

SEMS+ App

User Manual

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NOTICE

Due to product version upgrades or other reasons, the contents of this document may be updated from time to time. Unless otherwise agreed, the contents of this document cannot replace the safety precautions on the product labels. All descriptions in this document are for guidance only.

Preface

Applicable Personnel

Intended for professionals who are familiar with local regulations, standards, and electrical systems, have received professional training, and are knowledgeable about this product, or end users who have purchased GoodWe products.

Symbol Definitions

 DANGER
Indicates a hazardous situation which, if not avoided, will result in death or serious personal injury.
 WARNING
Indicates a moderate potential hazard that, if not avoided, could result in death or serious injury.
 CAUTION
Indicates a low potential hazard that, if not avoided, could result in moderate or minor injury to personnel.
NOTICE
Emphasizes and supplements the content; may also provide tips or tricks for optimized product use, helping you solve a problem or save time.

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1 App Introduction

NOTICE

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

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

The SEMS+ App is software used for remote plant monitoring or local device commissioning. Installers or owners can:

- Remotely monitor plant operation status and set plant and device operating parameters.
- Perform Local Access to devices, view device operating status, and set device parameters.

1.1 Supporting Products

Supports monitoring and management of relevant GoodWe brand devices, such as inverters, Intelligent meters, data loggers, EV chargers, batteries, etc.

1.2 Download and Install SEMS+ App

Phone Requirements

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

Download Method

Method 1:

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



Method 2:

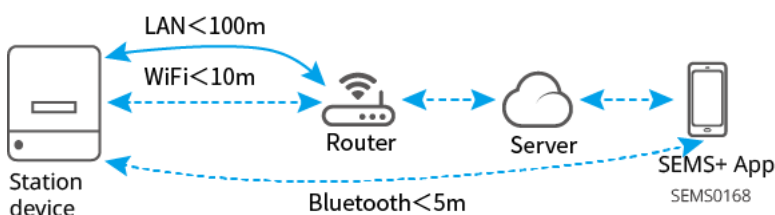
Scan the QR code below to download and install.



Add Desktop Widget

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

1.3 Connection Method



1.4 Common Icon Descriptions

Icon	Description	Icon	Description
	Create a plant, add devices, etc.		Scan for nearby devices.
			
	More information.		Filter.
	Message notifications.		Add to favorites or remove from favorites.
	Save.		Edit.
	Delete.		Copy.
	Expand or collapse the data display.		Device software version upgrade.
	Enlarge the chart display.		Turn on or off.
	Sort. Tap to sort in ascending or descending order.		Expand the plant list and switch plants.
	Configuration. For example: configure commonly used control items.		Switch between 2D/3D energy flow diagram display views.
	Enlarge curve chart display.	-	-

1.5 Register Account

Operation Steps

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

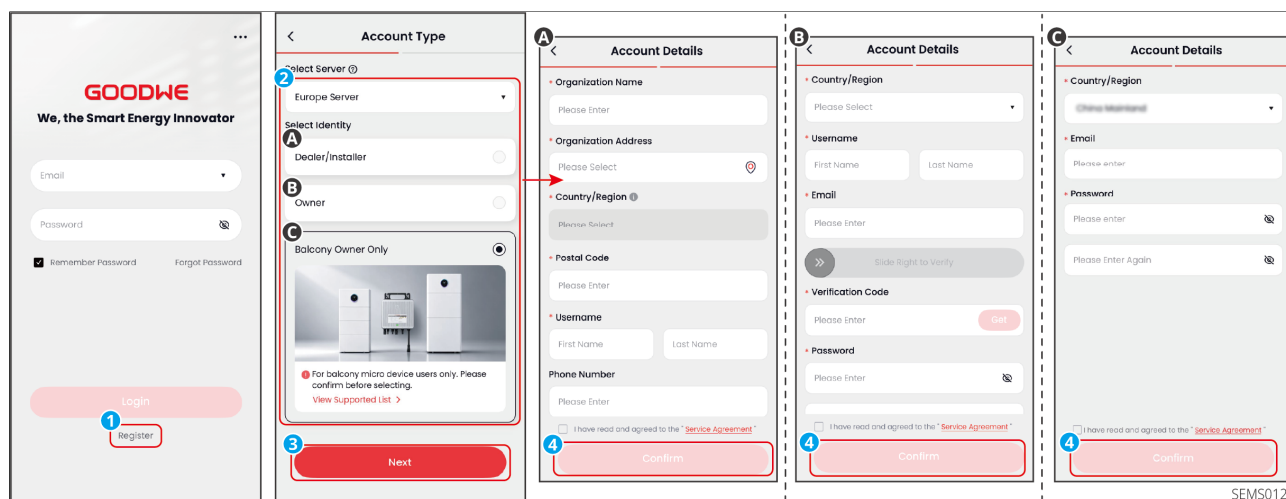


Figure1 Register Account

1.6 Log in to Account

NOTICE

- Before logging in to the App, please register an account first or obtain an account and password from your distributor.
- After logging in to your account, you can view or manage plant information. The actual interface shall prevail. The plant information displayed varies depending on the account type, region, plant type, etc.

Operation Steps

1. Enter your account and password, and tap 'Log In'.

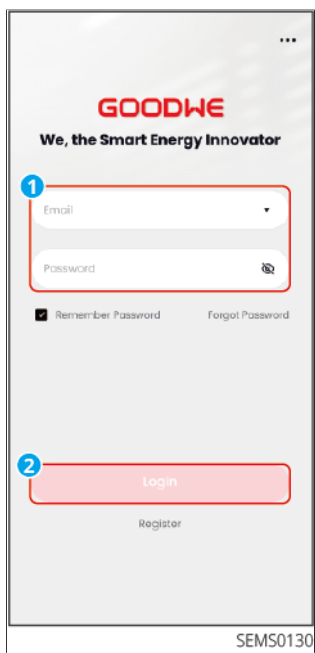


Figure2 Log in to Account

2 Remote Plant Monitoring

NOTICE

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

After logging in to the App with your account and password, you can create plants, add devices, monitor plant operating status, view device operating information, etc. Add the App as a home screen widget to monitor plant operation in real time.

2.1 Plant

2.1.1 Create Plant

Supports creating plants according to actual requirements.

2.1.1.1 Fill in Plant Information

Create Plant (Installer/Distributor)

Operation Steps

1. After logging in to the App, if there is no plant under the account, click "Create Plant"; if there is a plant under the account, go to the plant list screen and click "+" to enter the new plant information entry screen.
2. Follow the on-screen instructions and fill in basic information such as plant address, name, capacity, and power according to actual conditions.
3. If you need to add plant visitors, enter the organization code and plant visitor information. Click "Done" to create a new plant.
4. Select whether to add plant devices as needed. If you need to add them, refer to [2.1.1.2.Add Device\(Page 14\)](#)chapter.

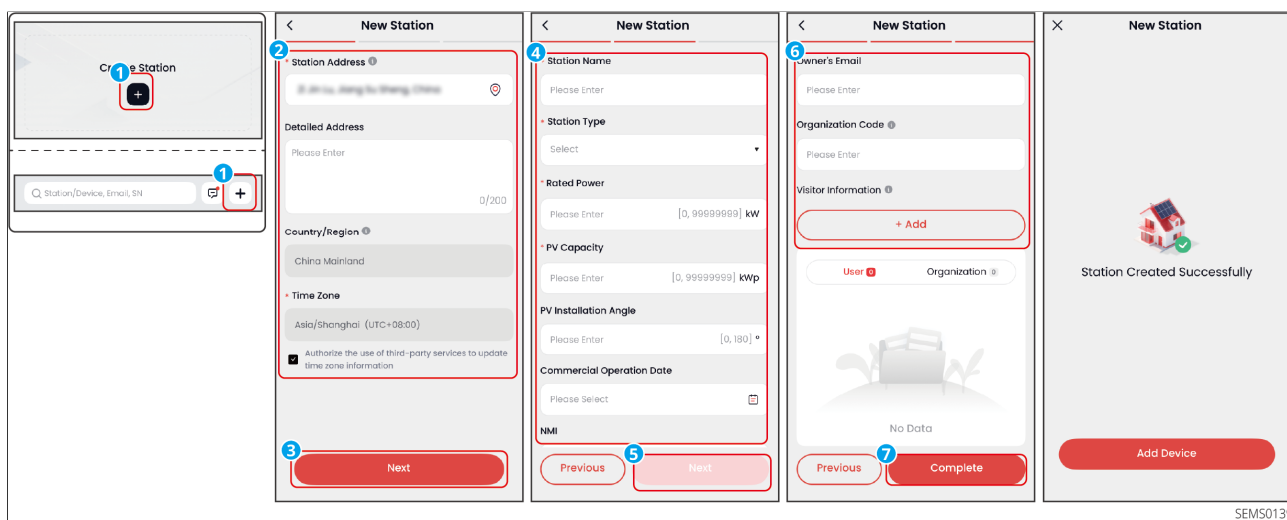


Figure3 Fill in Plant Information (Installer/Distributor)

Parameters	Functional Description
Plant Type	Set according to the actual plant type. Supported: Residential PV Plant, Residential Storage Station, Commercial and Industrial Storage Station, Commercial and Industrial PV Plant.
Plant Name	Set the plant name according to actual requirements.
Rated Power	Set the total installed power of the plant.
PV Capacity	Set the total installed PV capacity of the plant.
Battery Capacity	Set the total battery capacity of the plant.
PV Installation Angle	SetPVpanel Installation Angle.
Commercial Operation Date	Set the plant grid connection date.

Create Plant (Owner) Operation Steps

1. After logging in to the App, tap "Create Plant" according to the on-screen instructions; if there is a plant under the account, tap "+" on the plant list screen to enter the new plant information filling screen.
2. Follow the on-screen instructions and fill in basic information such as plant name, address, and type according to actual conditions.

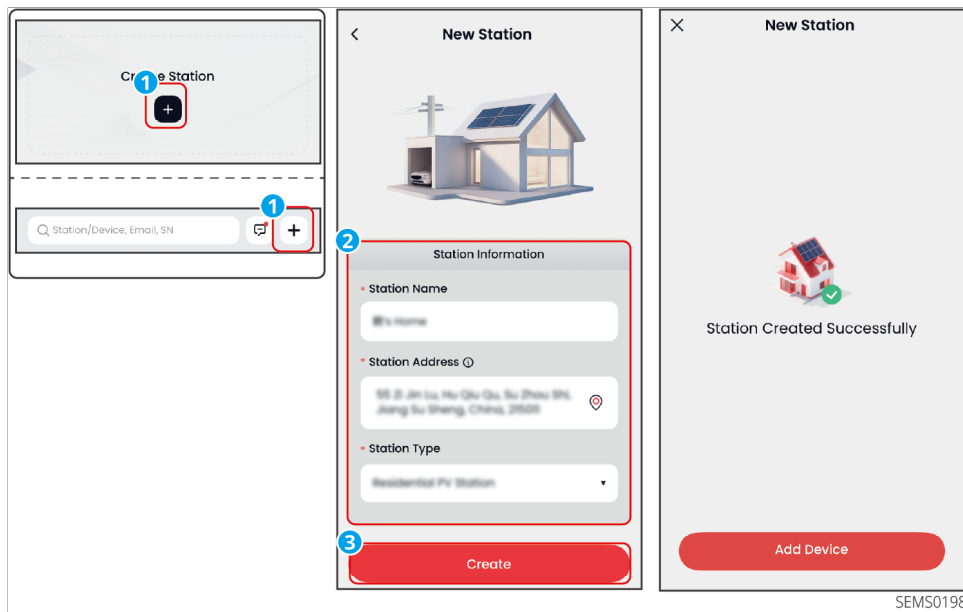


Figure4 Fill in Plant Information (Owner)

2.1.1.2 Add Plant Devices

After the plant is created, plant devices can be added to the plant according to actual requirements.

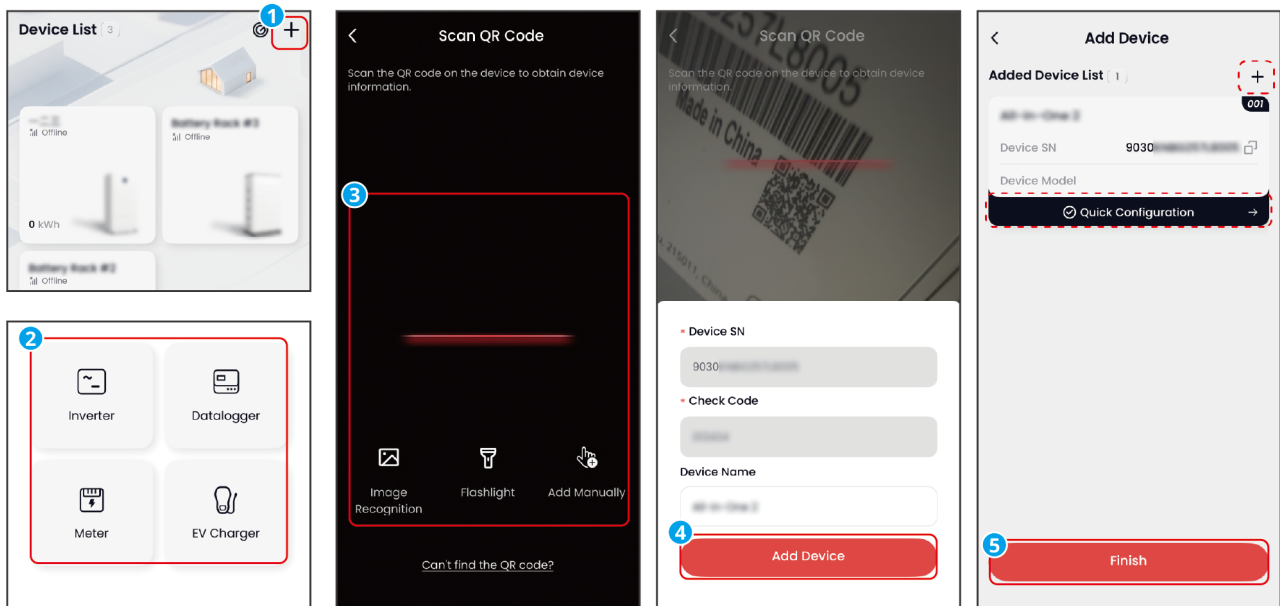
- When a Home Energy Management System (HEMS) device has been added to the plant:
 - Supports synchronously adding devices associated with the HEMS; or adding devices not associated with the HEMS, to monitor all devices only in the same plant.
 - Please use Bluetooth Local Access to connect energy storage inverters, EV chargers, Intelligent switches, and other devices in the network to the same router as the HEMS; otherwise, the HEMS cannot identify the above devices. For GoodWe products, please refer to [3.1.Local Access Devices\(Page 61\)](#) section; for third-party products, please refer to the device user manual.

Steps to Manually Add Devices

1. On the plant home page, click **+**.
2. Add devices according to actual requirements. Select the device type, and scan the device SN or manually enter the device SN.
3. After scanning is complete, verify whether the device serial number and verification code are correct. Modify the device name according to actual

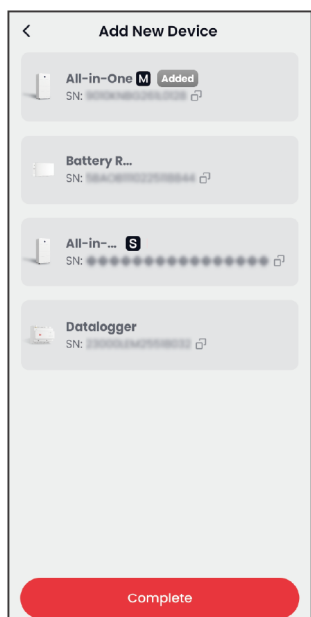
requirements. Click 'Add Device' to complete the addition.

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



SEMS0147

6. After completing Quick Configuration, devices in the same system will be identified, such as meters, batteries, etc., without the need to manually add them again. Click "Finish" to complete device addition. After devices are added, if there are new devices in the system, they will be automatically scanned and prompted.

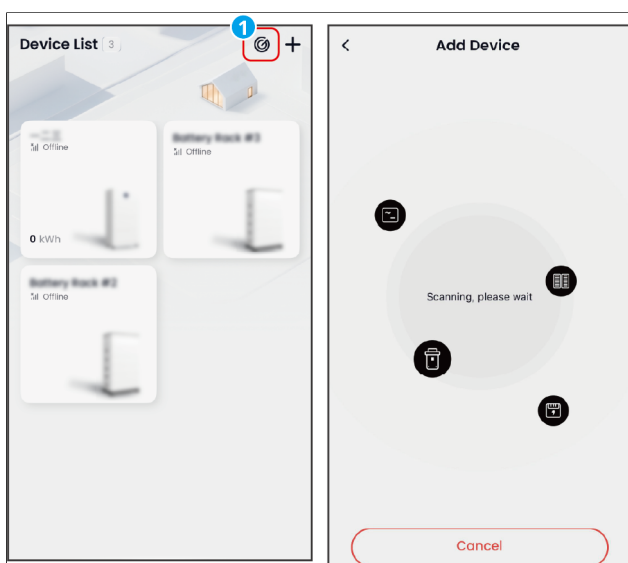


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Steps to add devices by scanning

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

1. In the device list interface, click .
2. In the scanned devices, check the devices to be added, and click "Add".
3. If you need to continue adding other unscanned devices, click "Continue Adding"; otherwise, click "Finish".



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2.1.1.3 Quick Configuration Device

NOTICE

- After a device is added to the plant for the first time, basic operation can be ensured through Quick Configuration.
- Before performing Quick Configuration, ensure that all devices are powered on and running properly.
- The Quick Configuration content varies by device type. Refer to the actual interface.

Operation Steps

1. After adding a device, tap "Quick Configuration" as prompted by the interface, or go to the device list screen via "Services" > "Local Access".
2. On the device list screen, select the "Bluetooth" or "WiFi" tab based on the signal type of the Intelligent communication stick.
3. Pull down or tap "Search Device", confirm the inverter signal name based on the inverter serial number, and tap to enter the Quick Configuration screen. If you entered the settings screen via "Local Access", tap "Quick Configuration" on the home page.
4. Complete network configuration, safety code, working mode, etc. as prompted by the interface. For details about working modes, refer to the [2.1.9.System Working Mode\(Page 39\)](#)chapter.
5. Tap "Finish" to complete Quick Configuration.

