V1.2 2026-02-10

SEMS+ App

User Manual

GOODWE

Copyright Statement

Copyright Statement

Trademark Authorization

GOODWE and other GOODWE trademarks used in this manual are owned by GOODWE Technology Co., Ltd. All other trademarks or registered trademarks mentioned in this manual belong to their respective owners.

NOTICE

Due to product version upgrades or other reasons, the content of this document may be 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 who are familiar with local regulations and standards, electrical systems, have received professional training, and possess in-depth knowledge of this product, or to end-users who have purchased GoodWe products.

Symbol Definition

DANGER
Indicates a highly hazardous situation which, if not avoided, will result in death or serious injury.
WARNING
Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION
Indicates a potentially hazardous situation which, if not avoided, may result in moderate or minor injury.
NOTICE
Emphasizes or 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

NOTICE

- The interfaces shown in this manual are based on SEMS+ App V2.0.1. The interfaces in subsequent versions may vary.
- The parameters and operation permissions that different login roles can view may vary.
- The displayed parameters and functions may differ depending on the device model and the safety standards of the country.
- The manual content is for reference only. Please refer to the actual display in the App.
- If you need to modify power station or device parameters, please carefully read this manual and the corresponding product manual before making changes to familiarize yourself with the product 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 the SEMS+ App.SEMS+ App is software used for remote power plant monitoring orlocal device debugging.

Installers or owners can:

- Remotely monitor the power plant's operation status and configure parameters for the plant and its equipment.
- Locally connect to devices to view their operational status and configure device parameters.

1.1 Supporting Products

Supports monitoring and management of GoodWe brand related devices, such as inverters, Smart Meters, data collectors, charging piles, batteries, etc.

1.2 Download and Install SEMS+ App

Phone Requirements:

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

Download Methods:

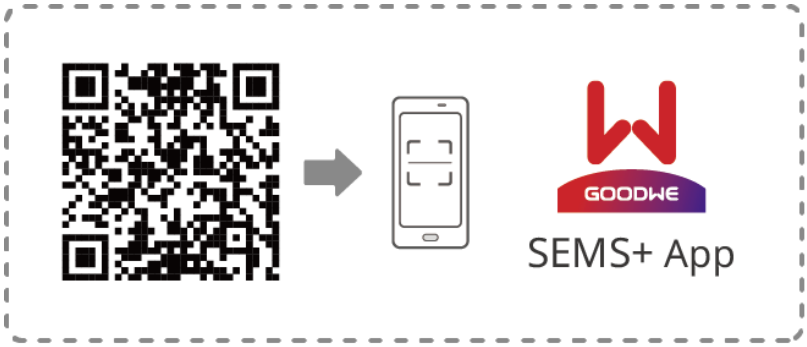
Method 1:

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

SEMS0163

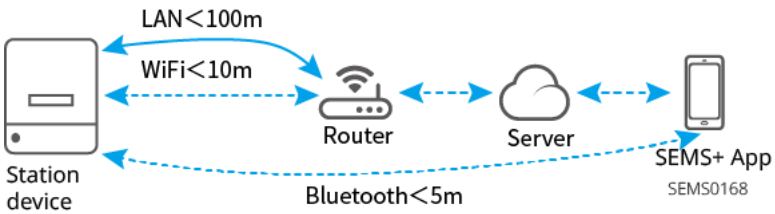
Method 2:

Scan the QR code below to download and install.



SEMS0164

1.3 Connection Method



SEMS0168

1.4 Common Icon Descriptions

Icon	Description	Icon	Description
	Power Plant Creation, adding devices, etc.		Scan nearby devices.
	More information.		Filter.
	Message notifications.		Favorite or unfavorite.
	Save.		Edit.
	Delete.		Copy.
	Expand or collapse data display.		Device software version upgrade.
	Enlarge chart display.		Turn on or off.
	Sort. tap to sort in ascending or descending order.		Expand power plant list and switch power plants.

1.5 Account Registration

Steps

1. On the App home page, clicktap
2. Select the server and account type according to your actual needs, then tap "Next".
3. Enter the account information according to your actual situation, then tap "Confirm" to complete the registration.

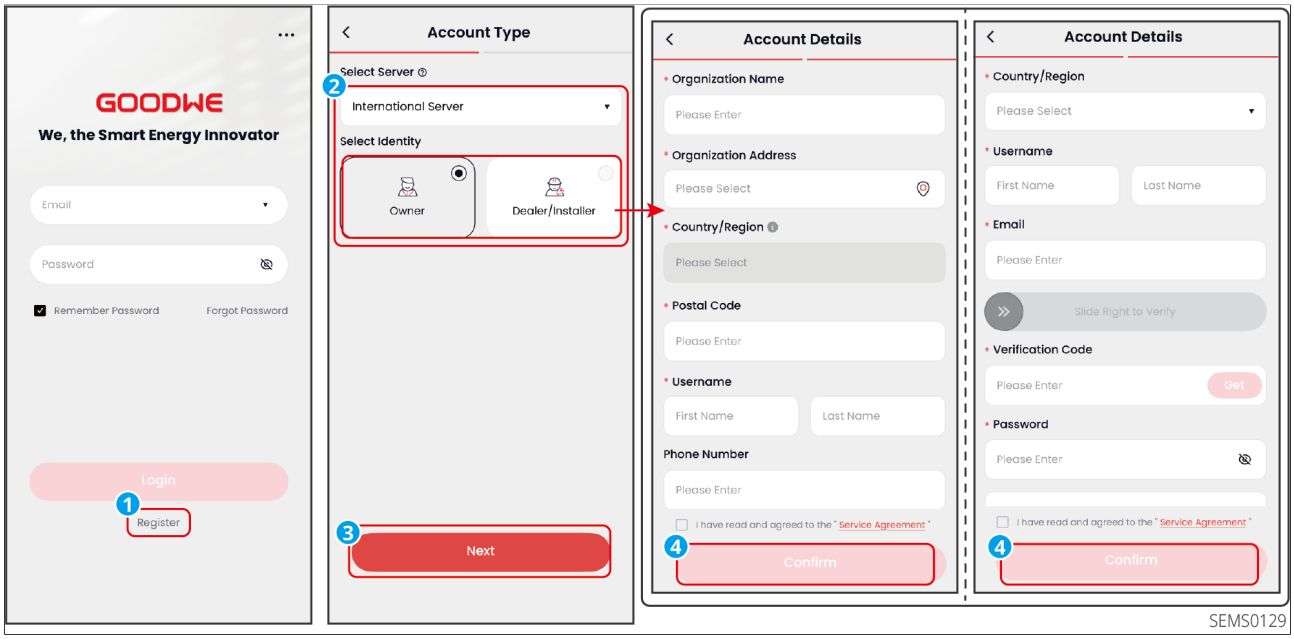


Figure1 Account Registration

1.6 Login Account

NOTICE

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

Operation Steps

1. Enter your username and password, then tap "Login".

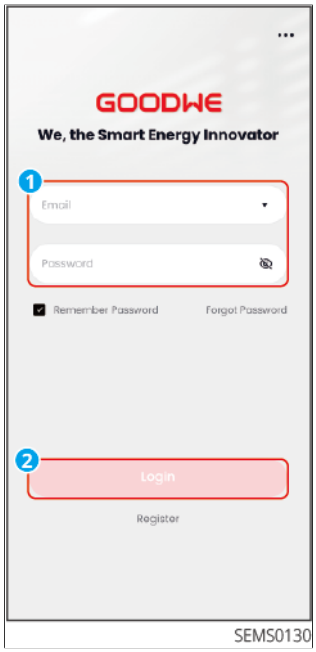


Figure2 Login Account

2 Remote Monitoring Power Station

NOTICE
The displayed power plant information varies depending on account type, region, power plant type, etc.

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

2.1 Monitoring Remote Stations

2.1.1 Power Plant Creation

Supports Power Plant Creation based on actual needs.

2.1.1.1 Fill in Power Plant Information

Procedure

1. After logging into the App, if there is no power plant under the account, tap " Create Station"; if there are power plants under the account, tap "+" on the power plant list interface to enter the new power plant information filling interface.
2. Follow the interface prompts and fill in basic information such as power plant address, name, capacity, and power according to the actual situation.
3. If you need to add a power plant visitor, you can fill in the organization code and power plant visitor information. tap "Complete" to create a new power plant.
4. Choose whether to add power plant equipment based on actual needs. If you need to add, please refer to the 2.1.1.2.Add Device(Page 12) chapter.

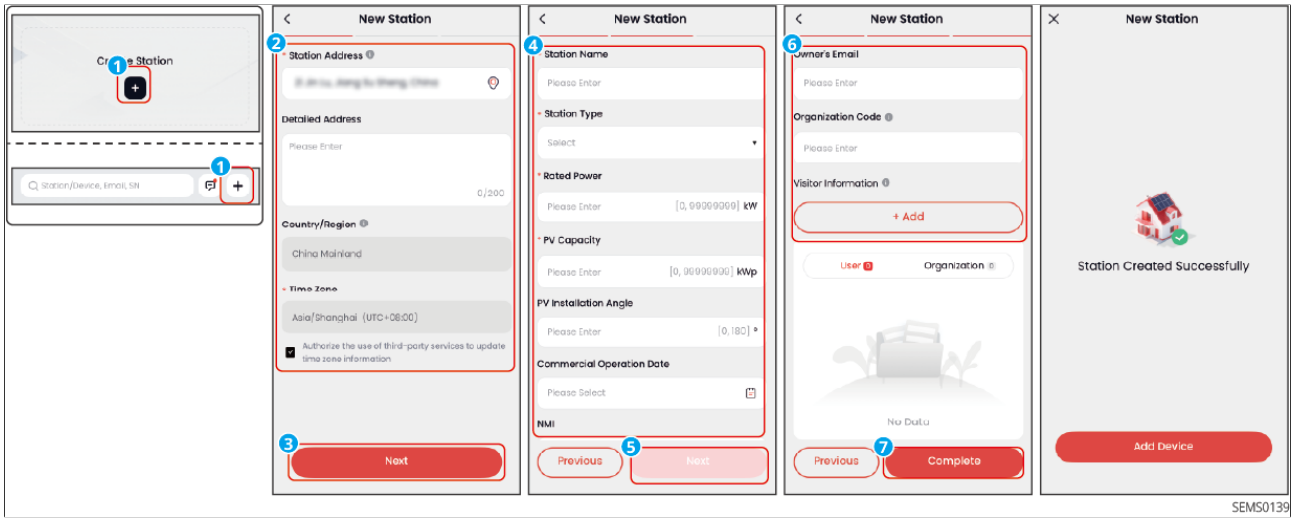


Figure3 Fill in Power Plant Information

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

2.1.1.2 Add Power Station Equipment

After the power station is created, you can add power station equipment based on 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 energy storage inverters,

charging piles, smart switches, and other devices in the network to the same Router as HEMS, otherwise HEMS cannot recognize the above devices. For GoodWe products, please refer to the 3.1.Near-end Connection Devices(Page 36) chapter; for third-party products, please refer to the device user manual.

Manual Device Addition Steps

1. On the device list interface, tap +.
2. Add devices based on actual needs. Select the device type, and scan the device SN or manually enter the device SN.
3. After scanning, confirm whether the device serial number and verification code are correct. Modify the device name based on actual needs. tap "Add Device" to complete the addition.
4. (Optional) If you need to continue adding devices to the current power station, tap +, and repeat the device SN input steps.
5. (Optional) tap "Quick Configuration" to modify device safety settings, working mode settings, etc. For details, please refer to 2.1.1.3.Quick Configuration(Page 14).
6. tap Finish to complete device addition.

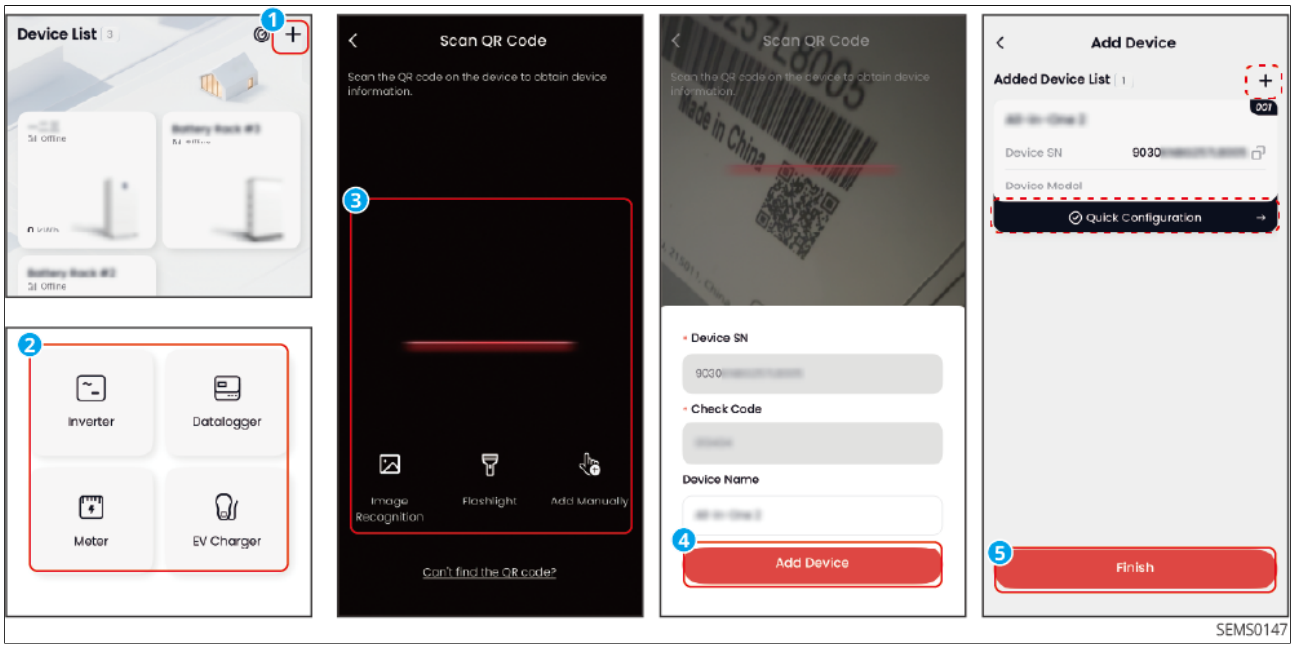


Figure4 Manual Device Addition

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, tap
2. In the scanned devices, check the devices that need to be added, and tap "Add".
3. If you need to continue adding other unscanned devices, tap "Continue Adding", otherwise tap "Finish".

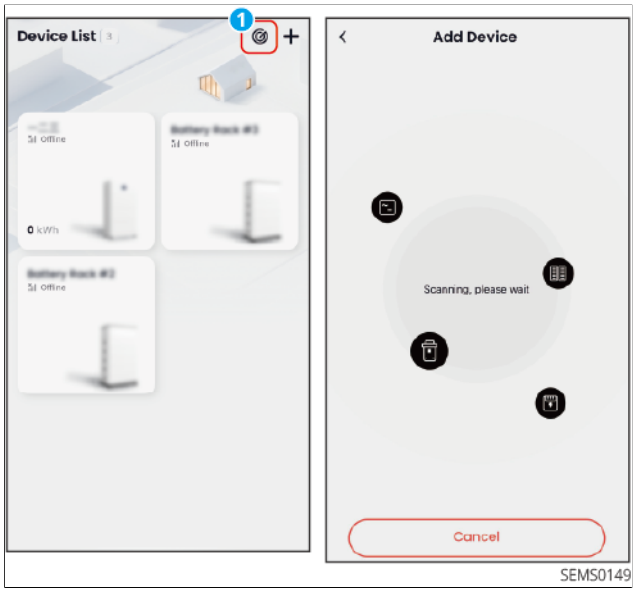


Figure5 Adding Devices via Scanning

2.1.1.3 Quickly Configure the Device

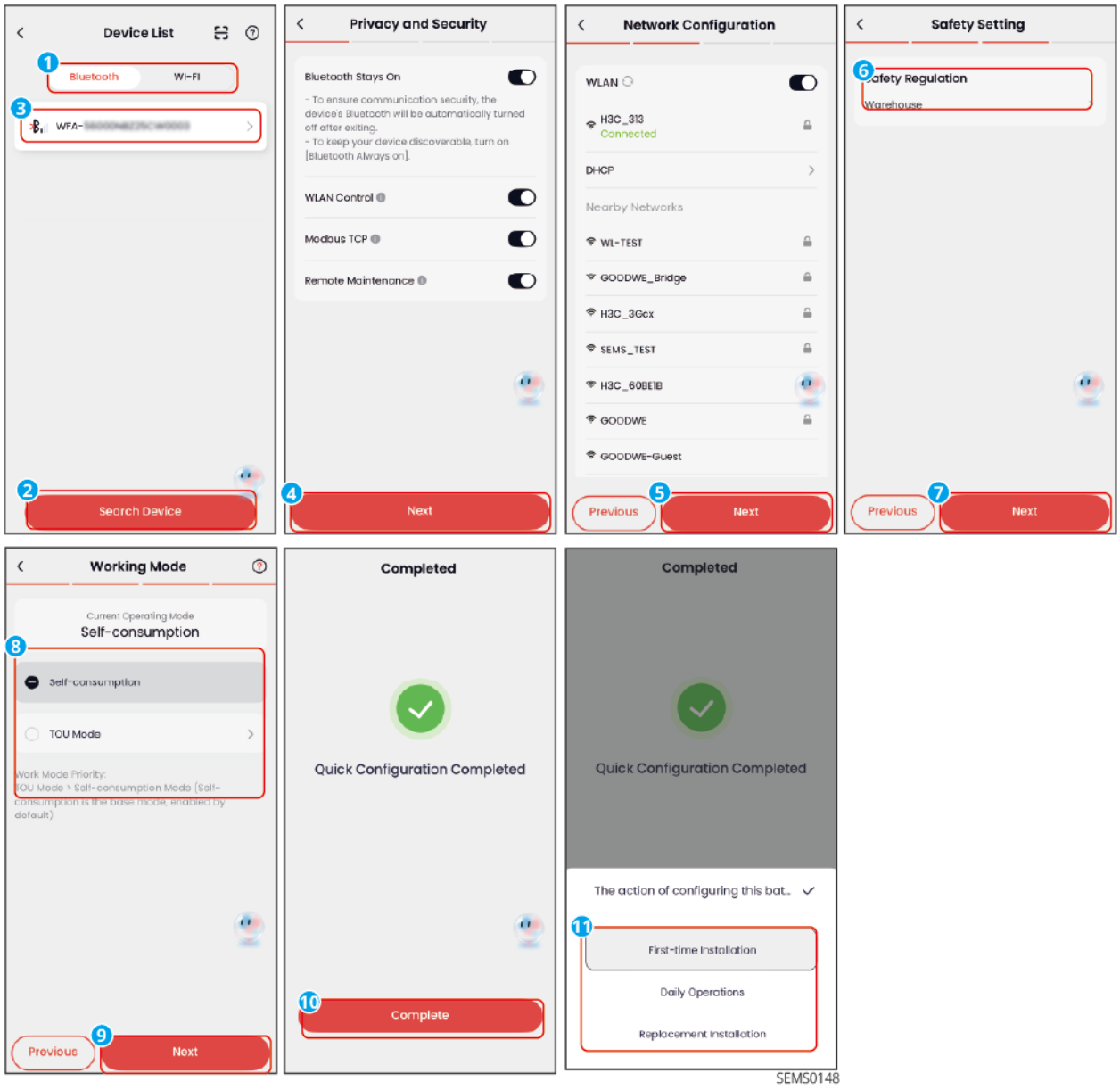
NOTICE

- 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, tap "Quick Configuration" as prompted on the interface, or go to the device list interface via "Account" > "Local Access".
2. On the device list interface, select the "Bluetooth" or "WiFi" tab based on the smart communication stick's signal type.

3. Pull down or tap "Search Device", confirm the inverter signal name according to the inverter serial number, and tap to enter the Quick Configuration interface.
4. Complete network configuration, safety code, working mode, etc., as prompted on the interface. For details on working modes, refer to the 7.2.System Working Mode(Page 66) chapter.
5. tap "Complete" to complete the Quick Configuration.



