-style-type: none"> <li>Battery information. Displays battery system SOC, charging/discharging status, charging/discharging power, etc.</li> <li>Click to enter the battery details interface.</li> </ul>
8	<ul style="list-style-type: none"> <li>Remote Control. Displays quick access entries for commonly used control items.</li> <li>Click "More Control" to view all device control items.</li> <li>For details, please refer to the Set Remote Control chapter.</li> </ul>
9	<ul style="list-style-type: none"> <li>Operating data. Displays current device operating parameters, such as active power, reactive power, power factor, etc.</li> <li>Click "More" to display all data details.</li> <li>The information displayed varies for different devices. Please refer to the actual interface.</li> </ul>
10	Displays power curves and energy monitoring charts within different time dimensions.
11	Device details. Displays basic device information, such as device name, Serial Number, device type, firmware version number, etc.

### 2.2.3 Remotely Controlling Device

The controllable parameters may vary depending on the device model and the safety standards of the country. Please refer to the actual device for details.

For an explanation of device parameters, please refer to [7.Appendix\(Page 71\)](#).

#### 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 interface. It supports configuring the control item parameters

displayed on the homepage via "Common Controls".

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

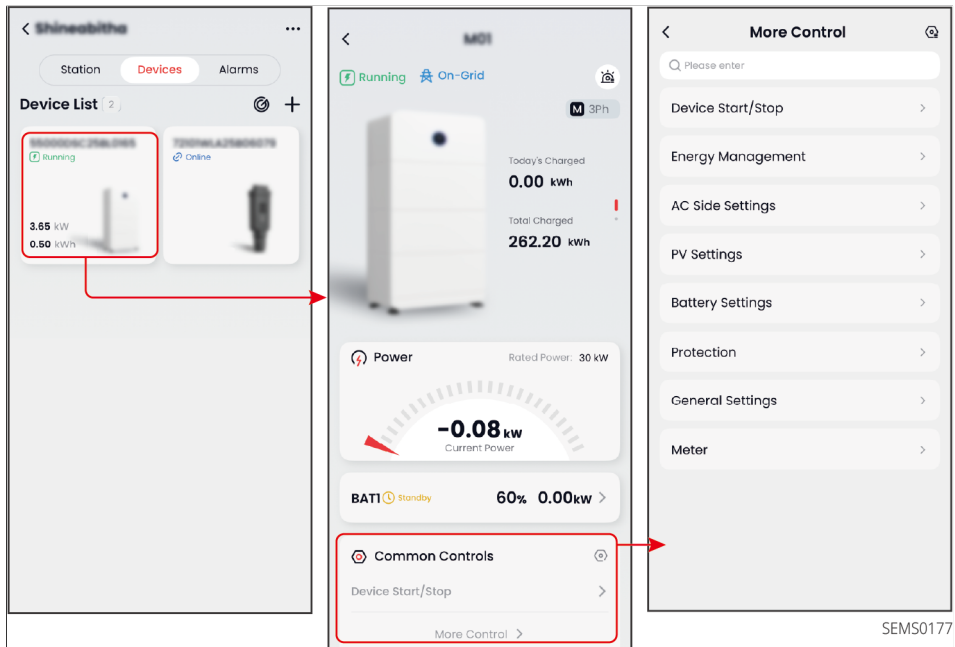


Figure17 Setting Inverter Parameters

## Setting Safety Parameters Procedure

1. Access the parameter setting interface via "Protection" > "Safety Regulation".
2. Set the safety regulation country and custom safety parameters according to the actual situation. Custom safety parameters can only be modified by the installer.

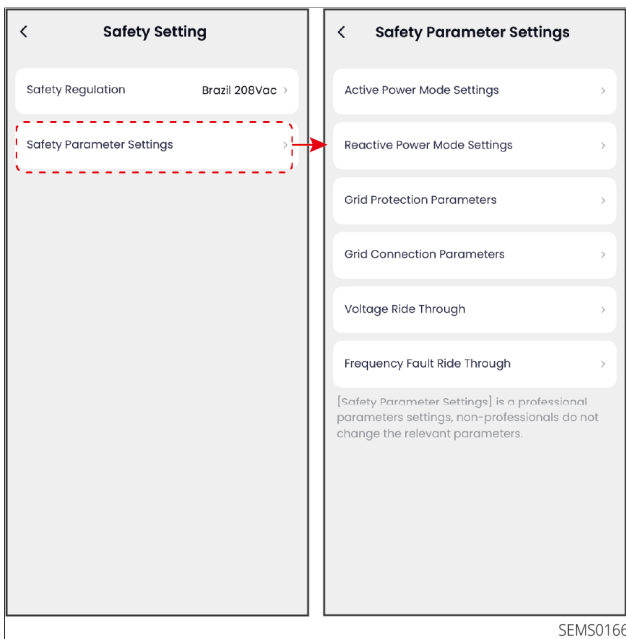


Figure18 Setting Safety Parameters

## Setting Power Limit Parameters

### NOTICE

The power limit interface varies by safety regulation country. Please refer to the actual interface.

### Procedure

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

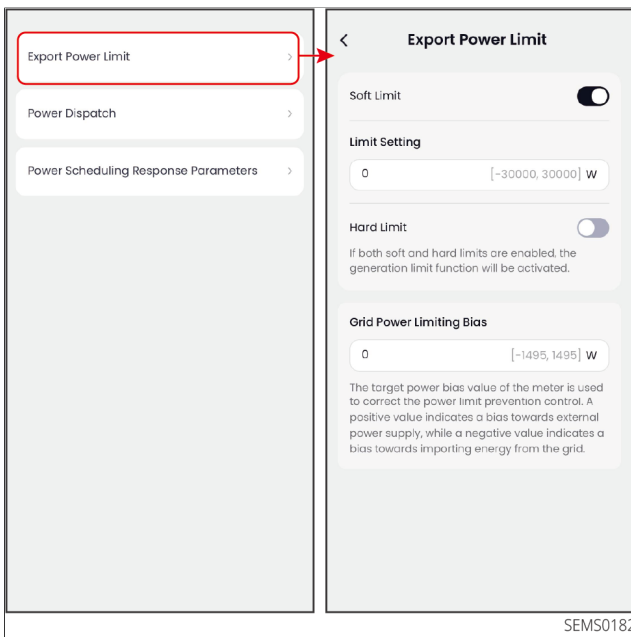


Figure19 Setting Power Limit Parameters

### 2.2.3.2 Setting Battery Parameters

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

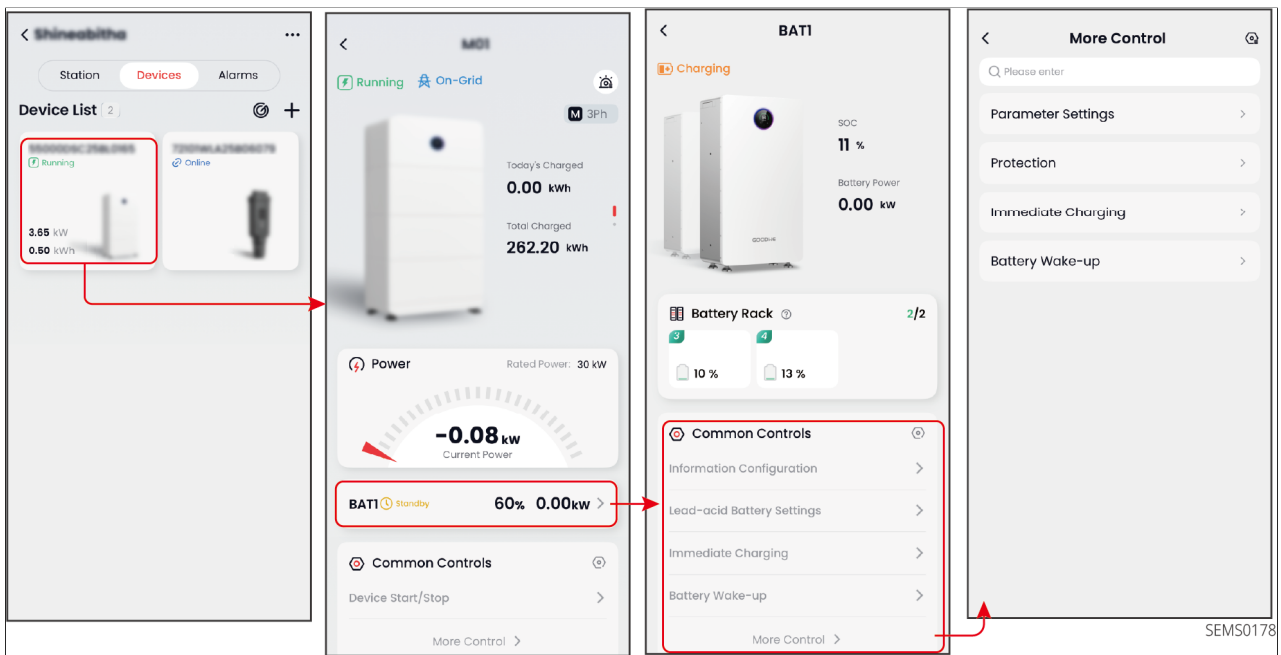


Figure20 Setting Battery Parameters

### 2.2.3.3 Setting Smart Meter Parameters

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

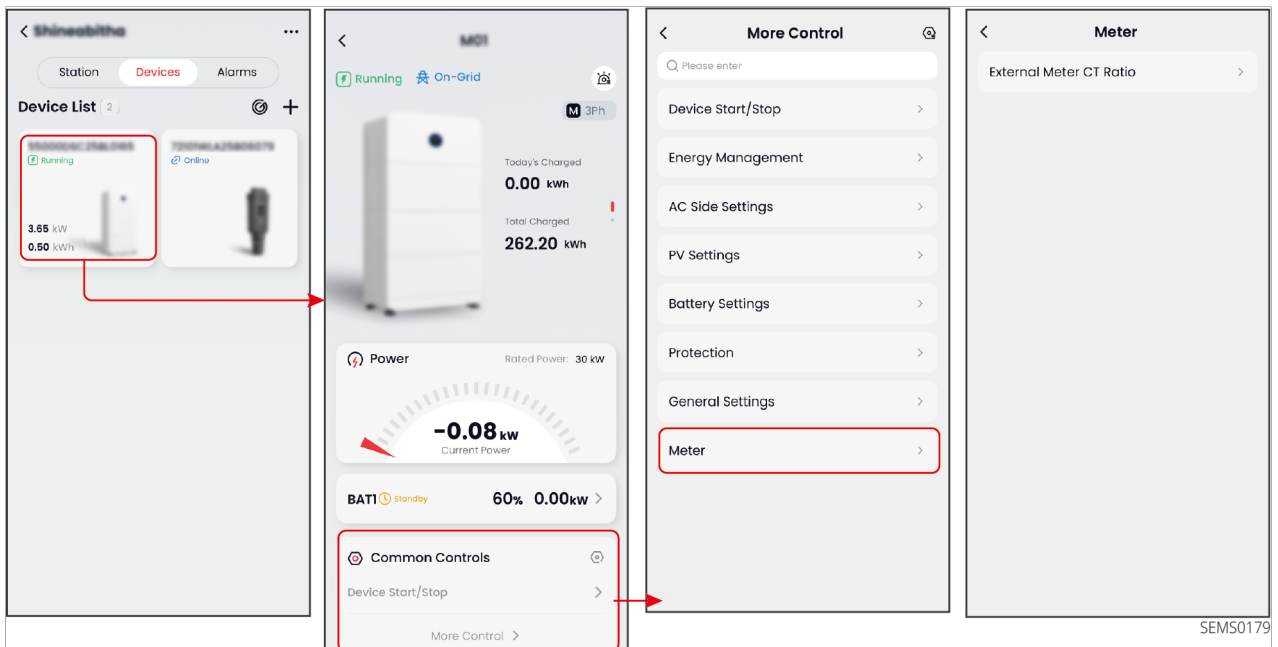


Figure21 Set Meter Parameters

### 2.2.3.4 Setting Home Energy Management Device Parameters

On the device list screen, select the home energy management device and click "Settings" to configure parameters according to your actual needs.

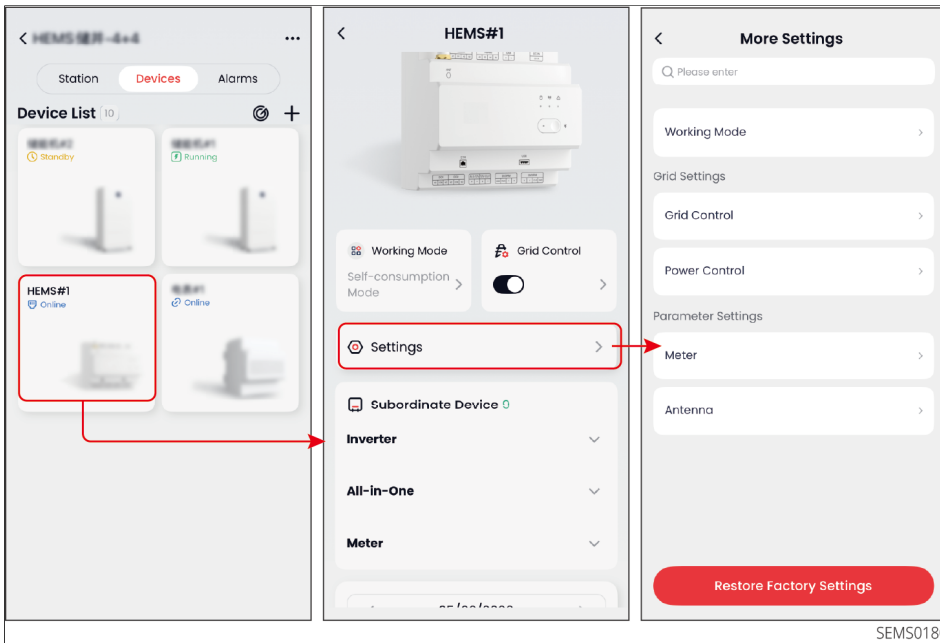


Figure22 Setting Home Energy Management Device Parameters


### 2.2.3.5 Setting System Operation Mode

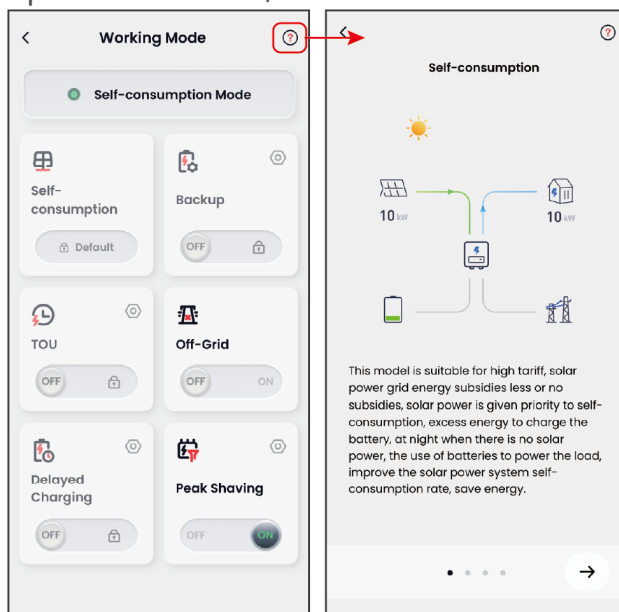
Supports selecting the system operation method based on electricity price, power consumption demand, or power supply environment. After configuration, the system will automatically coordinate photovoltaic, battery, and grid to dispatch power according to actual needs.

## NOTICE

- The default working mode is Self-consumption mode.
- Different systems support different working modes; please refer to the interface.
- When setting the working mode via the inverter, the priority of working modes is: Off-grid mode > Peakshaving > Delayed charging > TOU > Backup Mode > Self-consumption.
- When setting the working mode via the home energy management system, the priority of working modes is: Backup Mode > AI Mode > Peakshaving > TOU mode > Self-consumption.

## Procedure

1. Access the Operation Mode settings interface via "Energy Management" > "Operation Mode", or by searching for "Operation Mode" in the parameter control interface.
2. Set the operation mode according to actual requirements. To learn more about operation modes, click .



SEMS0159

## Self-consumption

The basic operation mode of the system.

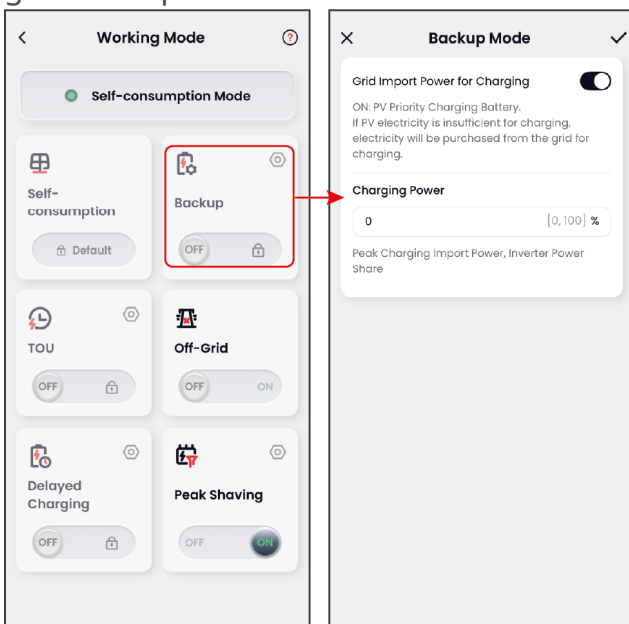
Photovoltaic power generation is prioritized for supplying loads, excess power charges the battery, and any remaining power is sold to the grid. When photovoltaic

generation is insufficient, the battery supplies power to the loads; if the battery power is also insufficient to meet the load demand, the grid supplies power to the loads.