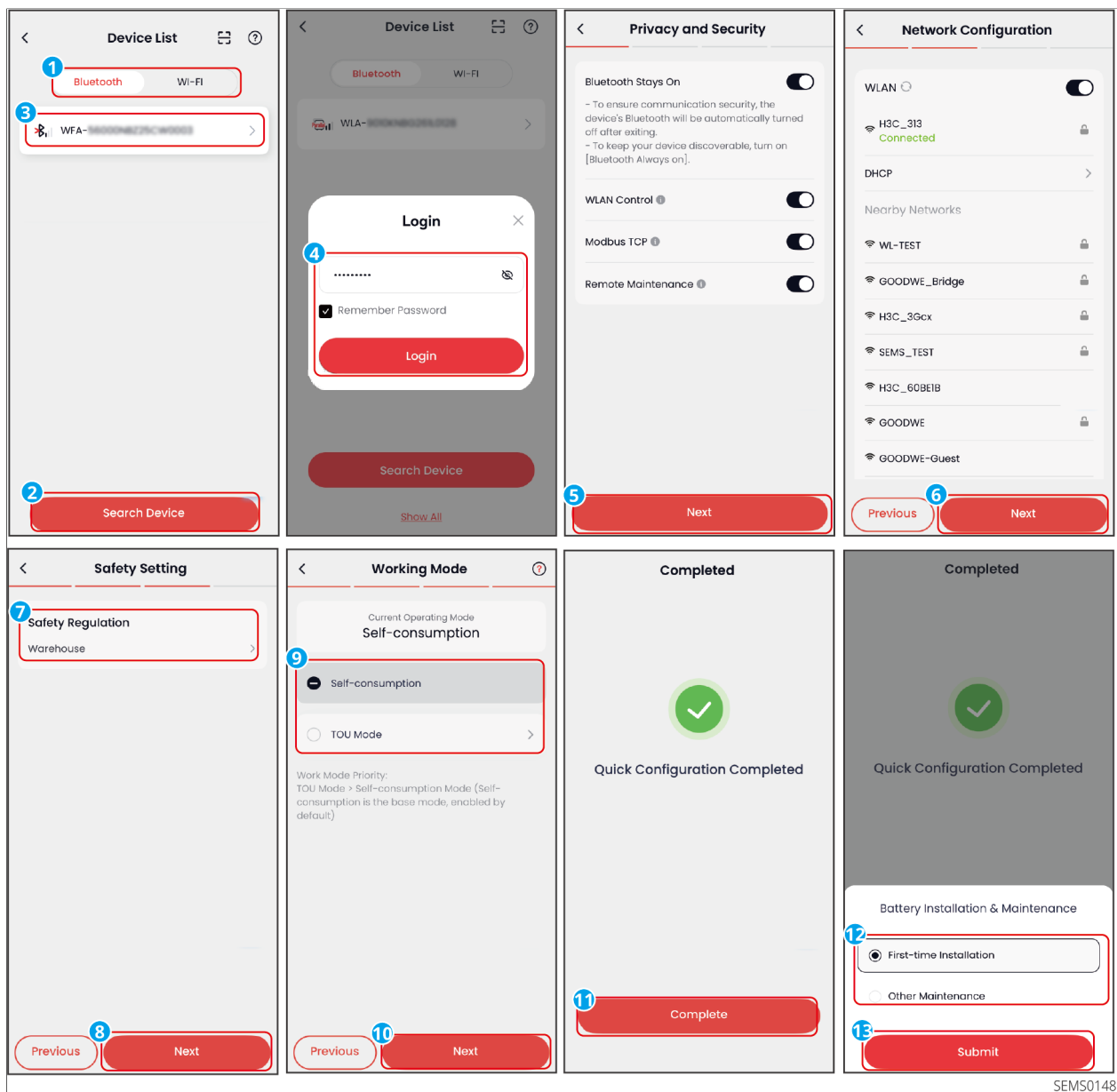


Figure5 Quick Configuration Device

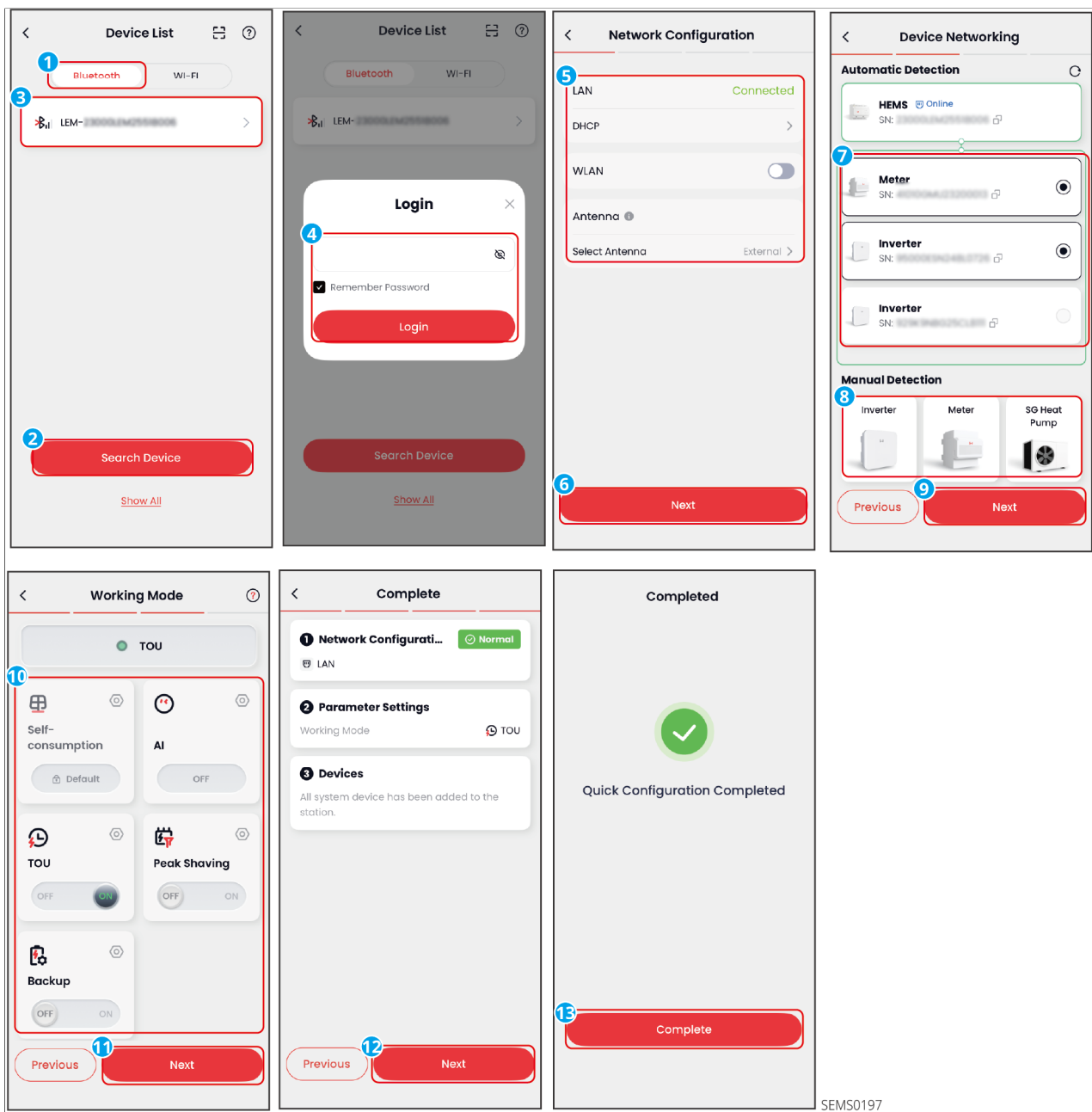
2.1.1.4 Quick Configuration (Home Energy Management System)

NOTICE

- After a device is added to the plant for the first time, basic operation can be ensured through Quick Configuration.
- Before performing Quick Configuration, ensure that all devices are powered on and running properly.
- If you need to manage and schedule inverters, chargers, or other Intelligent home devices, such as Intelligent switches and Intelligent sockets, through a home energy management system (HEMS), ensure that all devices are connected to the same local area network as the HEMS and have been successfully networked.
- Please refer to [Inverter and IoT Device Compatibility List](#), and ensure that the device model and software version in the system meet the requirements.

Operation Steps

1. After adding a device, tap "Quick Configuration" as prompted by the interface, or go to the device list screen via "Services" > "Local Access".
2. On the device list screen, select the "Bluetooth" tab.
3. Pull down or tap "Search Device", confirm the signal name based on the device serial number, and tap to enter the Quick Configuration screen. If you enter the settings screen through "Local Access", tap "Quick Configuration" on the home page.
4. Complete the network configuration according to the on-screen instructions.
5. If other devices in the system have completed network configuration and are connected to the same local area network as the HEMS, they can be automatically found on the "Device Networking" screen. It is recommended to select all found devices to complete networking. If a device is not found, manual addition is supported.
6. Set the working mode according to the on-screen instructions. For details about the working mode, refer to [2.1.9.System Working Mode\(Page 39\)](#) chapter.
7. Tap "Finish" to complete Quick Configuration.



SEMS0197

Figure6 Quick Configuration of Home Energy Management System

2.1.2 Create Plant (Balcony Owner)

NOTICE

- Please enable Bluetooth on your phone and grant the App Bluetooth and local network permissions; otherwise, devices cannot be scanned and paired.
- Only 2.4 GHz Wi-Fi is supported; the 5 GHz band is not supported.
- If the device cannot be found by scanning, confirm that the device is powered on, or move closer to the device and try again.

Operation Steps

1. Open the App and tap "Add Device"  on the home page. If the account already has a plant, on the "Device" page, tap .
2. After entering the Add Device page, the App automatically scans for nearby devices. In the scan list, tap the target device to be added.
3. A "Bluetooth Pairing Request" dialog box pops up on the page, displaying the device SN. Tap "Pair" to allow the phone to establish a Bluetooth connection with the device.
4. Enter the "Network Configuration" page, turn on WLAN, select the 2.4 GHz WiFi network where the phone is located from the "Nearby Networks" list, and enter the correct password. If a LAN connection is used, WiFi configuration is not required.
5. After the automatic "WLAN Detection" succeeds, tap "Next".
6. Enter the "New Station" page, fill in "Station Name" and "Station Address". The plant address can be obtained automatically.
7. Tap "Complete"; the device is added successfully. The page jumps to the device home page, where you can view plant information.

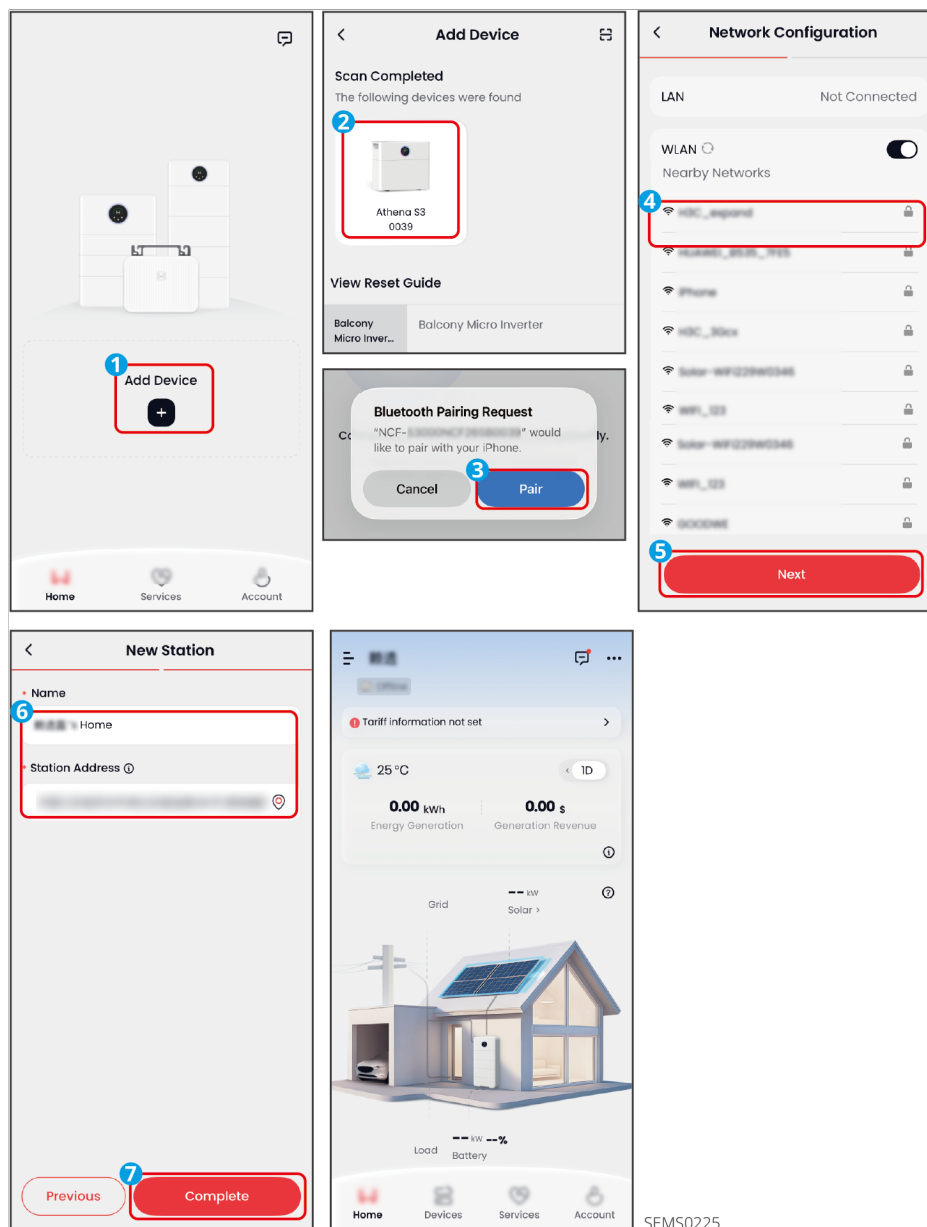


Figure7 Create Plant (Balcony Owner)

2.1.3 View Plant Information (Installer)

2.1.3.1 Plant List

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

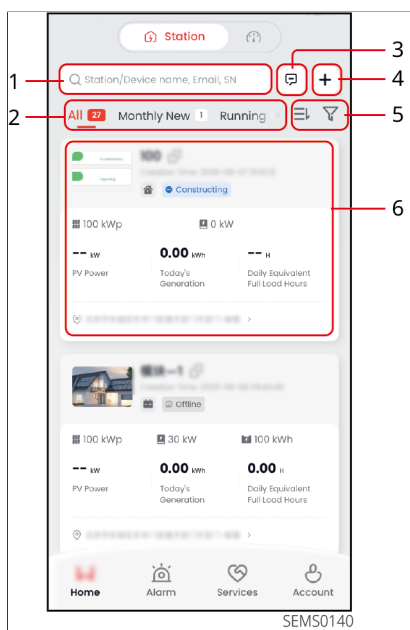


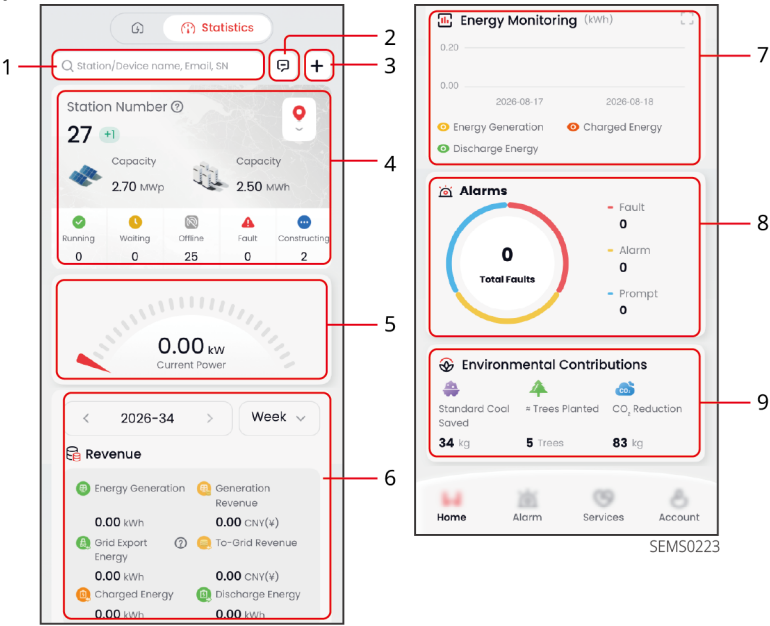
Figure8 Plant List

No.	Description
1	Search plant. Enter plant information to quickly locate the plant you need to view.
2	Plant operation status tab, click to quickly switch between plants in different operation states.
3	Plant messages. View plant alarms, events, and other message notifications.
4	Click to create a new plant.
5	- Plant sorting. Sort in ascending or descending order based on installed capacity or plant creation time. - Filter plants. Filter plants based on conditions such as plant type, Rated Power, whether favorited, etc.

No.	Description
6	- Plant card. Displays basic plant information such as plant name, operation status, Energy Generation, address, etc. - Click to enter the plant details interface. - Long press to perform quick operations such as favorite, share, and delete on the plant. - Click the plant address to open the mobile map application for quick navigation.

2.1.3.2 Plant Data Statistics

When the number of plants owned or managed by the account is two or more, the "Data Statistics" screen on the home page can display the operating data of all plants.



No.	Description
1	Search plant. Enter plant information to quickly locate the plant you need to view.
2	Plant messages. View plant alarms, events, and other message notifications.

No.	Description
3	Click to create a new plant.
4	- Information such as the current number of plants, PV capacity, energy storage capacity, and operating status. - Click  , to open the plant view.
5	Power dashboard. Displays the current power.
6	Revenue. Displays information such as plant Energy Generation, generation revenue, grid feed-in energy, feed-in revenue, charging energy, discharging energy, etc.
7	Energy Monitoring. Displays information such as Energy Generation, charging energy, and discharging energy.
8	Alarm. Monitors the distribution of alarm statuses.
9	- Environmental Contributions. Displays the environmental benefits generated by PV power generation, including CO2 emission reduction, standard coal saving, equivalent tree planting, etc. - The Environmental Contributions value is displayed by default. If needed, please modify it via "Account" > "Settings" > "Environmental Contributions".

2.1.3.3 Plant Details

On the plant list page, click any plant name to enter the plant details interface. In the plant details interface, you can view basic plant information, Energy Generation, revenue, energy flow diagram, Environmental Contributions, etc.

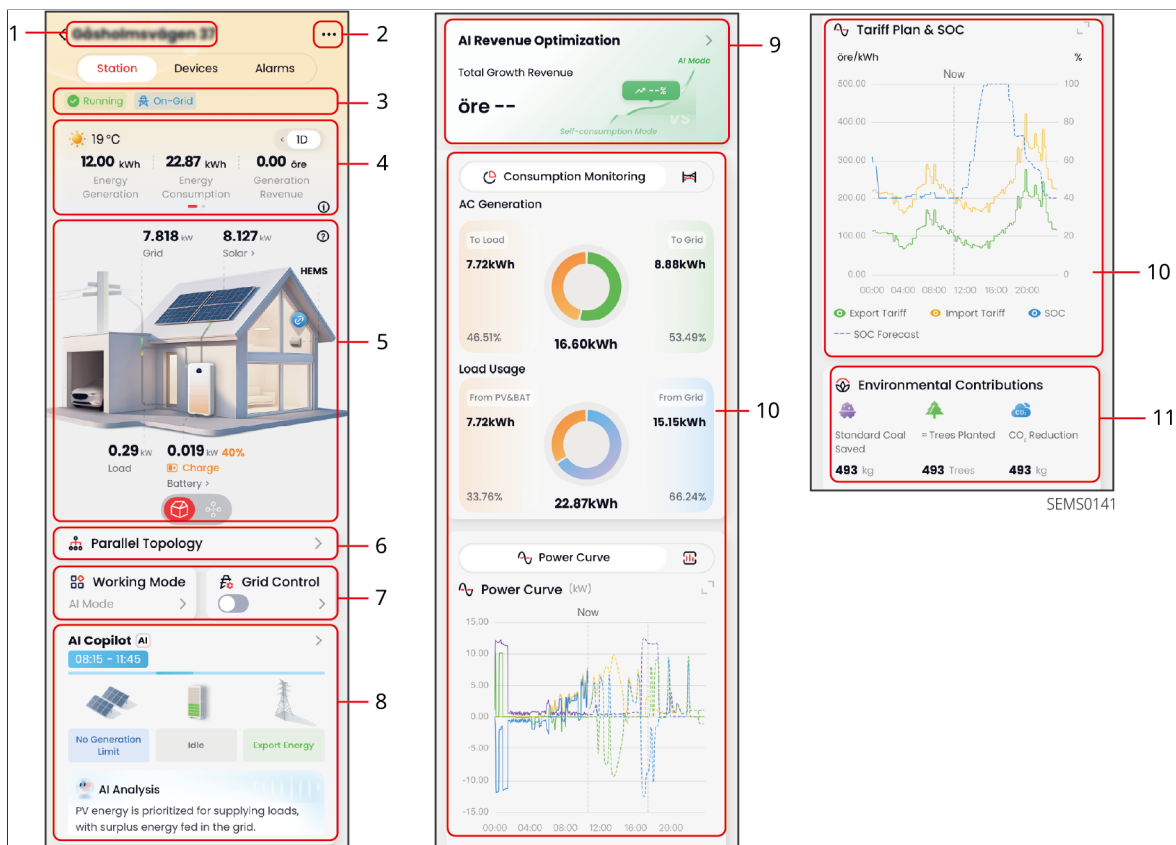


Figure9 Plant Details

No.	Description
1	Current plant name.
2	Configure plant information. Supports: configuring basic plant information, sharing plants, setting Tariff information.
3	Current plant operation status.

No.	Description
4	• Current weather and Energy Generation, power consumption, generation revenue, purchased electricity, grid feed-in revenue, etc. of the plant. • Plant revenue statistics require configuring the Tariff, otherwise the system cannot calculate revenue data. • Generation Revenue: Displays the estimated generation revenue under the current plant type. • Energy Generation: Displays the total energy generation under the current plant type. • Grid Feed-in Revenue: Displays the estimated revenue from electricity sales under the current plant type. • Grid Feed-in Energy: Displays the total grid feed-in energy for the current plant type.
5	• Plant Energy Flow Diagram Display. • Supports switching between 2D/3D energy flow diagrams. After switching the 2D/3D energy flow diagram of any plant, all plants of the same type under the account will switch simultaneously.
6	Parallel Topology Diagram. Click to view an overview of devices in the current system.
7	Quick settings entry for common control items.
8	• AI Energy Manager. Displayed when the system enables AI Mode, indicating that the current system is under AI-managed scheduling. • Displays the current time period and the planned dispatch status of PV, energy storage, and grid within the current time period. • Click the card to enter the AI Energy Manager details screen, where you can view the detailed AI Copilot plan.

No.	Description
9	• Displayed when the system enables AI Mode. Compares Self-consumption Mode and AI Mode to show economic benefit optimization. • Click the card to enter the economic benefit optimization details screen to view AI Running Days, revenue growth, cost comparison overview, revenue calendar, etc.
10	Electricity consumption monitoring, energy flow, power curve, energy monitoring chart. Through visualized charts, display the plant operation status and plant energy dynamics.
11	• Environmental Contributions. Displays the environmental benefits generated by PV power generation, including CO2 emission reduction, standard coal saving, equivalent tree planting, etc. • The Environmental Contributions value is displayed by default. If needed, please modify it via "Account" > "Settings" > "Environmental Contributions".

2.1.3.4 Alarms

When logged in with an installer account, click 'Alarms' on the home page to view alarm information for all plants under the account.

- By default, 'All' alarms are displayed. You can switch between 'Ongoing' and 'Recovered' faults using the status tabs.
- Press and hold to favorite, delete, confirm alarms, etc.
- Click  to confirm faults in batches.

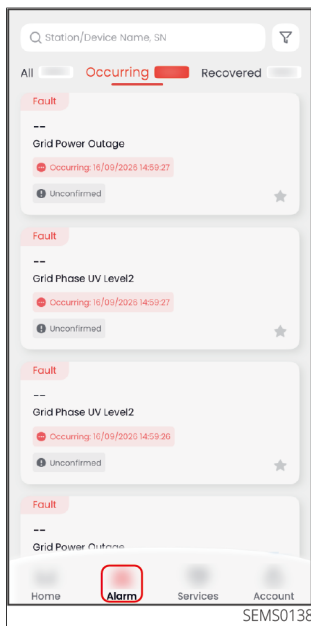


Figure10 View Alarm Information

2.1.4 View Plant Information (Owner)

2.1.4.1 Plant List

When there are multiple plants in the owner account, you can view all plants through the sidebar and switch the plant displayed on the home page.

The plant list displays all plants under the account, including self-built plants and shared plants. The functions of shared plants may be limited; please refer to the actual screen.