2.1.2 Viewing Power Plant Information (Installer)

2.1.2.1 Power Station List

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

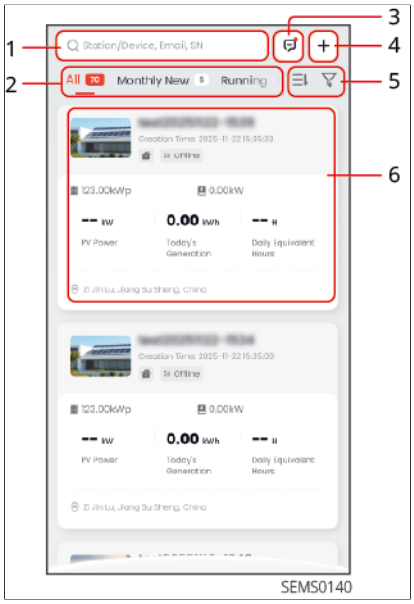


Figure6 Power Station List

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

No.	Description
6	• Station card. Displays basic station information such as station name, operation status, Energy Generation, address, etc. • Tap to enter the station details interface. • Long press to perform quick operations on the station such as favoriting, sharing, and deleting.

2.1.2.2 Power Station Details

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

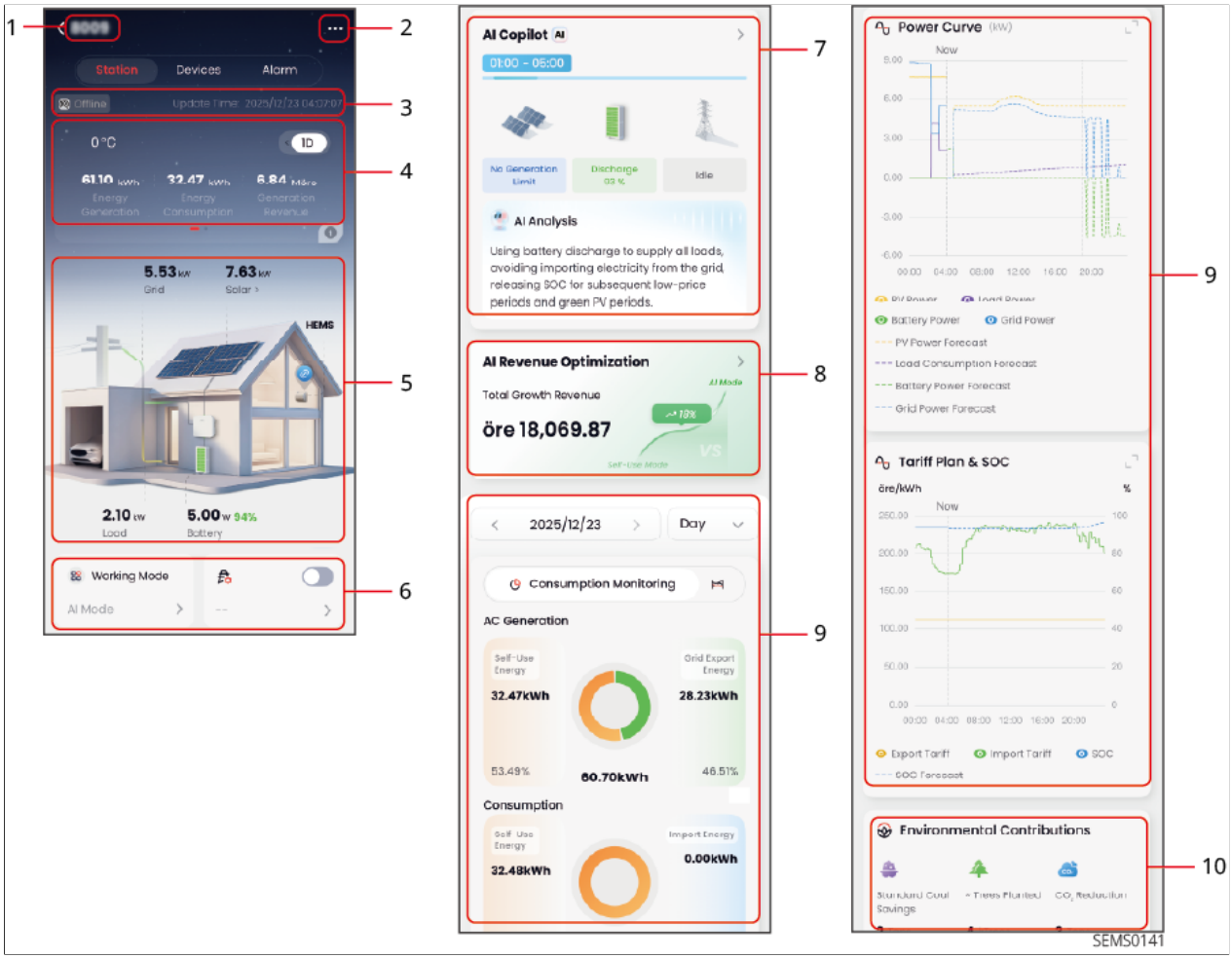


Figure7 Power Station Details

No.	Description
1	Current power plant name.
2	Configure power plant information. Supports: configuring basic plant information, sharing the plant, setting electricity price information.
3	Current operating status of the plant and update time.
4	• Current weather at the plant, along with Energy Generation, electricity consumption, generation revenue, purchased electricity, feed-in revenue, etc. • Plant revenue statistics require electricity price configuration; otherwise, the system cannot calculate revenue data. • Currently, only revenue estimation via fixed electricity price is supported. • Generation Revenue: Displays the estimated generation revenue for the current plant type. • Energy Generation: Displays the total energy generation for the current plant type. • Feed-in Revenue: Displays the estimated revenue from selling electricity for the current plant type. • Feed-in Energy: Displays the total feed-in energy for the current plant type.
5	Display of the plant's energy flow diagram.
6	Quick access entry for common control settings.

No.	Description
7	• AI Energy Manager. Displayed when the system's AI mode is enabled, indicating the system is currently under AI-managed scheduling. • Displays the current time period and the planned scheduling status for PV, energy storage, and grid within that period. • tap the card to enter the AI Energy Manager details interface to view the detailed AI scheduling plan.
8	• Displayed when the system's AI mode is enabled. Compares Self-Consumption Mode with AI Mode, showing economic benefit optimization. • tap the card to enter the Economic Benefit Optimization details interface, to view AI operation days, revenue increase, expenditure comparison overview, revenue calendar, etc.
9	Electricity Consumption Monitoring, Energy Flow, Power Curve, Energy Monitoring Chart. Visualizes plant operation status and energy dynamics through charts.
10	Environmental Contributions. Displays the environmental benefits generated by PV power generation, including: CO2 emission reduction, standard coal saved, equivalent trees planted, etc.

2.1.2.3 Alerts

When logged in with an installer account, tap "Alerts" on the homepage to view alert information for all power plants under the account.

- By default, "All" alerts are displayed. You can switch between "Occuring" and "Recovered" faults using the status tabs.
- Long press to favorite, delete, or acknowledge an alert.

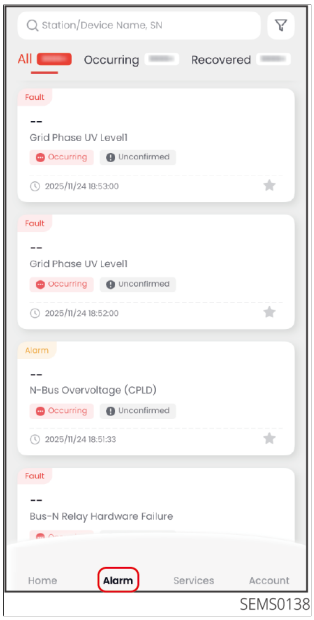


Figure8 Alerts

2.1.3 Viewing Power Plant Information (Owner)

2.1.3.1 Power Plant List

When there are multiple power plants in the owner's account, you can view all power plants via the sidebar and switch the power plant displayed on the homepage.
The Power Plant List displays all power plants under the account, including self-built power plants and shared power plants. The functionality of shared power plants may be limited; please refer to the actual interface.

Figure9 Power Plant List

No.	Description
1	Query power stations. Enter station information to quickly locate the station you need to view.
2	Tap to create a new power station.
3	• Power station card. Displays basic station information such as station name, operating status, Energy Generation, address, etc. • Tap to enter the station details interface. • Long press to perform quick operations on the station such as favoriting, sharing, and deleting.

2.1.3.2 Power Station Details

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

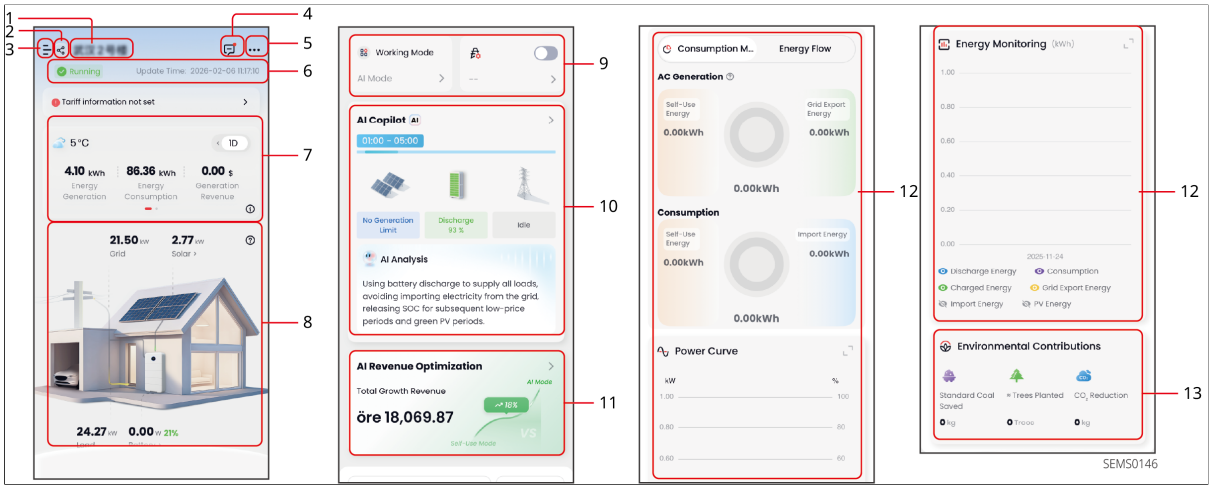


Figure10 Power Station Details

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

No.	Description
7	• Current weather at the plant and Energy Generation, electricity consumption, power generation revenue, purchased electricity, feed-in revenue, etc. • Plant revenue statistics require electricity price configuration; otherwise, the system cannot calculate revenue data. • Currently, only revenue estimation via fixed electricity prices is supported. • Power Generation Revenue: displays the total power generation revenue under the current plant type. • Energy Generation: displays the total energy generation under the current plant type. • Feed-in Revenue: displays the total feed-in revenue under the current plant type. • Feed-in Electricity: displays the total feed-in electricity under the current plant type.
8	Plant energy flow diagram display.
9	Quick access for common control settings.
10	• AI Energy Manager. Displayed when AI mode is enabled, indicating the system is currently managed and dispatched by AI. • Displays the current time period and the planned dispatch status of PV, energy storage, and the grid during this period. • tap the card to enter the AI Energy Manager details page to view the detailed AI dispatch plan.
11	• Displayed when AI mode is enabled. Compares self-consumption mode with AI mode, showing economic benefit optimization. • tap the card to enter the Economic Benefit Optimization details page to view AI operation days, revenue increase, expenditure comparison overview, revenue calendar, etc.

No.	Description
12	Power consumption monitoring, energy flow, power curve, energy monitoring charts. Display plant operation status and plant energy dynamics through visual charts.
13	Environmental Contributions. Display the environmental benefits generated by PV power generation, including: CO2 emission reduction, standard coal saved, equivalent trees planted, etc.

2.1.4 Modify Power Station Basic Information

Supports modifying basic power station information, including station name, station type, Rated Power, battery capacity, photovoltaic capacity, station address, etc. When modifying the station type, only switching to an energy storage station is supported; switching to a photovoltaic station is not supported.

Operation Steps

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

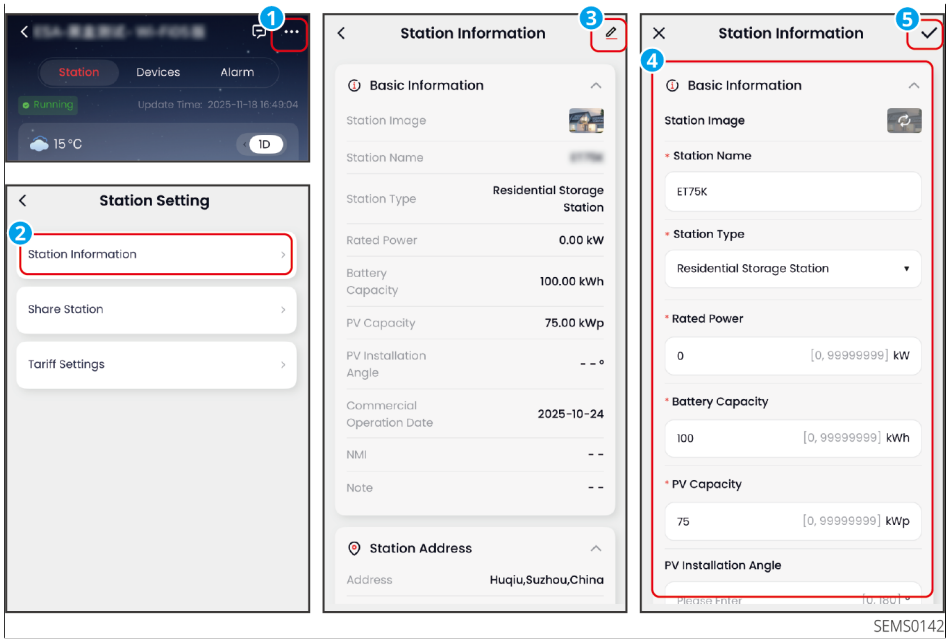


Figure11 Modify Power Station Information

2.1.5 Configure Tariff Information

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

Steps

1. On the power station details interface, tap •••>"Tariff Settings" to enter the tariff settings interface.
2. Select "Export Tariff" or "Purchase Tariff". Then set the tariff type, supporting "Fixed Tariff", "Time-of-Use Tariff", and "Dynamic Pricing".

- Fixed Tariff: Set by the user according to the actual tariff.
- Time-of-Use Tariff: The user sets the tariff information for different time periods according to the actual tariff. Supports setting multiple tariff groups.
- Dynamic Pricing: Obtain dynamic pricing from the power company, and dynamically adjust the actual electricity buying/selling price combined with the tariff surcharge set by the user. Only applicable in some regions and for some devices.

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

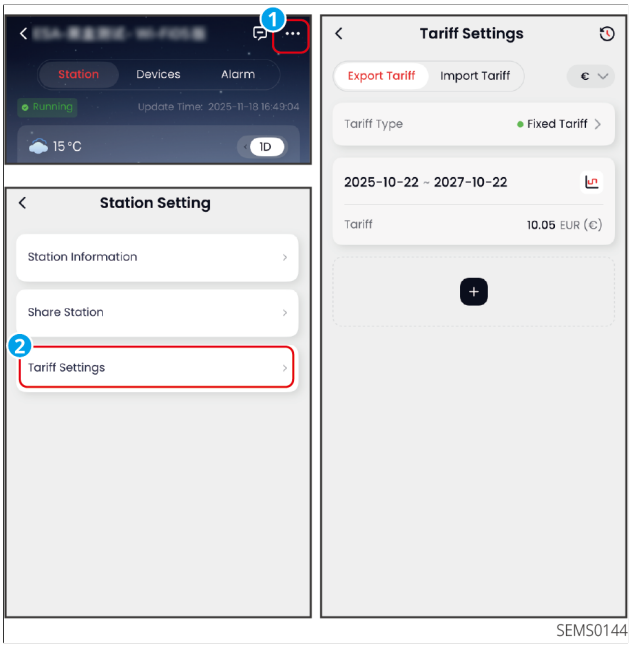


Figure12 Configure Tariff Information

2.1.6 Manage Power Station Sharing

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

Operation Steps

1. On the power station details page, tap ••• >"Share Station" to enter the sharing interface.
2. Tap "Add Share", fill in the information of the recipient, and set permissions and time limits according to your needs. To revoke sharing after adding, tap ⊖.

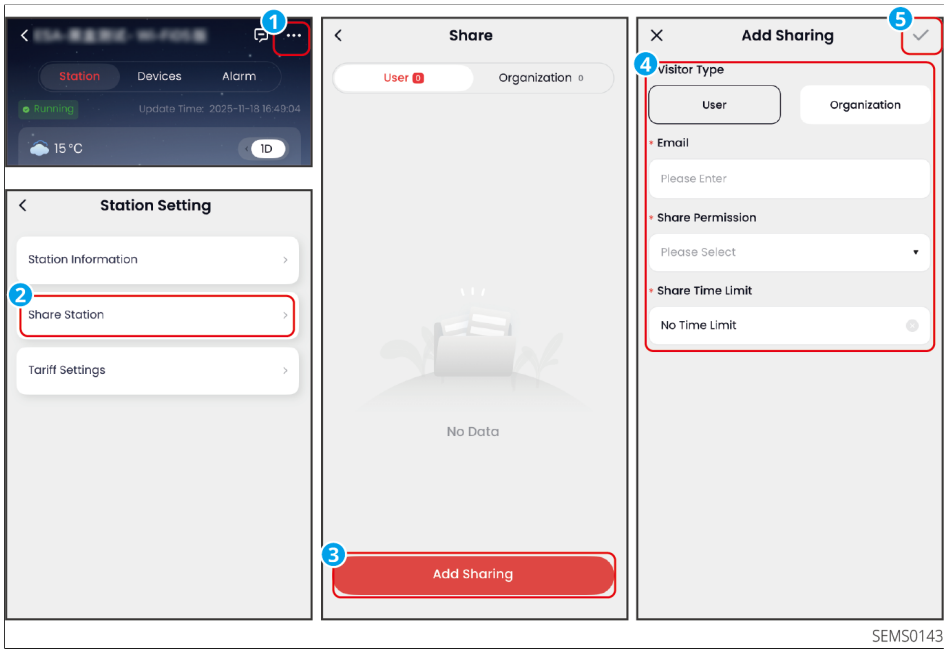


Figure13 Manage Power Station Sharing

2.2 Device

2.2.1 Device List

Supports viewing an overview of all devices under the account on the device list interface, including device name, operating status, etc.

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

Figure14 Device List

No.	Description
1	The current number of devices in the power station.
2	Scan to add devices to the current power station.
3	Manually add devices to the current power station.
4	• Device card. Displays data such as device name, device status, device illustration, Power, power generation, etc. • When the device type is different, the information displayed on the card varies. Please refer to the actual device. • When the power station type is different, the card form varies. Please refer to the actual situation. • The image on the device card is for reference only. Please refer to the physical product.