## Backup Mode

Recommended for areas with unstable grid.

When the grid fails, the inverter switches to off-grid operation mode, and the battery discharges to supply power to the loads, ensuring the BACKUP loads remain powered. When grid power is restored, the inverter operation mode switches back to grid-tied operation.



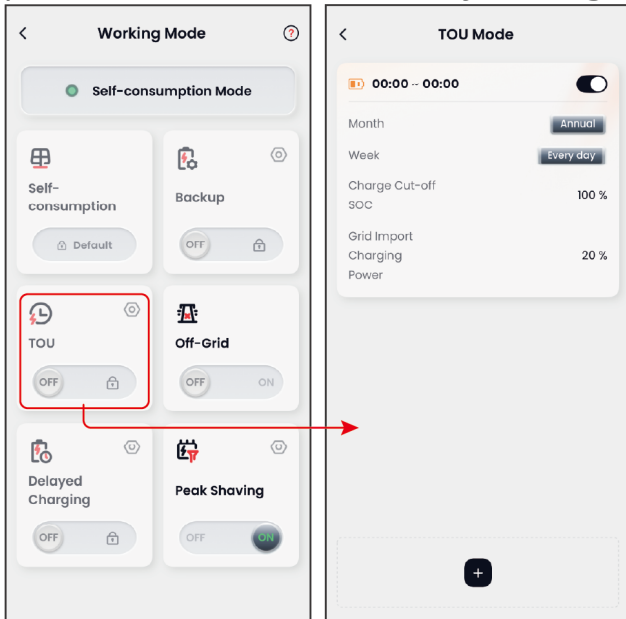
SEMS0189

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 significant peak and off-peak electricity price differences. In compliance with local laws and regulations, configure the system to buy or sell electricity based on grid peak and off-peak 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

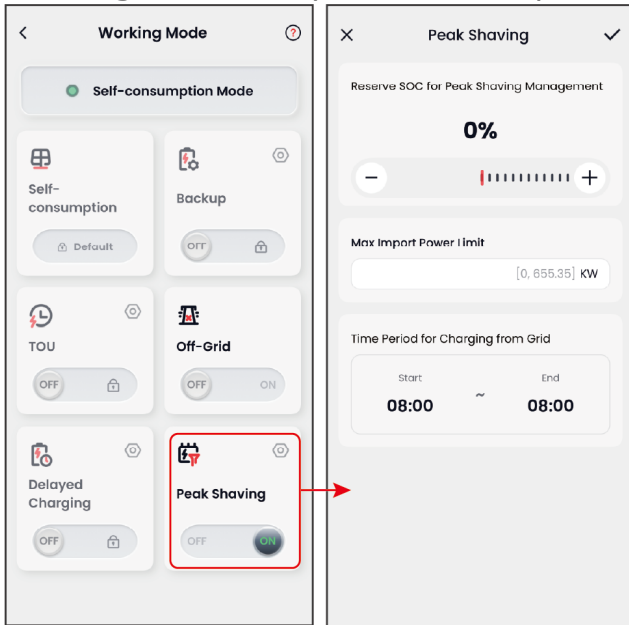
Parameter Name	Description
Start Time	Within the specified Start Time and End Time, the battery charges or discharges according to the set charging/discharging mode and rated power. Outside this time period, it operates in self-consumption mode.
End Time	
Charging/Discharging Mode	Set to either charge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

### Off-grid Mode

Suitable for areas without a grid. Photovoltaic and battery form a pure off-grid system. Photovoltaic power generation supplies the loads, and excess power charges the battery. When photovoltaic generation cannot meet the 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, utilize battery discharge to reduce power consumption exceeding the quota.

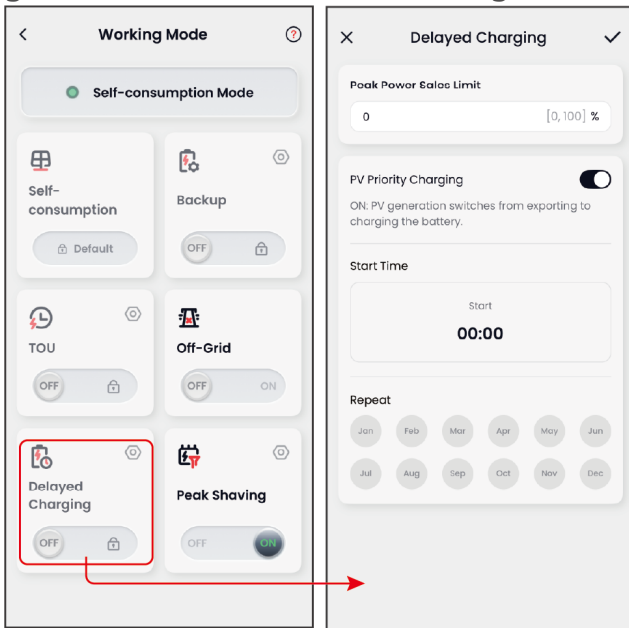


SEMS0187

Parameter Name	Description
Reserved SOC for Demand Management	In Demand Management mode, this SOC is reserved for demand management. The demand management function becomes invalid when the battery SOC is higher than the reserved SOC.
Grid Power Purchase Peak Limit	Sets the maximum power limit allowed for purchasing electricity from the grid. When the load power 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 this time period, the battery can be charged from the grid when the load power consumption does not exceed the grid purchase quota. Outside this time range, the battery can only be charged using the PV generation power.

## Delayed Charging

Suitable for areas with grid-tied power output limitations. By setting peak power limits and charging time periods, excess photovoltaic power generation beyond the grid-tie limit can be used to charge the battery, reducing photovoltaic waste.

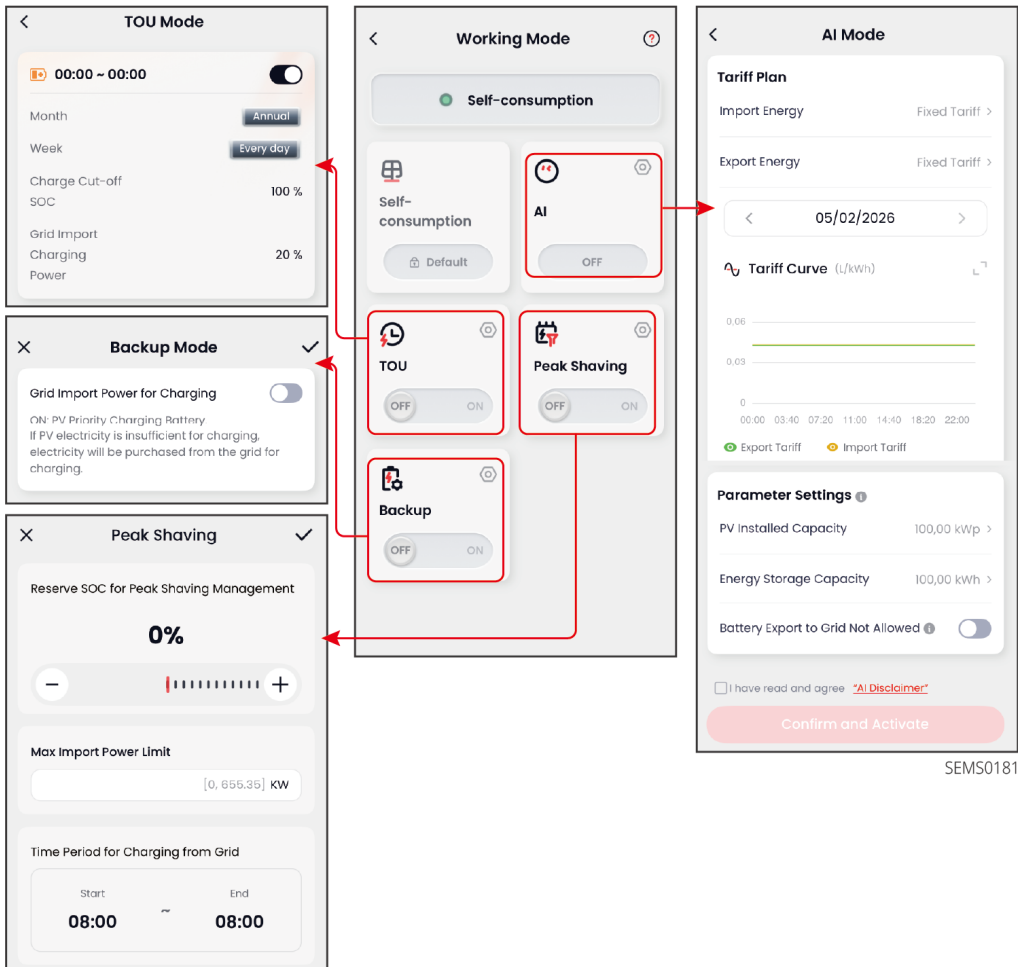


SEMS0186

Parameter Name	Description
Peak Power Sales Limit	According to the grid standards of some countries or regions, set the peak power limit. The peak power limit value must be lower than the local specified output power limit value.
PV Priority Charging	Within the charging time range, excess power from PV generation after supplying the load is prioritized for charging the battery. Outside the charging time range, excess power from PV generation after supplying the load is prioritized for selling electricity.
Start Charging Time	

### AI Mode

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



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

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

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

- Dynamic Tariff: Obtain dynamic electricity prices from the power company and combine them with user-set price surcharges to dynamically adjust the actual buying and selling electricity prices.
- Time-of-Use Tariff: Users set electricity price information for different time periods based on actual rates. Supports configuring multiple price groups.

## 3 Local Commissioning Device

### NOTICE

The displayed 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 Connecting to Devices Locally

### NOTICE

- Before connecting to the device locally, please ensure the device is powered on and operating normally.
- The displayed device name varies depending on the device type or smart communication stick type, as follows (\*\*\*) represents 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-\*\*\*

#### Operation Steps

1. After logging into the App, click "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. Click "Search for Devices" to refresh the

- device list, and select the device to connect via 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 turn off after this connection ends.

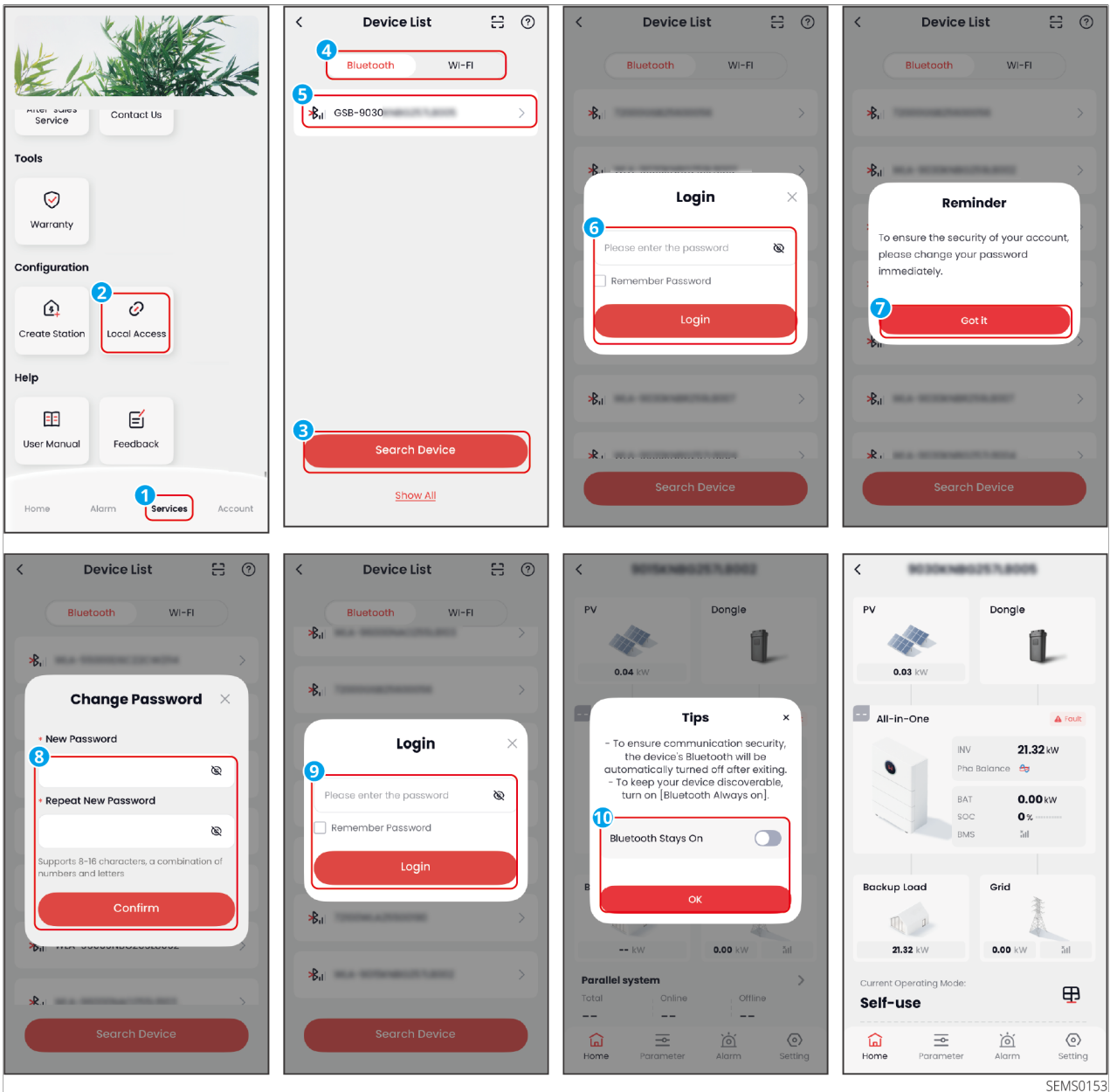


Figure23 Local Access Devices

## 3.2 Local Connection Interface Overview

## NOTICE

The App interface may vary depending on the devices in the system. Please refer to the actual interface.

After connecting to a device via Bluetooth or WiFi, you can access the local connection device interface. This allows you to view or modify device parameters.

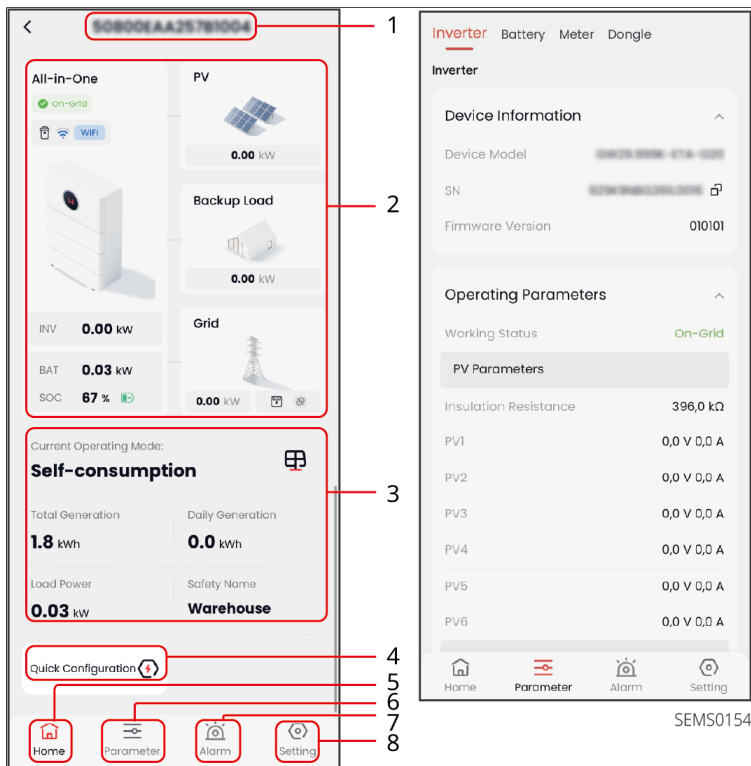


Figure24 Local Connection Interface Overview

No.	Description
1	Current device serial number.
2	<ul style="list-style-type: none"> <li>System module cards. Includes PV, communication module, Inverter, Utility grid, Backup load, and other cards.</li> <li>Click a card to view related parameters and set parameter values.</li> <li>When the inverter is an all-in-one unit, click the all-in-one unit card to view information for the inverter, Battery, and communication stick separately and set parameter values.</li> </ul>

No.	Description
3	Current system operation information. Includes working mode, Energy Generation, power, etc.
4	Quick access to control items, for example: <ul style="list-style-type: none"> <li>• Quick Configuration. Quickly complete network settings, safety code settings, Working Mode Settings, device self-test, and other functions to meet basic usage. For specific settings, please refer to the <a href="#">2.1.1.3.Quick Configuration(Page 14)</a> chapter.</li> <li>• Some models support "One-Click Configuration", which can generate templates based on the completed Quick Configuration.</li> </ul>
5	Home page. Displays system information, such as devices included in the system, system operation information, and provides quick access to view and set parameters.
6	Parameters. View device model, serial number, firmware version, device operating parameters, etc., according to the device type.
7	<ul style="list-style-type: none"> <li>• Alarm. Displays current device alarm information.</li> <li>• Click to view detailed information such as alarm type, alarm cause, and handling suggestions.</li> </ul>
8	Settings. Displays configurable parameters according to the device type.