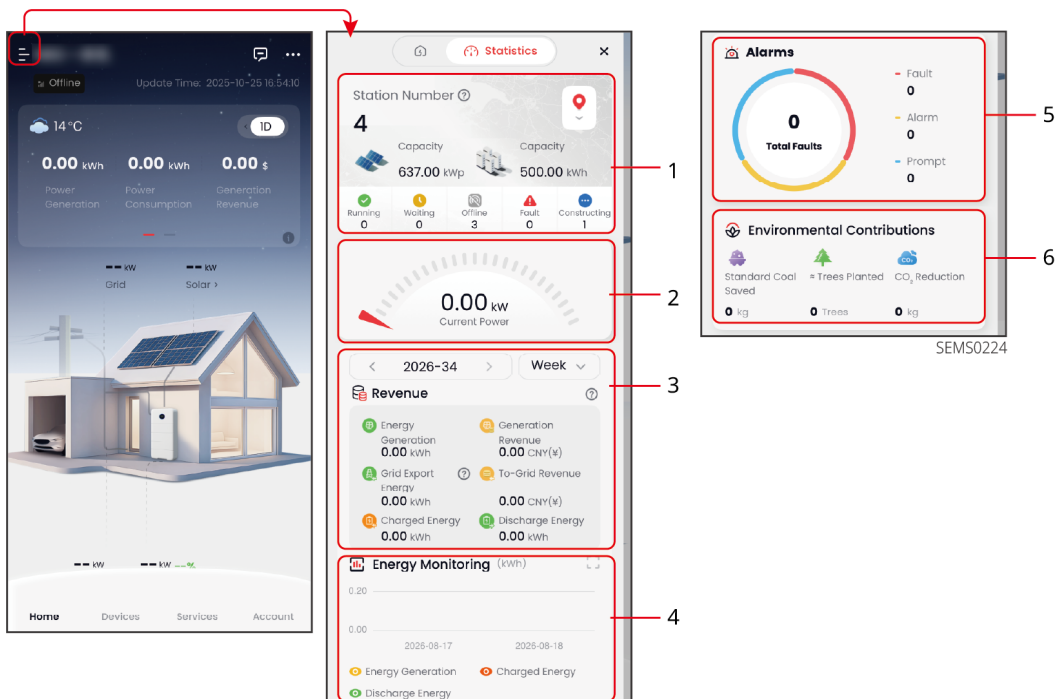


Figure11 View Plant List

No.	Description
1	Search plant. Enter plant information to quickly locate the plant you need to view.
2	Click to create a new plant.
3	- Plant card. Displays basic plant information such as plant name, operation status, Energy Generation, address, etc. - Click to enter the plant details interface. - Long press to perform quick operations such as favorite, share, and delete on the plant.

2.1.4.2 Plant Data Statistics

When the number of plants owned or managed by the account is two or more, the "Data Statistics" screen in the sidebar can display the operating data of all plants.



No.	Description
1	- Information such as the current number of plants, PV capacity, energy storage capacity, and operating status. - Click  , to open the plant view.
2	Power dashboard. Displays the current power.
3	Revenue. Displays information such as plant Energy Generation, generation revenue, grid feed-in energy, feed-in revenue, charging energy, discharging energy, etc.
4	Energy Monitoring. Displays information such as Energy Generation, charging energy, and discharging energy.
5	Alarm. Monitors the distribution of alarm statuses.

No.	Description
6	• Environmental Contributions. Displays the environmental benefits generated by PV power generation, including CO2 emission reduction, standard coal saving, equivalent tree planting, etc. • The Environmental Contributions value is displayed by default. If needed, please modify it via "Account" > "Settings" > "Environmental Contributions".

2.1.4.3 Plant Details

After logging in to the App with the owner account, you can view the details of a plant in the current account on the App home page. On the plant details screen, you can view basic plant information, Energy Generation, revenue, energy flow diagram, Environmental Contributions, and other information.

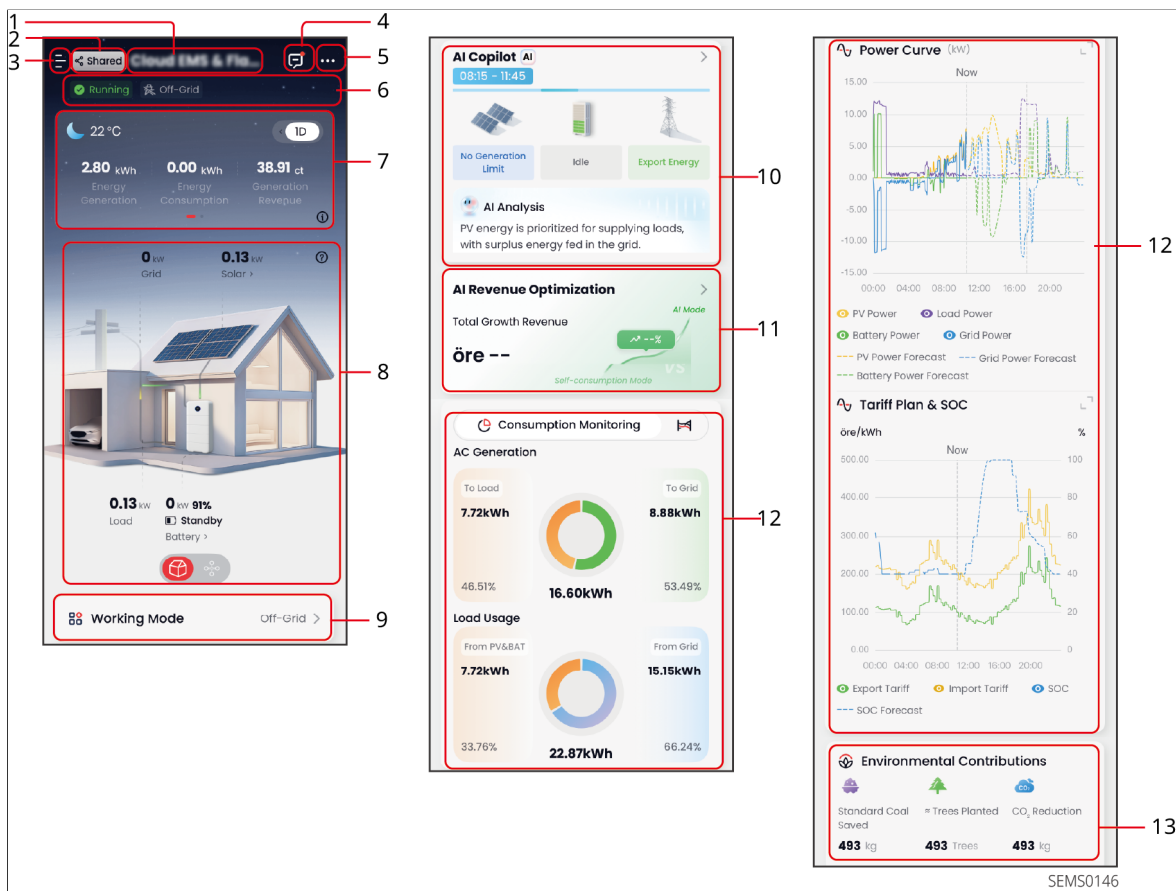


Figure12 View Plant Details

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

No.	Description
7	• Current weather and Energy Generation, power consumption, generation revenue, purchased electricity, grid feed-in revenue, etc. of the plant. • Plant revenue statistics require configuring the Tariff, otherwise the system cannot calculate revenue data. • Power Generation Revenue: Displays the total power generation revenue for the current plant type. • Energy Generation: Displays the total energy generation under the current plant type. • Grid Feed-in Revenue: Displays the total grid feed-in revenue for the current plant type. • Grid Feed-in Energy: Displays the total grid feed-in energy for the current plant type.
8	• Plant Energy Flow Diagram Display. • Supports switching between 2D/3D energy flow diagrams. After switching the 2D/3D energy flow diagram of any plant, all plants of the same type under the account will switch simultaneously.
9	Quick settings entry for common control items.
10	• AI Energy Manager. Displayed when the system enables AI Mode, indicating that the current system is under AI-managed scheduling. • Displays the current time period and the planned dispatch status of PV, energy storage, and grid within the current time period. • Click the card to enter the AI Energy Manager details screen, where you can view the detailed AI Copilot plan.

No.	Description
11	- Displayed when the system enables AI Mode. Compares Self-consumption Mode and AI Mode to show economic benefit optimization. - Click the card to enter the economic benefit optimization details screen to view AI Running Days, revenue growth, cost comparison overview, revenue calendar, etc.
12	Electricity consumption monitoring, energy flow, power curve, energy monitoring chart. Through visualized charts, display the plant operation status and plant energy dynamics.
13	- Environmental Contributions. Displays the environmental benefits generated by PV power generation, including CO2 emission reduction, standard coal saving, equivalent tree planting, etc. - The Environmental Contributions value is displayed by default. If needed, please modify it via "Account" > "Settings" > "Environmental Contributions".

2.1.5 Edit Plant Basic Information

Supports modifying basic plant information, including plant name, plant type, Rated Power, battery capacity, PV capacity, plant address, etc.

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

Operation Steps

1.

On the plant details screen, tap...to enter the plant settings screen.

2. Tap "Plant Info" >  to modify the basic plant information.

3. After modifying the information, tap  to save the changes.

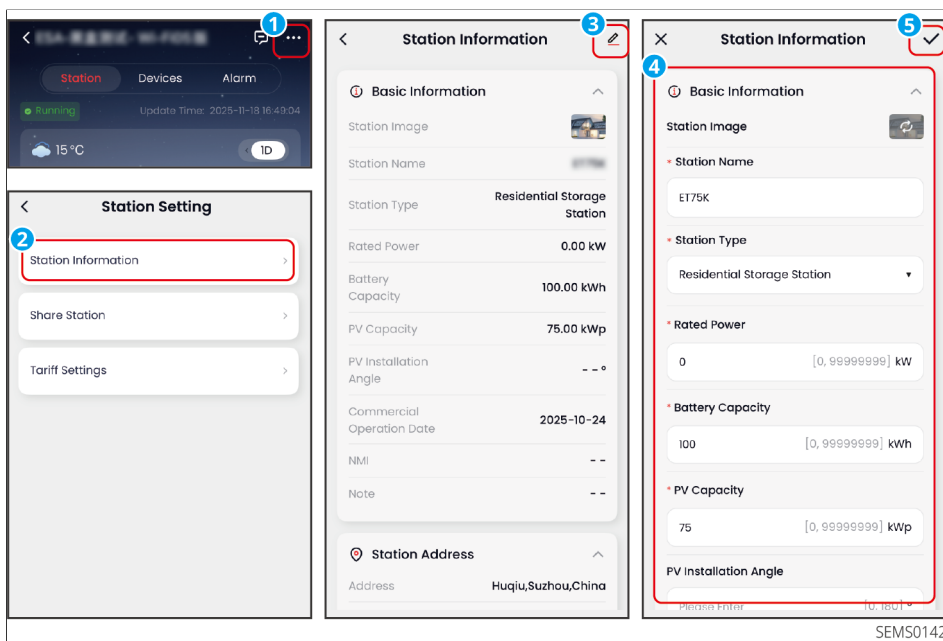


Figure13 Modify Plant Information

2.1.6 Configure Tariff Information

Supports viewing or setting the plant Tariff information according to actual conditions.

Only some countries or regions in Europe support the use of electricity market Tariff; the current electricity market only supports Nord Pool.

Operation Steps

1. On the plant details screen, click...> "Tariff Settings" to enter the Tariff settings screen.
2. Select "Export Energy Tariff" or "Import Energy Tariff". Set the Tariff type. Supports "Fixed Tariff", "Time-of-Use Tariff", and "Dynamic Pricing".
 - Fixed Tariff: Users set it according to the actual Tariff.
 - Time-of-Use Tariff: Users can set Tariff information for different time periods according to the actual Tariff. Multiple Tariff groups can be set. For time periods without a Time-of-Use Tariff, the default Tariff will be used automatically.
 - Dynamic Pricing: Obtain Dynamic Pricing from the power company, and combine it with the user-defined Tariff surcharge to dynamically adjust the actual purchase and sale Tariff.
 - Supports automatically obtaining the Tariff based on the matched electricity

retailer, or manually configuring the Tariff.

- Only applicable to certain regions and certain devices.

3. Click , fill in the Tariff information based on actual conditions and save.

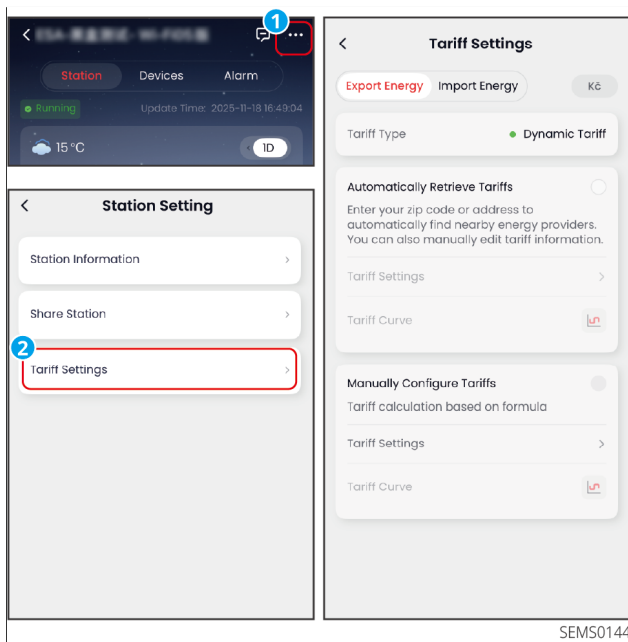


Figure14 Configure Tariff Information

2.1.7 Configure PV Module Layout

Set the PV Module Layout according to the actual PV module conditions. This information is for recording the PV layout only and will not change the actual PV layout.

Operation Steps

1. (Optional) If there are multiple plants, select the target plant on the plant list screen.
2. Go to  > "PV Module Layout" to enter the PV Module Layout settings screen. The page displays the plant's module distribution in a grid (R rows × C columns) and shows the current azimuth, tilt angle, and Layout Pattern in "Layout Information" at the top.
3. Click , and you can edit module orientation, tilt angle, and Layout Pattern in the edit panel. After modification, click  to save the edited result.

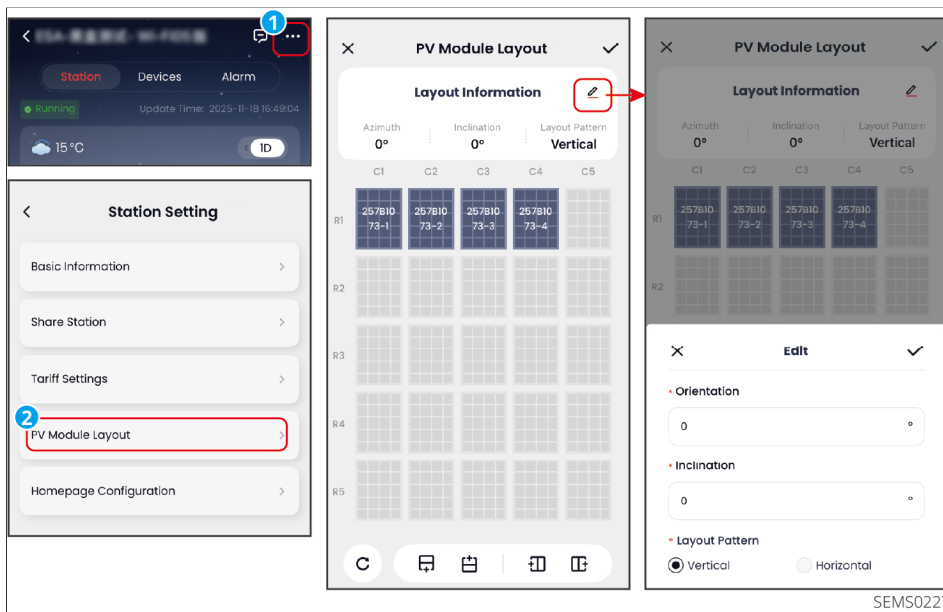


Figure15 Configure PV Module Layout

2.1.8 Manage Plant Sharing

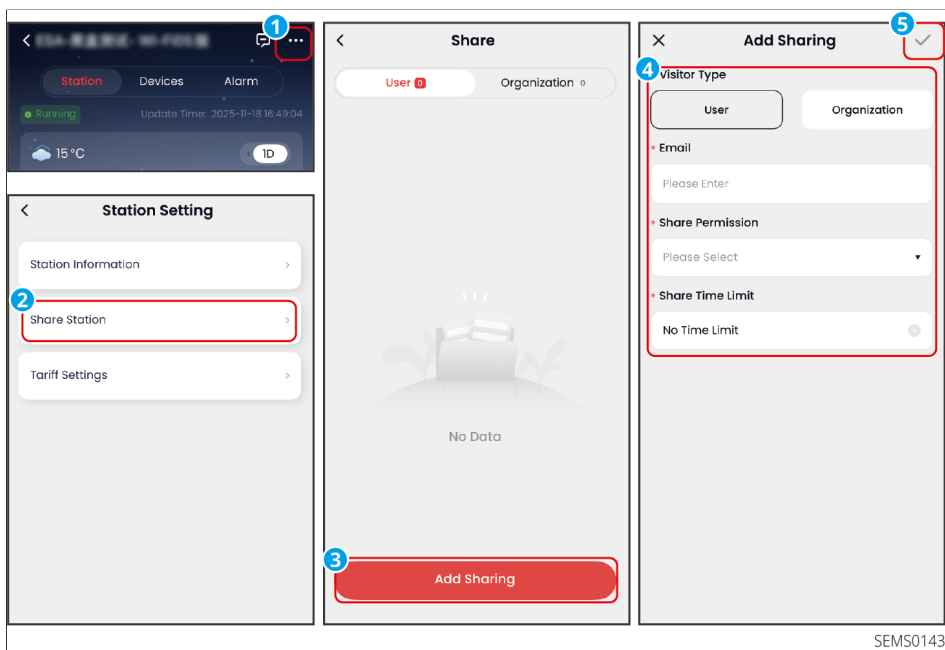
After a plant is created, it can be shared with other organizations or individual users, and sharing permissions and validity periods can be set.

If you want to share a plant with an unregistered user, follow the on-screen instructions to enter information such as the email address, and an account will be automatically registered.

Operation Steps

1. On the plant details screen, click **...** > "Share Plant" to enter the sharing screen.
2. Tap "Add Sharing", enter the recipient's information as required, and set the permissions and validity period. After adding, if you need to cancel the sharing, tap.

o



SEMS0143

Figure16 Manage Plant Sharing

2.1.9 Set System Operating Mode

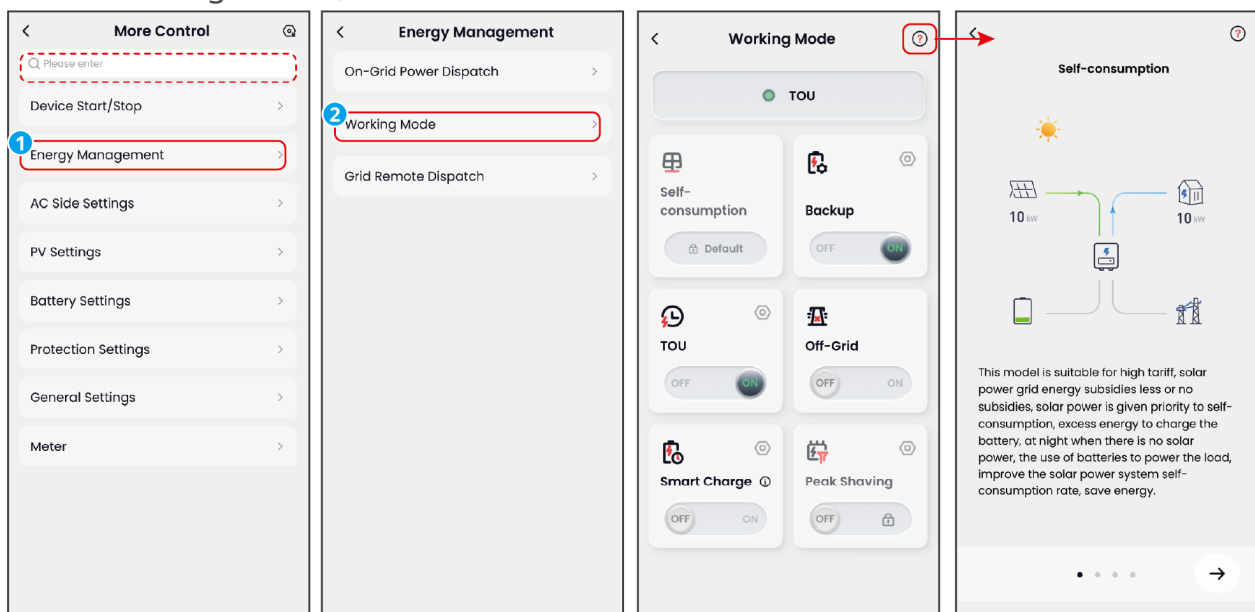
Supports selecting the system operation mode based on Tariff, electricity demand, or power supply environment, etc. After the settings are complete, the system automatically coordinates PV, battery, and grid to schedule power according to actual demand.

NOTICE

- The default working mode is Self-consumption Mode.
- Different systems support different working modes. Please refer to the interface.
- When the working mode is set through the inverter, the working mode priority is: Off-grid Mode > Demand Management > Intelligent Charging > TOU > Backup Mode > Self-consumption.
- When the working mode is set through the Home Energy Management System, the working mode priority is: Backup Mode > AI Mode > Demand Management > TOU Mode > Self-consumption.
- When the plant supports the Cloud EMS function, the plant-level working mode can be set; otherwise, only setting the working mode through the device is supported.
- The Cloud EMS function is currently only applicable to some plants with a single energy storage unit installed.