2.2.2 Device Detailed Information

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

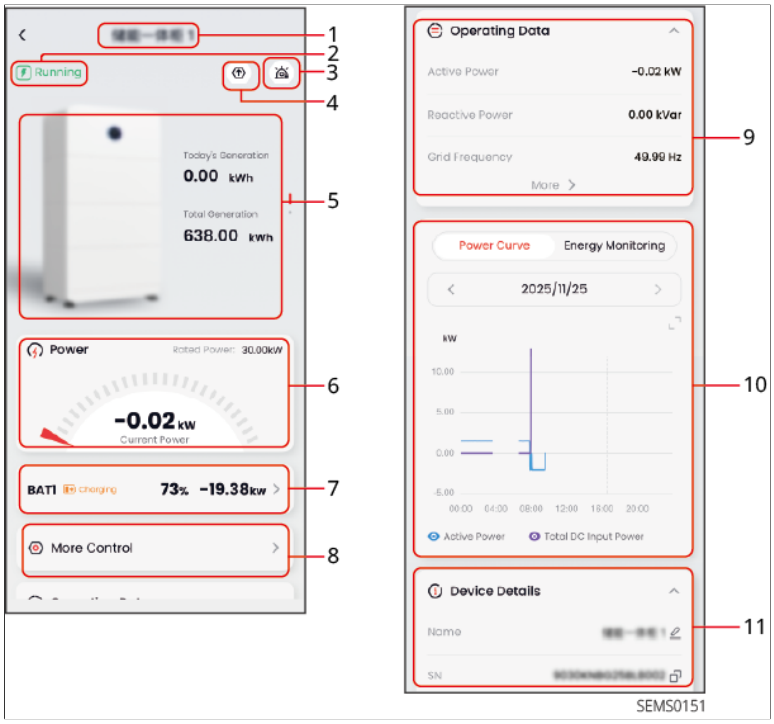


Figure15 Device Details

No.	Description
1	Device name.
2	Device operation status.
3	Device alarm information. tap to view detailed alarm information.
4	When logged in with an installer account, supports upgrading the device or viewing the device upgrade history.
5	Power generation information. Displays today's power generation, cumulative power generation, etc.
6	Power dashboard. Displays current power and rated power value.
7	• Battery information. Displays battery system SOC, charge/discharge status, charge/discharge power, etc. • Tap to enter the Battery Details Interface.

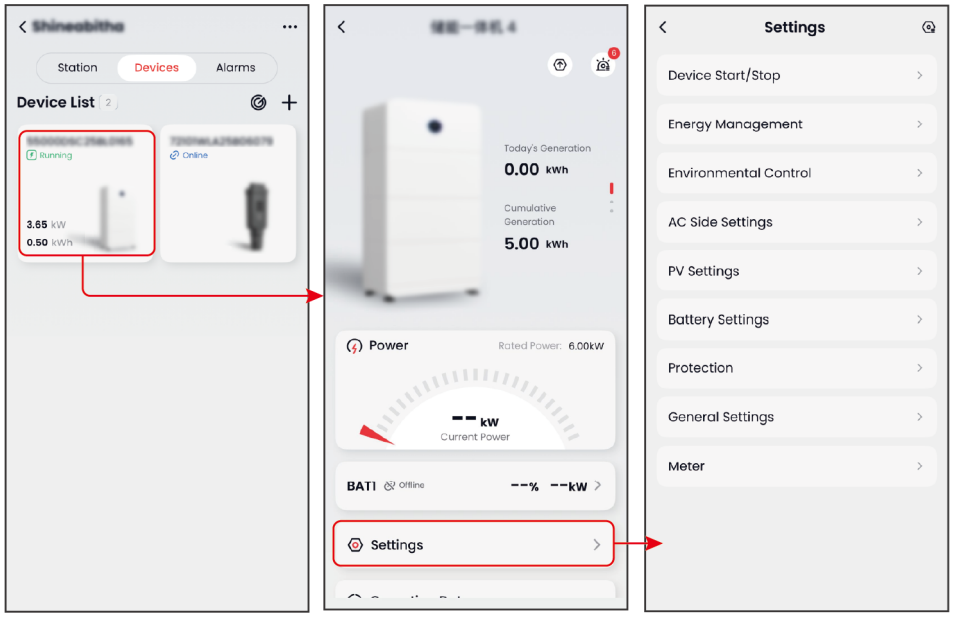
No.	Description
8	• Remote Control. Displays quick access entries for common control items. • tap "More Control" to view all control items for the device. • For details, please refer to the Setting Remote Control section.
9	• Operating data. Displays current device operating parameters, such as active power, reactive power, power factor, etc. • tap "More" to display all data details. • The information displayed varies for different devices. Please refer to the actual interface.
10	Displays power curves and energy monitoring charts within different time dimensions.
11	Device details. Displays basic device information, such as device name, SN, device type, firmware version number, etc.

2.2.3 Remote Control Device

The controllable parameters may vary depending on the device model and the safety standards of the country. Please refer to the actual device for details.
For an explanation of device parameters, please refer to 7.Appendix(Page 61).

2.2.3.1 Setting Inverter Parameters

On the device list interface, select the inverter that needs to be set, and tap "Set" to set the inverter parameters according to actual requirements.

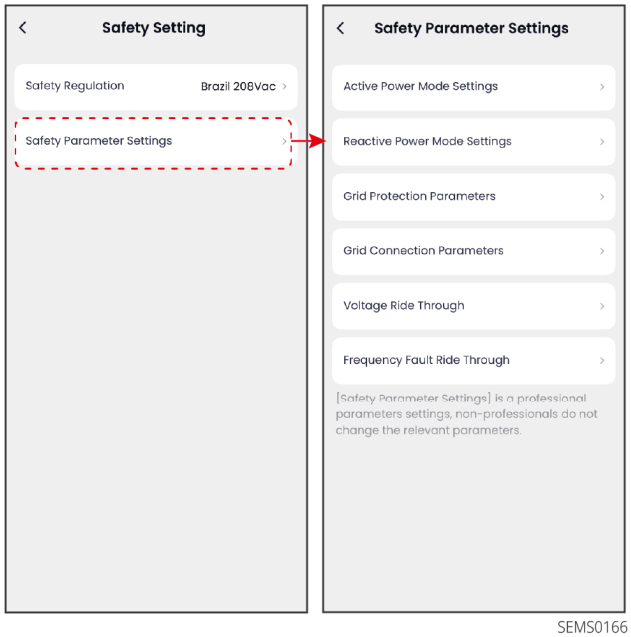


SEMS0177

Setting Safety Parameters

Operation Steps

1. Via "Protection" > "Safety Setting" to enter the parameter setting interface.
2. Set the safety country and custom safety parameters according to actual. Custom safety parameters can only be modified by installers.



SEMS0166

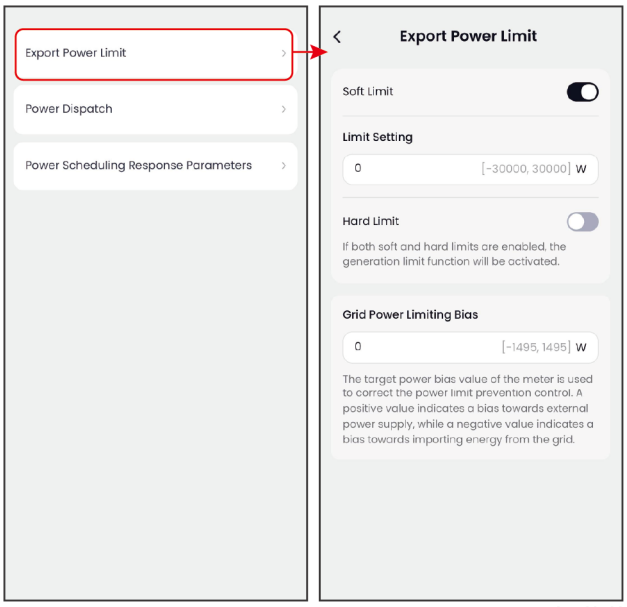
Setting Power Limit Parameters

NOTICE

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

Operation Steps

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



SEMS0182

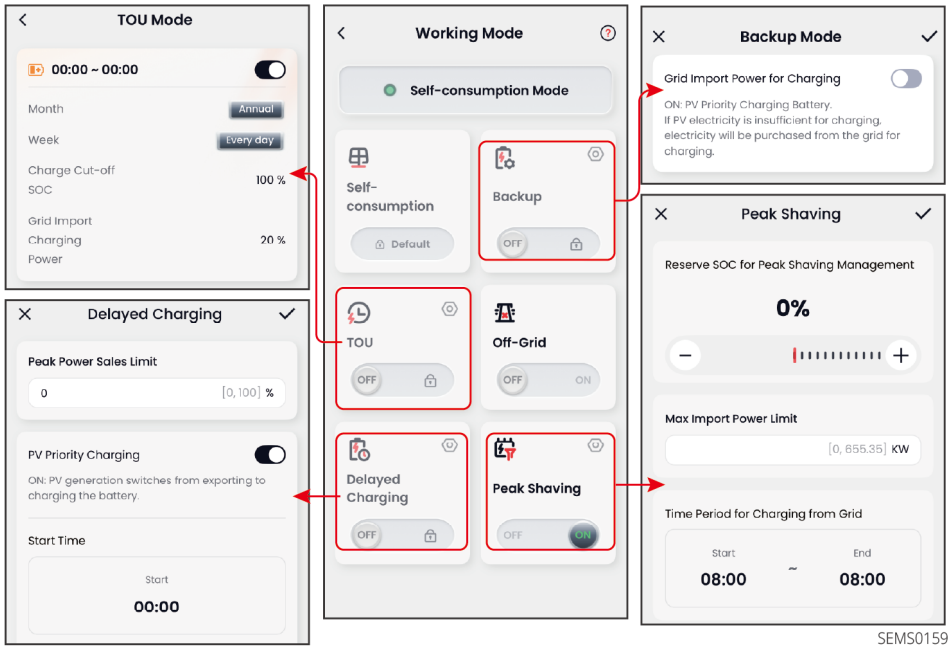
Setting Work Mode

NOTICE

- Only supports setting the working mode for energy storage inverters.
- The working modes that can be set vary by inverter model. Please refer to the interface for details.

Operation Steps

1. Via "Energy Management" > "Working Mode" to enter the work mode setting interface.
2. Set the work mode according to actual requirements.



SEMS0159

2.2.3.2 Configure Battery Parameters

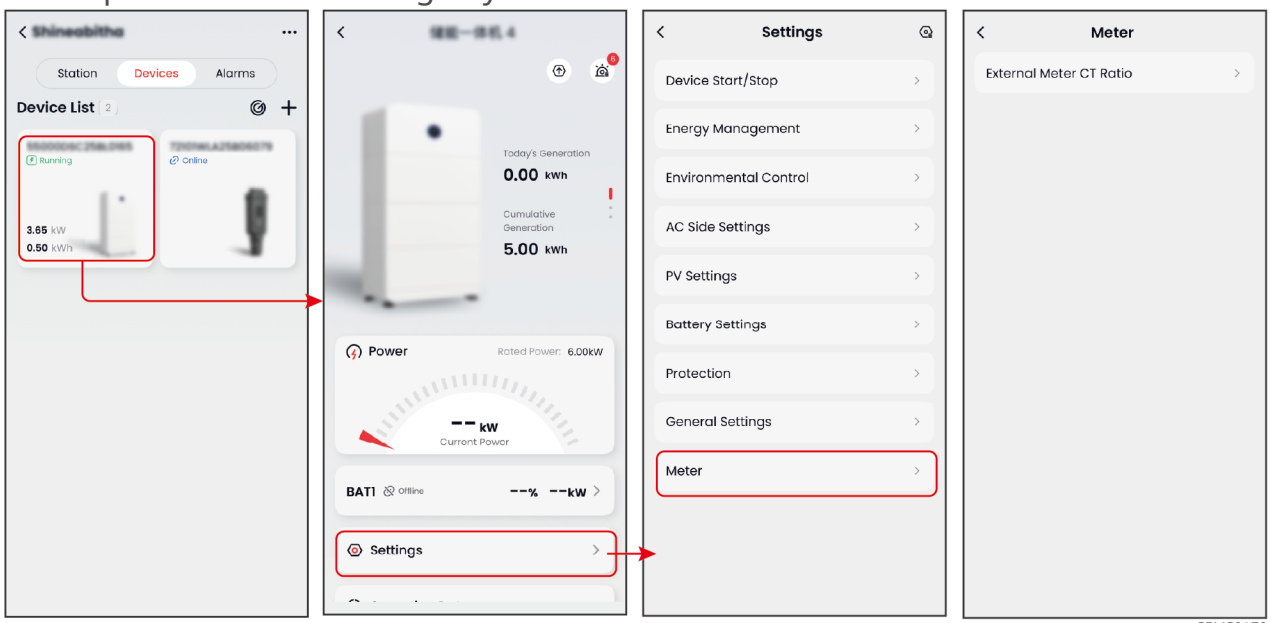
Select an inverter from the device list, and then choose the battery you wish to configure in the inverter details interface. tap "Configure" to set the battery parameters according to your actual needs.

SEMS0178

2.2.3.3 Setting Meter Parameters

On the device list interface, select the inverter and tap "Settings" > "Meter" to set the

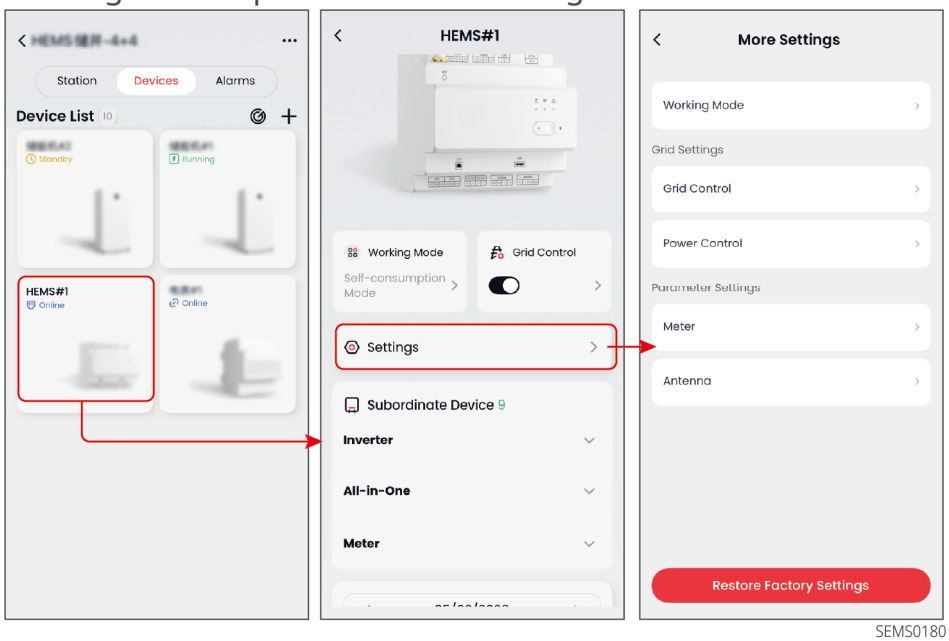
meter parameters according to your actual needs.



SEMS0179

2.2.3.4 Configure Home Energy Management Device Parameters

Select the Home Energy Management Device from the device list interface and tap "Settings" to set parameters according to actual needs.



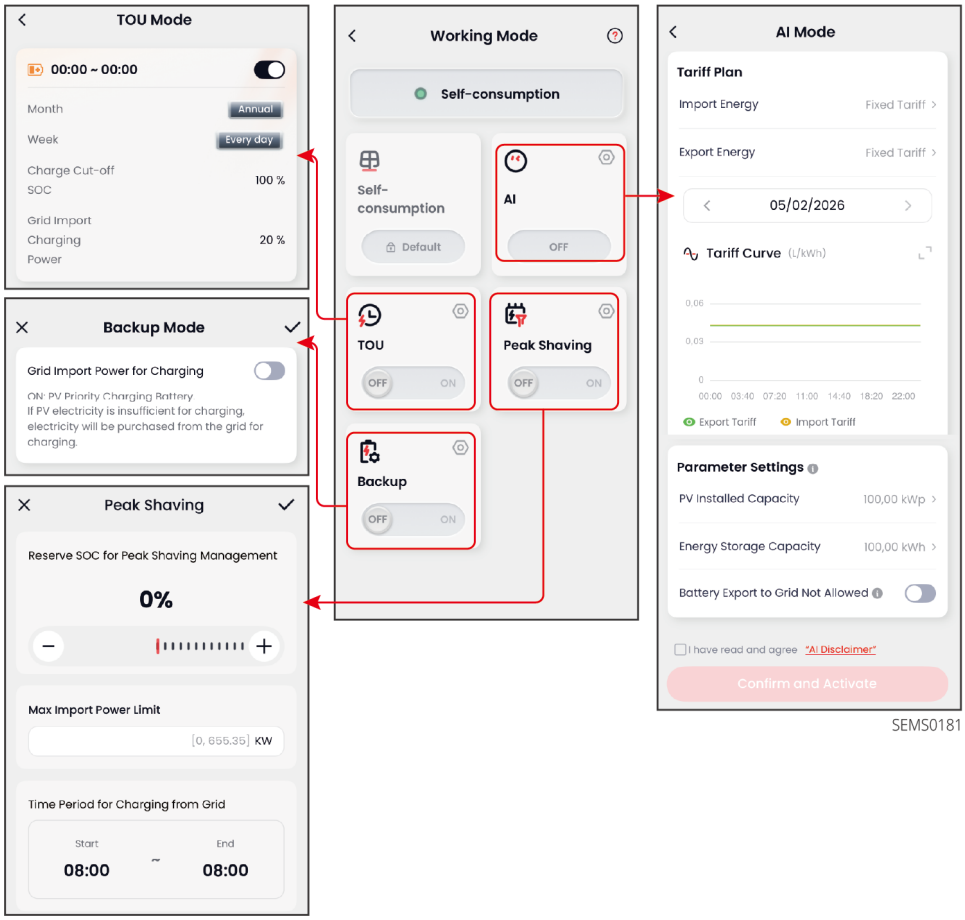
SEMS0180

Set Working Mode

Operation Steps

1. Navigate to the working mode setup interface via "Settings" > "Working Mode".

2. Set the working mode according to actual needs and the on-screen prompts.



SEMS0181

3 Local Connecting Devices

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 and the device via Bluetooth or WiFi to view device information and configure device parameters locally.

3.1 Local Access Devices

NOTICE

- Before locally connecting to the device, please confirm the device is powered on and operating normally.
- When the device type or smart communication stick type is different, the displayed device name will vary, 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, tap "Service" > "Local Access" to enter the connection interface.
2. On the "Device List" interface, select the "Bluetooth" or "WiFi" tab based on the

smart communication stick signal type. tap "Search Devices" to refresh the device list, and select the device to connect via serial number.

3. During the first login, enter the initial login password to log in and modify the password according to the interface prompts. Initial login password: 1234.
4. When connecting via Bluetooth, please enable "Bluetooth Stays On" according to the interface prompts; otherwise, after this connection ends, the Bluetooth signal will be turned off.