## 3.3 Setting Device Parameters

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

### 3.3.1 One-Click Configuration

Some device models support the One-Click Configuration mode, which allows you to save quick configurations as templates and apply them rapidly.

After completing the quick configuration, connect to the device locally, click "One-Click Configuration" > "Generate Template" to save the current configuration as a

template. When needed, click "One-Click Configuration Mode" to quickly import the saved template.

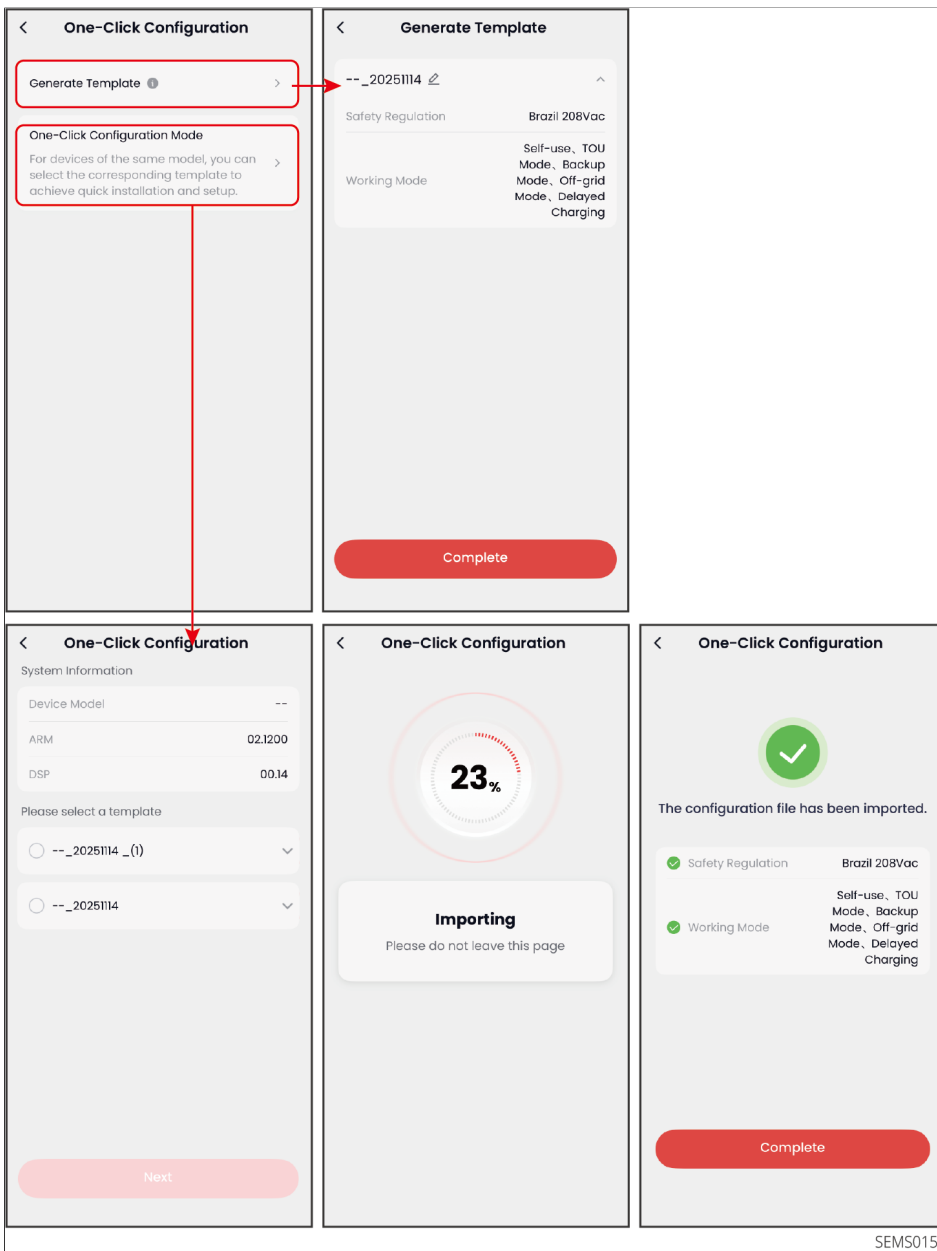


Figure25 One-Click Configuration

### 3.3.2 Setting 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.

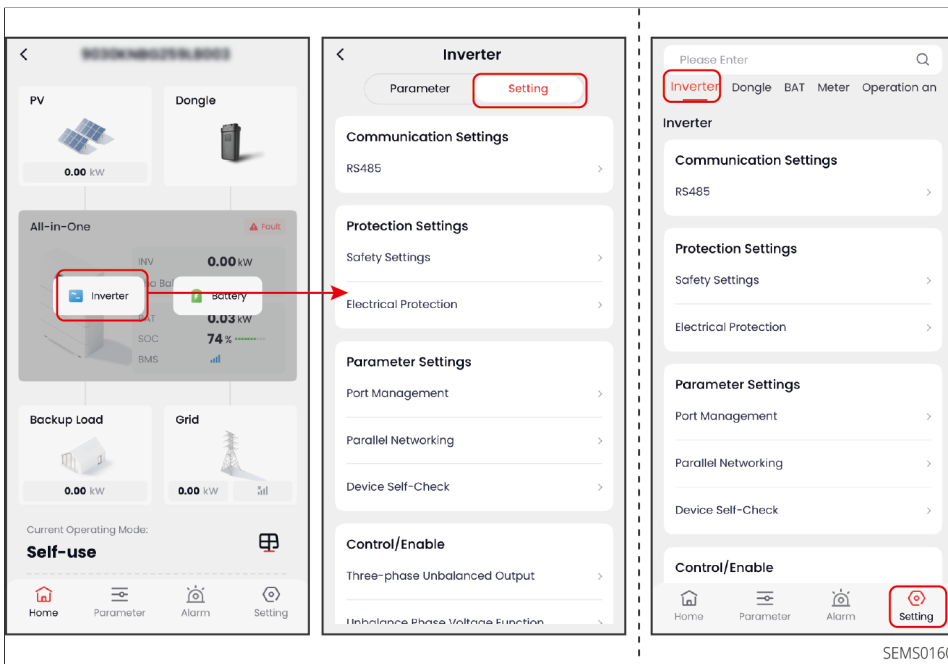


Figure26 Setting Inverter Parameters

## Setting Safety Parameters Operation Steps

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

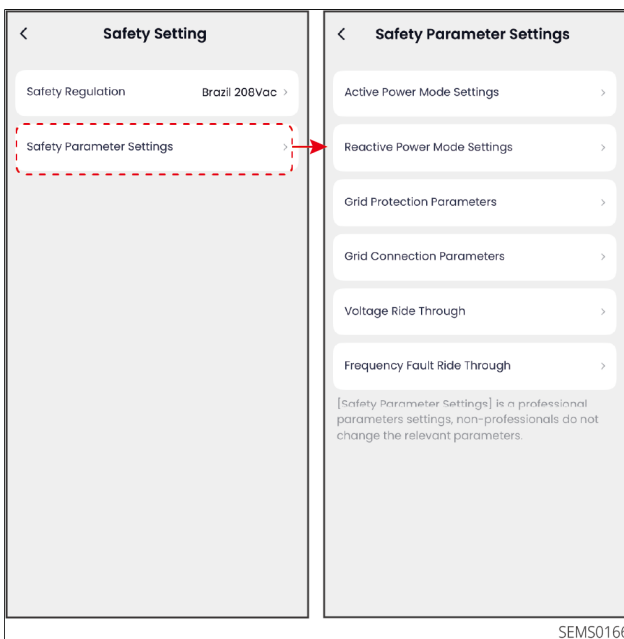


Figure27 Setting Safety Parameters

## Setting Power Limit Parameters

### NOTICE

The power limit interface varies for countries with different safety regulations. Please refer to the actual interface.

### Operation Steps

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.

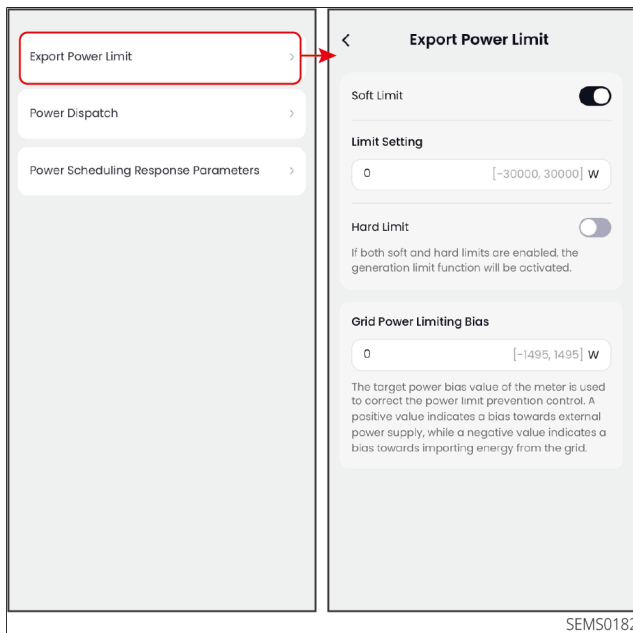


Figure28 Setting Power Limit Parameters

## Setting RS485 Parallel Connection

## 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 host.
- If the device does not support self-networking, please first set the slave inverter address, then configure the parallel networking via the host.

### Operation Steps

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. Alternatively, based on the actual parallel scenario, set it as Standalone, Parallel, or Single-phase to Three-phase.
- When the device does not support auto-networking, you need to manually set the attributes of each inverter in the system:
    - When the inverter is the master, set it as Master and exit the connection. 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 "Networking".
    - When the inverter is a slave, set the inverter address and click ✓.
  - When the inverter supports auto-networking, select the number of inverters in the system according to the actual situation.

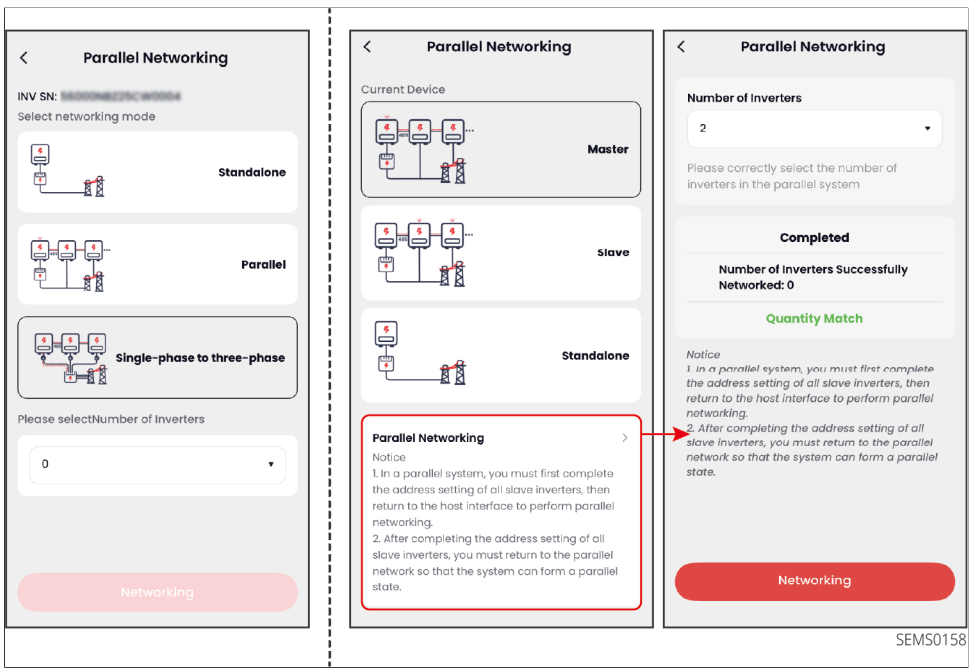


Figure29 Setting RS485 Parallel Connection

### 3.3.3 Configuring Smart Dongle Parameters

Method 1: On the "Home" page, select the communication module 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.

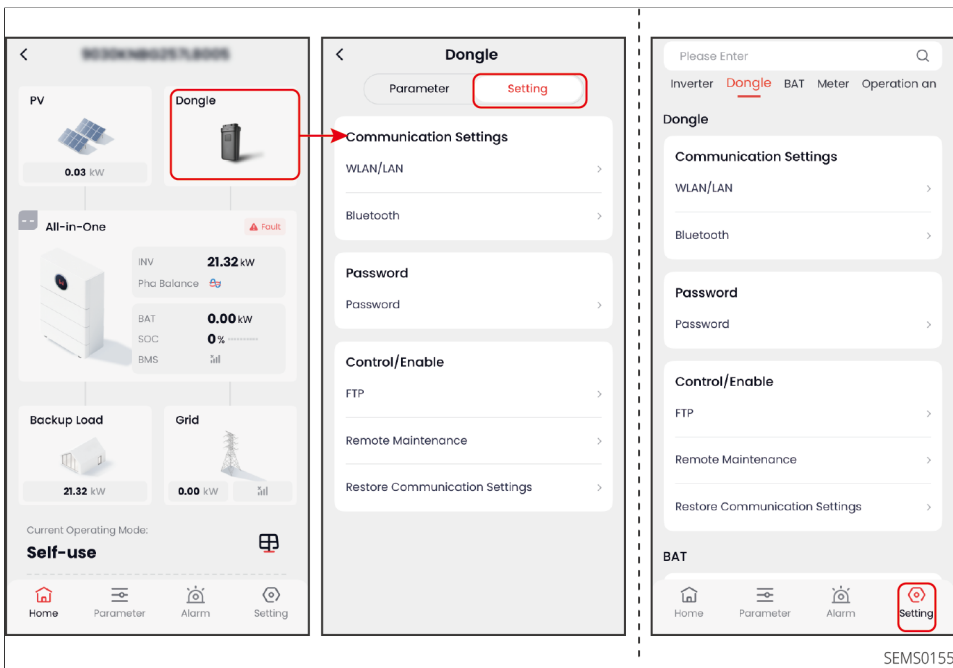


Figure30 Configure Communication Stick Parameters

### 3.3.4 Setting Battery Parameters

Method 1: On the "Home" page, select the Battery card, tap the card > "Settings", and modify the device parameters according to actual needs.

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

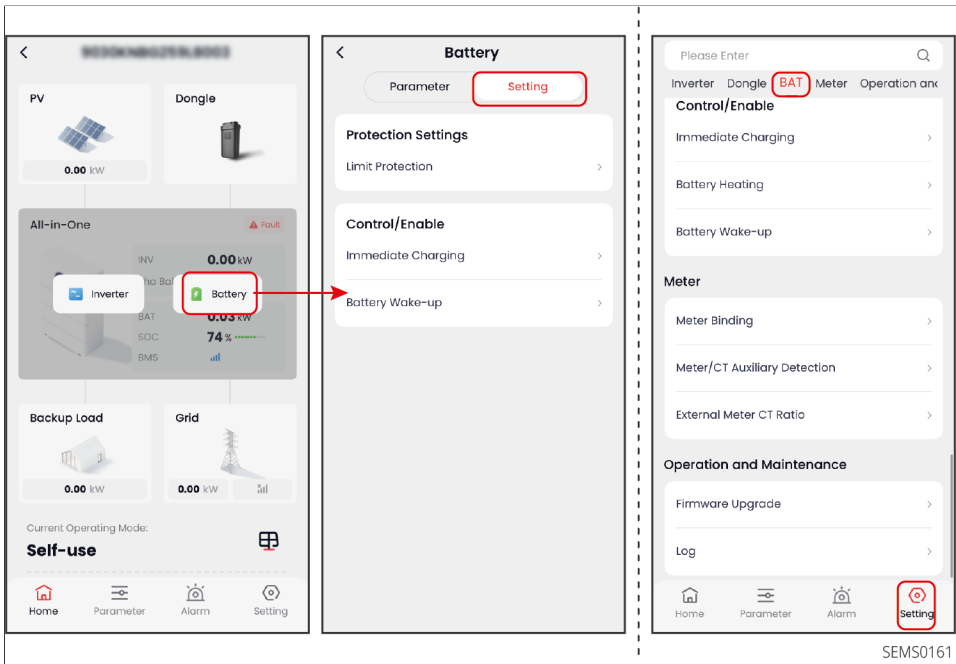


Figure31 Setting Battery Parameters

## Set JA12 Certification Parameters

### Procedure:

1. Tap "Settings" > "Battery" > "JA12 Certification".
2. Set the certified capacity and system capacity according to the actual situation. After setup, you can view the JA12 Certification mark on the home page.