Device-Level Working Mode Operation Steps

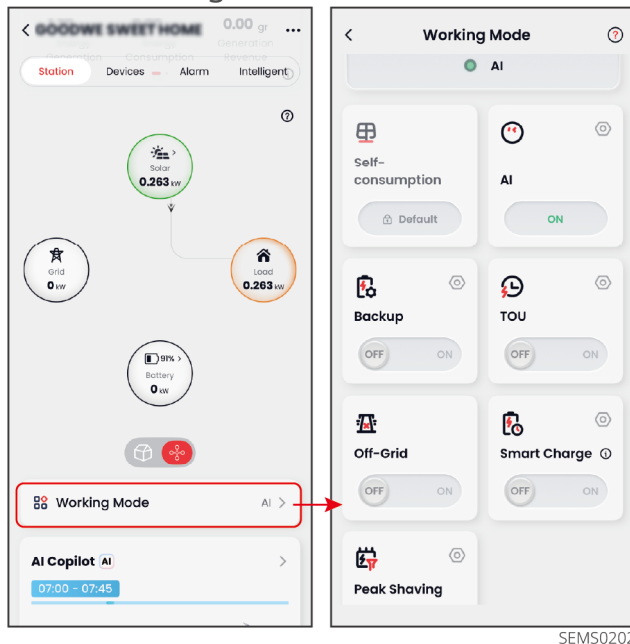
1. On the device details screen, go to "Common Controls" > "Energy Management" > "Working Mode", or search for "Working Mode" on the parameter control screen to access the Working Mode Settings screen.
2. Please set the working mode according to actual requirements. To learn more about working modes, click?



SEMS0159

Plant-Level Working Mode Settings Steps

1. On the plant home page, click "Working Mode".
2. Please set the working mode according to actual requirements. To learn more about working modes, click?



Self-consumption

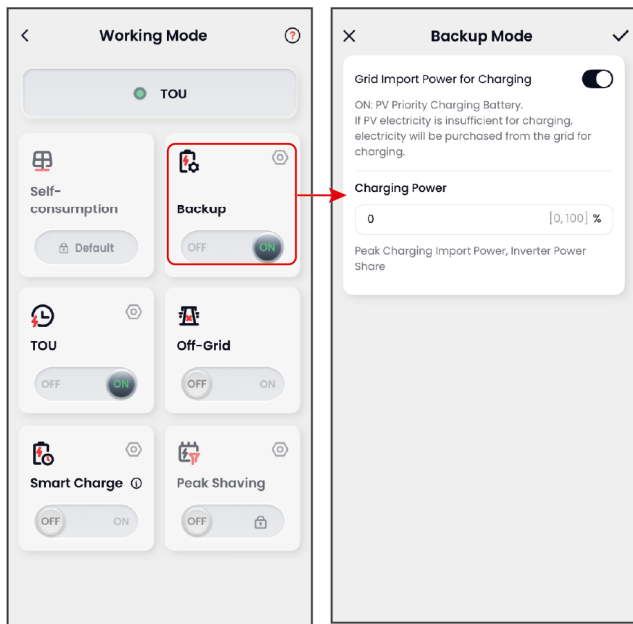
The basic working mode for system operation.

PV power generation is preferentially used to supply the load; surplus power charges the battery, and any remaining power is sold to the grid. When PV generation is insufficient, the battery supplies the load; when the battery power also cannot meet the load demand, the grid supplies the load.

Backup Mode

Recommended for areas with unstable grids.

When a Grid Power Outage occurs, the inverter switches to off-grid working mode, and the battery discharges to supply the load, ensuring that the BACKUP load is not interrupted; when the grid recovers, the inverter working mode switches to grid-connected operation.



SEMS0189

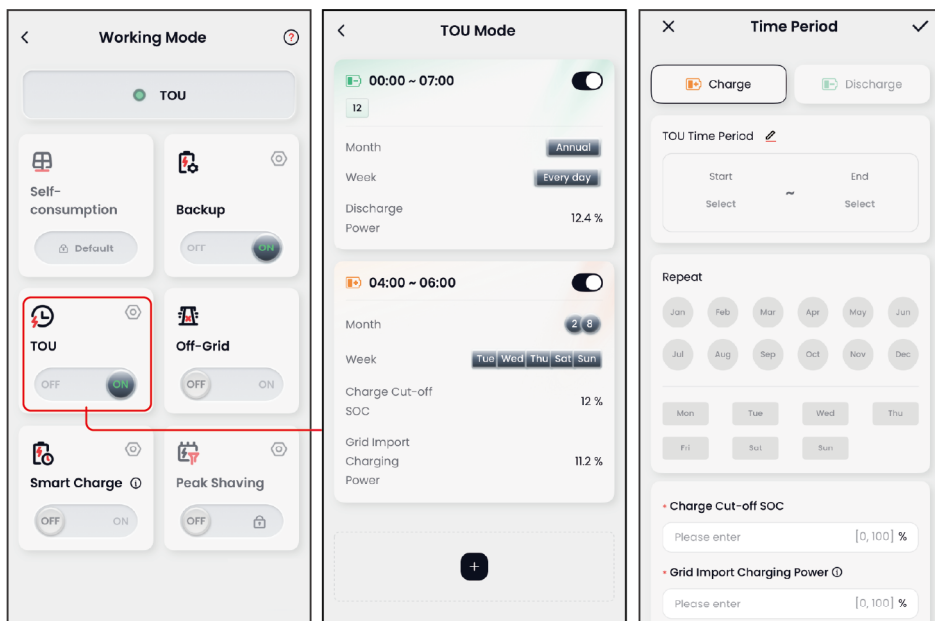
Parameter Name	Description
Grid Purchase Charging	Enable this function to allow the system to purchase electricity from the grid.
Charging Power	Peak power when buying electricity, as a percentage of the inverter's Rated Power.

TOU Mode

Applicable to regions with a large peak-valley Tariff difference.

In compliance with local laws and regulations, set the system to buy electricity or Export Energy according to the grid peak-valley Tariff periods. For example, during low Tariff periods, set the battery to charging mode to buy electricity from the grid for charging; during high Tariff periods, set the battery to discharging mode to supply the load or Export Energy to the grid.

Supports setting multiple time periods according to actual requirements and naming them as needed.



SEMS0185

Parameter Name	Description
Start Time	Within the Start Time and End Time, the battery charges or discharges according to the configured charge/discharge mode and Rated Power. Outside this time period, it operates in Self-consumption Mode.
End Time	
Charge/Discharge Mode	Set to charge or discharge according to actual requirements. - Charging: PV is prioritized to charge the battery. - Discharging: PV Priority to Export Power to the grid.
Charge Cut-off SOC	When the battery SOC reaches the set SOC, charging stops.
Grid Import Charging Power	The charging power, expressed as a percentage of the inverter Rated Power.
Power Limited Type	In Discharge Mode, some models support selecting either battery discharge or Export Energy to the grid. After discharging to the 'Discharge Cut-off SOC', discharging stops.
Discharge Cut-off SOC	

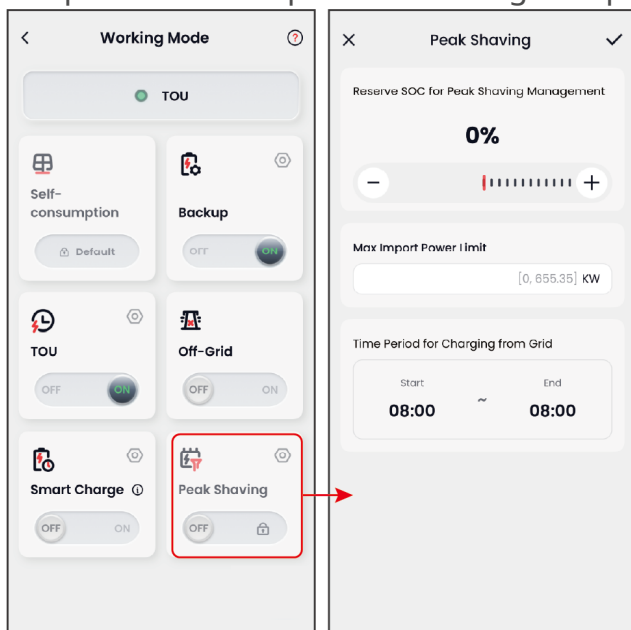
Parameter Name	Description
Discharge Power	The discharge power, expressed as a percentage of the inverter Rated Power.

Off-grid Mode

- Applicable to areas without a grid. The PV and battery form a pure off-grid system. PV power supplies the load, and excess energy charges the battery. When PV generation cannot meet the load demand, the battery supplies power to the load.
- Some models support manual or automatic activation of off-grid mode.
 - Manual Off-grid: The user manually switches to off-grid Operating Mode.
 - Automatic Off-grid: When the battery SOC is greater than the 'Off-grid SOC Upper Limit', the system automatically switches to off-grid operation; when the battery SOC is less than the 'Off-grid SOC Lower Limit', the system automatically switches back to grid-connected operation.

Demand Control

Applicable to scenarios with limited peak grid import power. When the total load power approaches the usage quota upper limit, battery discharge is used to reduce the power consumption exceeding the quota.

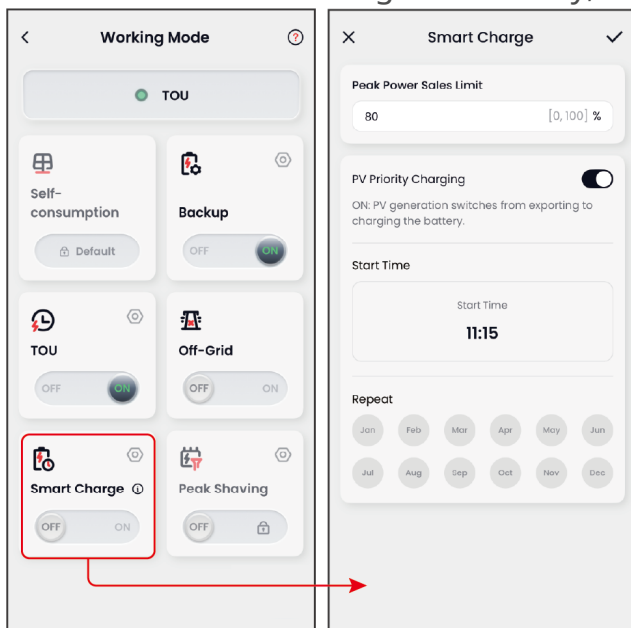


SEMS0187

Parameter Name	Description
Reserved SOC for Demand Control	In Demand Control Mode, the reserved SOC is used for demand control. When the battery SOC is higher than the reserved SOC, the demand control function is disabled.
Grid Import Peak Limit	Set the Max. Power limit allowed for grid import. When the load power exceeds the sum of the PV power generated by the PV system and this limit, the battery discharges to make up the excess power.
Time Period for Charging from Grid	- Within the Time Period for Charging from Grid, when load consumption does not exceed the grid import quota, the battery can be charged from the grid. Outside this time range, the battery can only be charged using PV generation power. - Supports setting multiple time periods according to actual requirements.

Intelligent Charging (Delayed Charging)

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



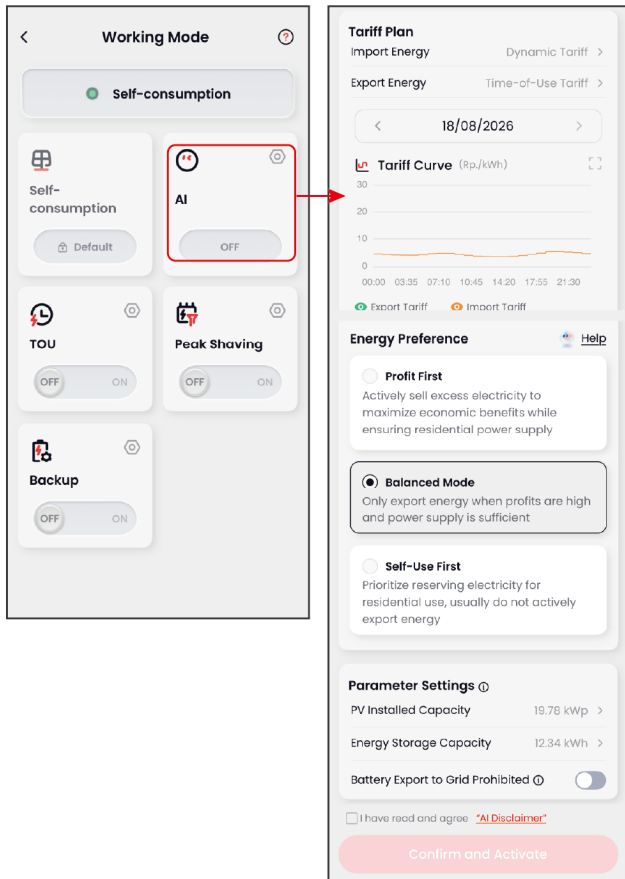
SEMS0186

Parameter Name	Description
Peak Power Sales Limit	According to the grid code requirements of certain countries or regions, set the peak power limit. The peak power limit value must be lower than the locally specified output power limit value.
PV Priority Charging	Within the Charging Time range, after the PV power is consumed by loads, the surplus energy is preferentially used to charge the battery. Outside the Charging Time range, after the PV power is consumed by loads, the surplus energy is preferentially used for Export Energy.
Start Charging Time	

AI Mode

AI Mode can be enabled when a home energy management system (HEMS) or cloud EMS function is used in the system.

Set the Tariff according to user requirements, and use AI computation to optimize scheduling, maximizing energy and economic Efficiency. When AI Mode is used, during the initial stage of collecting plant information, there may be deviations between the predicted curve and actual conditions.



SEMS0181

- Before enabling AI Mode, set the Tariff plan first. When the Tariff plan is a fixed Tariff, AI Mode is not supported.
- Select Time-of-Use Tariff or Dynamic Pricing, supporting:
 - Dynamic Pricing: Obtain Dynamic Pricing from the power company, and combine it with the Tariff surcharge set by the user to dynamically adjust the actual Tariff for power purchase and Export Energy.
 - Time-of-Use Tariff: Users can set Tariff information for different time periods according to the actual Tariff. Multiple Tariff groups can be set.
- Set the energy usage preference for AI Mode according to actual needs. If you have any questions, click the "Help" button.

2.2 Device

2.2.1 Device List

The device list screen allows you to view an overview of all devices under the account, including device name, operating status, etc.

- When logging in with an installer account, select the desired plant in 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 plant.

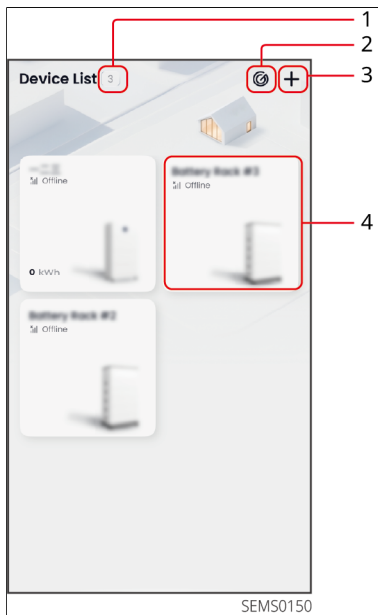


Figure17 Device List

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

No.	Description
4	• Device card. Displays data such as device name, device status, device image, power, and Energy Generation. • The information displayed on the card varies by device type. Refer to the actual display. • The card style varies by plant type. Refer to the actual display. • Device card images are for reference only. Refer to the actual product. • Long-press to rename or delete the device. • When long-pressing to delete the current device, if there are associated devices, follow the interface prompts to choose whether to delete the associated devices at the same time or retain them.

2.2.2 Device Details

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



Figure18 View Device Details

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

No.	Description
8	• Remote Control. Displays quick access to commonly used control items. • Click "More Control" to view all device control items. • For details, refer to the Setting Remote Control section.
9	• Operating data. Displays current device operating parameters, such as active power, reactive power, Power Factor, etc. • Click "More" to display all data details. • Information displayed varies by device; please refer to the actual interface.
10	Displays power curves and energy monitoring charts over different time dimensions.
11	Device details. Displays basic device information, such as device name, SN, device type, firmware version, etc.

2.2.3 Remote Control Device

Controllable parameters may vary depending on device model and the country's Safety Regulation; please refer to the actual device.

To understand the definitions of device parameters, refer to [8.Appendix\(Page 102\)](#).

2.2.3.1 Set Inverter Parameters

- On the device list screen, select the inverter to be configured, and set the inverter parameters according to actual requirements.
- The "Common Control" screen provides an entry to quickly access the parameter settings screen. You can configure "Common Control" to adjust the parameters of the control items displayed on the home page.
- Supports searching for parameters to be set through the search box.

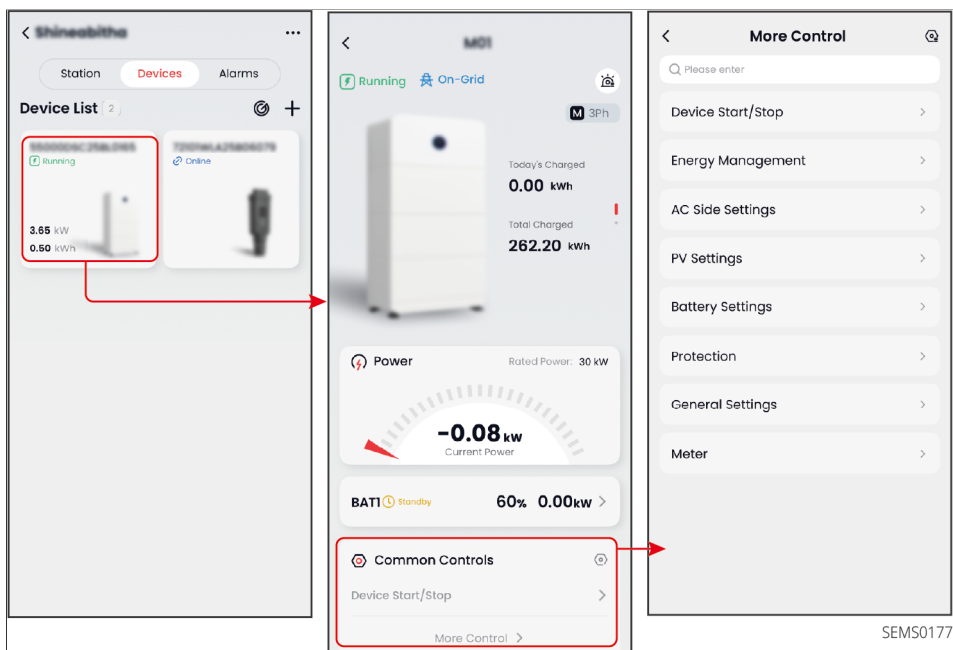


Figure19 Set Inverter Parameters

Set Safety Parameters Operation Steps

1. Access the parameter settings screen through "Protection" > "Safety Regulations".
2. Set the safety country and custom safety parameters according to actual conditions. Custom safety parameters can only be modified by installers.

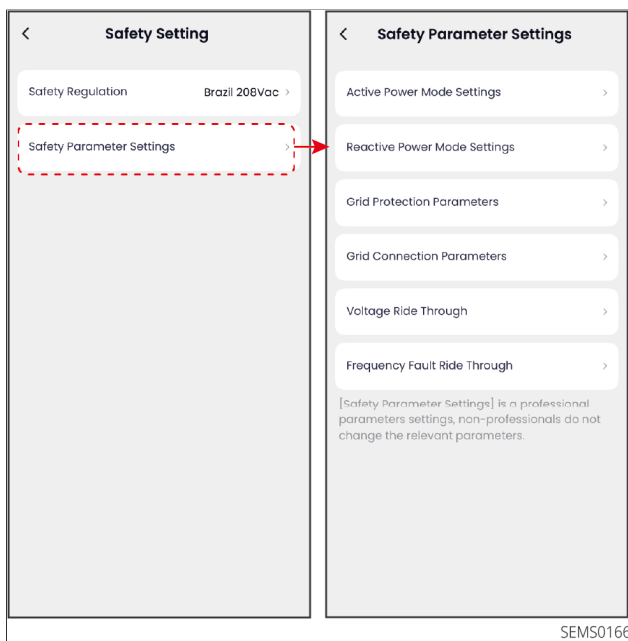


Figure20 Set Safety Parameters

Set Power Limitation Parameters

NOTICE

The power limit screen varies depending on the safety country; please refer to the actual screen.

Operation Steps

1. Access the power limit settings screen through "Energy Management" > "On-grid Power Dispatch" > "On-grid Power Limit".
2. Set the power limit parameters according to actual needs.