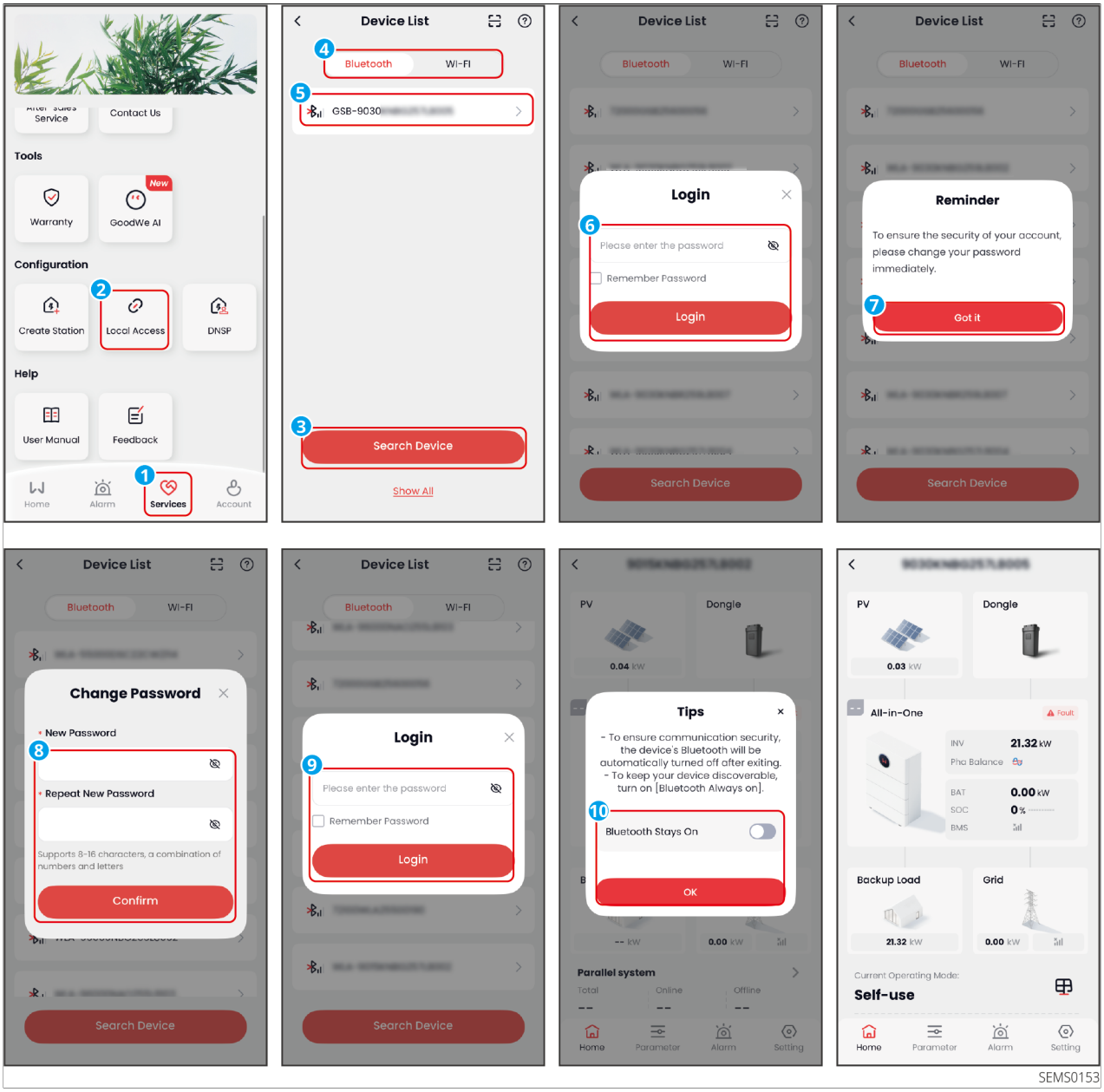
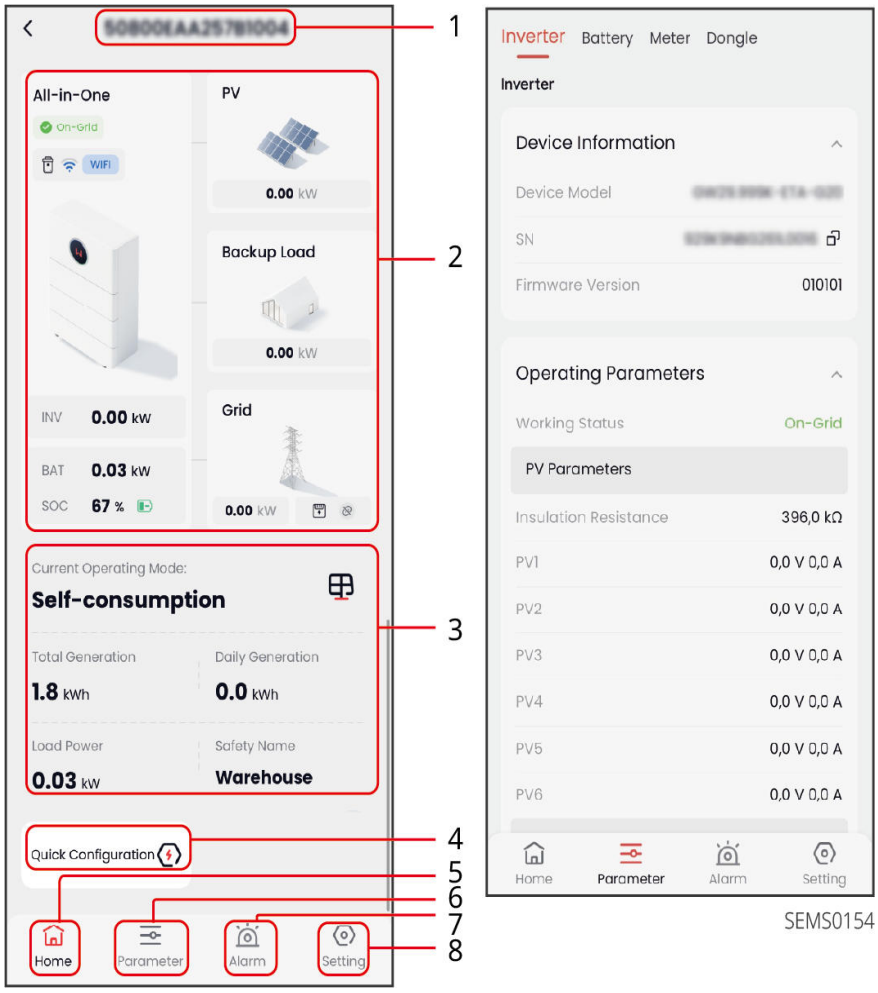


Figure16 Local Access Devices

3.2 Local Connection Interface Overview

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

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



No.	Description
1	Current device serial number.

No.	Description
2	• System module cards. Includes PV, communication module, Inverter, Utility grid, Backup load, and other cards. • Tap a card to view related parameters and set parameter values. • When the Inverter is an all-in-one unit, tap the all-in-one unit card to view Inverter, Battery, communication stick information separately and set parameter values.
3	Current system operation information. Includes Working Mode, Energy Generation, power, etc.
4	Quick access to control items, for example: • Quick Configuration. Quickly complete network settings, safety code settings, Working Mode Settings, device self-test, and other functions to meet basic usage. For specific settings, please refer to the 2.1.1.3.Quick Configuration(Page 14) chapter. • Some models support "One-tap Configuration", which can generate templates based on completed Quick Configuration.
5	Home. Displays system information, such as devices included in the system, system operation information, and provides quick access to view parameters and set parameters.
6	Parameters. View device model, serial number, firmware version, device operation parameters, etc., according to the device type.
7	• Alarms. Displays current device alarm information. • Tap to view detailed information such as alarm type, alarm cause, handling suggestions, etc.
8	Settings. Displays configurable parameters according to the device type.

3.3 Configure Device Parameters

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

your actual needs.

3.3.1 One-Click Configuration

Some device models support the One-click Configuration mode, which allows you to save a quick configuration as a template and apply it rapidly.
After completing the quick configuration, connect to the device locally, tap "One-Click Configuration" > "Generate Template" to save the current configuration as a template. When needed, tap "One-click Configuration Mode" to quickly import the saved template.

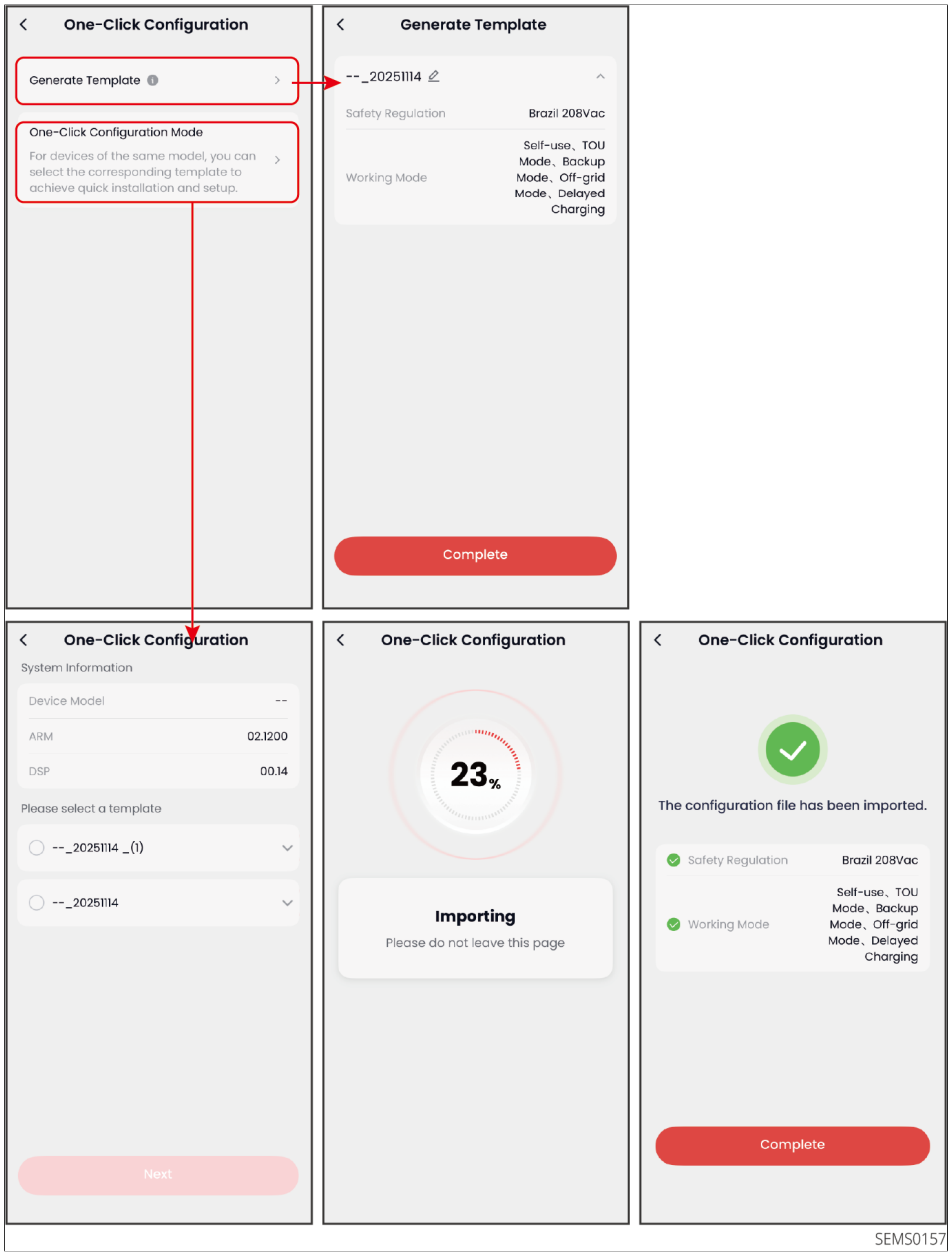


Figure17 One-tap Configuration

3.3.2 Setting Inverter Parameters

Method 1: On the "Home" page, select the inverter card, tap "Inverter" > "Settings", and modify device parameters according to actual needs.
Method 2: tap "Settings" and modify device parameters according to actual needs.

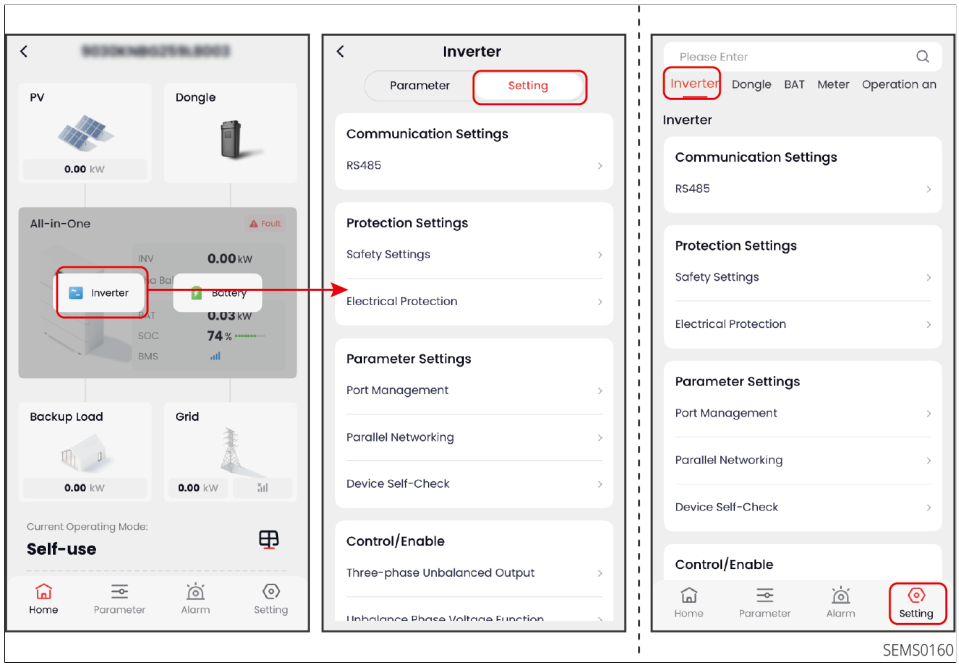
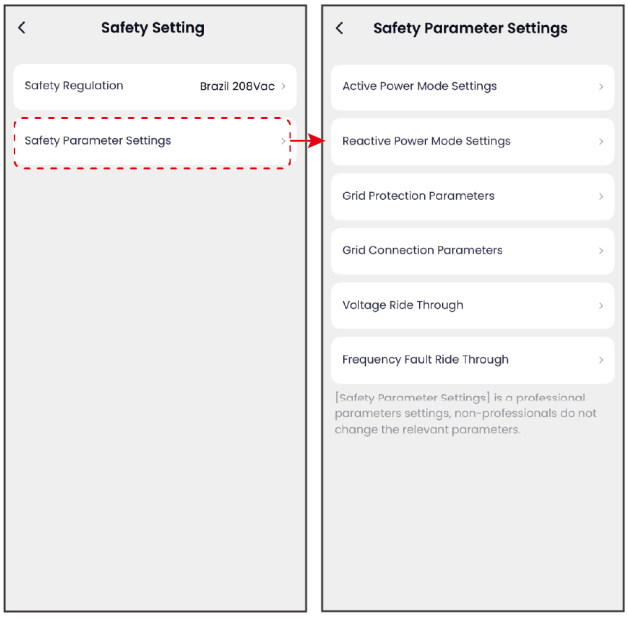


Figure18 Setting Inverter Parameters

Setting Safety Parameters

Operation Steps

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



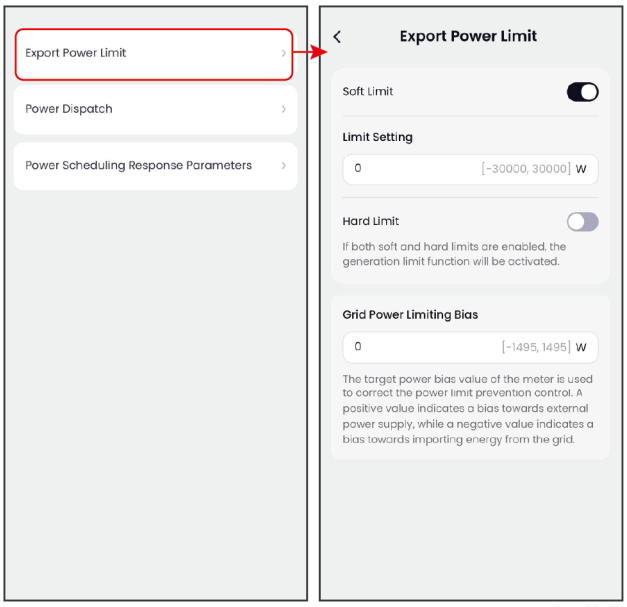
Setting Power Limit Parameters

NOTICE

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

Operation Steps

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



SEMS0182

Setting Work Mode

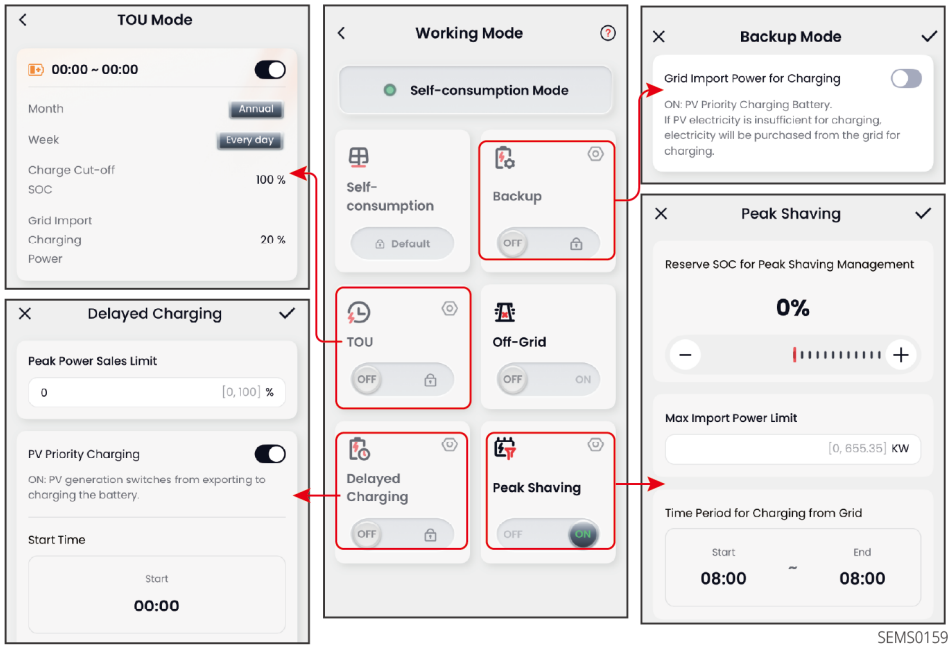
NOTICE

- Only supports setting the working mode for energy storage inverters.
- Different inverter models support different settable working modes. Please refer to the interface for details.

Operation Steps

1. Go to the work mode setting interface via "Settings" > "Working Mode".

2. Set the working mode according to actual needs.



Setting RS485 Parallel Connection

NOTICE

- When energy storage inverters are connected in parallel via RS485, each inverter must be configured individually via the App to confirm whether the connected inverter is a master or slave unit.
- When an inverter from a parallel system needs to be used as a standalone unit, it must be set to standalone mode via the App.
- Please set the device connected to the meter as the master unit.
- Please set the slave inverter addresses first, then configure the parallel network via the master unit.

Operation Steps

1. Go to the setting interface via "Settings" > "Parallel Networking".
2. According to the actual wiring of the inverter, set it as master, slave, or standalone.

- When the inverter is the master, set it as master and exit the connection. After completing the slave inverter address settings, return to this interface, tap

"Parallel Networking", set the number of inverters in the parallel system, and tap "Networking".

- When the inverter is a slave, set the inverter address and tap √.

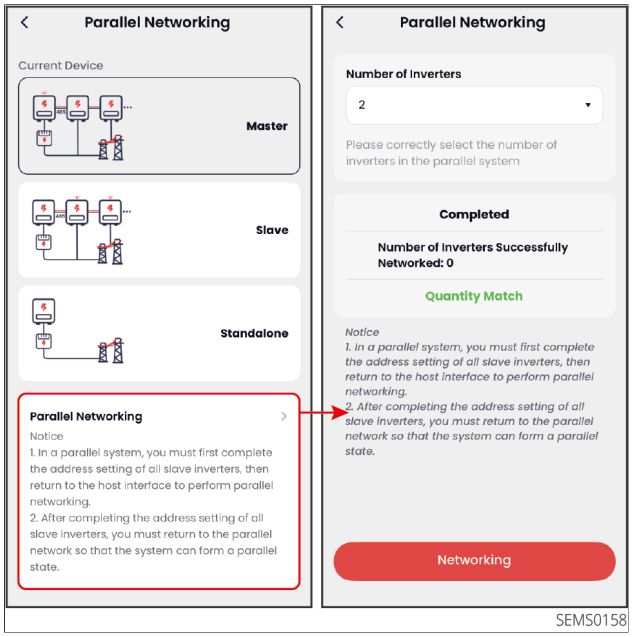


Figure19 Setting RS485 Parallel Connection

3.3.3 Configure Smart Communication Bar Parameters

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

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

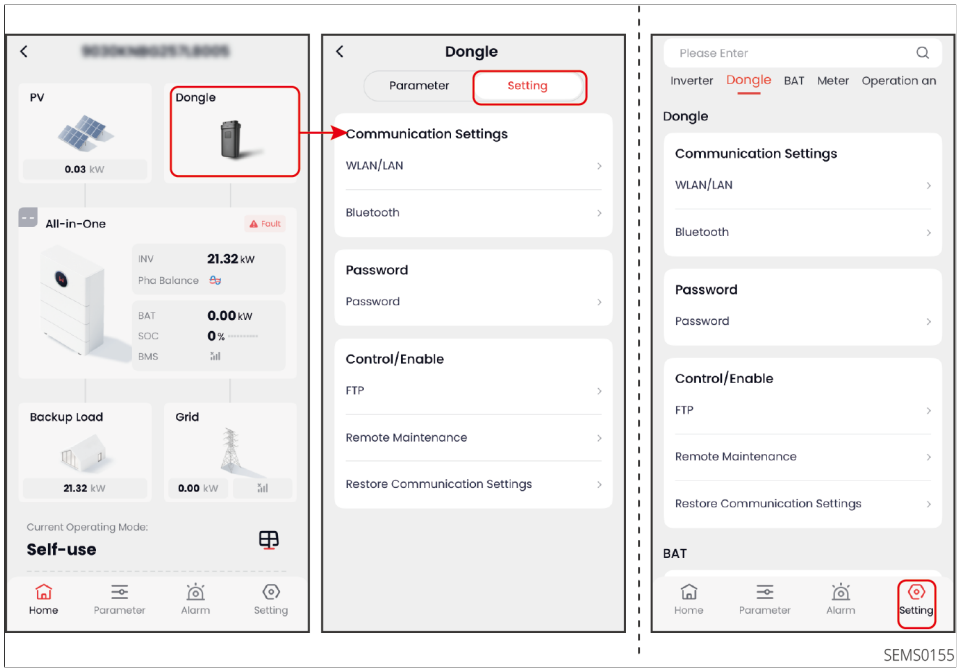


Figure20 Configure Communication Bar Parameters

3.3.4 Set Battery Parameters

Method 1: On the "Home" page, select the battery card, tap on 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.