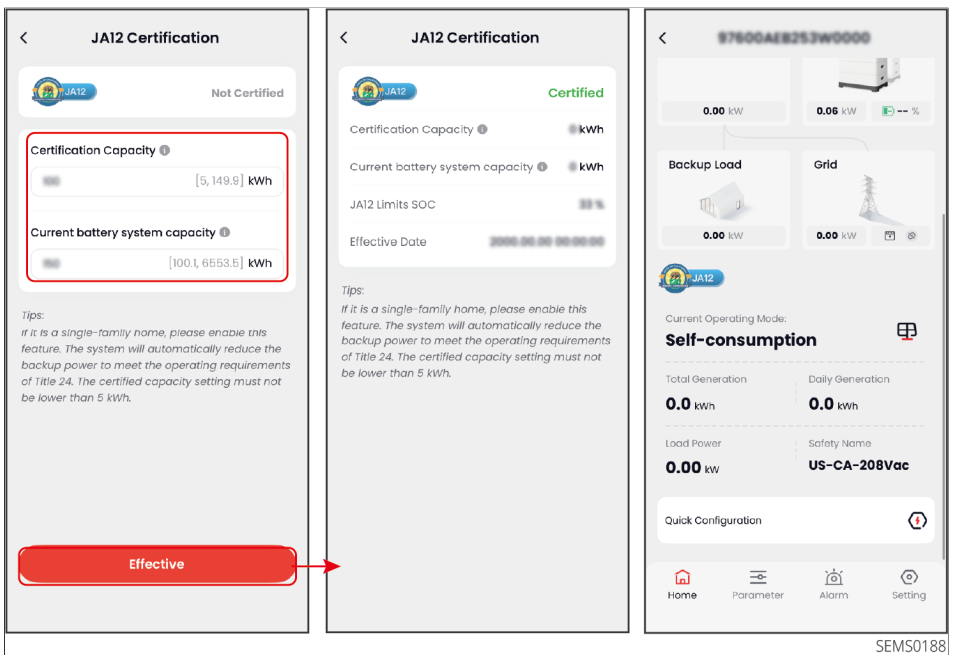


Figure32 Setting JA12 Certification Parameters

### 3.3.5 Setting Smart Meter Parameters

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

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

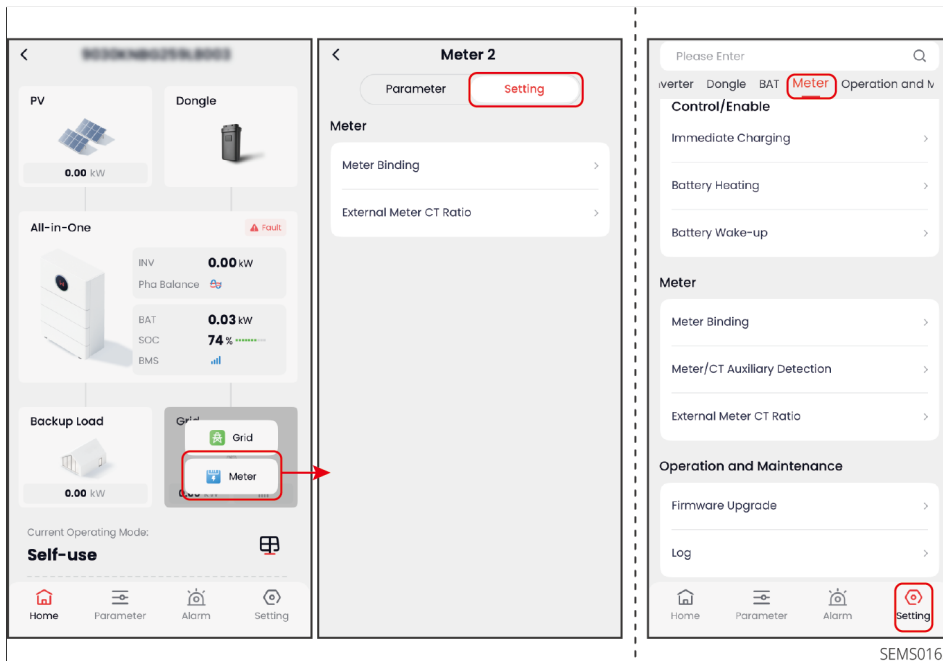


Figure33 Set Meter Parameters

#### Meter Binding Steps

1. Tap "Home", long press the "Utility grid" card, select "Meter" > "Settings" > "Meter Binding" to enter the binding interface. Alternatively, enter via "Settings" > "Meter" > "Meter Binding".
2. Tap the "Meters Number/Location" dropdown to select the actual application scenario. Supported options: 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, no external meter or CT. This guide uses the interface for Meter 1 (External), no Meter 2 as an example to explain how to bind a meter.
3. As shown in the figure below, when selecting to use an external meter, you need to manually add the external meter information. Tap "Bind", and 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.

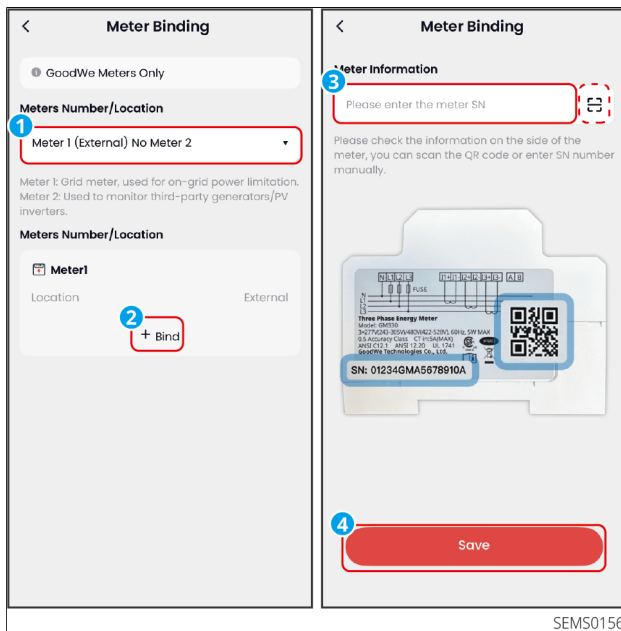


Figure34 Bind Meter


### 3.3.6 Setting System Operation Mode

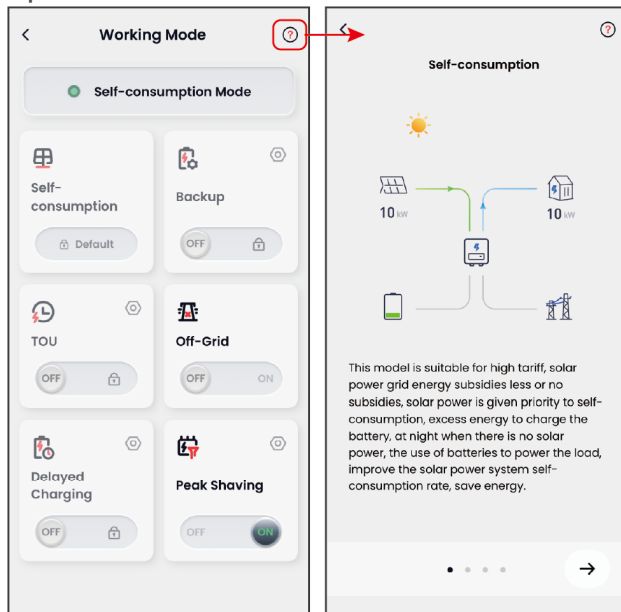
Supports selecting the system operation method based on electricity price, power consumption demand, or power supply environment. After configuration, the system will automatically coordinate photovoltaic, battery, and grid to dispatch power according to actual needs.

#### NOTICE

- The default working mode is Self-consumption mode.
- Different systems support different working modes; please refer to the interface.
- When setting the working mode via the inverter, the priority of working modes is: Off-grid mode > Peakshaving > Delayed charging > TOU > Backup Mode > Self-consumption.
- When setting the working mode via the home energy management system, the priority of working modes is: Backup Mode > AI Mode > Peakshaving > TOU mode > Self-consumption.

## Procedure

1. Access the Operation Mode settings interface via "Energy Management" > "Operation Mode", or by searching for "Operation Mode" in the parameter control interface.
2. Set the operation mode according to actual requirements. To learn more about operation modes, click .



SEMS0159

## Self-consumption

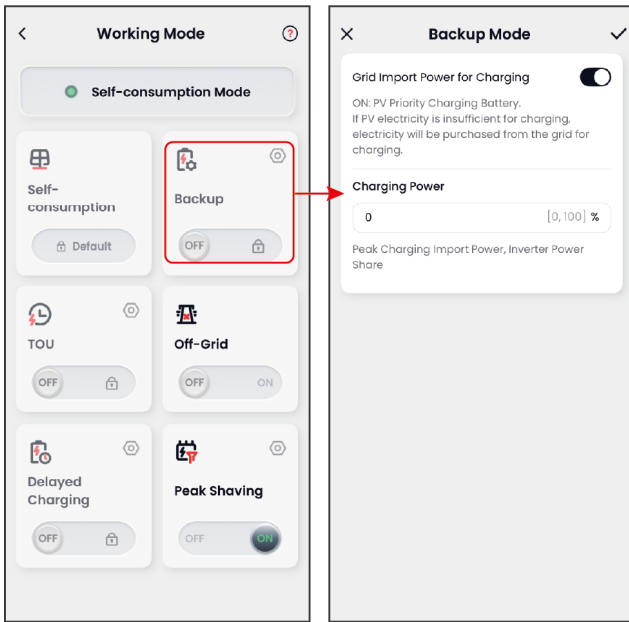
The basic operation mode of the system.

Photovoltaic power generation is prioritized for supplying loads, excess power charges the battery, and any remaining power is sold to the grid. When photovoltaic generation is insufficient, the battery supplies power to the loads; if the battery power is also insufficient to meet the load demand, the grid supplies power to the loads.

## Backup Mode

Recommended for areas with unstable grid.

When the grid fails, the inverter switches to off-grid operation mode, and the battery discharges to supply power to the loads, ensuring the BACKUP loads remain powered. When grid power is restored, the inverter operation mode switches back to grid-tied operation.

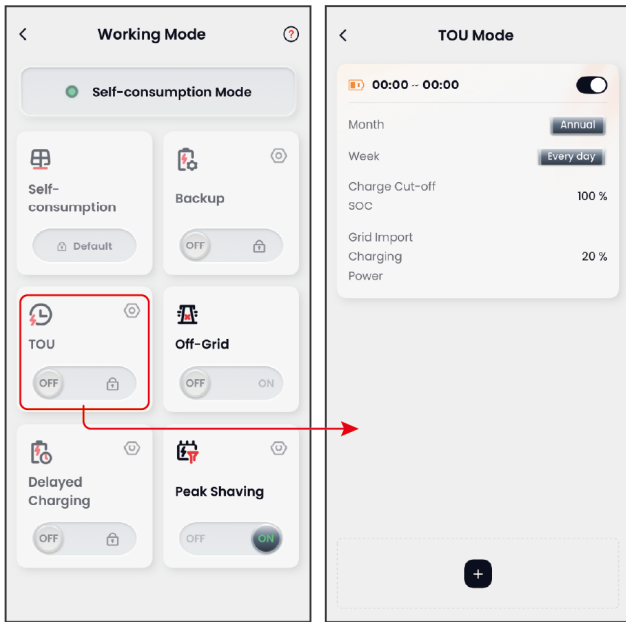


SEMS0189

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 significant peak and off-peak electricity price differences. In compliance with local laws and regulations, configure the system to buy or sell electricity based on grid peak and off-peak 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.



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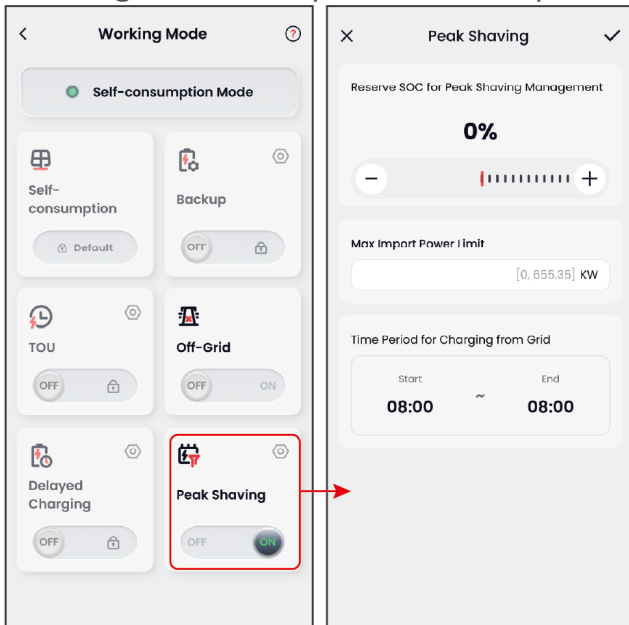
Parameter Name	Description
Start Time	Within the specified Start Time and End Time, the battery charges or discharges according to the set charging/discharging mode and rated power. Outside this time period, it operates in self-consumption mode.
End Time	
Charging/Discharging Mode	Set to either charge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

## Off-grid Mode

Suitable for areas without a grid. Photovoltaic and battery form a pure off-grid system. Photovoltaic power generation supplies the loads, and excess power charges the battery. When photovoltaic generation cannot meet the 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, utilize battery discharge to reduce power consumption exceeding the quota.



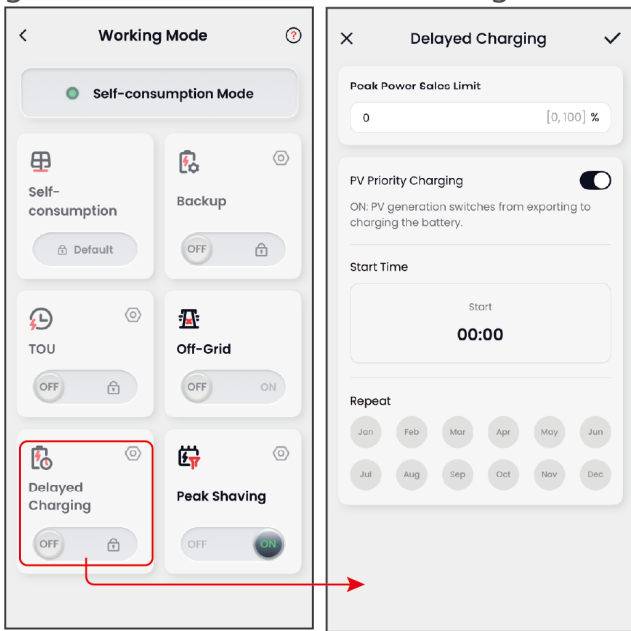
SEMS0187

Parameter Name	Description
Reserved SOC for Demand Management	In Demand Management mode, this SOC is reserved for demand management. The demand management function becomes invalid when the battery SOC is higher than the reserved SOC.
Grid Power Purchase Peak Limit	Sets the maximum power limit allowed for purchasing electricity from the grid. When the load power 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 this time period, the battery can be charged from the grid when the load power consumption does not exceed the grid purchase quota. Outside this time range, the battery can only be charged using the PV generation power.

### Delayed Charging

Suitable for areas with grid-tied power output limitations. By setting peak power limits and charging time periods, excess photovoltaic power generation beyond the

grid-tie limit can be used to charge the battery, reducing photovoltaic waste.

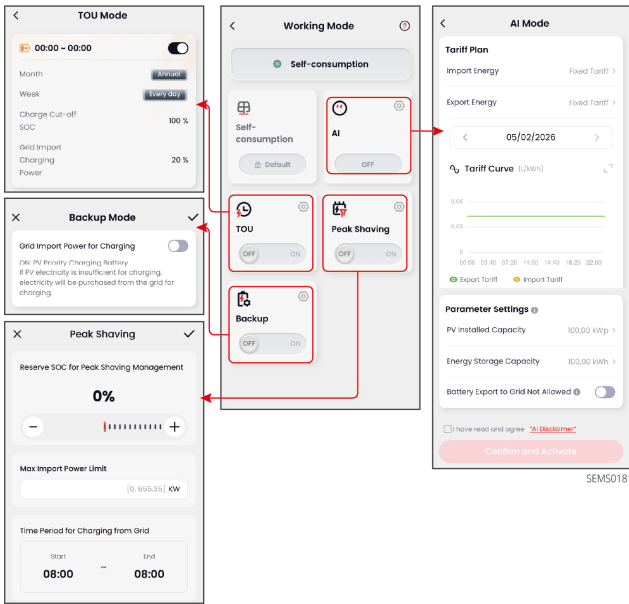


SEMS0186

Parameter Name	Description
Peak Power Sales Limit	According to the grid standards of some countries or regions, set the peak power limit. The peak power limit value must be lower than the local specified output power limit value.
PV Priority Charging	Within the charging time range, excess power from PV generation after supplying the load is prioritized for charging the battery. Outside the charging time range, excess power from PV generation after supplying the load is prioritized for selling electricity.
Start Charging Time	

### AI Mode

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



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

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

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

- Dynamic Tariff: Obtain dynamic electricity prices from the power company and combine them with user-set price surcharges to dynamically adjust the actual buying and selling electricity prices.
- Time-of-Use Tariff: Users set electricity price information for different time periods based on actual rates. Supports configuring multiple price 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, AI assistance invocation, etc.