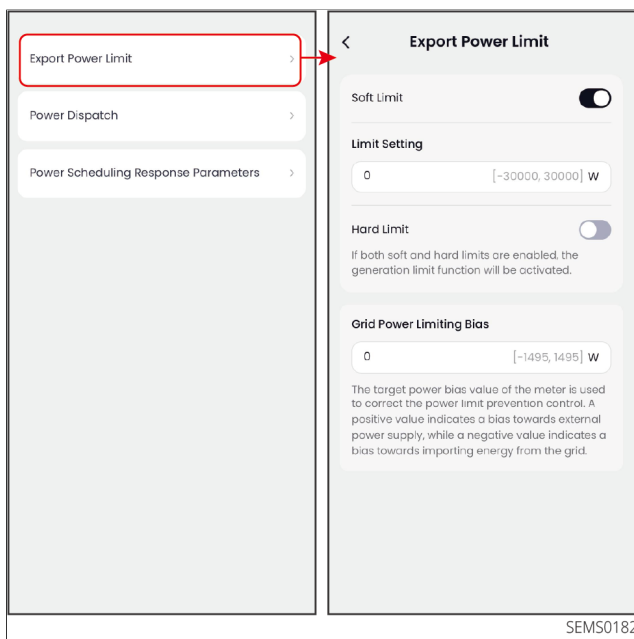


Figure21 Set Power Limitation Parameters

2.2.3.2 Set Battery Parameters

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

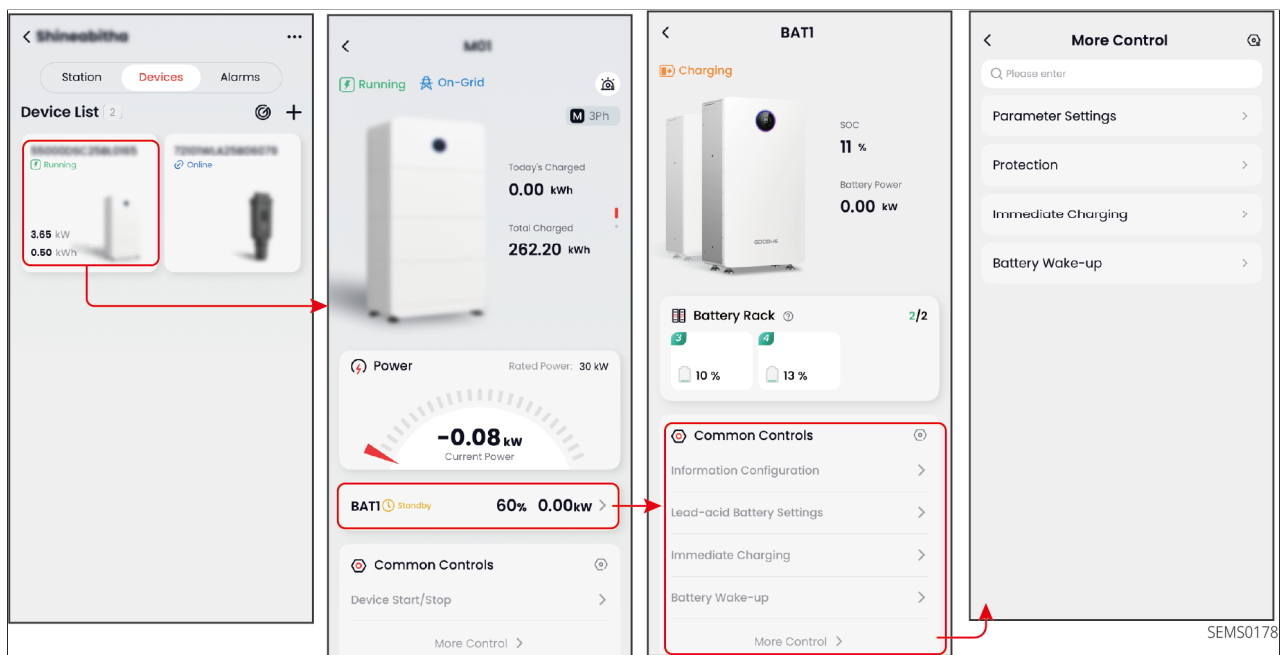


Figure22 Set Battery Parameters

Set JA12 Certification Parameters

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

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

Operating steps:

1. Tap "Settings" > "Battery" > "JA12 Certification".
2. Set the Certification capacity and system capacity according to actual conditions.
The settings take effect permanently and cannot be modified. After the settings are complete, you can view the JA12 Certification mark on the Home page.

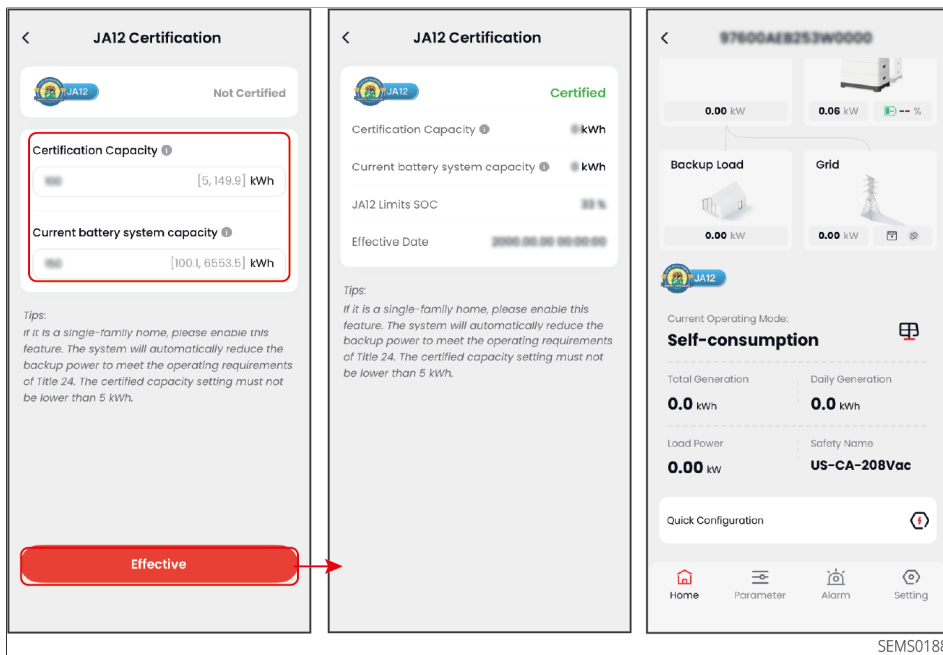


Figure23 Set JA12 Certification Parameters

Set Energy-saving mode (Balcony Device)

- Only applicable to Balcony Micro Storage series products.
- ESA ATHENA S2 series: To save power, when the device is grid-connected, it automatically enters standby mode 5 minutes after the battery level reaches the lower SOC limit, or when it is off-grid with no load for 2 consecutive hours. After standby, the screen turns off, and the App cannot monitor temporarily. It can be woken up when the PV generation is higher than the device's Start-up Voltage or by switching the device button off and on once.
- ESA ATHENA S3 series: To save power, the device automatically enters standby mode after 2 consecutive hours with no load in off-grid state. After entering standby, the screen turns off and the App cannot monitor temporarily. It can be woken up when any of the following conditions is met: PV generation is higher than the device's Start-up Voltage, the AC grid-connected port is connected to a normal grid, or the device button is toggled once.

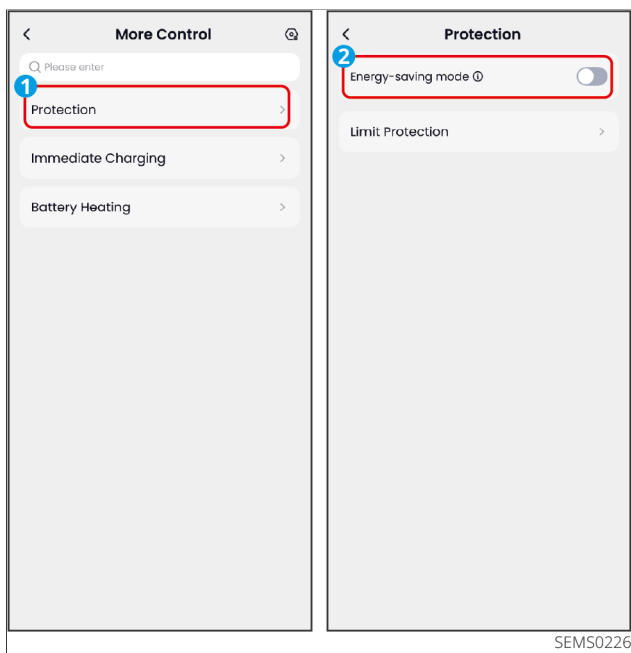


Figure24 Set Energy-saving mode

2.2.3.3 Set Meter Parameters

On the device list screen, select the inverter, and tap "Common Control" > "Meter" to set the meter parameters according to actual requirements.

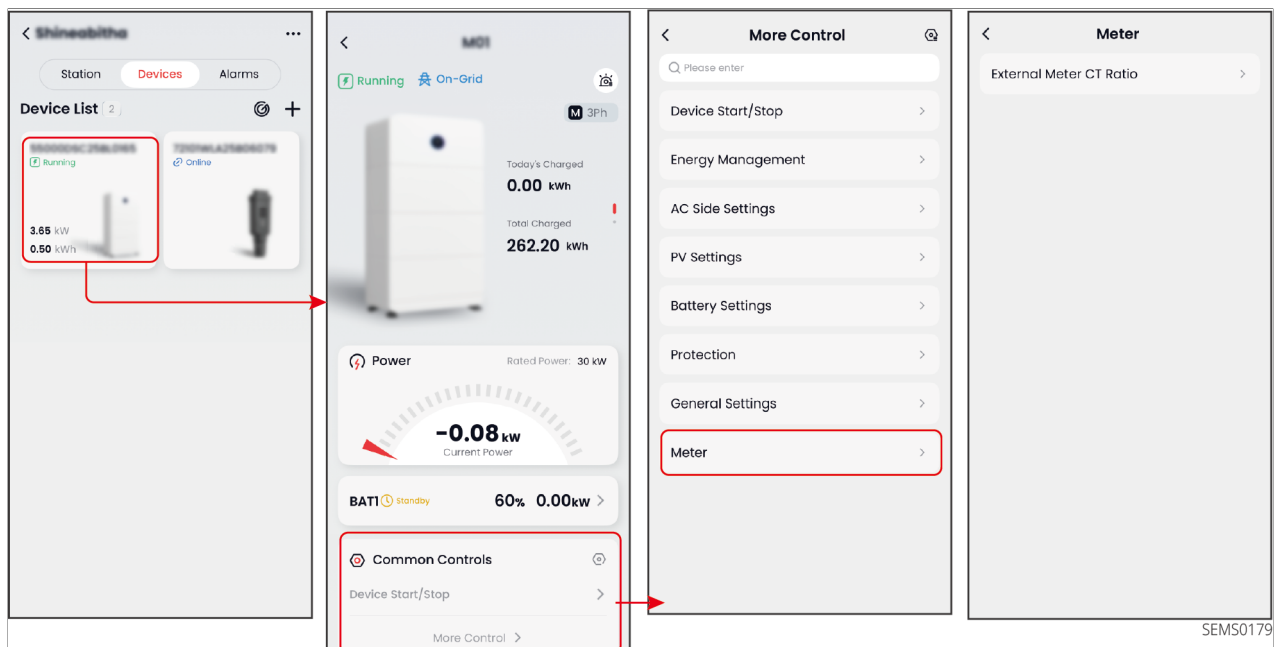


Figure25 Set Meter Parameters

2.2.3.4 Set Home Energy Management Device Parameters

On the device list screen, select the Home Energy Management Device, and tap "Settings" to set parameters according to actual requirements.

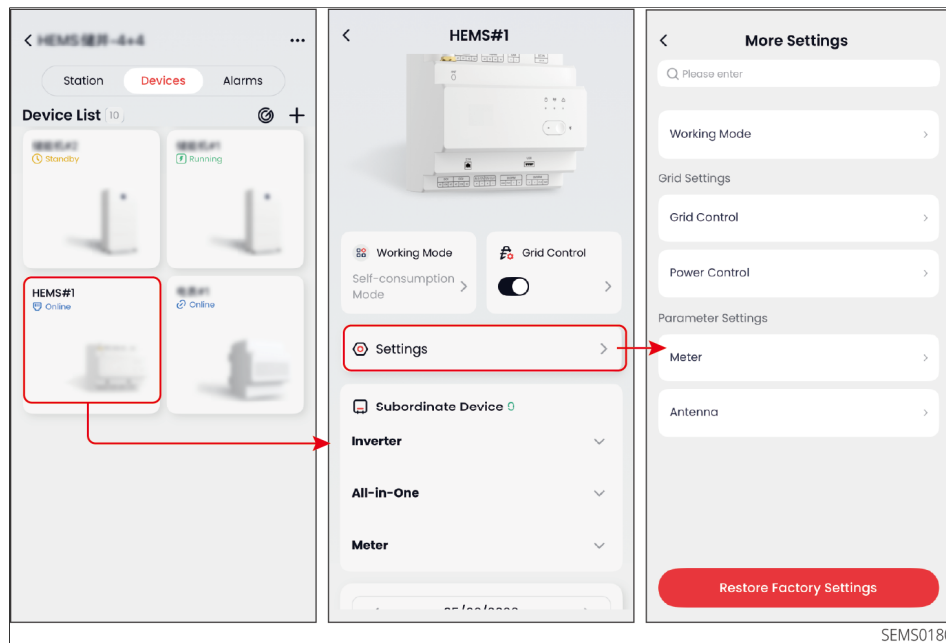
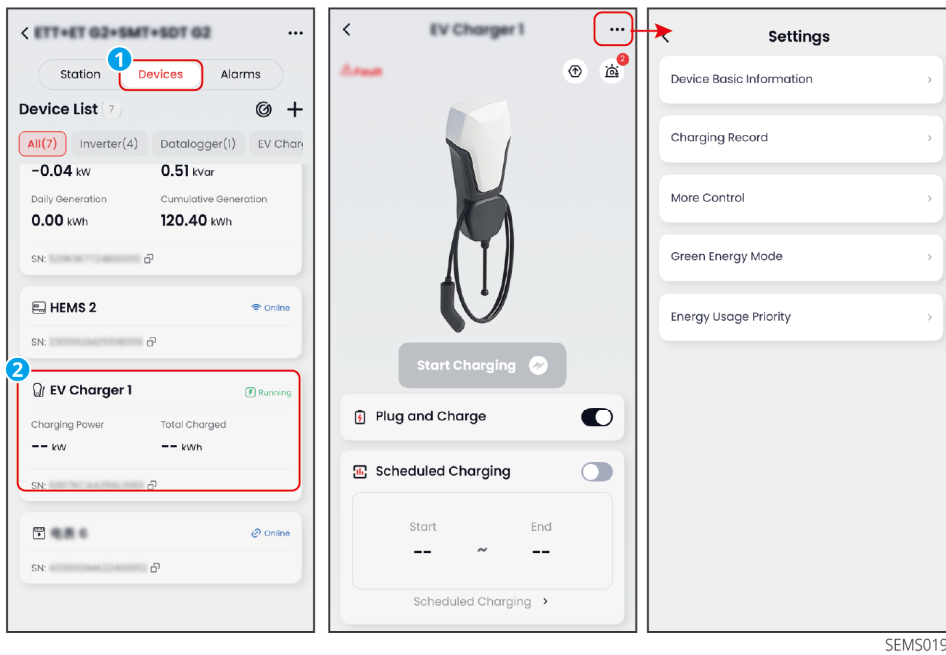


Figure26 Set Home Energy Management Device Parameters

2.2.3.4.1 Set EV Charger Parameters

On the device list screen, select the charger and tap it to enter the settings screen. Supports setting charging modes:

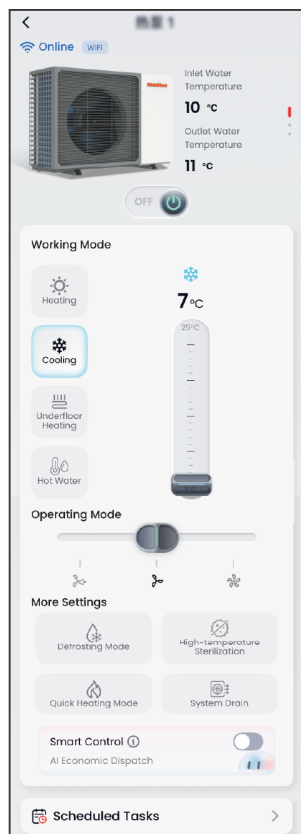
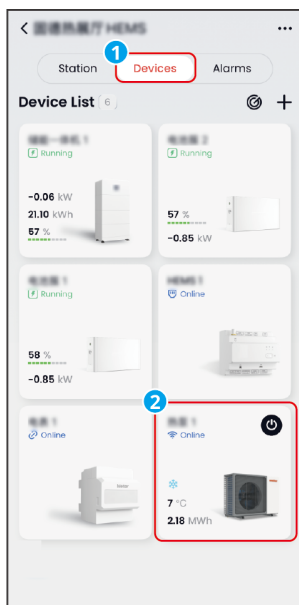
- Plug and Play: Insert the charging connector into the vehicle to Start Charging.
- Scheduled Charging: Set the scheduled Charging Time according to actual needs. You can select single charging or multiple cyclic charging sessions.
- Green Energy Mode: When the PV surplus power is greater than the Green Energy Starting Power, charging starts. To prevent the device from repeatedly starting and stopping due to unstable green energy, set the minimum operating period after the device starts.



SEMS0199

2.2.3.4.2 Set Heat Pump Parameters

- On the device list screen, select the heat pump and tap to enter the settings screen.
- The heat pump model used in the system varies, and the supported control items differ; please refer to the actual interface.
- When connected to an SG Ready heat pump, you can control heat pump start/stop and set the working mode.
- When connected to a GoodHeat heat pump, supports:
 - Control heat pump start/stop. In shutdown state, the mode cannot be set; only system draining can be set.
 - Set working modes such as Cooling, Heating, Floor Heating, and Hot Water, and set the Operating Mode based on the working mode.
 - Set scheduled tasks.
 - Set functions such as defrost mode, high-temperature sterilization, rapid heating mode, and system draining.
 - Enable AI Intelligent Control; the heat pump will operate according to the AI Mode schedule set by HEMS.



SEMS0200

3 Local Device Commissioning

NOTICE

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

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

3.1 Local Access Devices

NOTICE

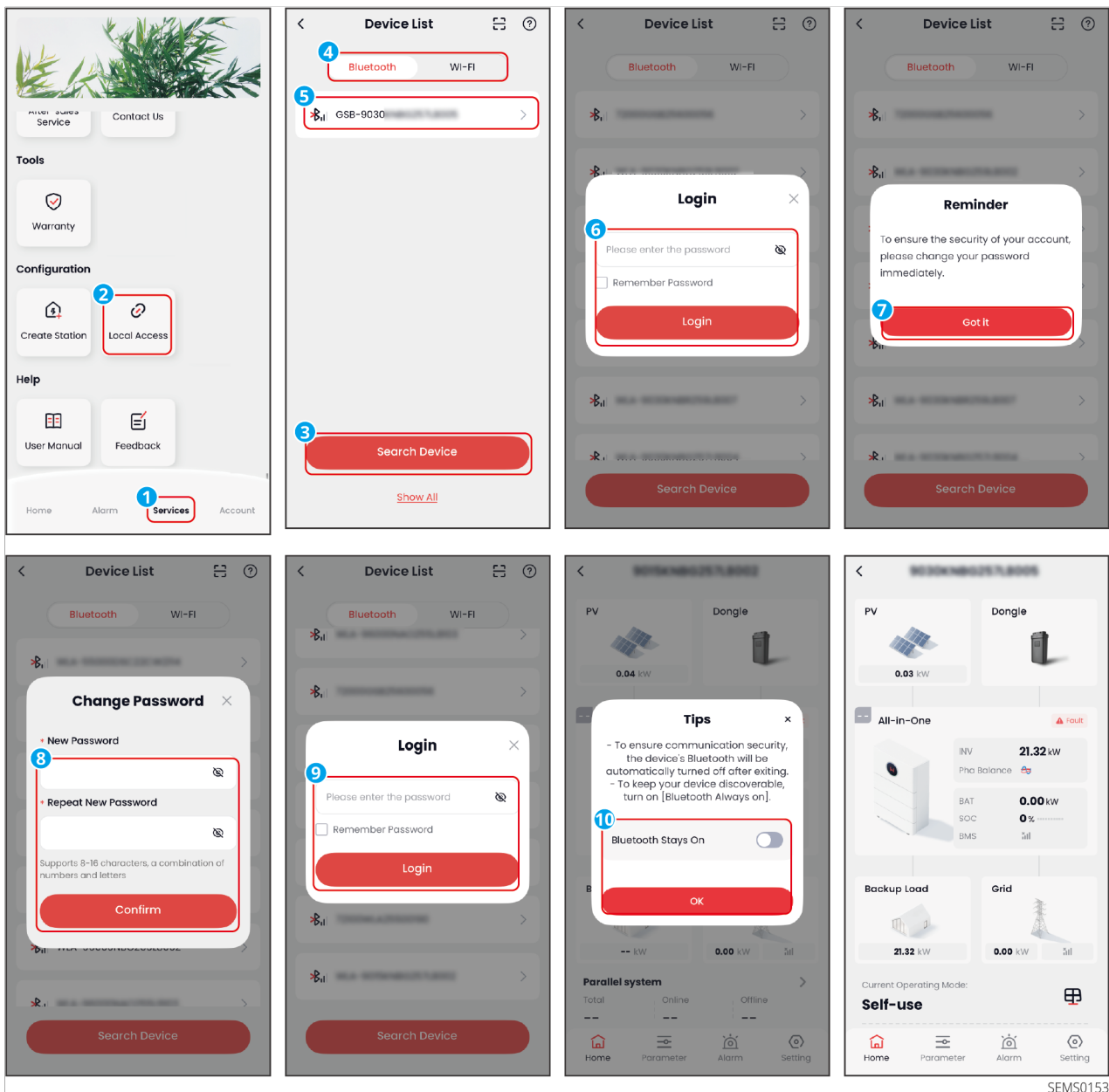
- Before connecting to the device via Local Access, confirm that the device is powered on and operating normally.
- When the device type or Intelligent Communication Stick type is different, the displayed device name differs, as follows (***) is the device serial number):
 - Wi-Fi/LAN Kit; Wi-Fi Kit; Wi-Fi Box: Solar-WiFi***
 - WiFi/LAN Kit-20: WLA-***
 - WiFi Kit-20: WFA-***
 - Ezlink3000: CCM-BLE***; CCM-***; ***
 - 4G Kit-CN-G20/4G Kit-CN-G21: GSA-***; LAE-***; GSB-***
 - 4G Kit-G20: LGA-***
 - 4G Kit-CN-G23: LAF-***
 - Charging Station: ***
 - EzManager3000: LEM-***

Operation Steps

1. After logging in to the App, tap "Service" > "Local Access" to enter the connection screen.
2. On the "Device List" page, select the "Bluetooth" or "WiFi" tab according to the

signal type of the Intelligent Communication Stick. Tap "Search Device" to refresh the device list, and select the device to be connected by serial number.