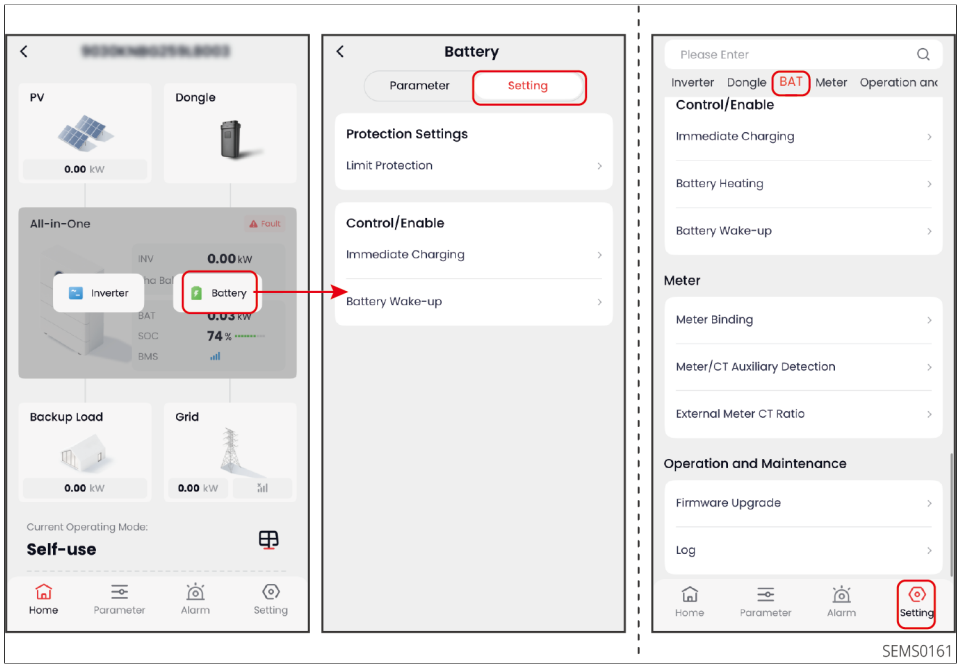


Figure21 Set Battery Parameters

3.3.5 Set 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.

Figure22 Set Meter Parameters

Meter Binding Operation Steps

1. tap 'Home', long press the 'Utility grid' card, select 'Meter' > 'Settings' > 'Meter Binding', to enter the binding interface. Or, enter the binding interface 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). Here, the Meter 1 (external) No Meter 2 interface is used as an example to introduce how to bind the meter.
3. As shown in the figure below, when selecting to use an external meter, you need to manually add 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 actual conditions; if using other meters, there is no need to set the meter CT ratio.

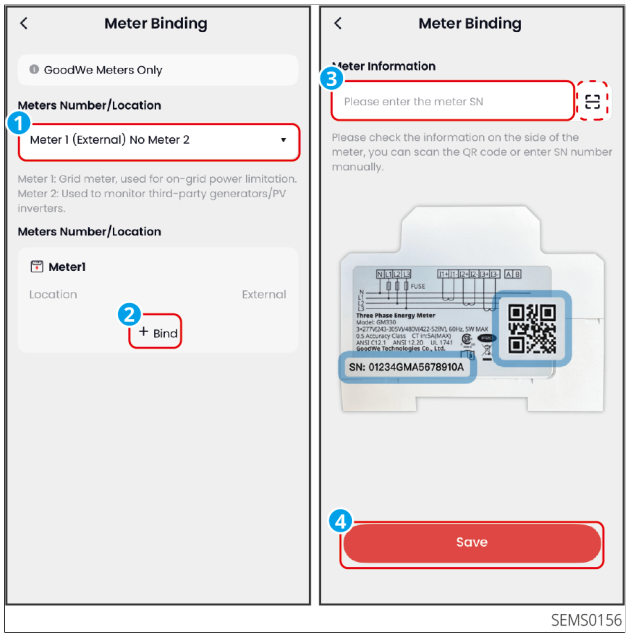


Figure23 Meter Binding

4 Services

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

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

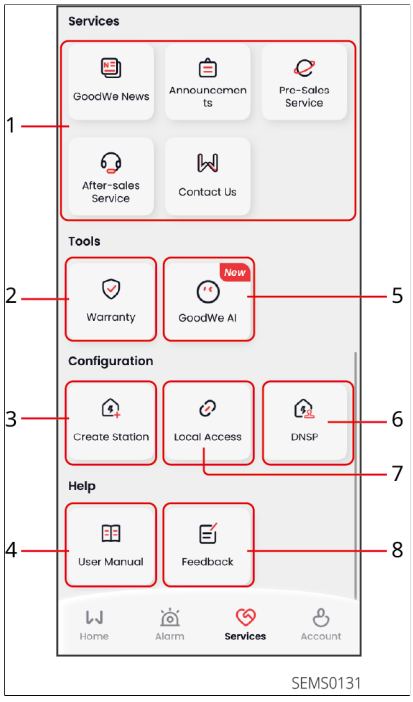


Figure24 Service Interface

No.	Description
1	Entry point for news, announcements, and pre-sales/after-sales service.
2	Query warranty period by device serial number.
3	Power Plant Creation. For detailed steps, please refer to the Power Plant Creation chapter.

No.	Description
4	View the App user manual.
5	• AI Assistant. Quickly access knowledge base information, query business data, etc., through intelligent Q&A. • Supports enabling the AI Assistant floating window for quick access to the conversation interface.
6	DNSP settings. 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 Configure DNSP Function

NOTICE

- Only applicable in Australia.
- Registering the user's power station to the DNSP network allows electricity service providers to remotely limit the output power value of the photovoltaic power station.
- After DNSP registration, if there are operational abnormalities, it supports detecting 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" > "DNSPtap
2. Select an unregistered power station and click to enter the registration interface.tap
3. Fill in the registration information and submit.

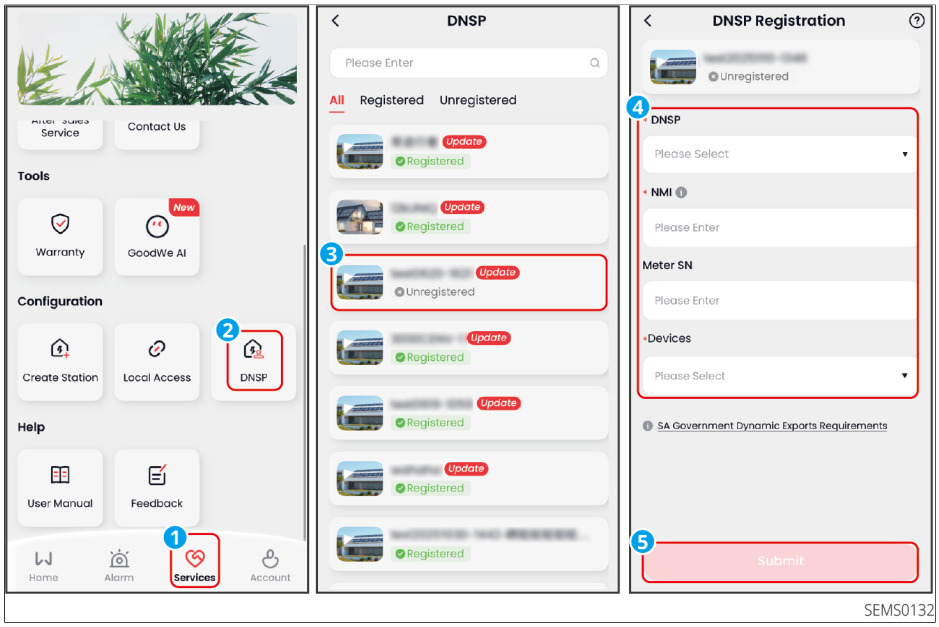


Figure25 DNSP Registration

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

DNSP Check Steps

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

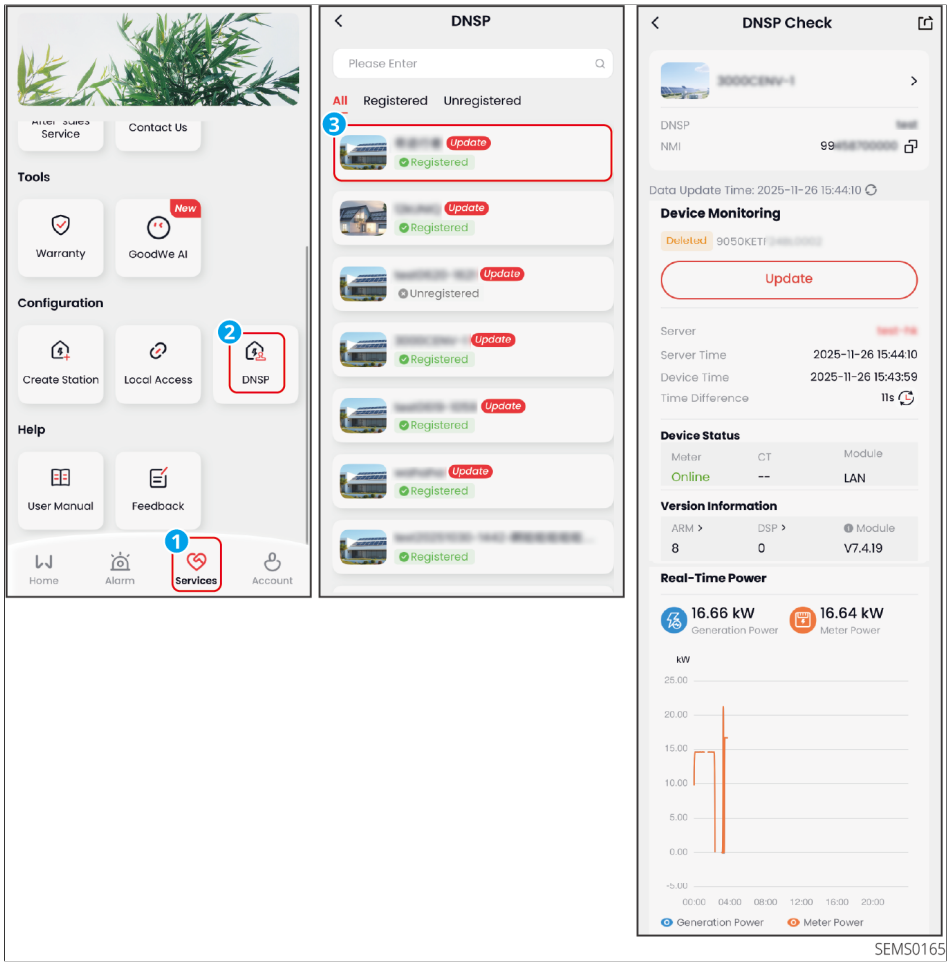


Figure26 DNSP Verification

4.2 Using AI Assistant

Through the GoodWe AI Assistant Q&A format, quickly obtain graphic and text information.

- Supports querying knowledge base information, such as GoodWe product device manuals, etc.
- 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"tap

2. Enter the question you need to ask in the dialog box, and it will quickly generate an answer.

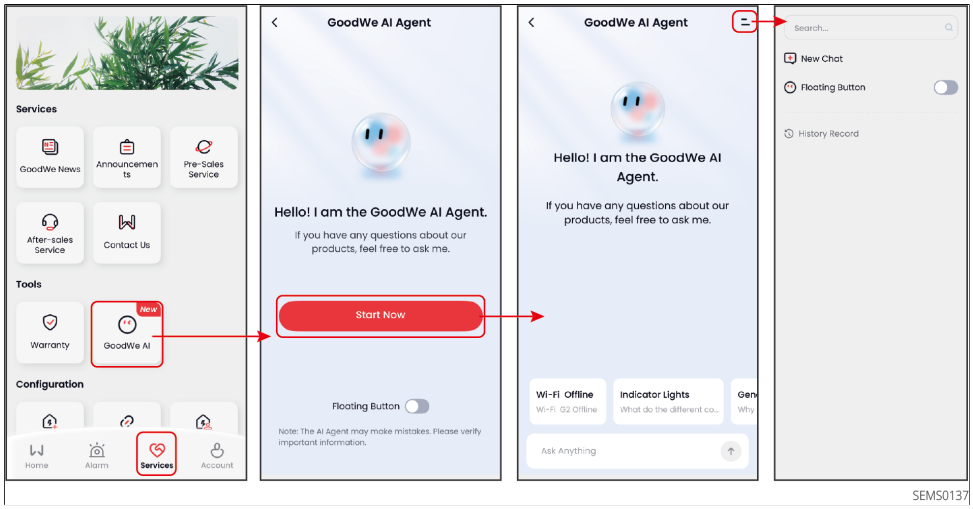


Figure27 AI Assistant

5 Account

5.1 Modify User Information

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

Steps:

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

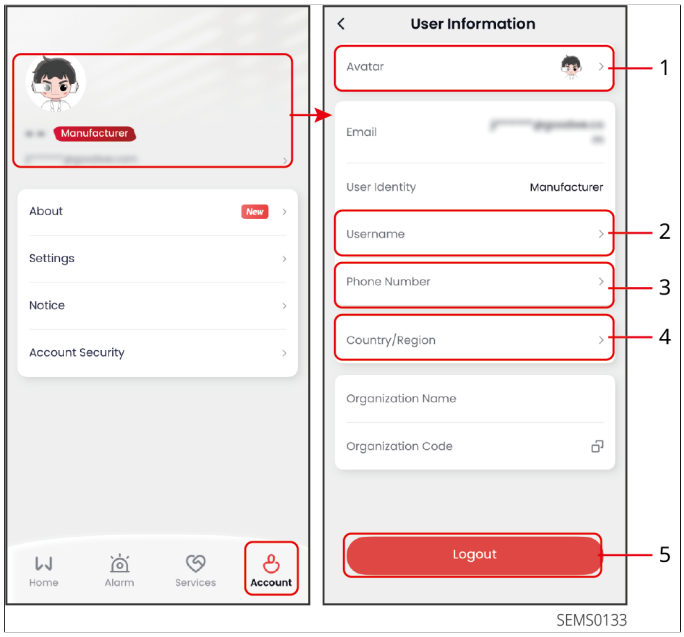


Figure28 Modify User Information

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

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

5.2 Set App Notification Information

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

Operation Steps

tap "Account" > "Notifications" to enter the notification settings interface, where you can enable or disable message notifications, set message types, etc.

- Alert Subscription Configuration: Once enabled, users can receive timely notifications when device alarms occur.
  - Supports setting push channels, such as receiving notifications via the App message center, email, etc.
  - Supports setting when to push alarm notifications.
  - Supports setting time periods and types for which notifications are not received.
- Shared Station Subscription: Receive notifications when a new station is shared.

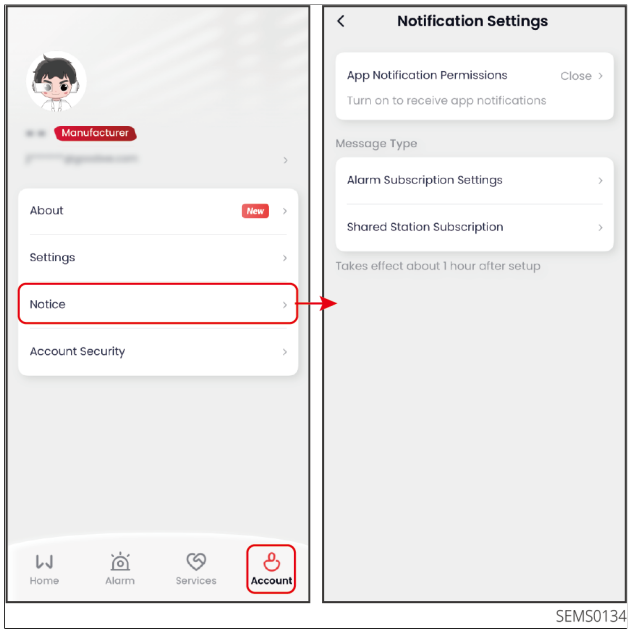


Figure29 Set App Notification Messages

5.3 Set Account Security Information

To ensure account security, you can modify your account's bound email, login password, and other information. You can also deregister accounts without power plants.

Steps

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

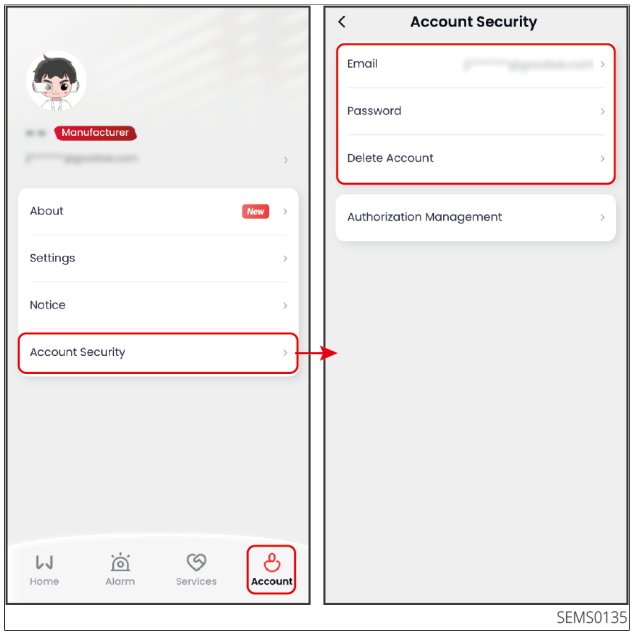


Figure30 Set Account Security Information

5.4 Configure Monitoring Permissions

NOTICE

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

Procedure

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

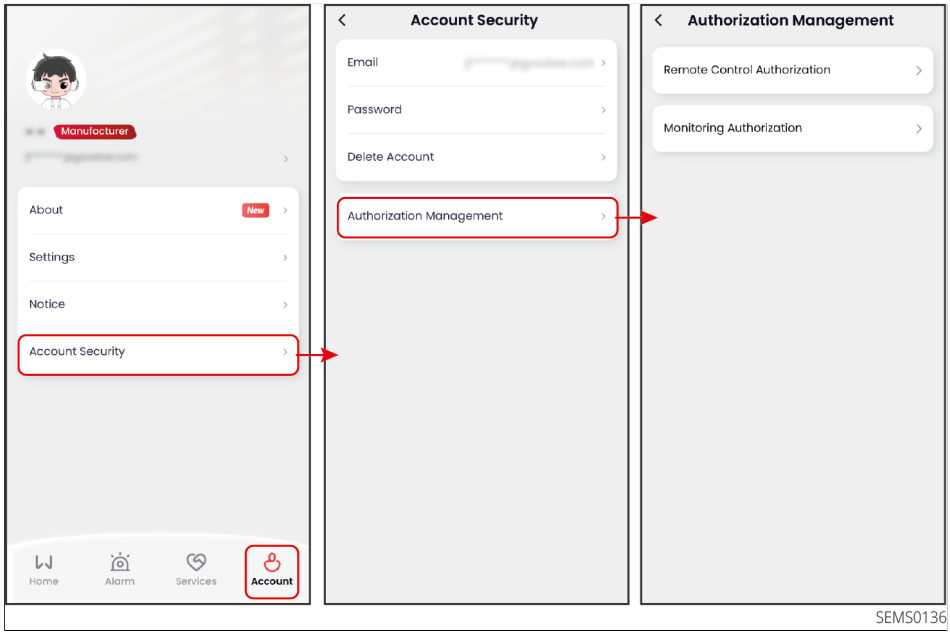


Figure31 Configure Monitoring Permissions

6 Troubleshooting

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

No.	Fault Name	Fault Cause	Handling Measures
5	Failed to retrieve data during operation	Communication between the device and the App is interrupted.	1. Check if communication between the device and the router is normal. 2. Check if communication between the router and the cloud is normal.