## NOTICE

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

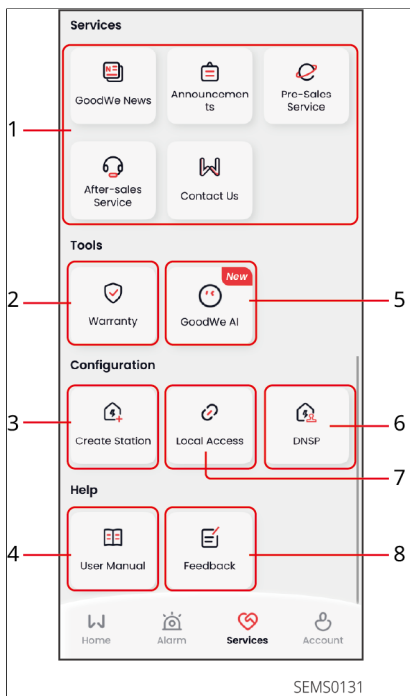


Figure35 Service Interface

No.	Description
1	Entry for news, announcements, and pre-sales/after-sales service.
2	<ul style="list-style-type: none"> <li>• Query warranty period by device serial number.</li> <li>• Supports querying battery product performance guarantee parameters, such as health index, type discharge capacity, etc.</li> </ul>

No.	Description
3	Create Station. For detailed steps, please refer to the Create Station chapter.
4	View the App user manual.
5	<ul style="list-style-type: none"> <li>• AI Assistant. Quickly access knowledge base information, query business data, etc., through intelligent Q&amp;A.</li> <li>• Supports enabling the AI Assistant floating window for quick access to the conversation interface.</li> </ul>
6	DNSP settings. Only applicable 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 to the DNSP network allows the electricity service provider to remotely limit the output power value of the photovoltaic power station.
- After DNSP registration, if there is abnormal operation, support is available to detect DNSP abnormal issues through the installer account, such as communication problems, firmware version issues, device time difference problems, etc.

### DNSP Registration Steps

1. Click "Service" > "DNSP" to enter the DNSP setup interface.
2. Select an unregistered power station, click to enter the registration interface.

3. Fill in the registration information and submit.

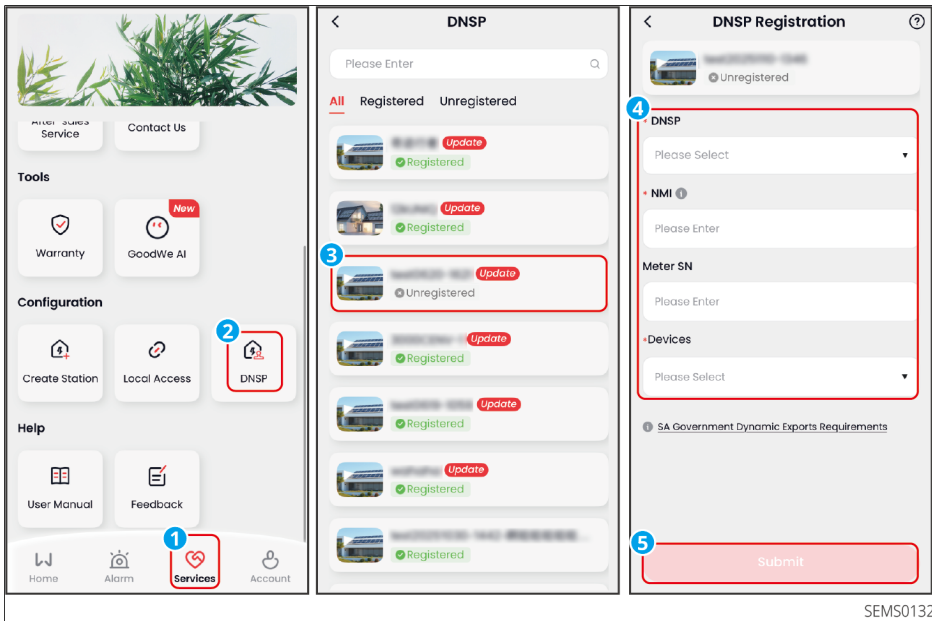


Figure36 DNSP Registration

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 the devices added in the power station. After selection, it can automatically fill in information such as device serial number.

### DNSP Check Steps

1. Click "Service" > "DNSP" to enter the DNSP setup interface.
2. Select a registered power station, click to enter the check interface.
3. Check if there is any abnormal information prompt, for example:
  - Whether the NMI number is correct;
  - Whether there is a time difference between the server and the device;
  - Whether the device status is online;
  - Whether the device version needs to be upgraded;

- Whether the device operating power is within the set range, etc.

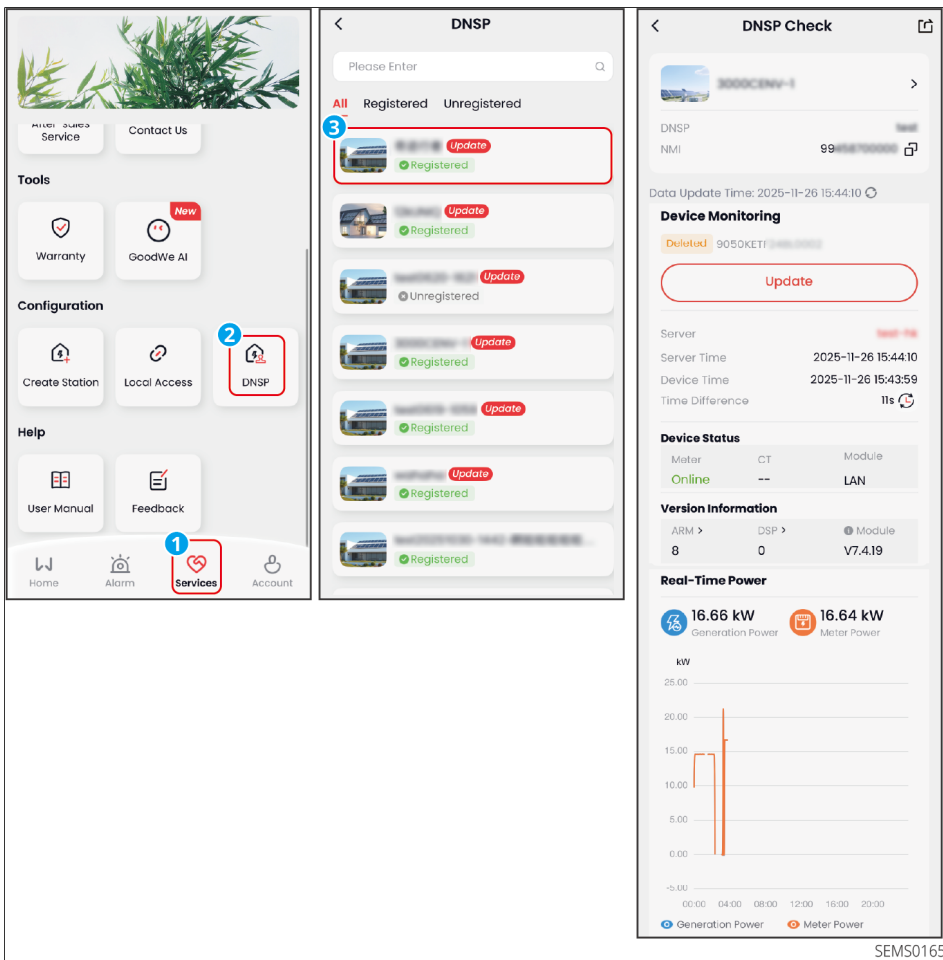


Figure37 DNSP Verification

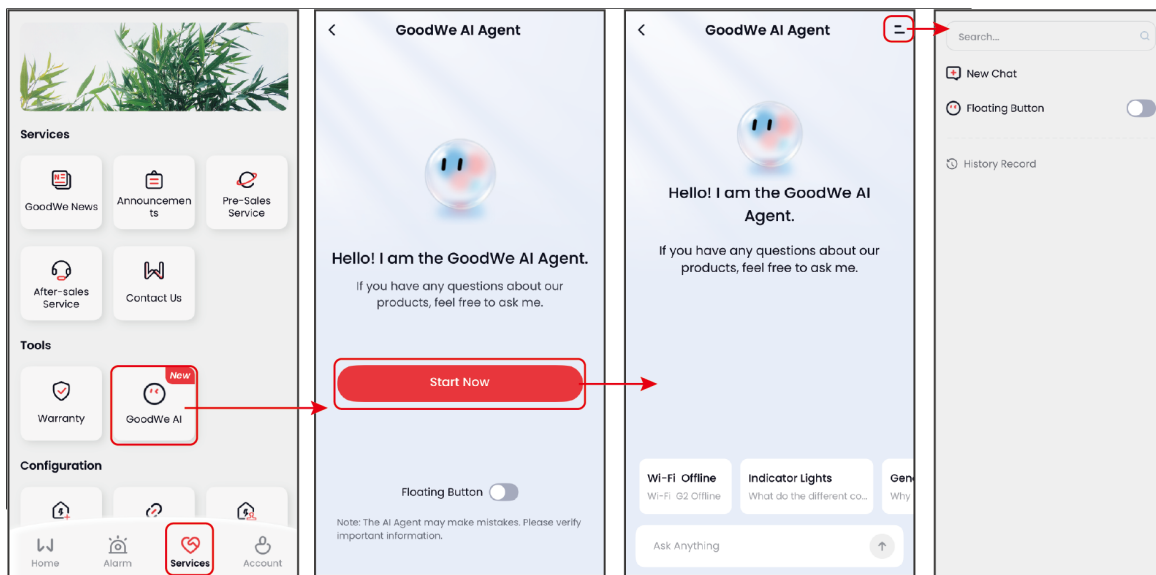
## 4.2 Using AI Assistant

Quickly obtain information with images and text through the GoodWe AI Assistant in a Q&A format.

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

### Operation Steps

1. Click "Service" > "GoodWe AI" to enter the AI Assistant interface.
2. Enter the question you need to ask in the dialog box to quickly generate an answer.



SEMS0137

Figure38 AI Assistant

# 5 Account

## 5.1 Modifying 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 interface, where you can modify user-related information.

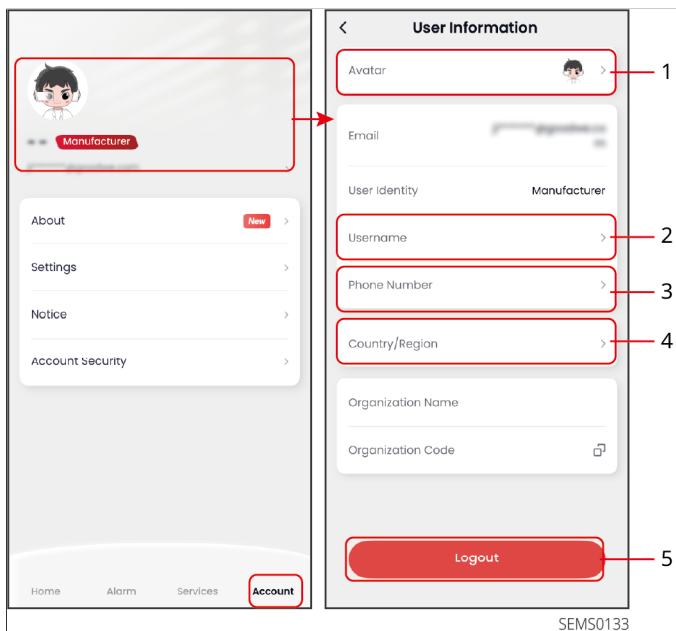


Figure39 Modify User Information

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

No.	Description
5	Log out of the current logged-in account.

## 5.2 Setting 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.

- Alert Subscription Configuration: After enabled, users can promptly receive notifications when devices generate alerts.
  - Supports setting push channels, such as receiving notifications via the App message center, email, etc.
  - Supports setting when to push alert notifications.
  - Supports setting time periods and types for not receiving notifications.
- Shared Station Subscription: Receive notifications when new shared stations are received.

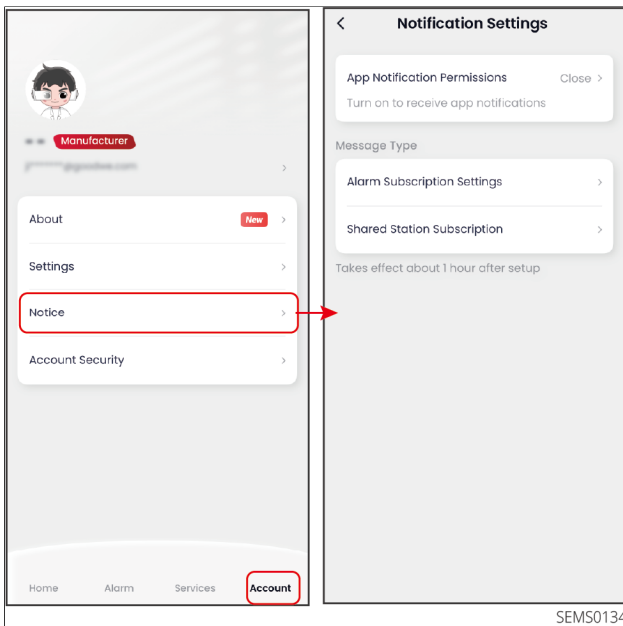


Figure40 Set App Notification Messages

## 5.3 Setting Account Security Information

To ensure account security, you can modify the account's bound email, login password, and other information. It also supports the deletion of accounts without power plants.

### Steps

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

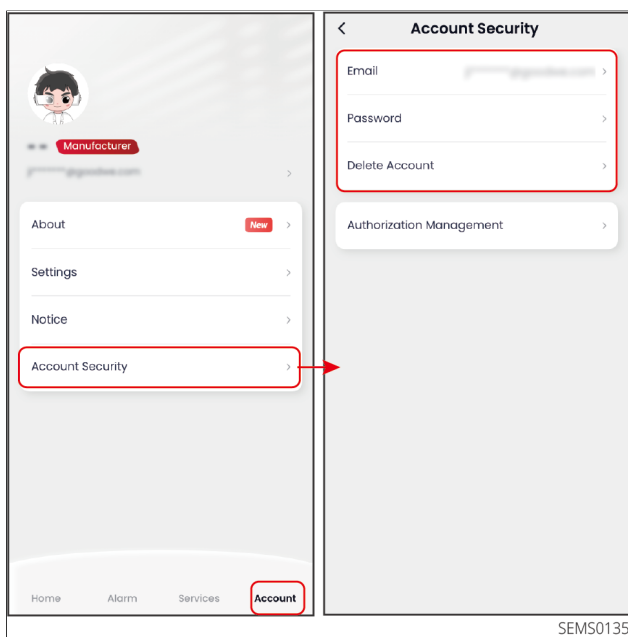


Figure41 Setting Account Security Information

## 5.4 Setting Monitoring Permissions

## NOTICE

- Applicable only to European and Australian servers.
- If there is a requirement for third-party remote control, 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 plant.

### Procedure

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

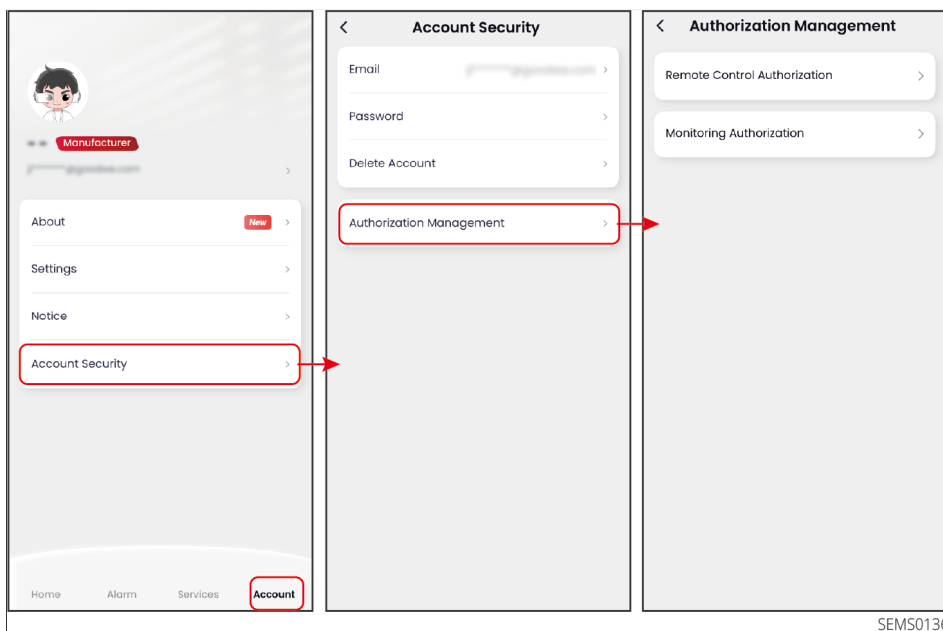


Figure42 Setting Monitoring Permissions

## 6 Troubleshooting

No.	Fault Name	Fault Cause	Handling Measures
1	Unable to Install the App	<ol style="list-style-type: none"> <li>1. The mobile phone's operating system version is too low.</li> <li>2. The phone is blocking the installation of the software package.</li> </ol>	<ol style="list-style-type: none"> <li>1. Upgrade the mobile phone's operating system.</li> <li>2. In the phone's Settings &gt; Security interface, check the option to allow installation of apps from unknown sources.</li> </ol>
2	Device WiFi Signal Not Displayed in App Device List	The App is not connected to a WiFi signal.	<ol style="list-style-type: none"> <li>1. Confirm the WiFi communication stick is working normally.</li> <li>2. Refresh the device list. If the device still does not appear in the list, exit the App and log in again.</li> </ol>
3	Login Failed	<ol style="list-style-type: none"> <li>1. The mobile phone is not connected to the internet.</li> <li>2. The App is under maintenance.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check if the phone's mobile data is turned on and can access the internet.</li> <li>2. The App is under maintenance. Please try again later.</li> </ol>
4	Unable to Launch the App	<ol style="list-style-type: none"> <li>1. The mobile phone's operating system version is too low.</li> <li>2. The App version is too low.</li> </ol>	<ol style="list-style-type: none"> <li>1. Upgrade the mobile phone's operating system.</li> <li>2. Confirm whether the App version is the latest.</li> </ol>

No.	Fault Name	Fault Cause	Handling Measures
5	Failed to Obtain Data During Operation	Communication between the device and the App is interrupted.	<ol style="list-style-type: none"> <li>1. Check if communication between the device and the router is normal.</li> <li>2. Check if communication between the router and the cloud is normal.</li> </ol>

# 7 Appendix

## 7.1 Safety Regulation Countries

No.	Standard Name	No.	Standard 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
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

No.	Standard Name	No.	Standard Name
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( $\geq 110$ 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
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

No.	Standard Name	No.	Standard Name
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	-	-
<b>Global</b>			
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		
<b>Americas</b>			
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
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

No.	Standard Name	No.	Standard Name
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
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		
<b>Oceania</b>			
1	Australia-A	4	Newzealand

No.	Standard Name	No.	Standard Name
2	Australia-B	5	Newzealand:2015
3	Australia-C	6	NZ-GreenGrid
<b>Asia</b>			
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
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

No.	Standard Name	No.	Standard Name
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
<b>Africa</b>			
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	Set the host communication address of the inverter. For a single inverter, set the communication address according to the actual situation; when multiple inverters are connected, the address of each inverter must be different, and all inverters cannot set the communication address to 247.