3. On first login, enter the initial login password to log in and change the password as prompted. Initial login password: 1234.
4. When connecting via Bluetooth, follow the on-screen prompt to enable "Bluetooth Stays On"; otherwise, the Bluetooth signal will be turned off after this connection ends.



SEMS0153

Figure27 Local Access Devices

3.2 Local Access Interface Overview

NOTICE

The App interface varies depending on the devices included in the system; please refer to the actual interface.

After connecting to the device via Bluetooth or WiFi, you can enter the Local Access device interface. It supports viewing or modifying device parameters.

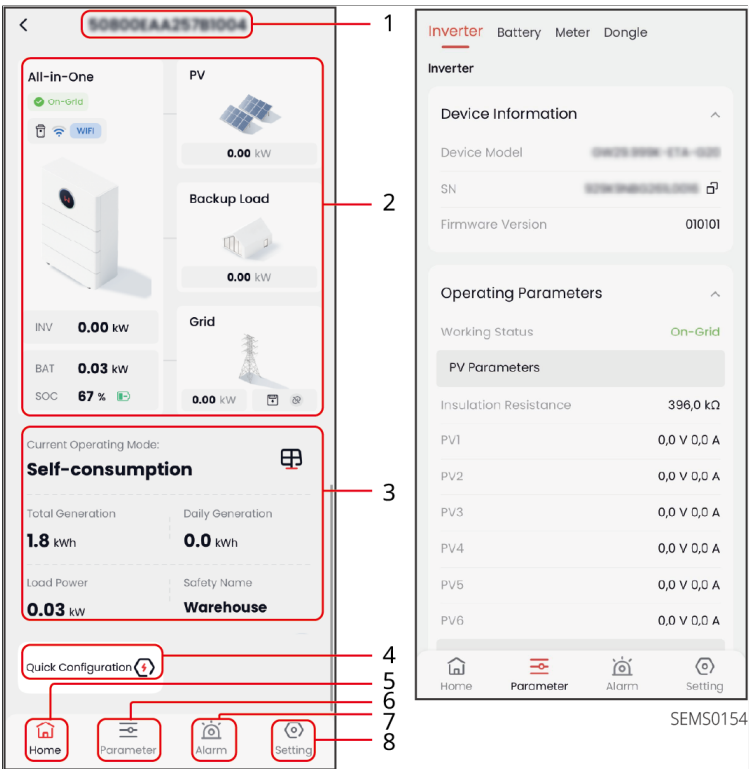


Figure28 Local Access Interface Overview

No.	Description
1	Current device serial number.

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

3.3 Set Device Parameters

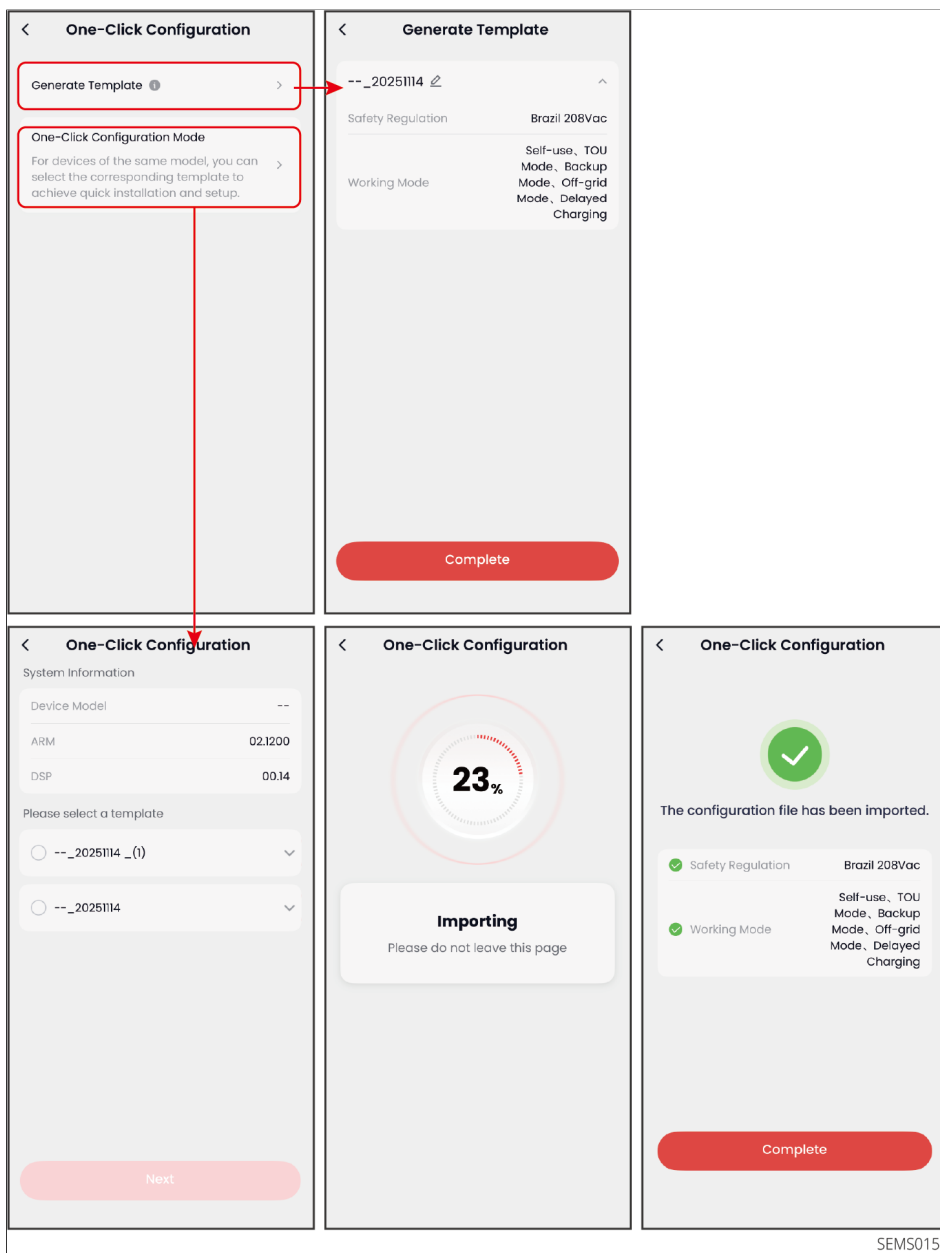
After connecting to the device locally, you can modify device parameters according to

actual needs.

3.3.1 One-Click Configuration

Some models support One-Click Configuration mode, which saves Quick Configuration as a template and applies it quickly.

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



SEMS0157

Figure29 One-Click Configuration

3.3.2 Set Inverter Parameters

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

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

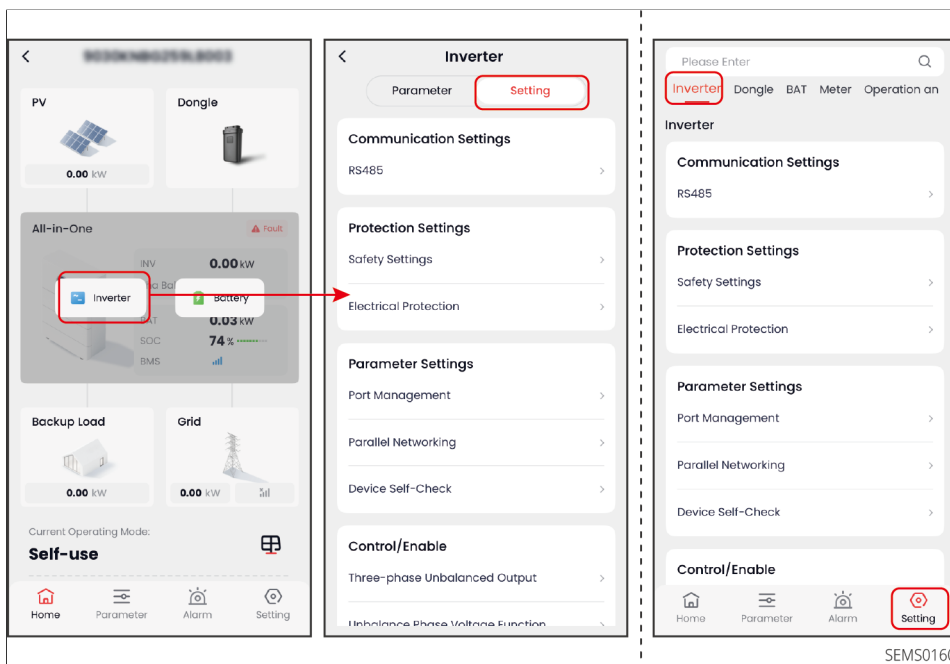


Figure30 Set Inverter Parameters

Set Safety Parameters

Operation Steps

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

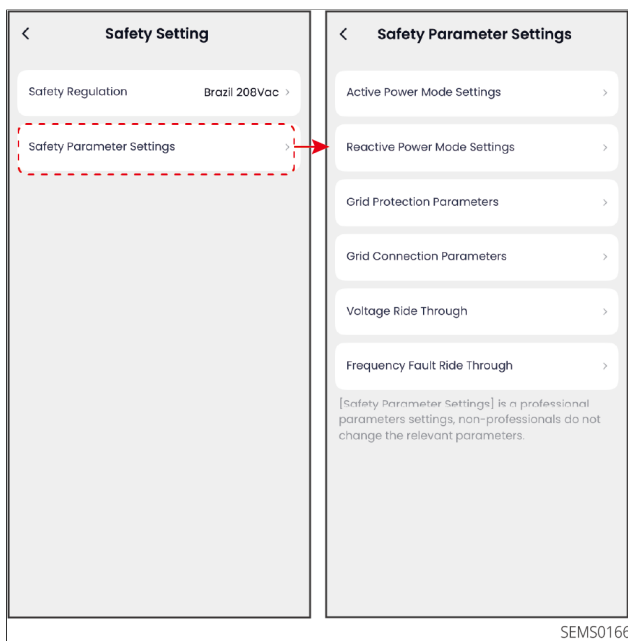


Figure31 Set Safety Parameters

Set Power Limitation Parameters

NOTICE

The power limit screen varies depending on the safety country; please refer to the actual screen.

Operation Steps

1. Go to "Settings" > "On-grid Power Dispatch" > "On-grid Power Limit" to enter the power limit settings screen.
2. Set the power limit parameters according to actual needs.

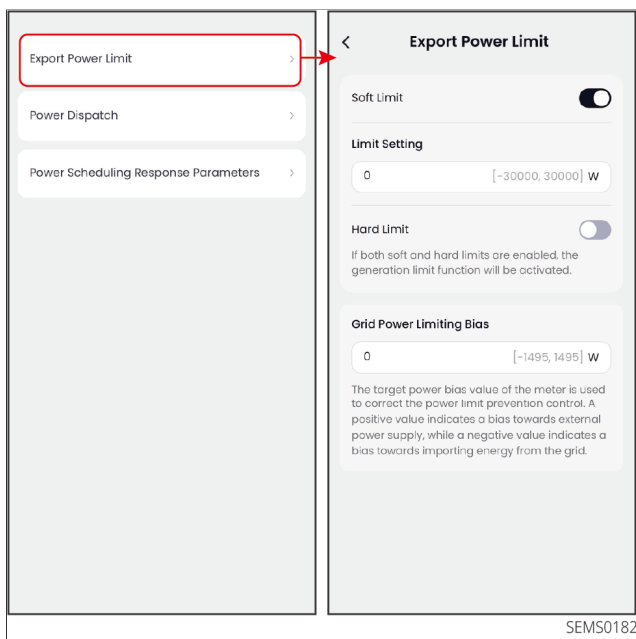


Figure32 Set Power Limitation Parameters

Set RS485 Parallel Networking

NOTICE

- Different inverters support different RS485 parallel modes, such as manual networking or self-networking. Please refer to the actual product.
- When an inverter in a parallel system needs to be separated for standalone use, it must be set to standalone via the App.
- In a parallel system, the inverter connected to the meter is the master.
- If the device does not support self-networking, first set the slave inverter address, and then configure Parallel Networking through the master.
- After completing Parallel Networking, the master settings are delivered to the slaves by default. If there are differences, set the slave parameters separately.

Operation Steps

1. Go to "Settings" > "Parallel Management" > "Parallel Networking" to enter the settings screen.
2. According to the actual wiring of the inverter, set it as master, slave, or standalone; or according to the actual parallel scenario, set it as standalone, parallel, or single-

phase to three-phase.

- When the device does not support self-networking, you need to manually set the properties of each inverter in the system:
 - When the inverter is the master, set it as master and then exit the connection. After setting the slave inverter addresses, return to this screen, tap "Parallel Networking", set the number of inverters in the parallel system, and then tap "Networking".
 - When the inverter is a slave, set the inverter address and then tap v.
- When the inverter supports self-networking, select the number of inverters in the system according to the actual situation.

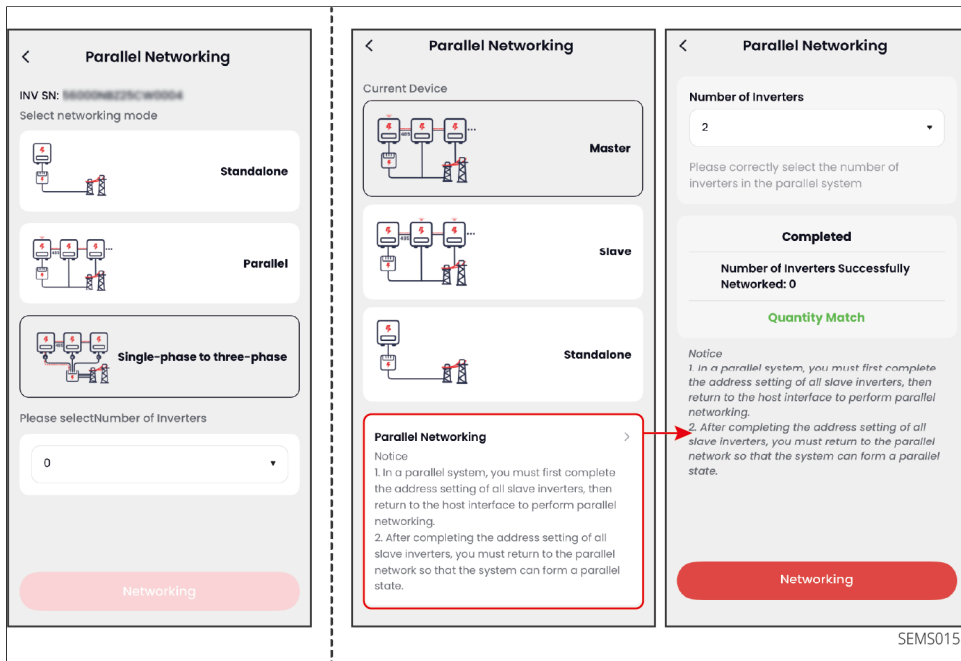


Figure33 Set RS485 Parallel

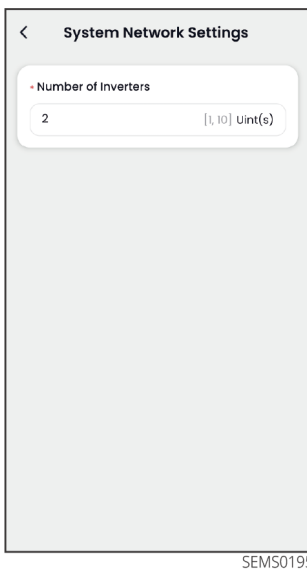
Set Ezlink Parallel Networking

NOTICE

- In a parallel system, the inverter connected to the Ezlink3000 Intelligent Communication Stick is the master.
- Set the number of inverters in the parallel system through the master.
- After completing Parallel Networking, the master settings are delivered to the slaves by default. If there are differences, set the slave parameters separately.

Operation Steps

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



SEMS0195

3.3.3 Set Intelligent Communication Dongle Parameters

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

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

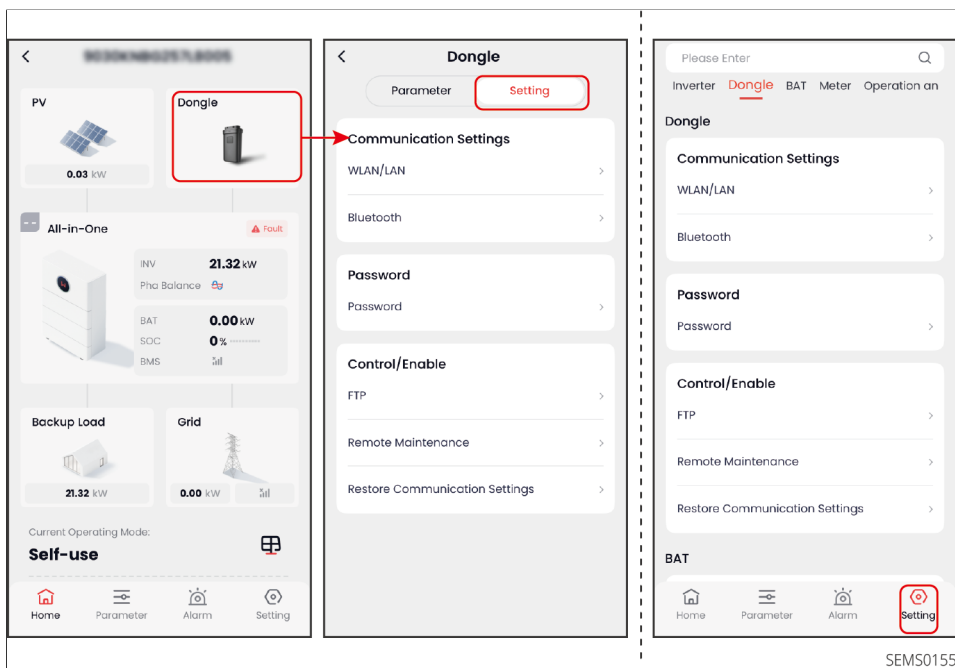


Figure34 Set Communication Stick Parameters

3.3.4 Set Battery Parameters

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

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

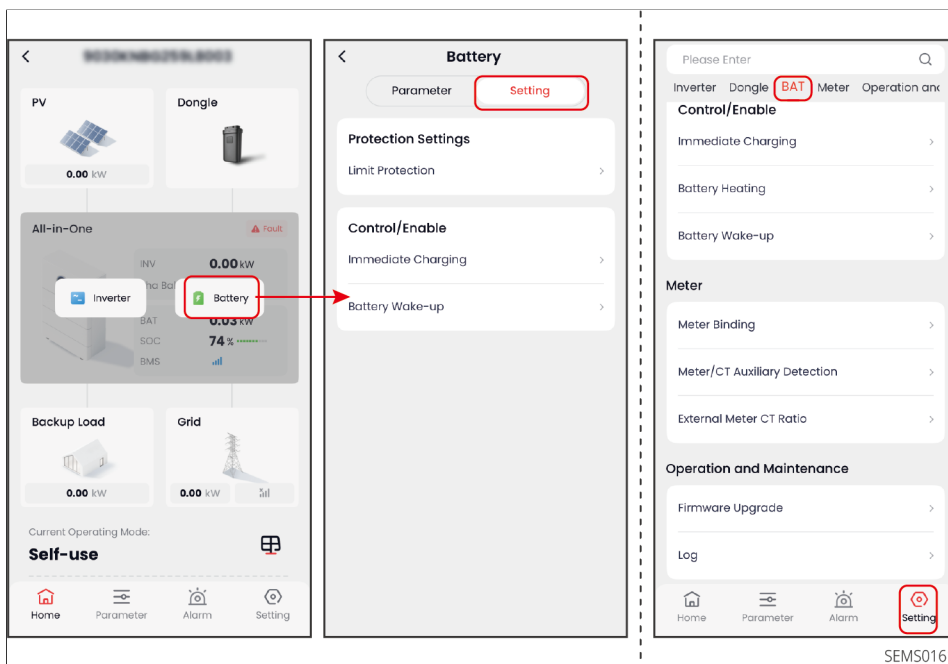


Figure35 Set Battery Parameters

Set JA12 Certification Parameters

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

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

Operating steps:

1. Tap "Settings" > "Battery" > "JA12 Certification".
2. Set the Certification capacity and system capacity according to actual conditions.
The settings take effect permanently and cannot be modified. After the settings are complete, you can view the JA12 Certification mark on the Home page.

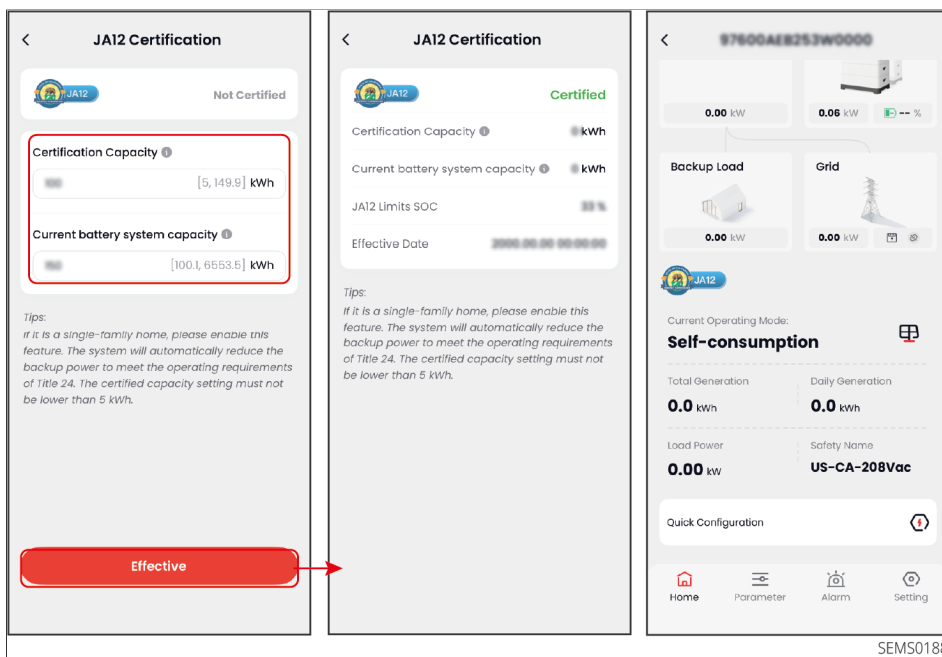


Figure36 Set JA12 Certification Parameters

3.3.5 Set Meter Parameters

Method 1: On the Home page, press and hold the 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.