7 Appendix

7.1 Safety Compliance Countries

No.	Safety Standard Name	No.	Safety Standard Name
Europe			
1	IT-CEI 0-21	54	NI-G98
2	IT-CEI 0-16	55	IE-LV-16/25A
3	DE LV with PV	56	IE-LV-72A
4	DE LV without PV	57	IE-ESB-C&D(< 110kV)
5	DE-MV	58	IE-EirGrid-110kV
6	ES-A	59	PT-D
7	ES-B	60	EE
8	ES-C	61	NO
9	ES-D	62	FI-A
10	ES-island	63	FI-B
11	BE	64	FI-C
12	FR-LV	65	FI-D
13	FR-island-50Hz	66	UA-A1
14	FR-island-60Hz	67	UA-A2
15	type A-PL_V.1.1	68	EN 50549-1
16	type B-LV-PL_V.1.1	69	EN 50549-2
17	type C-PL_V.1.1	70	DK-West-B-MVHV
18	type D-PL_V.1.1	71	DK-East-B-MVHV
19	NL-16/20A	72	DK-West-C-MVHV
20	NL-A	73	DK-East-C-MVHV
21	NL-B	74	DK-West-D-MVHV
22	NL-C	75	DK-East-D-MVHV
23	NL-D	76	FR-Reunion

No.	Safety Standard Name	No.	Safety Standard Name
24	SE-A	77	BE-LV（>30kVA）
25	SE MV	78	BE-HV
26	SK-A	79	CH-B
27	SK-B	80	NI-G99-A
28	SK-C	81	NI-G99-B
29	HU	82	NI-G99-C
30	CH-A	83	NI-G99-D
31	CY	84	IE-LV-170kVA
32	GR	85	IE-MV&HV-200kVA
33	DK-West-A	86	DE-HV
34	DK-East-A	87	FR-MV
35	DK-West-B	88	CZ-A1/A2-09
36	DK-East-B	89	DE-EHV
37	AT < 1kV	90	IE-EirGrid-400KV
38	AT > 1kV	91	IE-EirGrid-220KV
39	BG	92	IE-EirGrid-66KV
40	Czech	93	IE-ESB-B
41	CZ-A1-09	94	IE-ESB-D(≥110kV)
42	CZ-A2-09	95	type B-MV-PL_V.1.1
43	CZ-B1/B2-09	96	GB-G99-A HV
44	CZ-C	97	GB-G99-B LV
45	CZ-D	98	GB-G99-C LV
46	RO-A	99	UA-B
47	RO-B	100	UA-C
48	RO-D	101	UA-D

No.	Safety Standard Name	No.	Safety Standard Name
49	GB-G98	102	UK-G98
50	GB-G99-A LV	103	UK-G99-A LV
51	GB-G99-B HV	104	UK-G99-B LV
52	GB-G99-C HV	105	UK-G99-C LV
53	GB-G99-D	106	CZ-A1
Global			
1	60Hz-Default	6	IEC 61727-60Hz
2	50Hz-Default	7	Warehouse
3	127Vac-60Hz-Default	8	IEC61727-480Vac-60Hz
4	127Vac-50Hz-Default	9	IEC61727-480Vac-50Hz
5	IEC 61727-50Hz		
Americas			
1	Argentina-220V-LV	38	LUMAPR-2024-220Vac-3P
2	US-208Vac	39	LUMAPR-2024-240Vac-3P
3	US-240Vac	40	Cayman
4	Mexico-220Vac	41	Brazil-220Vac
5	Mexico-440Vac	42	Brazil-208Vac
6	US-480Vac	43	Brazil-230Vac
7	US-208Vac-3P	44	Brazil-240Vac
8	US-220Vac-3P	45	Brazil-254Vac
9	US-240Vac-3P	46	Brazil-127Vac
10	US-CA-208Vac	47	Brazil-ONS
11	US-CA-240Vac	48	Barbados
12	US-CA-480Vac	49	Chile-BT
13	US-CA-208Vac-3P	50	Chile-MT-A
14	US-CA-220Vac-3P	51	Chile MT-B
15	US-CA-240Vac-3P	52	Colombia

No.	Safety Standard Name	No.	Safety Standard Name
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		
Oceania			
1	Australia-A	4	Newzealand
2	Australia-B	5	Newzealand:2015
3	Australia-C	6	NZ-GreenGrid

No.	Safety Standard Name	No.	Safety Standard Name
Asia			
1	China A	33	Israel-MV
2	China B	34	Israel-HV
3	China Higher Voltage	35	Vietnam
4	China Highest Voltage	36	Malaysia-LV
5	China Power Station	37	Malaysia-MV
6	China Shandong	38	DEWA-LV
7	China Hebei	39	DEWA-MV
8	China PCS	40	Saudi Arabia-220V-LV
9	Taiwan	41	JP-690Vac-50Hz
10	Hong Kong	42	JP-690Vac-60Hz
11	China Northeast	43	Srilanka-MV/HV
12	Thailand-MEA	44	IEC 61727-127Vac-50Hz
13	Thailand-PEA	45	IEC 61727-127Vac-60Hz
14	Mauritius	46	JP-550Vac-50Hz
15	Korea	47	JP-550Vac-60Hz
16	India	48	India-Higher
17	India-CEA	49	JP-220Vac-50Hz
18	Pakistan	50	JP-220Vac-60Hz
19	Philippines	51	Saudi Arabia-127V-LV
20	Philippines-127Vac	52	Srilanka-LV >1MW
21	JP-200Vac-50Hz	53	China-YN
22	JP-200Vac-60Hz	54	GB/T 29319-LV
23	JP-440Vac-50Hz	55	GB/T 29319-MV
24	JP-440Vac-60Hz	56	Philippines -277Vac
25	JP-420Vac-50Hz	57	JP-360Vac-50Hz
26	JP-420Vac-60Hz	58	JP-360Vac-60Hz
27	JP-480Vac-50Hz	59	JP-320Vac-50Hz
28	JP-480Vac-60Hz	60	JP-320Vac-60Hz

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

7.2 System Working Modes

NOTICE
The solar-plus-storage system supports setting the system working mode. The default working mode is Self-consumption mode. Working mode priority: Peakshaving > Delayed Charging > TOU > Backup > Self-consumption.

Self-consumption

The basic working mode of the system. PV generation primarily supplies power to the loads, excess electricity charges the battery, and any remaining electricity is sold to the grid. When PV generation cannot meet the load demand, 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 working mode, and the battery discharges to supply power to the loads, ensuring uninterrupted power for BACKUP loads. When the grid is restored, the inverter switches back to grid-tied working mode.

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

TOU Mode

Subject to compliance with local laws and regulations, electricity buying and selling is set according to different time periods based on the grid's peak and valley electricity price differences. According to actual needs, during valley price periods, the battery can be set to charging mode to buy electricity from the grid for charging. During peak price periods, the battery can be set to discharging mode to supply power to the loads.

Parameter Name	Description
Start Time	Within the Start Time and End Time, the battery charges or discharges according to the set charge/discharge mode and rated power.
End Time	
Charge/Discharge Mode	Set to charge or discharge based on actual requirements.
Charge Cut-off SOC	Charging stops when the battery's state of charge reaches the set SOC.
Grid Import Charging Power	The percentage of charging power relative to the inverter's rated power.
Battery Discharge Power	The percentage of discharging power relative to the inverter's rated power.

Off-grid Mode

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

Peakshaving

Primarily applicable to scenarios with limited peak power purchase. When the total load power consumption exceeds the electricity quota in a short period, battery discharge can be utilized to reduce the portion of consumption that exceeds the quota.

Parameter Name	Description
Reserved SOC for Demand Management	In Demand Management Mode, when the battery SOC is lower than the reserved SOC for demand management, this function is active. When the battery SOC is higher than the reserved SOC for demand management, the demand management function becomes inactive.
Grid Purchase Power 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 the Time Period for Charging from Grid, if the load power consumption does not exceed the grid purchase quota, the battery can be charged from the grid. Outside this time period, the battery can only be charged using the power generated by the PV system.

Delayed Charging

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

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 must be lower than the local specified output power limit.

Parameter Name	Description
Photovoltaic Priority Charging	Within the charging time range, photovoltaic power generation is prioritized for charging the battery.
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 with AI calculations for optimized scheduling to achieve maximum energy and economic efficiency. When using AI Mode, during the initial stage of collecting power station information, there may be discrepancies between the predicted curve and actual data.

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

- Dynamic Pricing: Obtain dynamic electricity prices from the power company, and combine 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 tariffs. Supports setting multiple tariff groups.

7.3 Inverter Parameters

Communication Parameters

Parameter Name	Description
RS485 Settings	Sets the communication address of the inverter as the master. For a single inverter, set the communication address according to the actual situation. When multiple inverters are connected, each inverter must have a different address, and none of the inverters should have their communication address set to 247.

Device Start/Stop Parameters

Parameter Name	Description
Start	Controls device startup, shutdown, and restart.
Stop	
Restart	

Environmental Control Parameters

Parameter Name	Description
Fan Control	
Fan reverses to remove dust	When enabled, the fan will periodically reverse automatically to remove dust.
External Fan Start Temperature Setting	When the device temperature reaches the set value, the external fan starts running.
Manual Fan Detection	Detects whether the fan can operate normally.

AC Side Setting Parameters

Parameter Name	Description
PV Connection Mode	For specific models, the photovoltaic string connection method for the Inverter MPPT ports can be manually configured to avoid misidentification of the connection method. Supported modes: • Independent Connection: External PV strings are connected one-to-one with the Inverter's PV input ports. • Partial Parallel Connection: 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. • Parallel Connection: When external PV strings are connected to the Inverter's PV input ports, multiple PV strings are first connected via a Y-cable and then split into multiple branches connected to several PV input ports.
AC Port Connection Settings	According to the Inverter port characteristics, it supports connection to loads, generators, microgrid devices, etc. For details, please refer to 7.3.4.Multipurpose Port Parameters(Page 93).
Backup Function Settings	
Backup	When enabled, if the grid fails, loads connected to the Inverter's BACK-UP port can be powered by the battery, ensuring uninterrupted power supply to the loads.
Detection Mode	• UPS Mode - Full-wave Detection: Detects whether the grid voltage is too high or too low. • UPS Mode - Half-wave Detection: Detects whether the grid voltage is too low. • EPS Mode - Supports Low Voltage Ride-Through: Disables the grid voltage detection function.
Off-grid First Cold Start	Takes effect only once. After enabling this function, the battery or PV can be used to output backup power in off-grid mode.

Parameter Name	Description
Off-grid Cold Start Holding	Takes effect multiple times. After enabling this function, the battery or PV can be used to output backup power in off-grid mode.
Clear Overload Fault	When the load power connected to the Inverter's BACK-UP port exceeds the rated load power, the Inverter will restart and detect the load power again. If not handled promptly, the Inverter will restart multiple times for load detection, with the interval between each restart progressively increasing. After the BACK-UP port load power is reduced to within the rated power range, tap this switch to clear the Inverter restart interval, and the Inverter will restart immediately.
Parallel Management	When Inverters are paralleled via RS485, it is necessary to manually set the master or slave attribute of the Inverter and configure information such as the slave address.
Type of Electrical Supply System	Select single-phase, split-phase, or three-phase grid according to 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	For three-phase Inverters connected to unbalanced loads, such as when L1, L2, and L3 are connected to loads of different power levels, the three-phase unbalanced output function needs to be enabled.
Unbalanced Phase Voltage Function	When enabled, the Inverter will perform power derating or power distribution based on the voltage values of each phase grid, maximizing power utilization.

PV Setting Parameters

Parameter Name	Description
PV Connection Mode	For some models, the connection method of the PV strings to the inverter MPPT ports can be manually set to avoid misidentification of the string connection method. Supported modes: • Independent Connection: External PV strings are connected one-to-one with the inverter-side PV input ports. • Partial Parallel Connection: When one PV string is connected to multiple MPPT ports on the inverter side, other PV modules may also be connected to other MPPT ports on the inverter side. • Parallel Connection: When external PV strings are connected to the inverter-side PV input ports, multiple PV strings are first connected via a Y-cable and then split into multiple branches connected to multiple PV input ports.
PID Settings	• During operation, a potential difference between the output electrodes and the grounded frame of a PV panel can, over time, lead to a decrease in the panel's power generation efficiency. This is known as Potential Induced Degradation (PID). • The PID function in GoodWe products works by raising the voltage difference between the PV panel and its frame, creating a positive voltage difference (referred to as raising the positive voltage), to achieve PID suppression. This is suitable for P-type panels and N-type panels that require a raised positive voltage to suppress the PID effect. For N-type panels that require a reduced negative voltage to suppress the PID effect, it is recommended to disable this function. Please consult your module supplier to determine if your N-type modules belong to the type that requires raising the positive voltage for PID suppression.

Parameter Name	Description
Shadow Scan Function	When PV panels are severely shaded, enabling the Shadow Scan function can optimize the inverter's power generation efficiency.

Battery Settings

Parameter Name	Description
Battery Activation	If purchasing an inactive battery, an activation code is required to enable the battery function.
BAT Port Connection Configuration	Select the battery connection mode based on the actual connection status of the battery.

Protection Parameters

Parameter Name	Description
Electrical Protection	
Lightning Protection Alarm	After enabling the lightning protection alarm function, an alarm will prompt for an abnormality when the surge protection device (SPD) module malfunctions.
AFCI Detection	• After enabling the AFCI function, it can monitor whether there is an arc fault hazard in the equipment. • tap "Arc Self-Test" to start the self-test of the arc fault detection module to confirm if its status is normal. View the result via the "AFCI Detection Status". • If the inverter triggers an arc alarm less than 5 times within 24 hours, the alarm can be cleared automatically. After the 5th arc alarm, the inverter shuts down for protection. You need to tap "Clear Arc Alarm" to clear the fault before the inverter can resume normal operation.

Parameter Name	Description
Backup N-PE Relay Switch	According to grid standard requirements in some countries or regions, it is necessary to ensure the internal relay of the BACK-UP port remains closed during off-grid operation, thereby connecting the N and PE lines.
Grid/On-Grid Protection	
Anti-islanding Protection	Enable or disable the anti-islanding protection function according to actual requirements.
NS Protection	Enable or disable the NS protection function according to standard requirements in some countries or regions.
Safety Regulations	
Grid Standard Code	Select the grid standard code according to the country or region where the inverter is located.
Safety Parameter Settings	Safety parameters must be set according to the grid company's requirements. Any changes require approval from the grid company.

General Setting Parameters

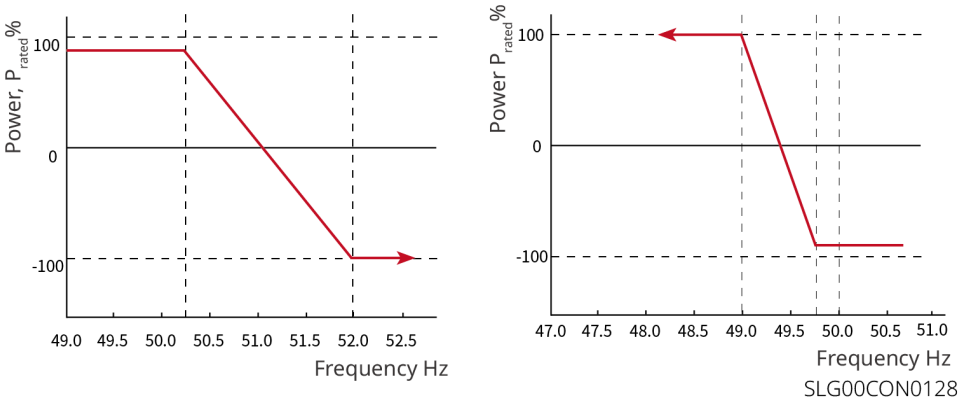
Parameter Name	Description
Device Self-Test	Start device status self-test.
Restore Factory Settings	Restore some functions to factory state.

7.3.1 Custom Safety Parameters

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

Active Power Mode

P(F) curve



P(U) curve

Parameter Name	Description
Generation Power Limit	Sets the limit for the inverter's output power.
Power Change Gradient	Sets the slope for increasing or decreasing active power output.
Over-frequency Power Reduction	
P(F) Curve	Enable this function when setting the P(F) curve is required according to grid standards in certain countries or regions.
Over-frequency Reduction Mode	Set the over-frequency power reduction mode based on actual requirements. • Slope Mode: Adjusts power based on the over-frequency point and reduction slope. • Stop Mode: Adjusts power based on the over-frequency start point and end point.
Over-frequency Start Point	When grid frequency is too high, the inverter reduces its active power output. When grid frequency exceeds this value, the inverter begins to reduce output power.
Sell/Buy Power Transition Frequency	When the set frequency value is reached, the system transitions from selling power to buying power.

Parameter Name	Description
Over-frequency End Point	When grid frequency is too high, the inverter reduces its active power output. When grid frequency exceeds this value, the inverter stops further reducing output power.
Over-frequency Power Slope Reference Power	Adjusts the inverter's active power output based on rated power, current power, apparent power, or maximum active power as the reference.
Over-frequency Power Slope	When grid frequency exceeds the over-frequency point, the inverter reduces output power according to this slope.
Tentional Delay Ta	The delay response time for inverter output power changes when grid frequency exceeds the over-frequency point.
Hysteresis Function Enable	Enables the hysteresis function.
Frequency Hysteresis Point	During over-frequency reduction, if the frequency decreases, the power output is maintained at the lowest point of the reduced power until the frequency falls below the hysteresis point, then power recovers.
Hysteresis Wait Time	For over-frequency reduction with decreasing frequency, when the frequency falls below the hysteresis point, this is the wait time before power recovery begins.
Hysteresis Power Recovery Slope Reference Power	For over-frequency reduction with decreasing frequency, when the frequency falls below the hysteresis point, this is the reference for power recovery, i.e., power recovery rate is based on recovery slope * reference power. Supported: Pn (Rated Power), Ps (Apparent Power), Pm (Current Power), Pmax (Maximum Power), Power Difference (△P).
Hysteresis Power Recovery Slope	For over-frequency reduction with decreasing frequency, when the frequency falls below the hysteresis point, this is the power change slope during power recovery.
Under-frequency Power Increase	

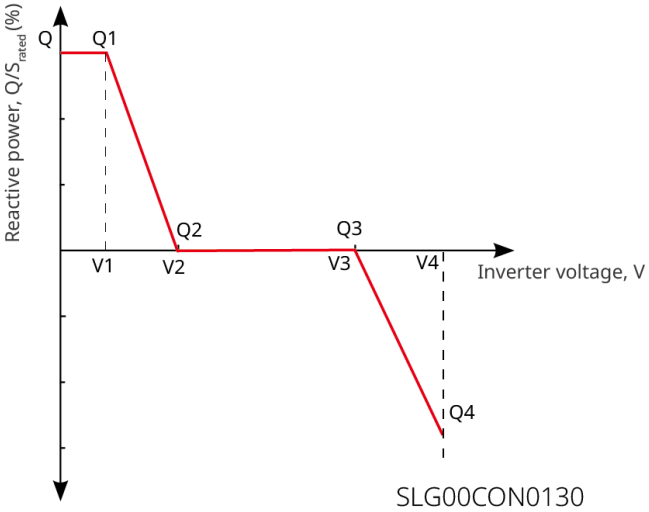
Parameter Name	Description
P(F) Curve	Enable this function when setting the P(F) curve is required according to grid standards in certain countries or regions.
Under-frequency Increase Mode	Set the under-frequency power increase mode based on actual requirements. • Slope Mode: Adjusts power based on the under-frequency point and increase slope. • Stop Mode: Adjusts power based on the under-frequency start point and end point.
Under-frequency Start Point	When grid frequency is too low, the inverter increases its active power output. When grid frequency falls below this value, the inverter begins to increase output power.
Sell/Buy Power Transition Frequency	When the set frequency value is reached, the system transitions from selling power to buying power.
Under-frequency End Point	When grid frequency is too low, the inverter increases its active power output. When grid frequency falls below this value, the inverter stops further increasing output power.
Over-frequency Power Slope Reference Power	Adjusts the inverter's active power output based on rated power, current power, apparent power, or maximum active power as the reference.
Under-frequency Power Slope	When grid frequency is too low, the inverter increases its active power output. This is the slope for the increase in inverter output power.
Tentional Delay Ta	The delay response time for inverter output power changes when grid frequency falls below the under-frequency point.
Hysteresis Function Enable	Enables the hysteresis function.