### Device Start/Stop Parameters

Parameter Name	Description
Start	

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

### Environmental Control Parameters

Parameter Name	Description
<b>Fan Control</b>	
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.
Manual Fan Check	Checks if the fan can operate normally.
<b>Silent Mode</b>	
Silent Mode	<ul style="list-style-type: none"> <li>• Enabling Silent Mode can reduce device noise.</li> <li>• Before enabling Silent Mode, please confirm the device is connected to a stable and reliable power grid, otherwise it will not take effect.</li> <li>• After enabling Silent Mode, if the power consumption of the system load is too high and the power generation cannot meet the demand, the system may automatically purchase power from the grid to ensure load operation.</li> <li>• During the use of Silent Mode, there may be some loss in PV power generation.</li> <li>• Supports setting the Silent Mode time period according to actual needs.</li> </ul>

### AC Side Configuration Parameters

Parameter Name	Description
PV Access Mode	<p>For specific models, you can manually set the PV string connection method for the inverter's MPPT ports to avoid misidentification of the connection method. Supported modes:</p> <ul style="list-style-type: none"> <li>• Independent Access: External PV strings are connected one-to-one with the inverter's PV input ports.</li> <li>• Partial Parallel Access: When one PV string is connected to multiple MPPT ports on the inverter side, other PV components may be connected to other MPPT ports on the inverter side simultaneously.</li> <li>• Parallel Access: When external PV strings are connected to the inverter's PV input ports, multiple PV strings are first connected via Y-cables and then split to connect to multiple PV input ports.</li> </ul>
AC Port Connection Settings	<p>Based on the inverter port characteristics, it supports connecting loads, generators, microgrid devices, etc. For details, please refer to <a href="#">7.2.4.Reuse Port Parameters(Page 101)</a>.</p>

Parameter Name	Description
Backup Function Settings	<ul style="list-style-type: none"> <li>• Backup: When enabled, if the grid power fails, loads connected to the inverter's BACK-UP port can be powered by the battery to ensure uninterrupted power supply.</li> <li>• Supports the following detection modes: <ul style="list-style-type: none"> <li>◦ UPS Mode - Full-wave Detection: Detects whether the grid voltage is too high or too low.</li> <li>◦ UPS Mode - Half-wave Detection: Detects whether the grid voltage is too low.</li> <li>◦ EPS Mode - Supports Low Voltage Ride-Through (LVRT): Disables the grid voltage detection function.</li> </ul> </li> <li>• Off-Grid First Cold Start: Takes effect only once. After enabling this function, you can use the battery or PV to output backup power in off-grid mode.</li> <li>• Off-grid Cold Start Holding: Takes effect multiple times. After enabling this function, you can use the battery or PV to output backup power in off-grid mode.</li> <li>• 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 increasing. After the BACK-UP port load power is reduced to within the rated range, you can click this switch to clear the inverter restart interval, and the inverter will restart immediately.</li> </ul>
Parallel Management	<p>When inverters are paralleled via RS485, set the parallel management parameters.</p> <ul style="list-style-type: none"> <li>• Manually set the inverter as master or slave and configure information such as slave address.</li> <li>• Automatically form a parallel system or a single-phase to three-phase system through self-networking.</li> </ul>

<b>Parameter Name</b>	<b>Description</b>
Type of Electrical Supply System	Select single-phase, split-phase, or three-phase grid based on the actual grid type the inverter is adapted to.
Output Method	Set according to the actual grid type the inverter is connected to. Currently supports three-phase three-wire and three-phase four-wire systems.
Three-phase Unbalanced Output	When a three-phase inverter is connected to an unbalanced load, such as L1, L2, and L3 connected to loads with different power ratings, 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 the voltage values of each grid phase to maximize power utilization.
On-Grid Point Rated Current Protection	To prevent damage or tripping of the household circuit breaker due to excessive current when the inverter buys/sells power from/to the grid, set the on-grid point rated current to limit the input/output current values.

## **PV Configuration Parameters**

Parameter Name	Description
PV Access Mode	<p>For certain models, the photovoltaic string connection method for the inverter's MPPT ports can be manually set to avoid misidentification of the string connection method. Supported modes:</p> <ul style="list-style-type: none"> <li>• Independent Access: External PV strings are connected one-to-one with the PV input ports on the inverter side.</li> <li>• Partial Parallel Access: When one PV string is connected to multiple MPPT ports on the inverter side, other PV modules are simultaneously connected to other MPPT ports on the inverter side.</li> <li>• Parallel Access: When external PV strings are connected to the PV input ports on the inverter side, multiple PV strings are first connected via Y-cables and then split into multiple connections to several PV input ports.</li> </ul>
PID Settings	<ul style="list-style-type: none"> <li>• During operation, a potential difference exists between the output electrodes of a photovoltaic panel and its grounded frame. Over time, this can lead to a degradation of the panel's power generation efficiency, known as Potential Induced Degradation (PID).</li> <li>• The PID function in GoodWe products works by elevating the voltage difference between the PV panel and its frame to a positive value (referred to as positive bias elevation), achieving PID suppression. This is suitable for P-type panels and N-type panels that require positive bias elevation for PID suppression. For N-type panels that require negative bias reduction for PID suppression, it is recommended to disable this function. Please consult the module supplier to determine if an N-type module belongs to the type requiring positive bias elevation for PID suppression.</li> </ul>
Shadow Scan Function	<p>When photovoltaic panels are severely shaded, enabling the Shadow Scan Function can optimize the inverter's power generation efficiency.</p>

## Battery Configuration

Parameter Name	Description
Battery Activate	If you purchase an inactive 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 battery connection status.

## Protection Parameters

Parameter Name	Description
<b>Electrical Protection</b>	
SPD Alarm	After enabling the SPD alarm function, an alarm will indicate an abnormality when the surge protective device module malfunctions.
AFCI Detection	<ul style="list-style-type: none"> <li>• After enabling the AFCI detection function, you can monitor whether the device has arc fault hazards.</li> <li>• Click "Arc Self-Test" to start a self-test of the arc detection module and confirm if its status is normal. View the result via "AFCI Detection Status".</li> <li>• 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 shuts down for protection. You must click "Clear Arc Alarm" to clear the fault before the inverter can resume normal operation.</li> </ul>
Backup N-PE Relay Switch	According to the grid standard requirements of certain countries or regions, it is necessary to ensure that the internal relay of the BACK-UP port remains closed during off-grid operation, thereby connecting the N and PE lines.
<b>Grid/On-Grid Protection</b>	
Anti-islanding Protection	Enable or disable the anti-islanding protection function according to actual requirements.

Parameter Name	Description
NS Protection	Enable or disable the NS protection function according to the standard requirements of certain countries or regions.
<b>Safety Regulation</b>	
Grid Standard Code	Select the grid standard code according to the country or region where the inverter is located.
Safety Regulation Parameter Setting	Safety regulation parameters must be set according to the requirements of the grid company. Any changes require the consent of the grid company.

## General Configuration Parameters

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

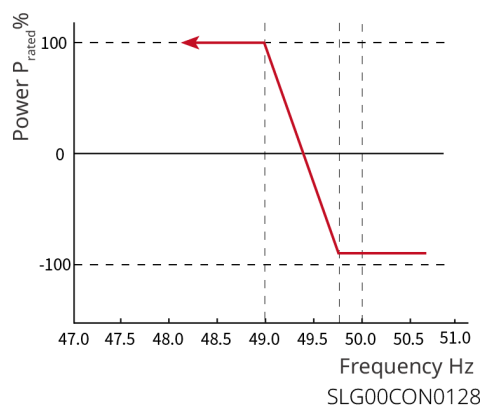
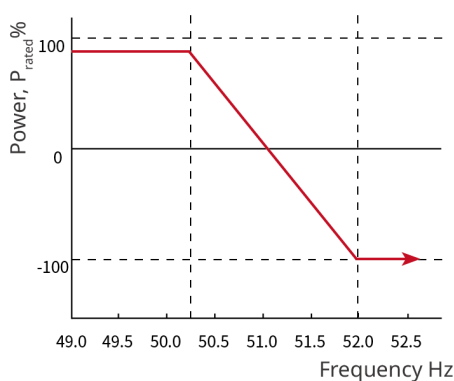
## 7.2.1 Custom Safety Regulation Parameters

### NOTICE

Safety regulation parameters must be set according to the grid company's requirements. Any changes must be approved by the grid company.

### Active Power Mode

#### P(F) Curve



## P(U) Curve

Parameter Name	Description
Output Active Power Setting	Set the output power limit of the inverter.
Power Change Gradient	Set the change slope when the active output power increases or decreases.
Over-Frequency Power Reduction	
P(F) Curve	Enable this function when it is required to set the P(F) curve according to grid standards in certain countries or regions.
Over-Frequency Power Reduction Mode	<p>Set the over-frequency power reduction mode according to actual requirements.</p> <ul style="list-style-type: none"> <li>• Slope mode: Adjust power based on the over-frequency point and reduction slope.</li> <li>• Stop mode: Adjust power based on the over-frequency start point and over-frequency end point.</li> </ul>
Over-Frequency Start Point	When the grid frequency is too high, the inverter reduces the output active power. When the grid frequency is greater than this value, the inverter output power starts to decrease.
Sell/Buy 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 the output active power. When the grid frequency is greater than this value, the inverter output power does not continue to decrease.
Over-Frequency Power Slope Reference Power	Adjust the inverter output active power based on the rated power, current power, apparent power, or maximum active power.

<b>Parameter Name</b>	<b>Description</b>
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 change.
Hysteresis Function Enable	Enable the hysteresis function.
Frequency Hysteresis Point	During over-frequency power reduction, if the frequency decreases, the power is output at the lowest point of the reduction power until the frequency is less than the hysteresis point, then the power recovers.
Hysteresis Wait Time	For over-frequency power reduction and frequency decrease, when the frequency is less than the hysteresis point, the time to wait for power recovery, i.e., a certain time must be waited before power recovers.
Hysteresis Power Recovery Slope Reference Power	For over-frequency power reduction and frequency decrease, when the frequency is less than the hysteresis point, the reference for power recovery, i.e., power recovery is performed according to the change rate of recovery slope * reference power. Supported: Pn rated power, Ps apparent power, Pm current power, Pmax maximum power, power difference ( $\Delta P$ ).
Hysteresis Power Recovery Slope	For over-frequency power reduction and frequency decrease, when the frequency is less than the hysteresis point, the power change slope during power recovery.
<b>Under-Frequency Power Loading</b>	
P(F) Curve	Enable this function when it is required to set the P(F) curve according to grid standards in certain countries or regions.

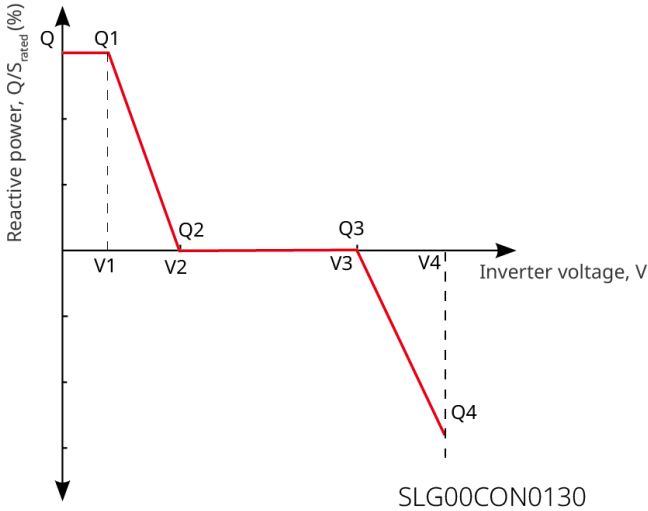
Parameter Name	Description
Under-Frequency Power Loading Mode	<p>Set the under-frequency power loading mode according to actual requirements.</p> <ul style="list-style-type: none"> <li>• Slope mode: Adjust power based on the under-frequency point and loading slope.</li> <li>• Stop mode: Adjust power based on the under-frequency start point and under-frequency end point.</li> </ul>
Under-Frequency Start Point	<p>When the grid frequency is too low, the inverter increases the output active power. When the grid frequency is less than this value, the inverter output power starts to increase.</p>
Sell/Buy Power Conversion Frequency	<p>When the set frequency value is reached, the system switches from selling power to buying power.</p>
Under-Frequency End Point	<p>When the grid frequency is too low, the inverter increases the output active power. When the grid frequency is less than this value, the inverter output power does not continue to increase.</p>
Over-Frequency Power Slope Reference Power	<p>Adjust the inverter output active power based on the rated power, current power, apparent power, or maximum active power.</p>
Under-Frequency Power Slope	<p>When the grid frequency is too low, the inverter increases the output active power. The slope when the inverter output power rises.</p>
Tentional Delay Ta	<p>When the grid frequency is below the under-frequency point, the delay response time for inverter output power change.</p>
Hysteresis Function Enable	<p>Enable the hysteresis function.</p>
Frequency Hysteresis Point	<p>During under-frequency power loading, if the frequency increases, the power is output at the lowest point of the loading power until the frequency is higher than the hysteresis point, then the power recovers.</p>

Parameter Name	Description
Hysteresis Wait Time	For under-frequency power loading and frequency increase, when the frequency is higher than the hysteresis point, the time to wait for power recovery, i.e., a certain time must be waited before power recovers.
Hysteresis Power Recovery Slope Reference Power	For under-frequency power loading and frequency increase, when the frequency is higher than the hysteresis point, the reference for power recovery, i.e., power recovery is performed according to the change rate of recovery slope * reference power. Supported: P <sub>n</sub> rated power, P <sub>s</sub> apparent power, P <sub>m</sub> current power, P <sub>max</sub> maximum power, power difference ( $\Delta P$ ).
Hysteresis Power Recovery Slope	For under-frequency power loading and frequency increase, when the frequency is higher than the hysteresis point, the power change slope during power recovery.
P(U) Curve Enable	Enable this function when it is required to set the P(U) curve according to grid standards in certain countries or regions.
V <sub>n</sub> Voltage	The ratio of the actual value of V <sub>n</sub> point voltage to the rated voltage, n=1, 2, 3, 4. For example: when set to 90, it means: $V/V_{rated}\% = 90\%$ .
V <sub>n</sub> Active Power	The ratio of the output active power of the inverter at V <sub>n</sub> point to the apparent power, n=1, 2, 3, 4. For example: when set to 48.5, it means: $P/P_{rated}\% = 48.5\%$ .
Output Response Mode	Set the active output response mode. Supported: <ul style="list-style-type: none"> <li>• First-order low-pass filter: Within the response time constant, output adjustment is achieved according to the first-order low-pass curve.</li> <li>• Slope scheduling: Output adjustment is achieved according to the set power change slope.</li> </ul>
Power Change Gradient	When the output response mode is set to slope scheduling, active power scheduling is achieved according to the power change gradient.

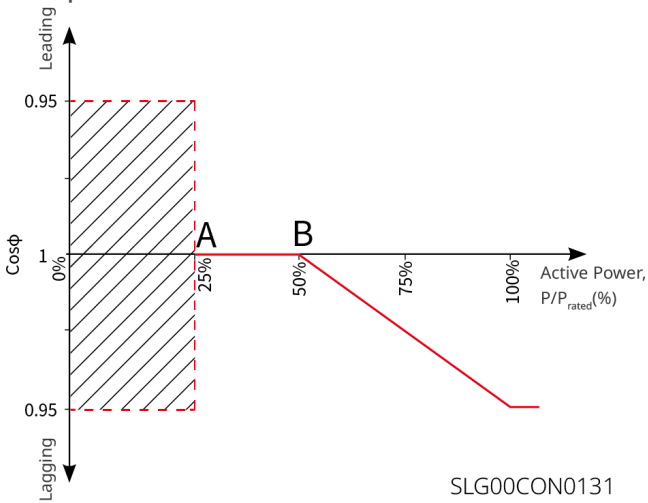
Parameter Name	Description
PT-1 Behavior Tau	When the output response mode is set to first-order low-pass filter, the time constant when the active power changes according to the first-order low-pass filter curve.
Overload Function Switch	When enabled, the maximum active power output is 1.1 times the rated power; otherwise, the maximum active power output is consistent with the rated power value.