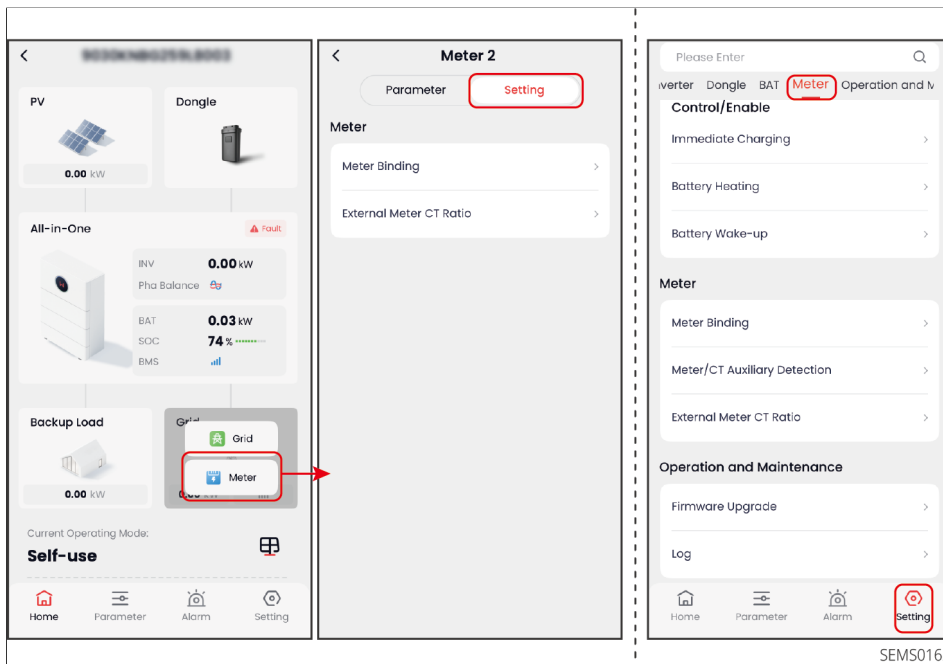


Figure37 Set Meter Parameters

Meter Binding Procedure

1. Tap "Home", press and hold the "Grid" card, and select "Meter" > "Settings" > "Meter Binding" to enter the binding screen. Alternatively, go to the binding screen via "Settings" > "Meter" > "Meter Binding".
2. Click the "Meters Number/Location" drop-down to select the actual application scenario. Supported selections: Meter 1 (Built-in) without Meter 2; Meter 1 (External) without Meter 2; Meter 1 (Built-in) and Meter 2 (External); Meter 1 (External) and Meter 2 (External); Built-in CT, external no meter and no CT. The actual options on the interface shall prevail. Here, the Meter 1 (External) without Meter 2 interface is used as an example to describe how to bind the meter.
3. As shown in the figure below, when using an external meter, you need to manually add the external meter information. Tap "Bind", and bind the meter by manually entering the meter SN or scanning the meter SN QR code. When the bound meter model is GM330, set the meter CT ratio according to actual conditions; if other meters are used, there is no need to set the meter CT ratio.

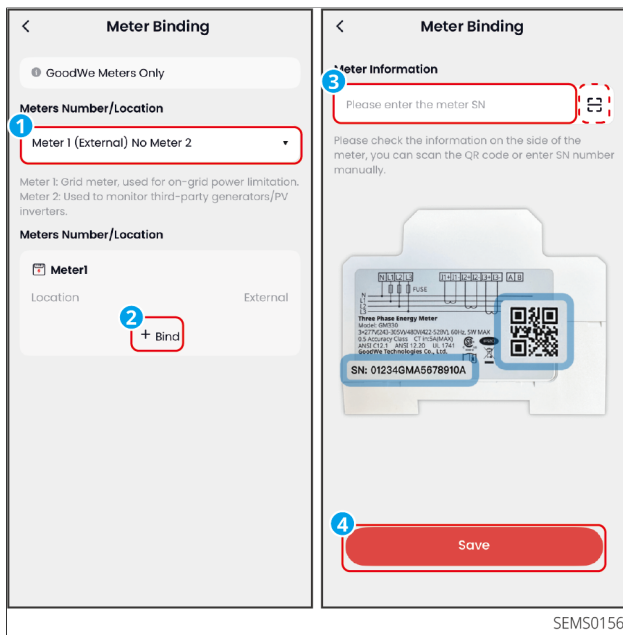


Figure38 Bind Meter

3.3.6 Set System Operating Mode

Supports selecting the system operation mode based on Tariff, electricity demand, or power supply environment, etc. After the settings are complete, the system automatically coordinates PV, battery, and grid to schedule power according to actual demand.

NOTICE

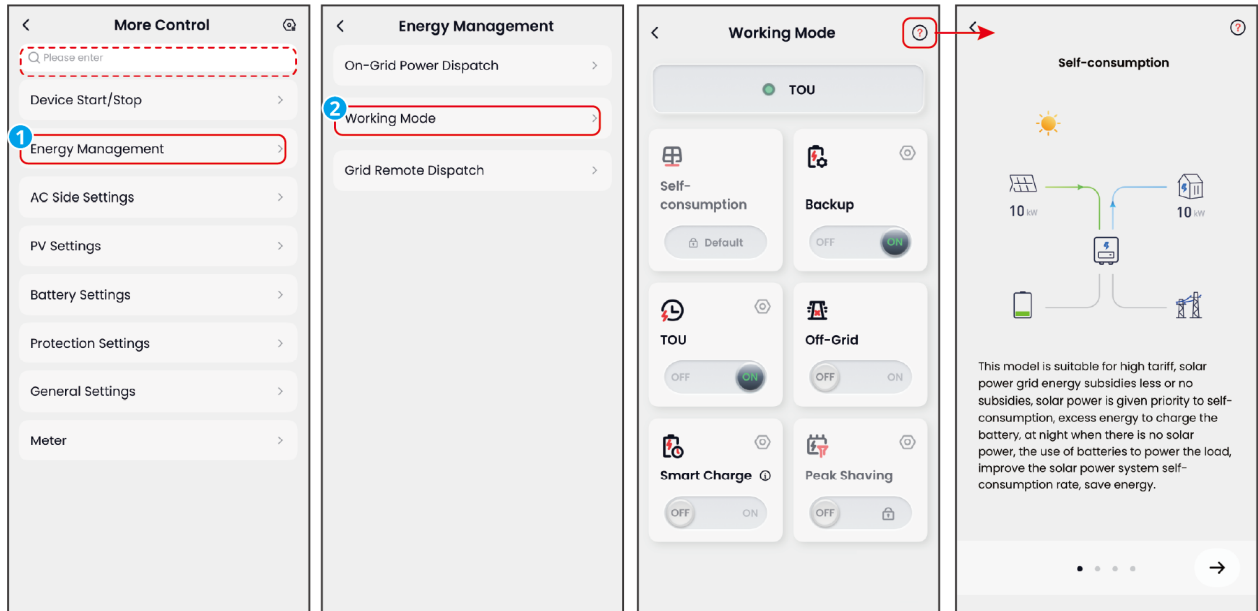
- The default working mode is Self-consumption Mode.
- Different systems support different working modes. Please refer to the interface.
- When the working mode is set through the inverter, the working mode priority is: Off-grid Mode > Demand Management > Intelligent Charging > TOU > Backup Mode > Self-consumption.
- When the working mode is set through the Home Energy Management System, the working mode priority is: Backup Mode > AI Mode > Demand Management > TOU Mode > Self-consumption.

Operation Steps

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

the parameter control screen to enter the Working Mode Settings screen.

2. Please set the working mode according to actual requirements. To learn more about working modes, click .



SEMS0159

Self-consumption

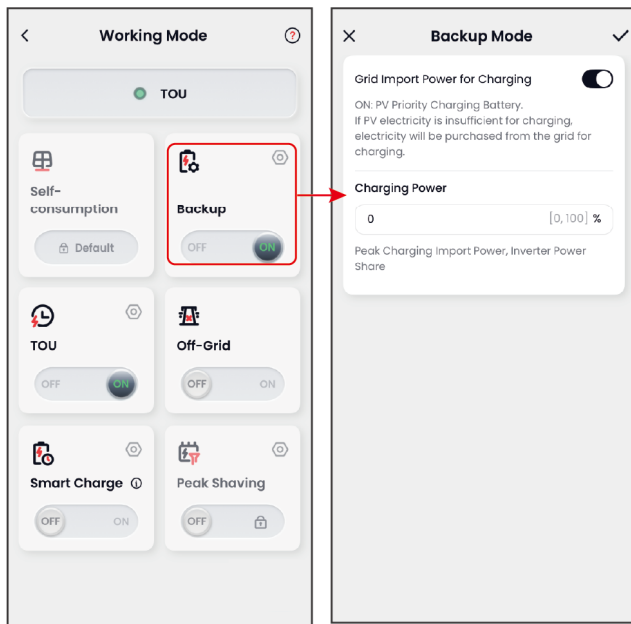
The basic working mode for system operation.

PV power generation is preferentially used to supply the load; surplus power charges the battery, and any remaining power is sold to the grid. When PV generation is insufficient, the battery supplies the load; when the battery power also cannot meet the load demand, the grid supplies the load.

Backup Mode

Recommended for areas with unstable grids.

When a Grid Power Outage occurs, the inverter switches to off-grid working mode, and the battery discharges to supply the load, ensuring that the BACKUP load is not interrupted; when the grid recovers, the inverter working mode switches to grid-connected operation.



SEMS0189

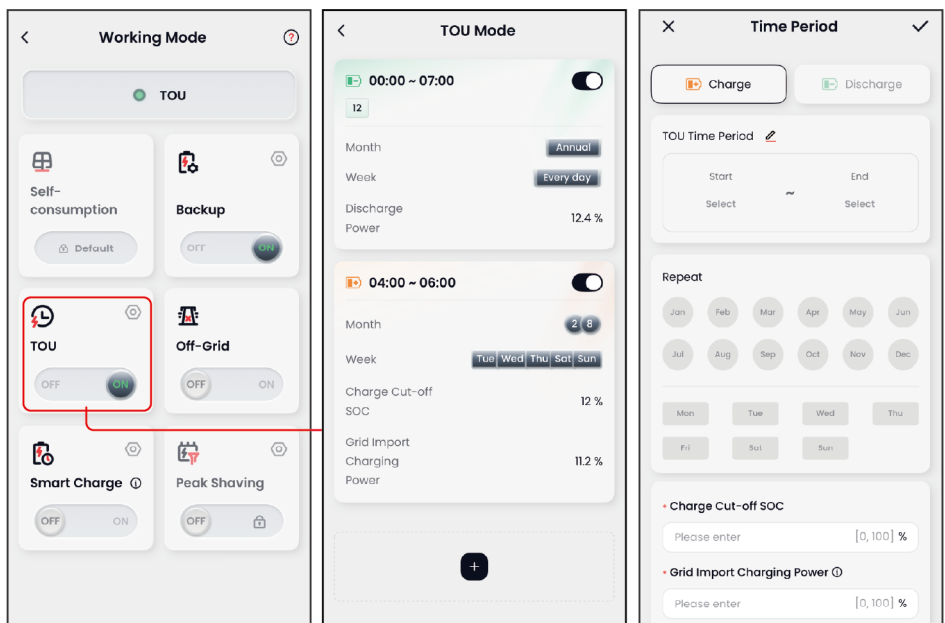
Parameter Name	Description
Grid Purchase Charging	Enable this function to allow the system to purchase electricity from the grid.
Charging Power	Peak power when buying electricity, as a percentage of the inverter's Rated Power.

TOU Mode

Applicable to regions with a large peak-valley Tariff difference.

In compliance with local laws and regulations, set the system to buy electricity or Export Energy according to the grid peak-valley Tariff periods. For example, during low Tariff periods, set the battery to charging mode to buy electricity from the grid for charging; during high Tariff periods, set the battery to discharging mode to supply the load or Export Energy to the grid.

Supports setting multiple time periods according to actual requirements and naming them as needed.



SEMS0185

Parameter Name	Description
Start Time	Within the Start Time and End Time, the battery charges or discharges according to the configured charge/discharge mode and Rated Power. Outside this time period, it operates in Self-consumption Mode.
End Time	
Charge/Discharge Mode	Set to charge or discharge according to actual requirements. - Charging: PV is prioritized to charge the battery. - Discharging: PV Priority to Export Power to the grid.
Charge Cut-off SOC	When the battery SOC reaches the set SOC, charging stops.
Grid Import Charging Power	The charging power, expressed as a percentage of the inverter Rated Power.
Power Limited Type	In Discharge Mode, some models support selecting either battery discharge or Export Energy to the grid. After discharging to the 'Discharge Cut-off SOC', discharging stops.
Discharge Cut-off SOC	

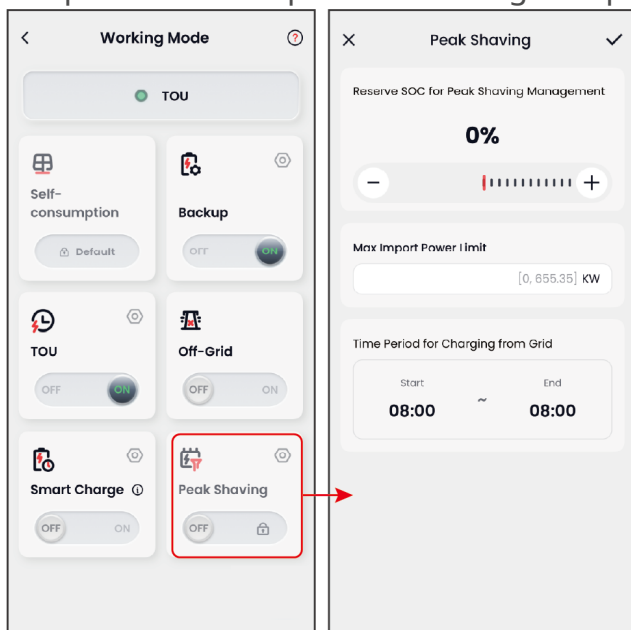
Parameter Name	Description
Discharge Power	The discharge power, expressed as a percentage of the inverter Rated Power.

Off-grid Mode

- Applicable to areas without a grid. The PV and battery form a pure off-grid system. PV power supplies the load, and excess energy charges the battery. When PV generation cannot meet the load demand, the battery supplies power to the load.
- Some models support manual or automatic activation of off-grid mode.
 - Manual Off-grid: The user manually switches to off-grid Operating Mode.
 - Automatic Off-grid: When the battery SOC is greater than the 'Off-grid SOC Upper Limit', the system automatically switches to off-grid operation; when the battery SOC is less than the 'Off-grid SOC Lower Limit', the system automatically switches back to grid-connected operation.

Demand Control

Applicable to scenarios with limited peak grid import power. When the total load power approaches the usage quota upper limit, battery discharge is used to reduce the power consumption exceeding the quota.

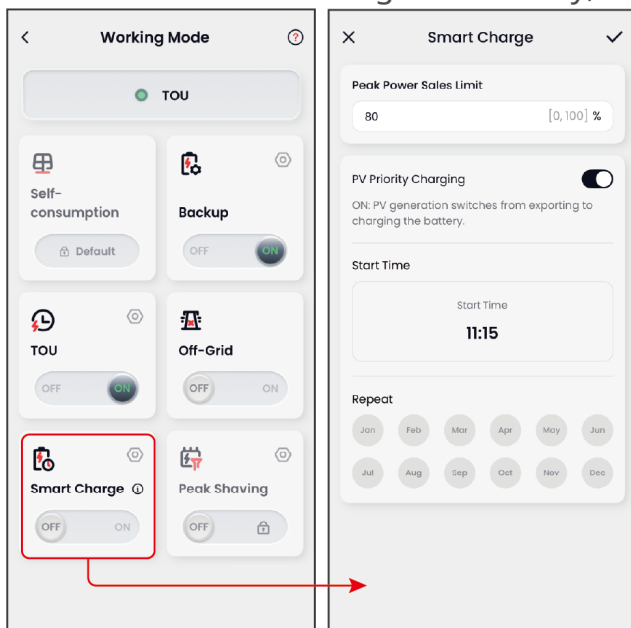


SEMS0187

Parameter Name	Description
Reserved SOC for Demand Control	In Demand Control Mode, the reserved SOC is used for demand control. When the battery SOC is higher than the reserved SOC, the demand control function is disabled.
Grid Import Peak Limit	Set the Max. Power limit allowed for grid import. When the load power exceeds the sum of the PV power generated by the PV system and this limit, the battery discharges to make up the excess power.
Time Period for Charging from Grid	- Within the Time Period for Charging from Grid, when load consumption does not exceed the grid import quota, the battery can be charged from the grid. Outside this time range, the battery can only be charged using PV generation power. - Supports setting multiple time periods according to actual requirements.

Intelligent Charging (Delayed Charging)

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

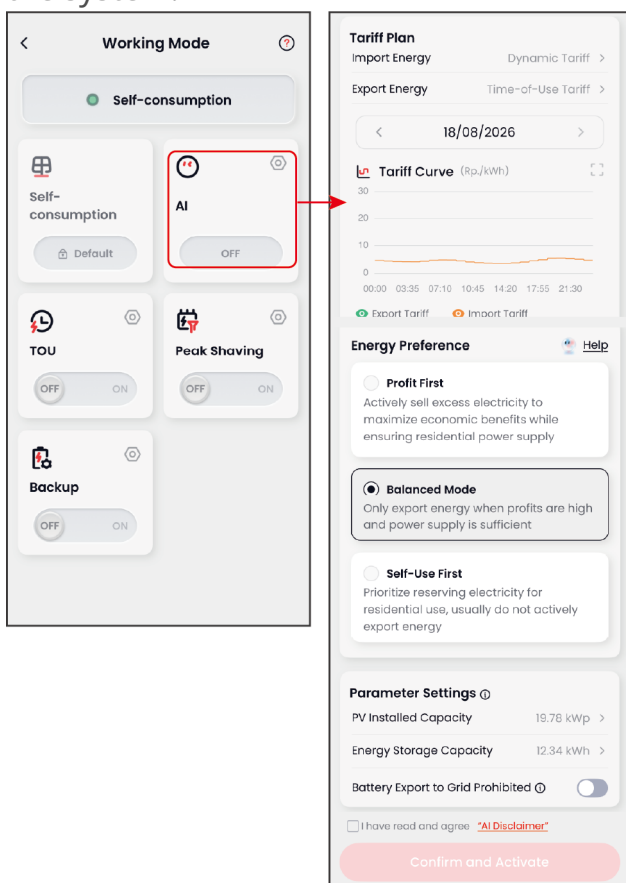


SEMS0186

Parameter Name	Description
Peak Power Sales Limit	According to the grid code requirements of certain countries or regions, set the peak power limit. The peak power limit value must be lower than the locally specified output power limit value.
PV Priority Charging	Within the Charging Time range, after the PV power is consumed by loads, the surplus energy is preferentially used to charge the battery. Outside the Charging Time range, after the PV power is consumed by loads, the surplus energy is preferentially used for Export Energy.
Start Charging Time	

AI Mode

AI Mode can be enabled when a home energy management system (HEMS) is used in the system.



SEMS0181

Set the Tariff according to user requirements, and use AI computation to optimize scheduling, maximizing energy and economic Efficiency. When AI Mode is used, during the initial stage of collecting plant information, there may be deviations

between the predicted curve and actual conditions.

- Before enabling AI Mode, set the Tariff plan first. When the Tariff plan is a fixed Tariff, AI Mode is not supported.
- Select Time-of-Use Tariff or Dynamic Pricing, supporting:
 - Dynamic Pricing: Obtain Dynamic Pricing from the power company, and combine it with the Tariff surcharge set by the user to dynamically adjust the actual Tariff for power purchase and Export Energy.
 - Time-of-Use Tariff: Users can set Tariff information for different time periods according to the actual Tariff. Multiple Tariff groups can be set.
- Set the energy usage preference for AI Mode according to actual needs. If you have any questions, click the "Help" button.

4 Intelligent Plant Management

4.1 Scheduling Timeline

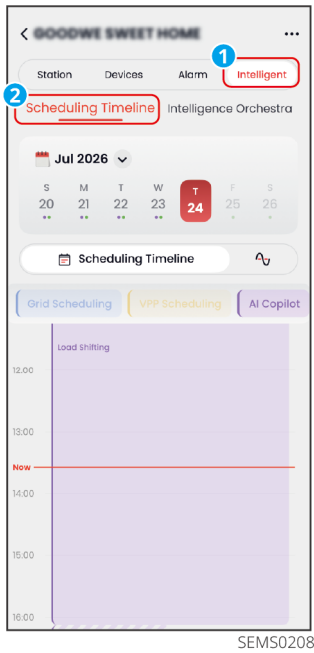
Through the Scheduling Timeline, view the plant's historical scheduling information and the day's scheduling plan, such as who initiated the scheduling command, when scheduling occurred, and what actions were executed.