Parameter Name	Description
Frequency Hysteresis Point	During under-frequency increase, if the frequency increases, the power output is maintained at the lowest point of the increased power until the frequency rises above the hysteresis point, then power recovers.
Hysteresis Wait Time	For under-frequency increase with increasing frequency, when the frequency rises above the hysteresis point, this is the wait time before power recovery begins.
Hysteresis Power Recovery Slope Reference Power	For under-frequency increase with increasing frequency, when the frequency rises above the hysteresis point, this is the reference for power recovery, i.e., power recovery rate is based on recovery slope * reference power. Supported: Pn (Rated Power), Ps (Apparent Power), Pm (Current Power), Pmax (Maximum Power), Power Difference (△P).
Hysteresis Power Recovery Slope	For under-frequency increase with increasing frequency, when the frequency rises above the hysteresis point, this is the power change slope during power recovery.
P(U) Curve Enable	Enable this function when setting the P(U) curve is required according to grid standards in certain countries or regions.
Vn Voltage	The ratio of the actual Vn point voltage to the rated voltage, where n=1, 2, 3, 4. For example: Setting to 90 means: V/Vrated% = 90%.
Vn Active Power	The ratio of the inverter's active power output at the Vn point to the apparent power, where n=1, 2, 3, 4. For example: Setting to 48.5 means: P/Prated% = 48.5%.
Output Response Mode	Sets the active power output response mode. Supported: • First-order Low-pass Filter: Achieves output regulation according to a first-order low-pass curve within the response time constant. • Slope Scheduling: Achieves output regulation according to the set power ramp rate.

Parameter Name	Description
Power Ramp Rate	When the output response mode is set to Slope Scheduling, active power scheduling is implemented according to the power ramp rate.
PT-1 Behavior Tau	When the output response mode is set to First-order Low-pass Filter, this is the time constant for active power changes following 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 equal to the rated power.

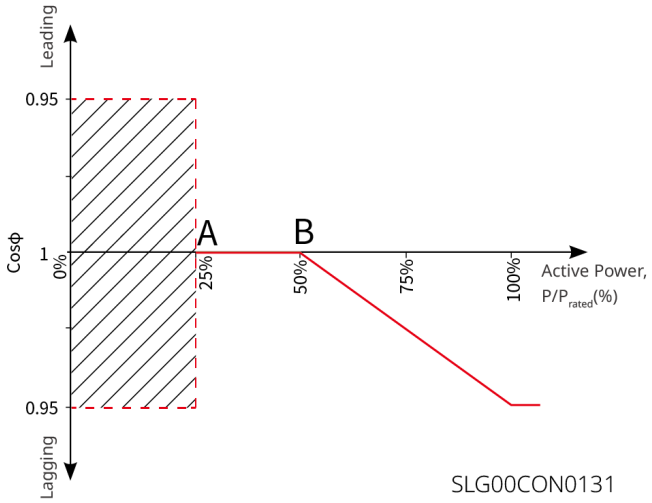
Reactive Power Mode

Q(U) curve



SLG00CON0130

Cosφ curve



SLG00CON0131

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

Parameter Name	Description
Mode Selection	Set the Q(U) curve mode. Supports Basic Mode and Slope Mode.
Vn Voltage	Ratio of the actual Vn point voltage to the rated voltage, where n=1, 2, 3, 4.
	For example: Setting it to 90 means: V/Vrated% = 90%.
Vn Reactive Power	Ratio of the reactive power output by the inverter at the Vn point to the apparent power, where n=1, 2, 3, 4. For example: Setting it to 48.5 means: Q/Srated% = 48.5%.
Voltage Deadband Width	Set the voltage deadband when the Q(U) curve mode is set to Slope Mode. There is no requirement for reactive power output within the deadband range.
Over-excited Slope	When the Q(U) curve mode is set to Slope Mode, set the power change slope to a positive or negative value.
Under-excited Slope	
Vn Reactive Power	Ratio of the reactive power output by the inverter at the Vn point to the apparent power, where n=1, 2, 3, 4. For example: Setting it to 48.5 means: Q/Srated% = 48.5%.
Q(U) Curve Response Time Constant	The power must reach 95% according to a first-order low-pass curve within 3 response time constants.
Extended Function Enable	Enable the extended function and set the corresponding parameters.
Enter Curve Power	When the ratio of the inverter's output reactive power to the rated power is between the Enter Curve Power and Exit Curve Power, the Q(U) curve requirements are met.
Exit Curve Power	
cosφ(P) Curve	
cosφ(P) Curve	Select this function when setting the Cosφ curve is required according to the grid standards of certain countries or regions.

Parameter Name	Description
Mode Selection	Set the cosφ(P) curve mode. Supports Basic Mode and Slope Mode.
N Point Power	N point inverter output active power / rated power percentage. N=A, B, C, D, E.
N Point cosφ Value	N point Power Factor. N=A, B, C, D, E.
Over-excited Slope	When the cosφ(P) curve mode is set to Slope Mode, set the power change slope to a positive or negative value.
Under-excited Slope	
n Point Power	N point inverter output active power / rated power percentage. N=A, B, C.
n Point cosφ Value	N point Power Factor. N=A, B, C.
cosφ(P) Curve Response Time Constant	The power must reach 95% according to a first-order low-pass curve within 3 response time constants.
Extended Function Enable	Enable the extended function and set the corresponding parameters.
Enter Curve Voltage	When the grid voltage is between the Enter Curve Voltage and Exit Curve Voltage, the voltage meets the Cosφ curve requirements.
Exit Curve Voltage	
Q(P) Curve	
Q(P) Curve Enable	Enable this function when setting the Q(P) curve is required according to the grid standards of certain countries or regions.
Mode Selection	Set the Q(P) curve mode. Supports Basic Mode and Slope Mode.

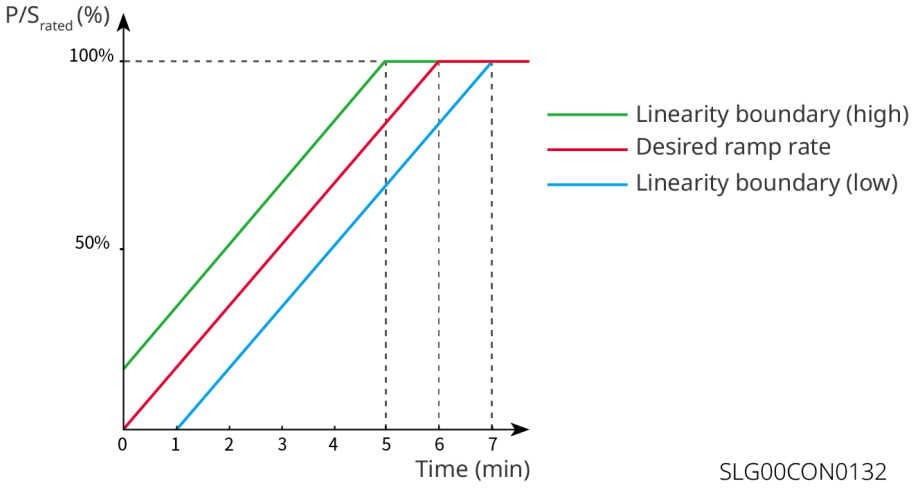
Parameter Name	Description
Pn Point Power	Ratio of reactive power at the Pn point to the rated power, where n=1, 2, 3, 4, 5, 6. For example: Setting it to 90 means: Q/Prated% = 90%.
Pn Point Reactive Power	Ratio of active power at the Pn point to the rated power, where n=1, 2, 3, 4, 5, 6. For example: Setting it to 90 means: P/Prated% = 90%.
Over-excited Slope	When the Q(P) curve mode is set to Slope Mode, set the power change slope to a positive or negative value.
Under-excited Slope	
Pn Point Power	Ratio of reactive power at the Pn point to the rated power, where n=1, 2, 3. For example: Setting it to 90 means: Q/Prated% = 90%.
Pn Point Reactive Power	Ratio of active power at the Pn point to the rated power, where n=1, 2, 3. For example: Setting it to 90 means: P/Prated% = 90%.
Response Time Constant	The power must reach 95% according to a first-order low-pass curve within 3 response time constants.

Grid Protection Parameters

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

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

Grid Connection Parameters



SLG00CON0132

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

Parameter Name	Description
Fault Reconnection	
Upper Connection Voltage 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.
Lower Connection Voltage 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.
Upper Connection Frequency 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.
Lower Connection Frequency Limit	When the inverter reconnects to the grid after a fault, if the grid frequency is lower than this value, the inverter will be unable to connect to the grid.
On-Grid Waiting Time	When the inverter reconnects to the grid after a fault, the waiting time before connecting to the grid after the grid voltage and frequency meet the on-grid requirements.
Reconnection Ramp Up Slope Enable	Enable the Soft Ramp Up Slope function.
Reconnection Ramp Up Slope	According to the standards of certain countries or regions, the percentage of power output increase per minute when the inverter connects to the grid non-initially. For example: Setting it to 10 indicates a reconnection ramp up slope of: 10% P/Srated/min.

Voltage Fault Ride-Through Parameters

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

Parameter Name	Description
UVn Point Time	During low voltage ride-through, the ride-through time at the LVRT characteristic point. n=1, 2, 3, 4, 5, 6, 7.
LVRT Entry Threshold	When the grid voltage is between the LVRT entry threshold and the LVRT exit threshold, the inverter does not immediately disconnect from the grid.
LVRT Exit Threshold	
Slope K1	The K-value coefficient for reactive power support during low voltage ride-through.
Zero Current Mode Enable	When enabled, the system outputs zero current during low voltage ride-through.
Entry Threshold	Threshold for entering zero current mode.
High Voltage Ride-Through (HVRT)	
OVn Point Voltage	During high voltage ride-through, the ratio of the ride-through voltage at the HVRT characteristic point to the rated voltage. n=1, 2, 3, 4, 5, 6, 7.
OVn Point Time	During high voltage ride-through, the ride-through time at the HVRT characteristic point. n=1, 2, 3, 4, 5, 6, 7.
HVRT Entry Threshold	When the grid voltage is between the HVRT entry threshold and the HVRT exit threshold, the inverter does not immediately disconnect from the grid.
HVRT Exit Threshold	
Slope K2	The K-value coefficient for reactive power support during high voltage ride-through.
Zero Current Mode Enable	During high voltage ride-through, the system outputs zero current.
Entry Threshold	Threshold for entering zero current mode.

Frequency Fault Ride-Through Parameters

Parameter Name	Description
Frequency Crossing Enable	Enable the frequency crossing 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.

7.3.2 Export Power Scheduling Parameters

Export power limit (General)

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

Export power limit (AU

Parameter Name	Description
Soft Limit	Enable this function when output power needs to be limited according to grid standards in certain countries or regions.

Parameter Name	Description
Limit Setting	• Set based on the actual maximum power that can be fed into the grid. • Supports setting a fixed power value or a percentage. The set percentage is the ratio of the limited power to the inverter's rated power. • After setting a fixed value, the percentage automatically adjusts accordingly; after setting a percentage, the fixed value automatically adjusts accordingly.
Hard Limit	When this function is enabled, the inverter will automatically disconnect from the grid if the power fed into the grid exceeds the limit value.

Export power limit (UK)

Parameter Name	Description
Power Export Limit	Enable this function when it is necessary to limit the output power according to the grid standards of certain countries or regions.
Mode Selection	• Some models require selecting a current limiting mode. Supported modes: Phase current, Total current. • When set to Phase current, the current per phase is limited; when set to Total current, the three-phase total current is limited.
Current Limit	Set according to the actual maximum current that can be fed into the grid.

Export power limit (Brazil)

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

Please download the template as prompted by the interface and configure the power limit information for different time periods. Once the template is filled out, upload it to the App to complete the time-of-use power limit configuration.

Power Scheduling

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

Parameter Name	Description
Night Reactive Power Scheduling Mode	According to the requirements of the grid company in the country/region where the inverter is located, control the night reactive power according to the selected scheduling mode. Supports: • Disabled: Do not enable reactive dispatch. • Night Reactive Power Scheduling (Var): Dispatch according to a fixed value. • Night Reactive Power Scheduling (%Pn): Dispatch according to the percentage of reactive power to rated power.

Power Scheduling Response Parameters

Parameter Name	Description
Active Power Dispatch Response Mode	Achieves the active power dispatch value through a dispatch response method, supporting: • 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 filtering curve. • Slope mode, i.e., achieving active power dispatch according to the power change slope, and setting the active power dispatch change slope.

Parameter Name	Description
Reactive Power Dispatch Response Mode	Achieves the reactive power dispatch value through a dispatch response method, supporting: • 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 filtering curve. • Slope mode, i.e., achieving reactive power dispatch according to the power change slope, and setting the reactive power dispatch change slope.

7.3.3 Grid Remote Dispatch Parameters

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

- Remote Shutdown: Achieve remote shutdown functionality through signal control ports. When an accident occurs, the device can be controlled to stop working.
- DRED (Demand Response Enabling Device): Control the device through the DRED signal control port to meet the DERD certification requirements in regions such as Australia.
- RCR (Ripple Control Receiver): Control the device through the RCR signal control port to meet the grid dispatch requirements in regions such as Germany.
- EnWG (Energy Industry Act) 14a: All controllable loads need to accept the grid's emergency adjustment. Grid operators can temporarily reduce the maximum grid purchase power of controllable loads to 4.2kW.

7.3.4 Multiport Parameters

Load Control Parameters
When the Inverter supports the load control function, the load can be controlled via the App.
For the ET40-50kW series Inverter, the load control function is only supported when the inverter is used with an 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 begins; 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 be powered on or off. 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	Applicable only to Smart Mode. The minimum operating time after the load is turned on, to prevent the load from frequent switching due to energy fluctuations.
Load Rated Power	Applicable 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's the STS built-in control port), which can control whether to supply power to the load. In off-grid mode, if overload on the BACK-UP port or GENERATOR port is detected or 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 connection and control are only supported when the inverter is used with an STS.

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

- No Generator Connected: When no generator is connected to the energy storage system, please select 'No Generator Connected'.
- Manual Generator Control (Dry Contact Connection Not Supported): Requires manual control of generator start/stop; the inverter cannot control generator start/stop.
- Automatic Generator Control (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 ON, the generator operates; the generator can automatically stop after running for the set duration.
  - Automatic Control Mode: Generator operation is prohibited during the set prohibited operation time period, and operates during the set operation time period.

Parameter Name	Description
Dry Node Control Method	Switch control mode/Automatic control mode.
Switch Control Mode	
Diesel Generator Dry Node Switch	Only applicable to switch control mode.
Run Time	The generator's continuous run time. After reaching this time, the generator stops running.
Automatic Control Mode	
Prohibited Operation Time	Set the time period when the generator is prohibited from running.
Run Time	The continuous run time after the generator starts. After reaching this time, the generator stops running. If the generator's run time includes the prohibited operation time, the generator stops running during this period; after the prohibited operation time, the generator resumes running and timing.

Parameter Name	Description
Generator Information Settings	
Rated Power	Set the rated power for generator operation.
Operating Time	Set the continuous operating time of 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.
Diesel Generator Battery Charging Setting	
Switch	Select whether to use generator power to charge the battery.
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 generator start. The generator starts to charge the battery when the battery SOC falls below this value.
Stop Charging SOC	When connected to a lithium battery, set the SOC threshold for generator stop. The generator stops charging the battery when the battery SOC rises above this value.
Start Charging Voltage	When connected to a lead-acid battery, set the voltage threshold for generator start. The generator starts to charge the battery when the battery voltage falls below this value.
Stop Charging Voltage	When connected to a lead-acid battery, set the voltage threshold for generator stop. The generator stops charging the battery when the battery voltage rises above this value.

Microgrid Control Parameters

Parameter Name	Description
Maximum Battery Charging SOC	When the battery type is lithium battery, set the upper limit for charging SOC. Charging stops once this limit is reached.
Maximum Battery Charging Voltage	When the battery type is lead-acid battery, set the upper limit for charging voltage. Charging stops once this limit is reached.
Microgrid Forced Start Charging	• During a grid fault, if the battery level is too low to support the energy storage inverter's off-grid operation. tap this button to forcibly start the energy storage inverter to output voltage to the grid-tied inverter, thereby starting the grid-tied inverter. • Effective once.
Hourly Trigger	• 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 forcibly start the energy storage inverter at a fixed time to output voltage to the grid-tied inverter, thereby starting the grid-tied inverter. • Effective multiple times.
Grid Limit Power Offset Value	Set the adjustable range for the maximum power the device can actually purchase from the grid.

7.4 Battery Parameters

Parameter Settings - Information Configuration
Select the battery model according to the actual connected battery type.

Parameter Settings - Lead-Acid Battery Settings
When connecting a lead-acid battery, you need to set the lead-acid battery parameters.

Parameter Name	Description
Battery Parameters	
BMS Battery Capacity	Set the battery capacity based on actual parameters.
BMS Battery Internal Resistance	Set the battery internal resistance based on actual parameters.
BM Temperature Compensation	• When the battery temperature changes, the battery charging voltage is affected. Based on 25℃, for every degree change in battery temperature, adjust the charging voltage upper limit according to the set value. • For example, if the charging temperature influence coefficient is set to 10, when the battery temperature rises to 26 degrees, the charging voltage upper limit decreases by 10mV.
Discharge Parameters	
Discharge Parameters	Set the parameters for battery discharge based on actual requirements.
Charging Parameters	
Constant Charging Voltage	Set the voltage value for battery constant charging based on actual requirements.
Float Charging Voltage	Set the voltage value for battery float charging based on actual requirements.
Float Charging Current	The maximum charging current after the battery charging mode switches from constant/equalization charging to float charging.
Switch to Float Charging Mode	The time required for the battery charging mode to switch from constant/equalization charging to float charging.
Equalization Charging Cycle	Set the interval days for battery equalization charging.

Parameter Settings - Lithium Battery Settings

When connecting a lithium battery, you need to set the lithium battery parameters.