### Reactive Power Mode

Q(U) Curve



Cosφ Curve



Parameter Name	Description
Fixed PF	
Fixed PF	Turn on this function when a fixed PF value is required according to grid standards in some countries or regions. After the parameter is set successfully, the power factor remains unchanged during inverter operation.
Under-excited	Set the power factor as positive or negative according to grid standards and actual usage requirements in the country or region.
Over-excited	
Power Factor	Set the power factor as needed, 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 grid standards in some countries or regions.
Over-excited/Under-excited	Set the reactive power as inductive or capacitive according to grid standards and actual usage requirements in 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 grid standards in some countries or regions.
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, 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, n=1, 2, 3, 4. For example: when set to 48.5, it means: $Q/S_{rated}\% = 48.5\%$ .

Parameter Name	Description
Voltage Dead Band Width	Set the voltage dead band when the Q(U) curve mode is set to slope mode. Within the dead band, there is no requirement for reactive power output.
Over-excited Slope	Set the power change slope as positive or negative when the Q(U) curve mode is set to slope mode.
Under-excited Slope	
Vn Reactive Power	The ratio of reactive power output by the inverter at point Vn to the apparent power, n=1, 2, 3, 4. For example: when set to 48.5, it means: $Q/S_{rated}\% = 48.5\%$ .
Q(U) Curve Response Time Constant	The power must reach 95% within 3 response time constants according to a first-order low-pass curve.
Extension Function Enable	Enable the extension function and set the corresponding parameters.
Enter Curve Power	When the ratio of reactive power output by the inverter to the rated power is between the enter curve power and exit curve power, it meets the Q(U) curve requirements.
Exit Curve Power	
cosφ(P) Curve	
cosφ(P) Curve	Select this function when setting the Cosφ curve is required according to grid standards in some countries or regions.
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	Power factor at point N. N=A, B, C, D, E.
Over-excited Slope	Set the power change slope as positive or negative when the cosφ(P) curve mode is set to slope mode.

Parameter Name	Description
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 $\cos\phi$ Value	Power factor at point N. N=A, B, C.
$\cos\phi(P)$ 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.
Enter Curve Voltage	When the grid voltage is between the enter curve voltage and exit curve voltage, it meets the $\cos\phi$ 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 grid standards in some countries or regions.
Mode Selection	Set the Q(P) curve mode, supporting basic mode and slope mode.
Pn Point Power	The ratio of reactive power at point Pn to the rated power, n=1, 2, 3, 4, 5, 6. For example: when set to 90, it means: $Q/P_{rated}\% = 90\%$ .
Pn Point Reactive Power	The ratio of active power at point Pn to the rated power, n=1, 2, 3, 4, 5, 6. For example: when set to 90, it means: $P/P_{rated}\% = 90\%$ .
Over-excited Slope	Set the power change slope as positive or negative when the Q(P) curve mode is set to slope mode.

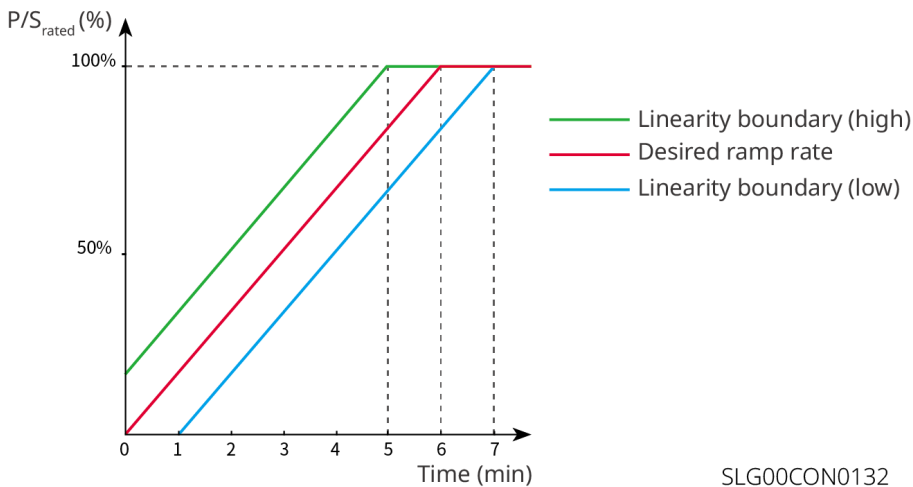
Parameter Name	Description
Under-excited Slope	
Pn Point Power	The ratio of reactive power at point Pn to the rated power, n=1, 2, 3. For example: when set to 90, it means: $Q/Prated\% = 90\%$ .
Pn Point Reactive Power	The ratio of active power at point Pn to the rated power, n=1, 2, 3. For example: 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.
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.

Parameter Name	Description
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.

<b>Parameter Name</b>	<b>Description</b>
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 Wait Time	When the inverter connects to the grid for the first time, the wait time for grid connection 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 standard requirements in certain countries or regions, the percentage of power output increase per minute when the inverter starts up for the first time.
<b>Fault Reconnection</b>	
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.

Parameter Name	Description
On-Grid Wait Time	When the inverter reconnects to the grid after a fault, the wait time for grid connection 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 standard requirements in certain countries or regions, the percentage of power output increase per minute when the inverter connects to the grid non-first time. For example: Setting it to 10 indicates a reconnection ramp-up slope of: 10%P/Rated/min.

### Voltage Fault Ride-Through Parameters

Parameter Name	Description
Low Voltage Ride-Through	
UVn Point Voltage	During LVRT, the ratio of the ride-through voltage at the low-voltage ride-through characteristic point to the rated voltage. n=1, 2, 3, 4, 5, 6, 7.
UVn Point Time	During LVRT, the ride-through time at the low-voltage ride-through characteristic point. n=1, 2, 3, 4, 5, 6, 7.
Enter LVRT Threshold	When the grid voltage is between the Enter LVRT Threshold and the Exit LVRT Threshold, the inverter does not immediately disconnect from the grid.
Exit LVRT Threshold	
Slope K1	The K coefficient for reactive power support during low voltage ride-through.
Zero Current Mode Enable	When enabled, the system outputs zero current during low voltage ride-through.
Enter Threshold	The threshold for entering zero current mode.
High Voltage Ride-Through	

Parameter Name	Description
OVn Point Voltage	During HVRT, the ratio of the ride-through voltage at the high-voltage ride-through characteristic point to the rated voltage. n=1, 2, 3, 4, 5, 6, 7.
OVn Point Time	During HVRT, the ride-through time at the high-voltage ride-through characteristic point. n=1, 2, 3, 4, 5, 6, 7.
Enter HVRT Threshold	When the grid voltage is between the Enter HVRT Threshold and the Exit HVRT Threshold, the inverter does not immediately disconnect from the grid.
Exit HVRT Threshold	
Slope K2	The K coefficient for reactive power support during high voltage ride-through.
Zero Current Mode Enable	During high voltage ride-through, the system outputs zero current.
Enter 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 under-frequency point n. n=1, 2, 3.
UFn Point Time	Set the under-frequency time for under-frequency point n. n=1, 2, 3.
OFn Point Frequency	Set the frequency for over-frequency point n. n=1, 2, 3.
OFn Point Time	Set the over-frequency time for over-frequency point n. n=1, 2, 3.

## 7.2.2 Grid Connection Power Scheduling Parameters

### Export power limit (General)

Parameter Name	Description
Export power limit	According to the grid standards of some countries or regions, turn on this function when it is necessary to limit the output power.
Power Limit	Set according to the maximum power that can actually be input to 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.
Power Limit Value	<ul style="list-style-type: none"> <li>• Set according to the maximum power that can actually be fed into the grid.</li> <li>• 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.</li> <li>• After setting a fixed value, the percentage automatically changes accordingly; after setting a percentage, the fixed value automatically changes accordingly.</li> </ul>
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.

Parameter Name	Description
Mode selection	<ul style="list-style-type: none"> <li>• Some models require selecting a current limit mode. Supported modes: Per-phase current, Total current.</li> <li>• 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.</li> </ul>
Current Limit	Set based on the actual maximum current that can be input to the grid.

### Export power limit (Brazil)

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

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

### Power Scheduling

Parameter Name	Description
<b>Active Power Dispatch</b>	
Active power mode	<p>According to the requirements of the grid company in the country/region where the inverter is located, control the active power based on the selected dispatch mode.</p> <p>Supports:</p> <ul style="list-style-type: none"> <li>• Not enabled: Do not enable active power dispatch.</li> <li>• Active Power (W): Dispatch based on a fixed value.</li> <li>• Active Power (%Pn): Dispatch based on the percentage of active power to rated power.</li> </ul>
<b>Reactive Power Dispatch</b>	

Parameter Name	Description
Reactive power mode	<p>According to the requirements of the grid company in the country/region where the inverter is located, control the reactive power based on the selected dispatch mode. Supports:</p> <ul style="list-style-type: none"> <li>• Not enabled: Do not enable reactive power dispatch.</li> <li>• Reactive Power (Var): Dispatch based on a fixed value.</li> <li>• Reactive Power (%Pn): Dispatch based on the percentage of reactive power to rated power.</li> <li>• PF compensation.</li> </ul>
<b>Nighttime Reactive Power</b>	
Enable Nighttime Reactive Power	Enable the nighttime reactive power function.
Nighttime Reactive Power Dispatch	<p>According to the requirements of the grid company in the country/region where the inverter is located, control the nighttime reactive power based on the selected dispatch mode. Supports:</p> <ul style="list-style-type: none"> <li>• Not enabled: Do not enable reactive power dispatch.</li> <li>• Nighttime Reactive Power Dispatch (Var): Dispatch based on a fixed value.</li> <li>• Nighttime Reactive Power Dispatch (%Pn): Dispatch based on the percentage of reactive power to rated power.</li> </ul>

### Power Scheduling Response Parameters

Parameter Name	Description
Active Power Dispatch Response	<p>Achieves the active power dispatch value through dispatch response methods, supporting:</p> <ul style="list-style-type: none"> <li>• 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 when the active power follows the first-order low-pass filter curve.</li> <li>• Slope mode, i.e., achieving active power dispatch according to the power change rate, and setting the active power dispatch change rate.</li> </ul>
Reactive Power Dispatch Response	<p>Achieves the reactive power dispatch value through dispatch response methods, supporting:</p> <ul style="list-style-type: none"> <li>• 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 when the reactive power follows the first-order low-pass filter curve.</li> <li>• Slope mode, i.e., achieving reactive power dispatch according to the power change rate, and setting the reactive power dispatch change rate.</li> </ul>

### 7.2.3 Grid Remote Dispatch Parameters

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

- Remote Shutdown: Achieve the remote shutdown function via the signal control port. When an accident occurs, the equipment can be controlled to stop working.
- DRED (Demand Response Enabling Device): Control the equipment via the DRED signal control port to meet the DRED certification requirements in regions such as Australia.
- RCR (Ripple Control Receiver): Control the equipment via the RCR signal control

port to meet the grid dispatch requirements in regions such as Germany.

- EnWG (Energy Industry Act) 14a: All controllable loads must accept emergency dimming from the grid. The grid operator can temporarily reduce the maximum grid purchase power of controllable loads to 4.2kW.

## 7.2.4 Multiplex Port Parameters

### Load Control Parameters

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

For the ET40-50kW series Inverter, the load control function is only supported when the Inverter is used with STS. The Inverter supports load control for the GENERATOR port or the BACKUP LOAD port.

- Dry Contact Mode: When the switch status is selected as 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, the load will automatically supply power to the load or cut off power. You can choose Standard Mode or Smart Mode.

Parameter Name	Description
Standard Mode	Supplies power to the load within the set time period.
Smart Mode	Within the set time period, starts supplying power to the load 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 Stop Time.
Stop 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, to prevent frequent switching due to energy fluctuations.
Load Rated Power	Applies only to Smart Mode. Starts supplying power to the load 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 on the BACK-UP end or GENERATOR end, 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 only supported when the Inverter is used with STS.

For the ET50-100kW series Inverter, generator access and control are only supported 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 start/stop needs to be manually controlled; the Inverter cannot control the generator start/stop.
- Automatic Control Generator (Dry Contact Connection Supported): When the generator has a dry contact control port and is connected to the Inverter, you need to set the Inverter's generator control mode to Switch Control Mode or Automatic Control Mode in the App.
  - Switch Control Mode: When the switch status is turned on, the generator works; after working for the set running time, the generator can automatically stop working.
  - Automatic Control Mode: During the set prohibited working time period, generator operation is prohibited; during the running time period, the generator works.

Parameter Name	Description
Dry Node Control Method	Switch Control Mode / Automatic Control Mode.
<b>Switch Control Mode</b>	
Diesel Generator Dry Node Switch	Applicable only to Switch Control Mode.

Parameter Name	Description
Runtime	The continuous operation time of the generator. The generator stops running after this time is reached.
<b>Automatic Control Mode</b>	
Prohibited Operation Period	Set the time period when generator operation is prohibited.
Runtime	The continuous operation time after the generator starts. The generator stops running after this time is reached. If the generator's runtime includes the Prohibited Operation Period, the generator will stop running during that period. After the Prohibited Operation Period ends, the generator will restart operation and the timer will reset.

Parameter Name	Description
<b>Generator Information Settings</b>	
Rated Power	Set the rated power for generator operation.
Runtime	Set the continuous runtime for the generator. The generator will be 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.
<b>Diesel Generator Battery Charging Setting</b>	
Switch	Select whether to use the generator to charge the battery.

Parameter Name	Description
Max. Charging Power (%)	The charging power when the generator charges the battery.
Start Charging SOC	When connected to a lithium battery, set the SOC threshold for starting the generator. 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 stopping the generator. 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 starting the generator. 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 stopping the generator. 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 of charging SOC. Charging stops after reaching this limit.
Battery Max Charge Voltage	When the battery type is lead-acid battery, set the upper limit of charging voltage. Charging stops after reaching this limit.
Microgrid Forced Charging Start	<ul style="list-style-type: none"> <li>• During a grid fault, if the battery level is too low to support the energy storage inverter's off-grid operation. Click this button to force the energy storage inverter to output voltage to the grid-tied inverter, thereby starting the grid-tied inverter.</li> <li>• Takes effect once.</li> </ul>

Parameter Name	Description
Hourly Trigger	<ul style="list-style-type: none"> <li>• During a grid fault, if the battery level is too low to support the energy storage inverter's off-grid operation. After enabling this function, the system will force the energy storage inverter to output voltage to the grid-tied inverter at a fixed time, thereby starting the grid-tied inverter.</li> <li>• Takes effect multiple times.</li> </ul>
Grid Limit Power Offset	Sets the adjustable range for the maximum power the device can actually draw from the grid.

## 7.3 Battery Parameters

### Parameter Settings - Information Configuration

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

### Parameter Settings - Lead-Acid Settings

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

Parameter Name	Description
<b>Battery Parameters</b>	
Battery Capacity	Set the battery capacity according to the actual parameters.
Battery Internal Resistance	Set the battery internal resistance according to the actual parameters.

Parameter Name	Description
Temperature Compensation	<ul style="list-style-type: none"> <li>When the battery temperature changes, the battery charging voltage is affected. Using 25°C as the baseline, for every degree of battery temperature change, the charging voltage upper limit is adjusted according to the set value.</li> <li>For example, if the charging temperature influence coefficient is set to 10, when the battery temperature rises to 26°C, the charging voltage upper limit decreases by 10mV.</li> </ul>
<b>Discharge Parameters</b>	
Discharge Parameters	Set the parameters for battery discharge according to actual requirements.
<b>Charging Parameters</b>	
Constant Charging Voltage	Set the voltage value for the constant charging stage of the battery according to actual requirements.
Float voltage	Set the voltage value for the float charging stage of the battery 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 duration 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 a lithium battery, the lithium battery parameters need to be set.