Parameter Name	Description
Maximum Charging Current	Applicable to some models. Set the maximum charging current for the battery during charging according to actual requirements.
Maximum Discharge Current	Applicable to some models. Set the maximum discharge current for the battery during discharging according to actual requirements.
Battery Heating	• Optional. This option is displayed on the interface when a battery with heating function is connected. After enabling the battery heating function, PV generation or grid power will be used to heat the battery when the battery temperature does not support startup. • The heating mode temperatures corresponding to different battery models vary. Please refer to the actual situation. • Enabling the battery heating function consumes a portion of the system power. The battery heating function is enabled by default to operate in low-power mode, and can be switched to other power modes if needed. • The start and stop of the battery heating function are automatically controlled by the BMS based on ambient temperature. Therefore, the installation environment and location of the device will affect the start and stop of the heating function. • Supports setting the heating time period according to actual needs, but within the time period, the heating function is still automatically started and stopped based on ambient temperature. • If PV and AC power only meet the load power consumption, and the battery power is insufficient to support self-heating, the heating function cannot be enabled.

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

Protection Parameters - Limit Protection

Parameter Name	Description
SOC Upper Limit	The upper limit for battery charging; charging stops when the battery SOC reaches the SOC upper limit.
SOC Protection	When enabled, if the battery capacity falls below the set depth of discharge, protection can be activated for the battery.
Battery Grid-connected DOD	The maximum discharge allowed for the battery when the inverter is operating in grid-connected mode.
Battery Off-grid DOD	The maximum discharge allowed for the battery when the inverter is operating in off-grid mode.
Backup SOC Maintenance	To ensure that the battery SOC is sufficient to maintain normal operation when the system is off-grid, during grid-connected operation, the battery will be charged by purchasing electricity from the grid to reach the set SOC protection value.

Parameter Name	Description
Off-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 only used to charge the battery until the battery SOC recovers to the off-grid recovery SOC value. If the SOC lower limit is higher than the off-grid recovery SOC value, charge 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. Takes effect only once.
Stop Charging SOC	Charging stops when the battery SOC reaches the Immediate Charging SOC upper limit.
Immediate Charging Power	The percentage of the inverter's rated power used for charging when Immediate Charging starts. For example, for a 10kW rated inverter, setting this to 60 results in a 6kW charging power.
Start	Start charging immediately.
Stop	Stop the current charging task immediately.

7.5 Smart Meter Parameters

Parameter Name	Description
Meter Binding	• When a photovoltaic system uses both grid-tied inverters and energy storage inverters to achieve coupling or microgrid functionality, dual meters may be employed in the system. Please set the meter binding information according to the actual usage scenario. • Only applicable to Growatt meters.

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

7.6 Smart Communication Stick Parameters

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

Communication Parameters

Parameter Name	Description
WLAN/LAN	
WLAN Control	Disabled by default. When this function is enabled, the App can connect to the device via WLAN when they are on the same local network. Otherwise, connection is not possible even on the same network.
Modbus TCP	When enabled, third-party platforms can access the inverter via the ModbusTCP protocol to achieve monitoring functions.
LAN	Automatically identifies the LAN network to which the device is connected.
WLAN	Select the actual WiFi network the device connects to, enabling communication between the device and the router or switch.
4G	

Parameter Name	Description
APN Settings	• APN settings are only applicable for configuring the SIM card information of 4G communication devices. • If the 4G module does not provide a Bluetooth signal, first configure the APN parameters via the Bluetooth module or WiFi module to enable 4G communication.
Bluetooth	
Bluetooth Stays On	Disabled by default. When this function is enabled, 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.

Password

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

Control/Enable Parameters

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

7.7 Home Energy Management Device Parameters

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

Grid Control Parameters

No.	Parameter Name	Description
1	Enable Function	Enable this function when it is necessary to limit the output power according to the grid standards of certain countries or regions.
2	Power Limit	Set the maximum power the device can actually feed into the grid according to the requirements of certain countries or regions.
3	Power Limited Type	Select the method for controlling the device's output power based on the actual situation. • Total Power: Control the total power at the point of common coupling not to exceed the output power limit. • Single-Phase Power: Control the power of each phase at the point of common coupling not to exceed the output power limit.
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.
5	Reverse Power Protection Handling Method	When reverse power flow occurs in the system and exceeds the maximum protection time (default 5s), the following protective measures can be taken: • Power Limit: The device continues to operate at a percentage of the rated power. • Device disconnects from the grid.

No.	Parameter Name	Description
6	Power Limit Protection Handling	The device continues to operate at a percentage of the rated power.
7	Meter Communication Abnormality Handling	Enable this function to take protective measures when communication between the meter and the device is abnormal.
8	Meter Abnormality Handling Method	When meter communication abnormality occurs in the system, the following protective measures can be taken: • Power Limit: The device continues to operate at a percentage of the rated power. • Device disconnects from the grid.
9	Meter Handling Power Limit	The device continues to operate at a percentage of the rated power.

Power Control Parameters

No.	Parameter Name	Description
RCR: According to standards in regions such as Germany, the device must provide RCR (Ripple Control Receiver) signal control ports to meet grid dispatch requirements.		
1	RCR	Enable or disable the RCR function.

No.	Parameter Name	Description
2	Active Dispatch	• Based on grid company requirements and RCR fixture type, select one or more DI ports and set the corresponding percentage. The percentage refers to the system output power as a percentage of the rated power. • Supports configuration of 16 levels of percentage values. Please set according to the actual needs of the grid company. • Do not duplicate the state combinations of DI1-DI4, otherwise the function may not execute properly. • If the actual wiring of the DI ports does not match the set values, the operating status will not take effect.
3	Reactive Dispatch	• Based on grid company requirements and RCR fixture type, select one or more DI ports and set the corresponding PF value. • Supports configuration of 16 levels of power factor values. Please set according to the actual needs of the grid company. • PF value range requirements: [-100, -80] or [80, 100]. [-100, -80] corresponds to lagging power factor [-0.99, -0.8], [80, 100] corresponds to leading power factor [0.8, 1]. • Do not duplicate the state combinations of DI1-DI4, otherwise the function may not execute properly. • If the actual wiring of the DI ports does not match the set values, the operating status will not take effect.
RCR&EnWG 14a: • According to standards in regions such as Germany, the device must provide RCR (Ripple Control Receiver) signal control ports to meet grid dispatch requirements. • For regions applicable to the EnWG 14a regulation, all controllable loads must accept emergency dimming from the grid. Grid operators can temporarily reduce the maximum grid import power of controllable loads to 4.2 kW.		
4	RCR&EnWG 14a	Enable or disable the RCR&EnWG 14a function.

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

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, first manually turn on the device, then tap Recovery On-Grid Immediate.

Other Parameters

No.	Parameter Name	Description
Electric Meter Settings		
1	Select Meter	Select the actual connected electric meter model.
2	Wiring Mode	Set the meter's wiring method. Supported: • Single-phase, two-wire • Three-phase, three-wire • Three-phase, four-wire
3	CT Ratio	• Set when the meter model is GM330. • Set the meter's CT ratio value.
Antenna Settings		
4	Select Antenna	Select the built-in antenna or external antenna according to the actual situation.
Time Settings		
5	Network Time Synchronization	After enabling, select the time server to synchronize time based on the chosen time source.

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

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

7.8 Operation and Maintenance Parameters

Parameter Name	Description
Firmware Upgrade	• Supports viewing or upgrading software versions such as the inverter's DSP version, ARM version, BMS version, AFCI version, STS version, communication module, etc. • Some devices do not support upgrading software versions via the App. Please refer to the actual device.
Log Export	• Supports exporting, downloading, and sharing logs. • Supports exporting different types of logs, such as communication module logs, inverter logs, etc. • Some models support exporting safety parameter files after selecting the safety regulation country.
Utility grid	
Auto Test	Enable this function when automatic grid connection testing needs to be set up according to the grid standards of certain countries or regions.

7.9 Australia Safety Regulations

For the Australian market, to comply with AS/NZS 4777.2:2020, please select from Australia A, Australia B, Australia C, or New Zealand. Please contact your local electricity grid operator on which Region to select.
Selecting a Region B should then automatically load all region B setpoints for volt-watt, volt-var, underfrequency, overfrequency, etc.

Volt–var response set-point values

Region	Default value	U1	U2	U3	U4
Australia A	Voltage	207V	220V	240V	258V
	Inverter reactive power level (Q) % of S_{rated}	44 % supplying	0%	0%	60 % absorbing
Australia B	Voltage	205V	220V	235V	255V
	Inverter reactive power level (Q) % of S_{rated}	30 % supplying	0%	0%	40 % absorbing
Australia C	Voltage	215V	230V	240V	255V
	Inverter reactive power level (Q) % of S_{rated}	44 % supplying	0%	0%	60 % absorbing
New Zealand	Voltage	207V	220V	235V	244 V
	Inverter reactive power level (Q) % of S_{rated}	60 % supplying	0%	0%	60 % absorbing
Allowed range	Voltage	180 to 230 V	180 to 230 V	230 to 265 V	230 to 265 V

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

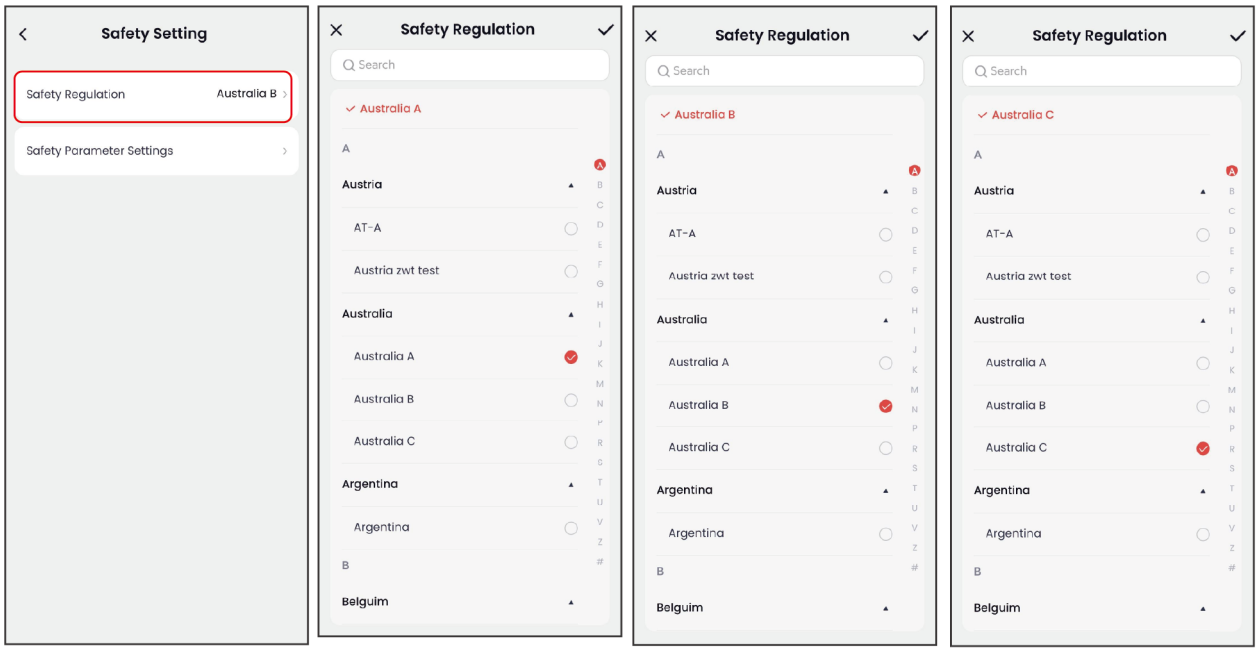
Protective function	Protective function limit	Trip delay time	Maximum disconnection time
Undervoltage 2 (V < <)	70 V	1 s	2 s
Undervoltage 1 (V <)	180 V	10 s	11 s
Overvoltage 1 (V >)	265 V	1 s	2 s
Overvoltage 2 (V > >)	275V	-	0.2 s

Upper connection and reconnection frequency (f_{URF})

Region	f_{URF}
Australia A	50.15 Hz
Australia B	50.15 Hz
Australia C	50.50 Hz
New Zealand	50.15 Hz

Steps to set the safety country:

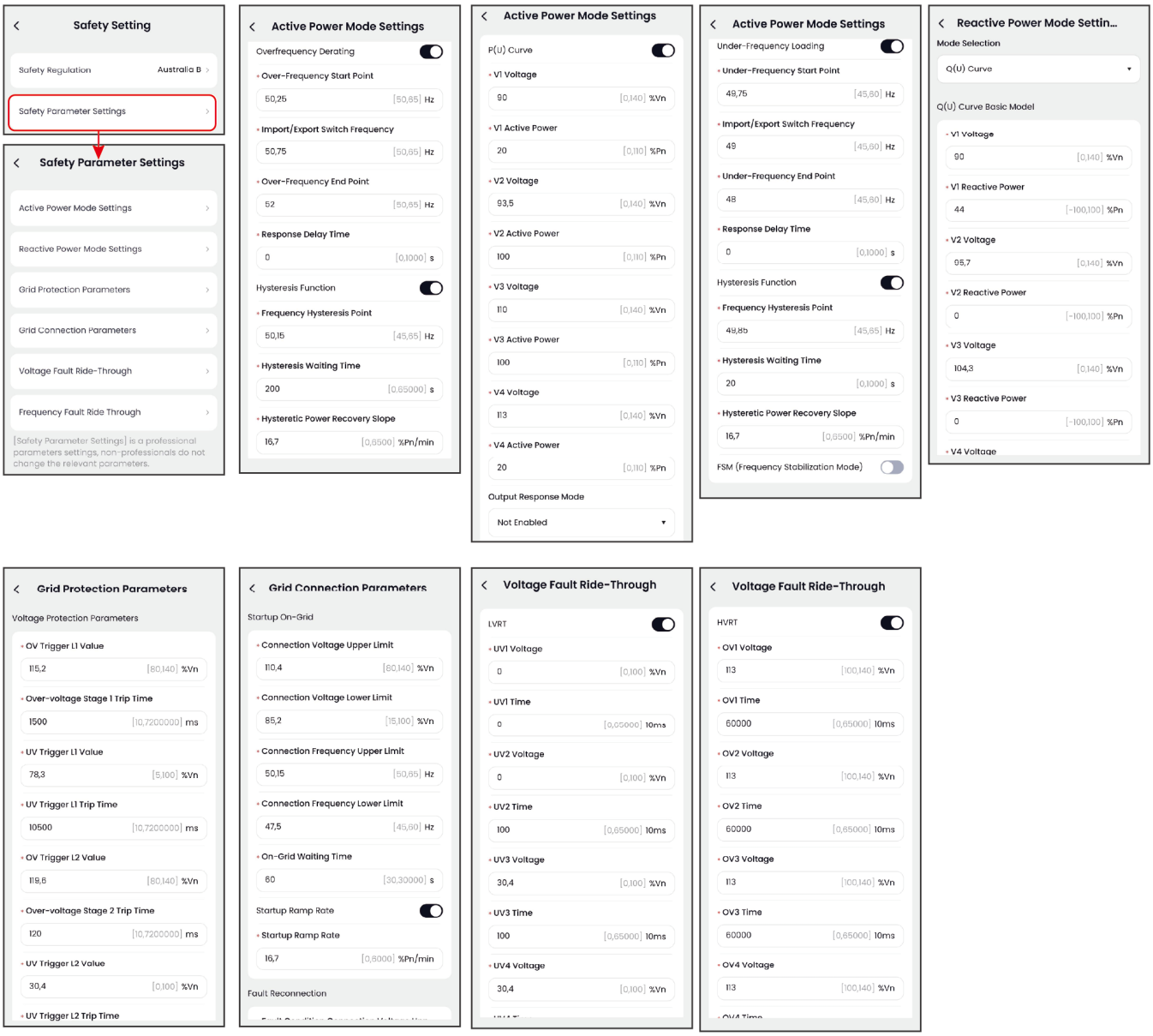
1. Login to the App. Go to "Protection" > "Safety Setting" >"Safety Regulation" on the device details interface.
2. Set the safety code to Australia A/B/C/New Zealand based on actual needs.



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


Safety Setting
Safety Regulation
Australia B
Safety Parameter Settings
Safety Parameter Settings
Active Power Mode Settings
Reactive Power Mode Settings
Grid Protection Parameters
Grid Connection Parameters
Voltage Fault Ride-Through
Frequency Fault Ride Through
[Safety Parameter Settings] is a professional parameters settings, non-professionals do not change the relevant parameters.
Active Power Mode Settings
Overfrequency Derating
Over-Frequency Start Point
50,25 [50,65] Hz
Import/Export Switch Frequency
50,75 [50,65] Hz
Over-Frequency End Point
52 [50,65] Hz
Response Delay Time
0 [0,1000] s
Hysteresis Function
Frequency Hysteresis Point
50,15 [45,65] Hz
Hysteresis Waiting Time
200 [0,65000] s
Hysteretic Power Recovery Slope
16,7 [0,6500] %Pn/min
Active Power Mode Settings
P(U) Curve
V1 Voltage
90 [0,140] %Vn
V1 Active Power
20 [0,110] %Pn
V2 Voltage
93,5 [0,140] %Vn
V2 Active Power
100 [0,110] %Pn
V3 Voltage
110 [0,140] %Vn
V3 Active Power
100 [0,110] %Pn
V4 Voltage
113 [0,140] %Vn
V4 Active Power
20 [0,110] %Pn
Output Response Mode
Not Enabled
Active Power Mode Settings
Under-Frequency Loading
Under-Frequency Start Point
49,75 [45,60] Hz
Import/Export Switch Frequency
49 [45,60] Hz
Under-Frequency End Point
48 [45,60] Hz
Response Delay Time
0 [0,1000] s
Hysteresis Function
Frequency Hysteresis Point
49,85 [45,65] Hz
Hysteresis Waiting Time
20 [0,1000] s
Hysteretic Power Recovery Slope
16,7 [0,6500] %Pn/min
FSM (Frequency Stabilization Mode)
Reactive Power Mode Settin...
Mode Selection
Q(U) Curve
Q(U) Curve Basic Model
V1 Voltage
90 [0,140] %Vn
V1 Reactive Power
44 [-100,100] %Pn
V2 Voltage
95,7 [0,140] %Vn
V2 Reactive Power
0 [-100,100] %Pn
V3 Voltage
104,3 [0,140] %Vn
V3 Reactive Power
0 [-100,100] %Pn
V4 Voltage
Grid Protection Parameters
Voltage Protection Parameters
OV Trigger L1 Value
115,2 [80,140] %Vn
Over-voltage Stage 1 Trip Time
1500 [10,7200000] ms
UV Trigger L1 Value
78,3 [5,100] %Vn
UV Trigger L1 Trip Time
10500 [10,7200000] ms
OV Trigger L2 Value
119,6 [80,140] %Vn
Over-voltage Stage 2 Trip Time
120 [10,7200000] ms
UV Trigger L2 Value
30,4 [0,100] %Vn
UV Trigger L2 Trip Time
Grid Connection Parameters
Startup On-Grid
Connection Voltage Upper Limit
110,4 [80,140] %Vn
Connection Voltage Lower Limit
85,2 [15,100] %Vn
Connection Frequency Upper Limit
50,15 [50,65] Hz
Connection Frequency Lower Limit
47,5 [45,60] Hz
On-Grid Waiting Time
60 [30,30000] s
Startup Ramp Rate
Startup Ramp Rate
16,7 [0,6000] %Pn/min
Fault Reconnection
Voltage Fault Ride-Through
LVRT
UV1 Voltage
0 [0,100] %Vn
UV1 Time
0 [0,65000] 10ms
UV2 Voltage
0 [0,100] %Vn
UV2 Time
100 [0,65000] 10ms
UV3 Voltage
30,4 [0,100] %Vn
UV3 Time
100 [0,65000] 10ms
UV4 Voltage
30,4 [0,100] %Vn
Voltage Fault Ride-Through
HVRT
OV1 Voltage
113 [100,140] %Vn
OV1 Time
60000 [0,65000] 10ms
OV2 Voltage
113 [100,140] %Vn
OV2 Time
60000 [0,65000] 10ms
OV3 Voltage
113 [100,140] %Vn
OV3 Time
60000 [0,65000] 10ms
OV4 Voltage
113 [100,140] %Vn

SEMS0184

8 Contact Information

GoodWe Technologies Co., Ltd.
No. 90, Zijin Road, Suzhou New District, Suzhou, China
400-998-1212
www.goodwe.com
service@goodwe.com