Parameter Name	Description
Max Charging Current	Applicable to some models. Set the maximum charging current for the battery during charging according to actual requirements.
Max Discharging Current	Applicable to some models. Set the maximum discharging current for the battery during discharging according to actual requirements.
Battery Heating	<ul style="list-style-type: none"> <li>• Optional. This option is displayed when connecting a battery that supports the heating function. After enabling the battery heating function, when the battery temperature does not support startup, PV generation or grid power will be used to heat the battery.</li> <li>• The temperature thresholds for heating modes vary for different battery models. Please refer to the actual product.</li> <li>• Enabling the battery heating function consumes a portion of system power. By default, the battery heating function operates in low-power mode. It can be switched to other power modes if needed.</li> <li>• 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.</li> <li>• Supports setting heating time periods based on actual needs, but within these periods, the heating function's activation is still automatically controlled by ambient temperature.</li> <li>• If PV and AC power only meet the load demand, and the battery power is insufficient to support self-heating, the heating function cannot be activated.</li> </ul>

Parameter Name	Description
Battery Wake-up	<ul style="list-style-type: none"> <li>• When enabled, the battery can be woken up after it shuts down due to undervoltage protection.</li> <li>• Only applicable to lithium batteries without circuit breakers. When enabled, the output voltage at the battery port is around 60V.</li> </ul>
Breathing Light	<ul style="list-style-type: none"> <li>• Only applicable to ESA 3-10kW series inverters.</li> <li>• Set the breathing light blinking duration. Supported: Always On, Always Off, 3min.</li> <li>• The default mode is to light up for three minutes after power-on and then automatically turn off.</li> </ul>

### Protection Parameters - Limit Protection

Parameter Name	Description
SOC Upper Limit	The maximum value for battery charging. The battery stops charging when its 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-tied Battery DOD	The maximum allowable discharge for the battery when the inverter is operating in grid-tied mode.
Off-grid Battery DOD	The maximum allowable discharge 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-tied mode.

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

### Battery Immediate Charging Parameters

Parameter Name	Description
Immediate Charging	When enabled, the battery is charged immediately from the grid. This setting takes effect only once.
Stop Charging SOC	Charging will stop when the battery SOC reaches the immediate charging SOC upper limit.
Immediate Charging Power	The percentage of the charging power relative to the inverter's rated power when immediate charging starts. For example, for an inverter with a rated power of 10kW, setting this to 60 results in a charging power of 6kW.
Start	Start charging immediately.
Stop	Stop the current charging task immediately.

### JA12 Certification

Applicable only in California.

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

## 7.4 Smart Meter Parameters

Parameter Name	Description
Meter Binding	<ul style="list-style-type: none"> <li>When both grid-tied inverters and energy storage inverters are used in a PV system to achieve coupling or microgrid functionality, dual meters may be employed. Please configure the meter binding information according to the actual usage scenario.</li> <li>Applicable only to GoodWe meters.</li> </ul>
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

When the smart dongle connected to the inverter is different, the communication configuration interface may vary. Please refer to the actual interface.

### Communication Parameters

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

<b>Parameter Name</b>	<b>Description</b>
LAN	Automatically identifies the LAN network the device is connected to.
WLAN	Select the actual WiFi network the device connects to for communication between the device and the router or switch.
<b>4G</b>	
APN Settings	<ul style="list-style-type: none"> <li>• APN settings are only applicable for configuring the SIM card information of 4G communication devices.</li> <li>• If the 4G module does not provide a Bluetooth signal, please first configure the APN parameters via the Bluetooth module or WiFi module to enable 4G communication.</li> </ul>
<b>Bluetooth</b>	
Bluetooth Stays On	Disabled by default. After enabling this function, the device's Bluetooth remains on, maintaining the connection with the App. Otherwise, the device's Bluetooth will turn off after 5 minutes, disconnecting from the App.
<b>WLAN Networking</b>	
WLAN Networking	<ul style="list-style-type: none"> <li>• Only applicable to microinverters.</li> <li>• It is recommended to set the inverter with the highest RSSI strength in the network as the master node.</li> </ul>

### **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	When this function is enabled, system operation data can be uploaded to a specified server via the FTP protocol, enabling remote monitoring functionality.
Remote Maintenance	When this function is enabled, remote maintenance of the device is supported, such as remote upgrades.
Restore Factory Settings	Restores the smart communication stick to its factory settings, including password and network configuration information.

## 7.6 Home Energy Management Device Parameters

### NOTICE

Please set 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 grid standards in certain countries or regions.
2	Power Limit	Set the maximum power the device can actually feed into the grid according to the requirements of certain countries or regions.

No.	Parameter Name	Description
3	Power Limited Type	Select the method to control the device's output power based on the actual situation. <ul style="list-style-type: none"> <li>• Total Power: Control the total power at the point of common coupling (PCC) not to exceed the output power limit.</li> <li>• Single-phase Power: Control the power of each phase at the PCC not to exceed the output power limit.</li> </ul>
4	Grid Power Limit Offset	Set the adjustable range for the maximum power the device can actually 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 reverse power flow occurs in the system for longer than the maximum protection time (default 5s), the following protective measures can be taken: <ul style="list-style-type: none"> <li>• Power Limit: The device continues to operate at a percentage of its rated power.</li> <li>• Device disconnects from the grid.</li> </ul>
6	Power Limit Protection Handling	The device continues to operate at a percentage of its rated power.
7	Meter Communication Abnormality Handling	Enable this function, and protective measures will be taken when communication between the meter and the device is abnormal.
8	Meter Abnormality Handling Method	When a meter communication abnormality occurs in the system, the following protective measures can be taken: <ul style="list-style-type: none"> <li>• Power Limit: The device continues to operate at a percentage of its rated power.</li> <li>• Device disconnects from the grid.</li> </ul>

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

### Power Control Parameters

No.	Parameter Name	Description
RCR: According to 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	<ul style="list-style-type: none"> <li>• Select one or more DI ports according to the grid company's requirements and the RCR fixture type, and set the corresponding percentage. The percentage refers to the system output power as a percentage of the rated power.</li> <li>• Supports configuration of 16 levels of percentage values. Please set according to the actual requirements of the grid company.</li> <li>• Do not duplicate the status combinations of DI1-DI4, otherwise the function cannot be executed properly.</li> <li>• If the actual wiring of the connected DI port does not match the set value, the operating status will not take effect.</li> </ul>

No.	Parameter Name	Description
3	Reactive Dispatch	<ul style="list-style-type: none"> <li>• Select one or more DI ports according to the grid company's requirements and the RCR fixture type, and set the corresponding PF value.</li> <li>• Supports configuration of 16 levels of power factor values. Please set according to the actual requirements of the grid company.</li> <li>• PF value range requirement: <b>[-100, -80]</b> or <b>[80,100]</b> . <b>[-100, -80]</b> corresponds to a lagging power factor of <b>[-0.99, -0.8]</b> , and <b>[80,100]</b> corresponds to a leading power factor of <b>[0.8,1]</b> .</li> <li>• Do not duplicate the status combinations of DI1-DI4, otherwise the function cannot be executed properly.</li> <li>• If the actual wiring of the connected DI port does not match the set value, the operating status will not take effect.</li> </ul>
<p>RCR&amp;EnWG 14a:</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• For regions subject to the EnWG 14a regulation, all controllable loads must accept emergency dimming from the grid. The grid operator can temporarily reduce the maximum grid import power of controllable loads to 4.2kW.</li> </ul>		
4	RCR&EnWG 14a	Enable or disable the RCR&EnWG 14a function.
5	Import Power Limit	Set the upper limit for power purchased from the grid according to local grid regulations.

No.	Parameter Name	Description
6	Active Dispatch	<ul style="list-style-type: none"> <li>• The DI4 port is fixed for EnWG 14a use.</li> <li>• Select one or more DI ports according to the grid company's requirements and the RCR fixture type, and set the corresponding percentage. The percentage refers to the system output power as a percentage of the rated power.</li> <li>• Supports configuration of 8 levels of percentage values. Please set according to the actual requirements of the grid company.</li> <li>• Do not duplicate the status combinations of DI1-DI3, otherwise the function cannot be executed properly.</li> <li>• If the actual wiring of the connected DI port does not match the set value, the operating status will not take effect.</li> </ul>
7	Reactive Dispatch	<ul style="list-style-type: none"> <li>• The DI4 port is fixed for EnWG 14a use.</li> <li>• Select one or more DI ports according to the grid company's requirements and the RCR fixture type, and set the corresponding PF value.</li> <li>• Supports configuration of 8 levels of power factor values. Please set according to the actual requirements of the grid company.</li> <li>• PF value range requirement: <b>[-100, -80]</b> or <b>[80,100]</b> . <b>[-100, -80]</b> corresponds to a lagging power factor of <b>[-0.99, -0.8]</b> , and <b>[80,100]</b> corresponds to a leading power factor of <b>[0.8,1]</b> .</li> <li>• Do not duplicate the status combinations of DI1-DI3, otherwise the function cannot be executed properly.</li> <li>• If the actual wiring of the connected DI port does not match the set value, the operating status will not take effect.</li> </ul>
<p>Remote Shutdown: According to the requirements of certain countries or regions, the device must provide a remote shutdown function to control the device to stop working in emergency situations.</p>		

No.	Parameter Name	Description
8	Remote Shutdown	Enable or disable the remote shutdown function.
9	Recovery On-Grid Immediate	If you need to restore the on-grid status after the device is shut down, please manually turn on the device first, 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: <ul style="list-style-type: none"> <li>• Single-phase, single-wire</li> <li>• Three-phase, three-wire</li> <li>• Three-phase, four-wire</li> </ul>
3	CT Ratio	<ul style="list-style-type: none"> <li>• Set when the meter model is GM330.</li> <li>• Set the CT ratio value of the meter.</li> </ul>
Antenna Settings		
4	Select Antenna	Select the built-in antenna or external antenna based on the actual situation.
Time Settings		
5	Network Time Synchronization	After enabling, select a time server to perform time synchronization based on the chosen time source.

No.	Parameter Name	Description
6	Time Server	Set the time server. Supported: <ul style="list-style-type: none"> <li>• time.google.com</li> <li>• pool.ntp.org</li> <li>• ntp.aliyun.com</li> </ul>

### Export Logs

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

## 7.7 Operation and Maintenance Parameters

Parameter Name	Description
Firmware Upgrade	<ul style="list-style-type: none"> <li>• Supports viewing or upgrading software versions such as the inverter's DSP version, ARM version, BMS version, AFCI version, STS version, communication module, etc.</li> <li>• Some devices do not support upgrading software versions via the App. Please refer to the actual device.</li> </ul>
Log Export	<ul style="list-style-type: none"> <li>• Supports exporting, downloading, and sharing logs.</li> <li>• Supports exporting different types of logs, such as communication module logs, inverter logs, etc.</li> <li>• Some models support exporting safety parameter files after selecting the safety regulation country.</li> </ul>
<b>Utility grid</b>	
Auto Test	Enable this function when an automatic grid connection test needs to be set up according to the utility grid standards of certain countries or regions.

## 7.8 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

Region	Default value	U1	U2	U3	U4
	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

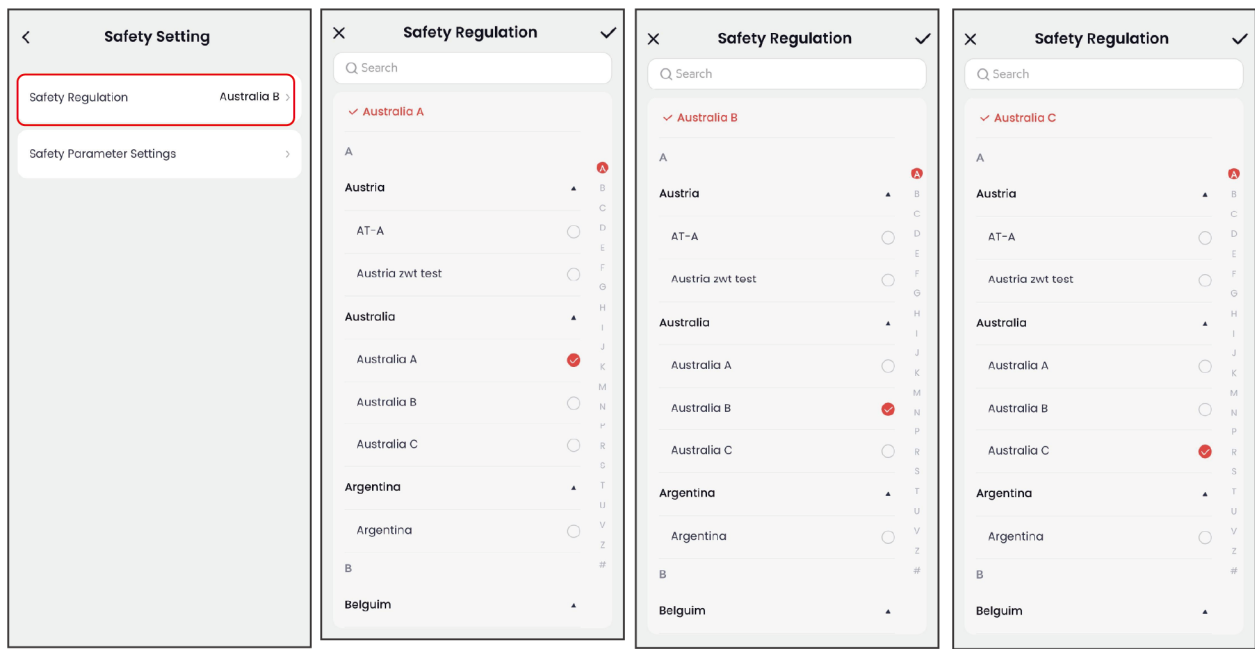
Protective function	Protective function limit	Trip delay time	Maximum disconnection time
Undervoltage 2 (V << )	70 V	1 s	2 s
Undervoltage 1 (V < )	180 V	10 s	11 s
Overvoltage 1 (V > )	265 V	1 s	2 s
Overvoltage 2 (V > > )	275V	-	0.2 s

## Upper connection and reconnection frequency (f<sub>URF</sub>)

Region	f <sub>URF</sub>
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:

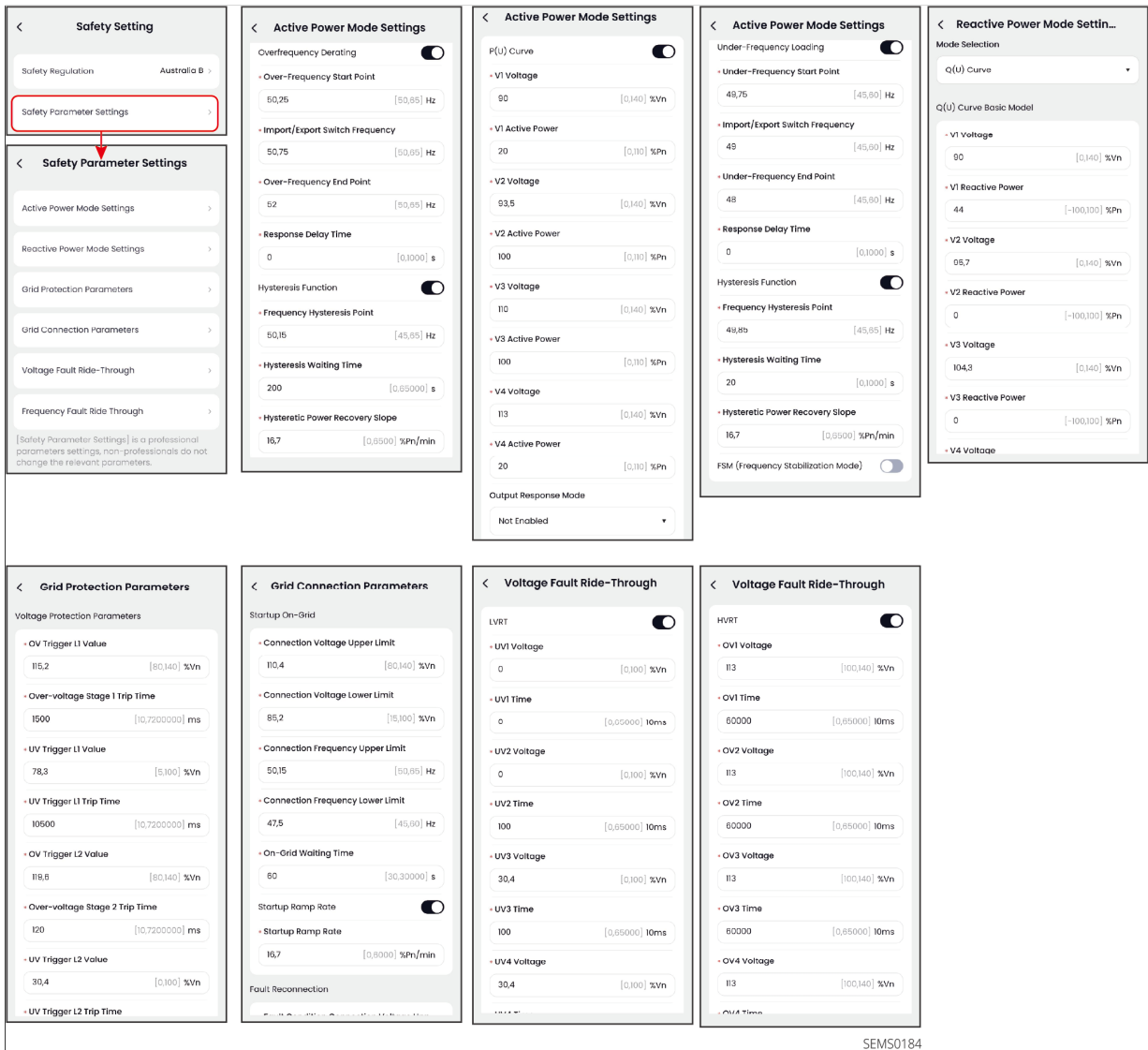
1. Login to the App. Go to "Protection" > "Safety Setting" >"Safety Regulation" on the device details interface.
2. Set the safety code to Australia A/B/C/New Zealand based on actual needs.



SEMS0183

## 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



SEMS0184

# 8 Contact Information

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