Currently supported scheduling modes:

- Grid Dispatch: The plant responds to grid commands and accepts grid dispatch, such as Australian DNSP.
- VPP Dispatch: The plant accepts virtual power plant dispatch. Only applicable to Europe and Australia.
- AI Copilot: The plant operates according to strategies generated by AI Intelligent algorithms.
- Workflow Dispatch: The plant operates based on conditions preset by the user in Workflow and the triggered working mode.

Operating steps:

1. Go to the plant details screen and tap "Intelligent" > "Scheduling Timeline".



4.2 Workflow

With Workflow, users can quickly create automated workflows according to actual needs, i.e., preset scenario trigger conditions, trigger time periods, and other instructions to execute corresponding operations within defined conditions and time periods.

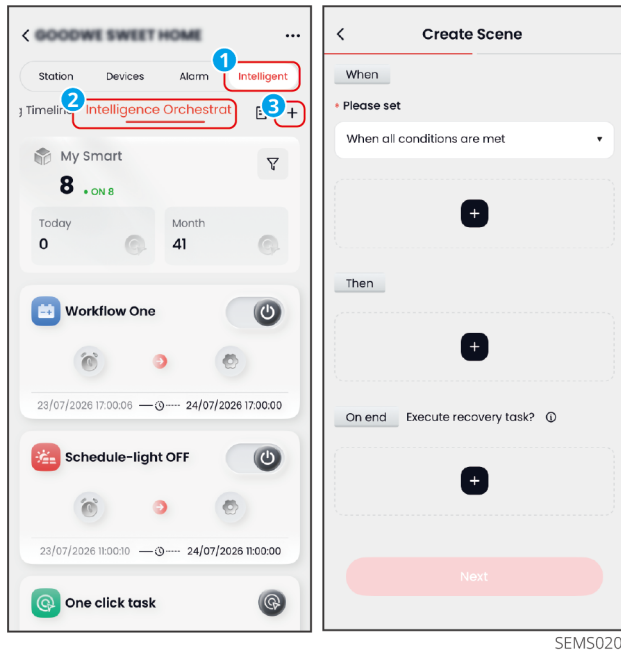
Example: Set the trigger condition to ambient temperature below 0°C and the effective time period to 7 PM to 12 AM every day. When both conditions are met, turn on the heat pump.

NOTICE

Workflows created through Workflow have higher priority than working modes set through devices or the plant.

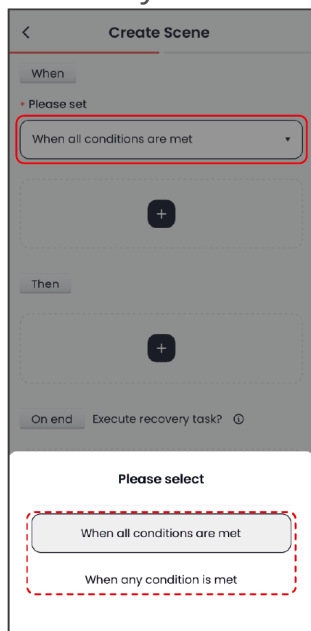
Operating steps:

1. Go to the plant details page, tap "Intelligent" > "Workflow" > **+**, and start creating a new scenario.



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

- When all conditions are met: execute the task only when all conditions are true
- When any condition is met: execute the task when any one condition is true

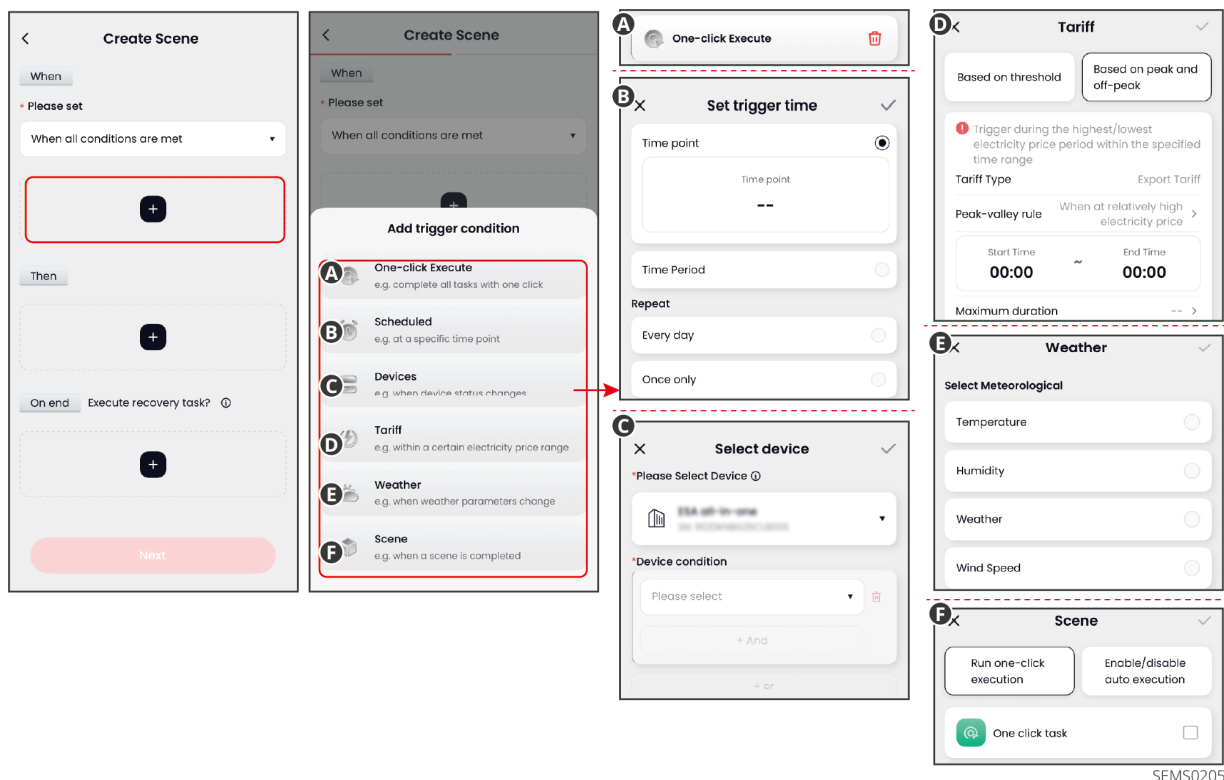


3. According to the interface prompts, set scene conditions. Except for 'One-click execution', other conditions support combined settings:

- One-tap execution: manually execute the task without additional trigger conditions.
- Schedule: Set the time point or time period for triggering the task, as well as the repeat cycle. If a time point is selected, the current task continues by default

after it expires; if a time period is selected, you can choose to continue executing the current task or switch to a new task after expiration.

- Device: Select a device and set conditions. The task is triggered when the selected device meets the conditions.
- Tariff: Trigger tasks based on tariff changes. Not applicable to fixed tariff.
 - Based on threshold: trigger the task when the Export Energy Tariff or Import Energy Tariff is higher/lower than the set Tariff threshold.
 - Based on peak-valley: within a specified time period, select the time period when the Export Energy Tariff is relatively high or the Import Energy Tariff is relatively low. The selected time periods can be non-contiguous. For example: the time period is from 8:00 AM to 2:00 PM; within this time period, select the 2 hours when the Export Energy Tariff is relatively high. According to Tariff fluctuations, the time periods with a relatively high Export Energy Tariff are 11:00 AM to 12:00 PM and 1:00 PM to 2:00 PM.
- Weather: trigger the task when meteorological conditions such as weather, temperature, humidity, and wind speed meet the conditions.
- Scenario: after an existing scenario is executed successfully, fails, or is completed, set the subsequent task to be executed.

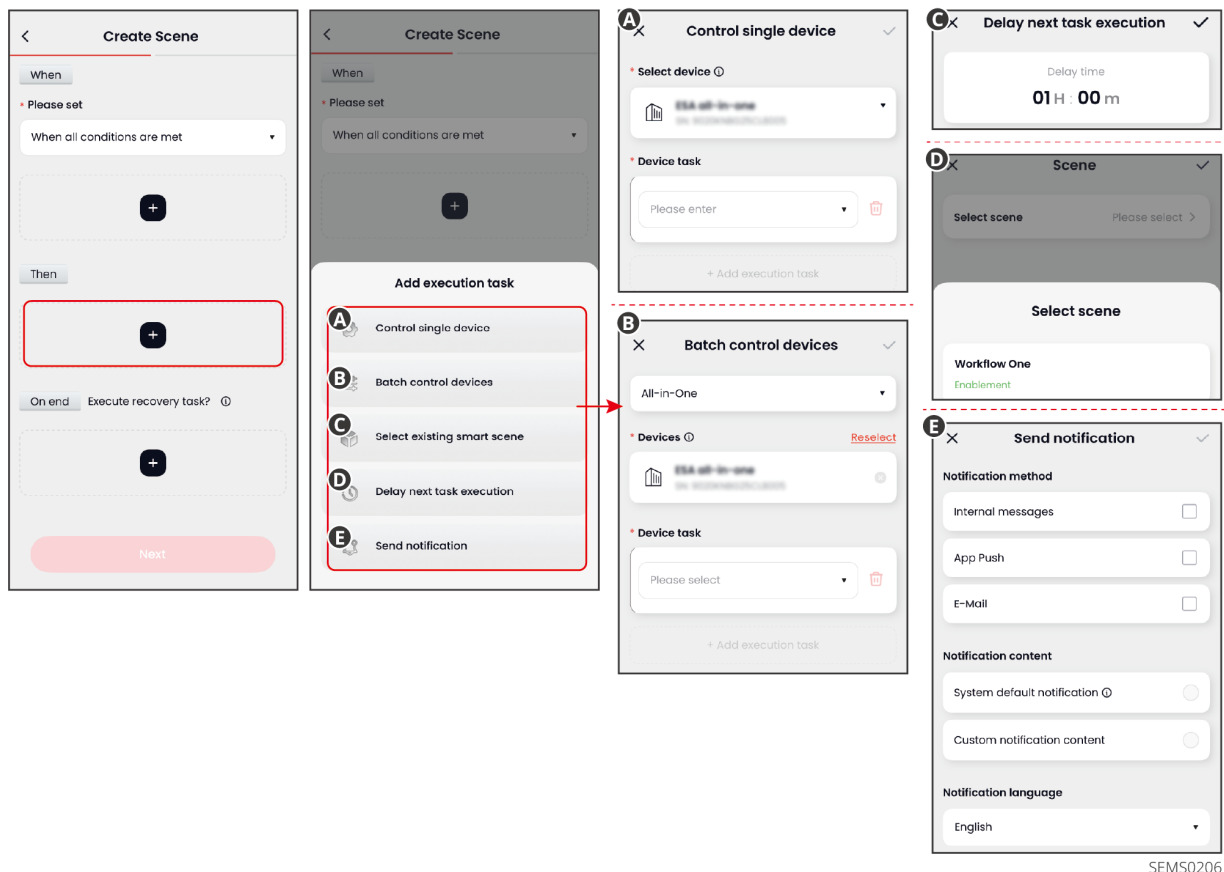


SEMS0205

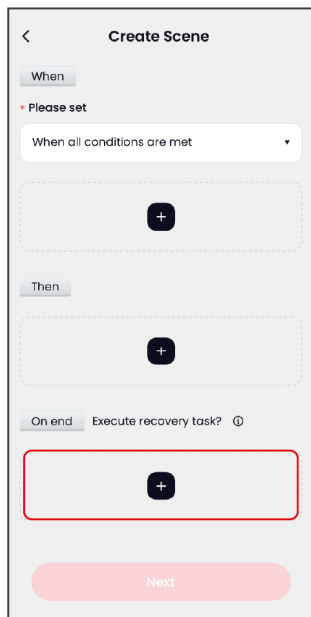
4. According to the interface prompts, preset the tasks to be executed:

- Control a single device: specify one device and its task

- Batch control devices: control multiple devices and their tasks simultaneously
- Select an existing Intelligent scenario: call an existing scenario
- Delay execution of the next task: set a delay time, and execute the subsequent task when the time expires
- Send notification reminders: send notifications via in-app messages, message notifications, email, etc.

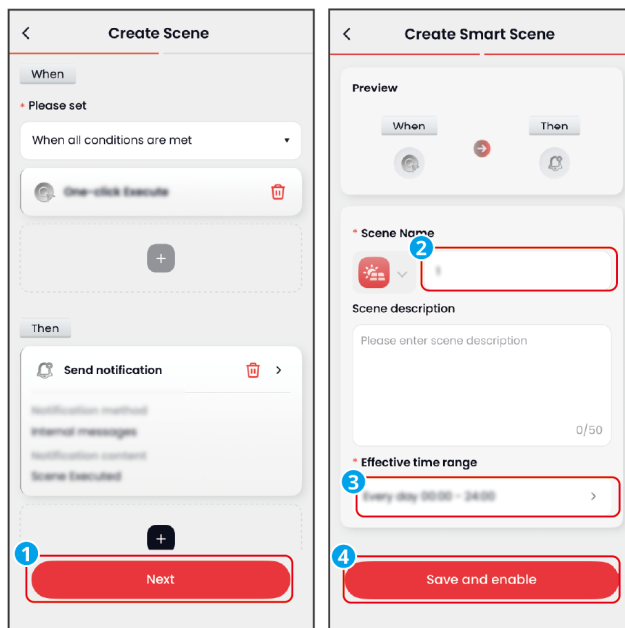


5. When the set condition is a scheduled time period or Tariff, you can set the next task after the current task ends according to actual needs. The supported task types are the same as those in step 4.



SEMS0216

6. Set the scenario name and describe the current scenario, and select the effective time period. Click "Save and Enable" to create the scenario and enable it, or click "Save" to create the scenario but not enable it for now.



SEMS0207

5 Service

Tap "Services" to enter the Services screen, where you can perform operations such as warranty query, pre-sales and after-sales service, plant configuration, manual viewing, problem feedback, AI invocation feedback, etc.

NOTICE

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

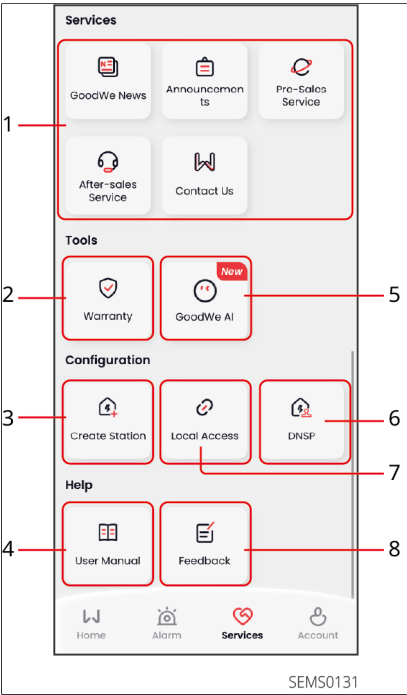


Figure39 Services Screen

No.	Description
1	Entry for news, announcements, and pre-sales/after-sales service.

No.	Description
2	- Query the warranty period by device serial number. - Supports querying performance guarantee parameters of battery products, such as health index, type discharge capacity, etc.
3	Create a plant. For detailed steps, refer to the Creating a Plant chapter.
4	View the App user manual.
5	- AI assistant. Through Intelligent Q&A, quickly obtain knowledge base information, query business data, etc. - Supports enabling the AI assistant floating window to quickly enter the chat interface.
6	DNSP settings. Only applicable to the Australian region.
7	Local Access. For detailed steps, refer to the Communication Settings chapter.
8	Provide feedback on issues during product use, optimization suggestions, etc.

5.1 Set DNSP Function

NOTICE

- Only applicable to Australia.
- Register the user's power station toDNSPnetwork, allowing electricity service providers to remotely limit the PV plant output power value.
- After DNSP Registration, if operation abnormalities occur, you can use the installer account to detect DNSP abnormal issues, such as communication problems, firmware version problems, device time difference problems, etc.

DNSP Registration Steps

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

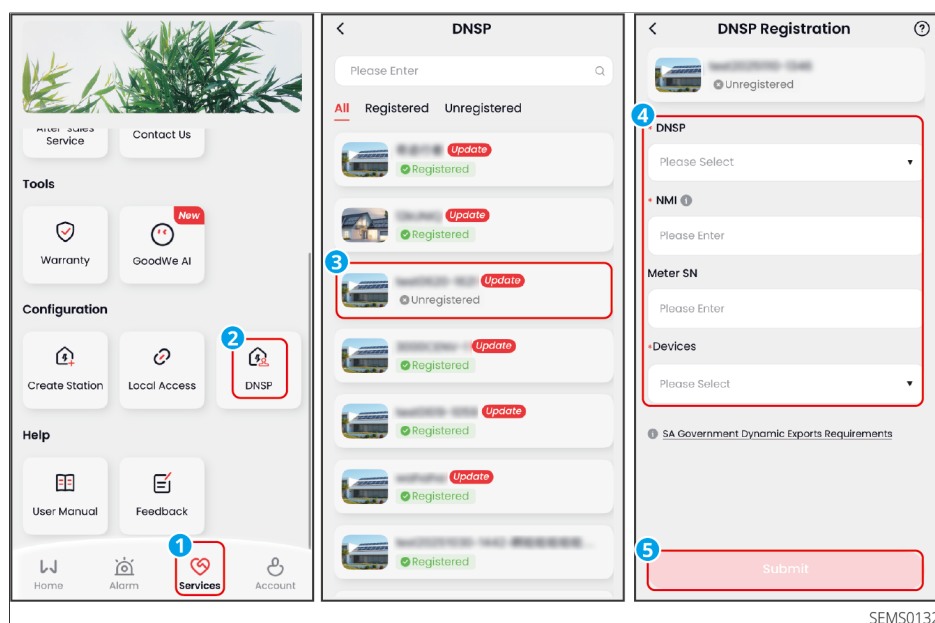


Figure40 DNSP Registration

Parameter Name	Description
DNSP	Set the grid company.
NMI	National Meter Identifier. SetNMInumber.
Meter SN	Set the SN of the connected meter.
Device	Select a device that has been added to the power station; after selection, information such as the device serial number can be automatically filled in.

DNSP Check Steps

1. Click "Service" > "DNSP" to enter the DNSP settings screen.
2. Select a registered power station and click to enter the check screen.
3. Check whether there are abnormal message 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.

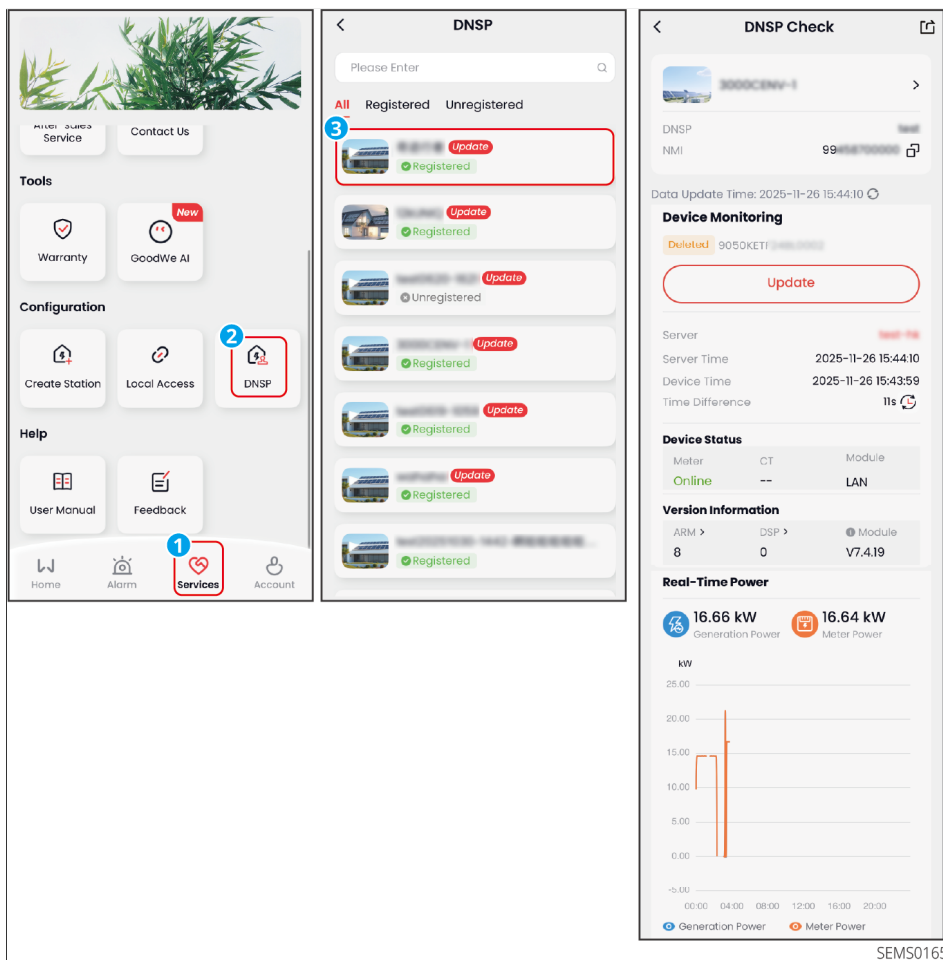


Figure41 DNSP Verification

5.2 Use AI Assistant

Quickly obtain graphic and text information through Q&A with the AI assistant.

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

- Supports querying external data, such as weather information, date information, etc.
- Supports providing feedback and suggestions on AI answers. When the AI cannot solve a problem, you can transfer to manual processing with one click and generate an after-sales work order.

Operation Steps

1. Tap "Service" > "GoodWe AI" to enter the AI assistant interface.
2. Enter the question you want to ask by text or voice in the dialog box to quickly generate an answer.

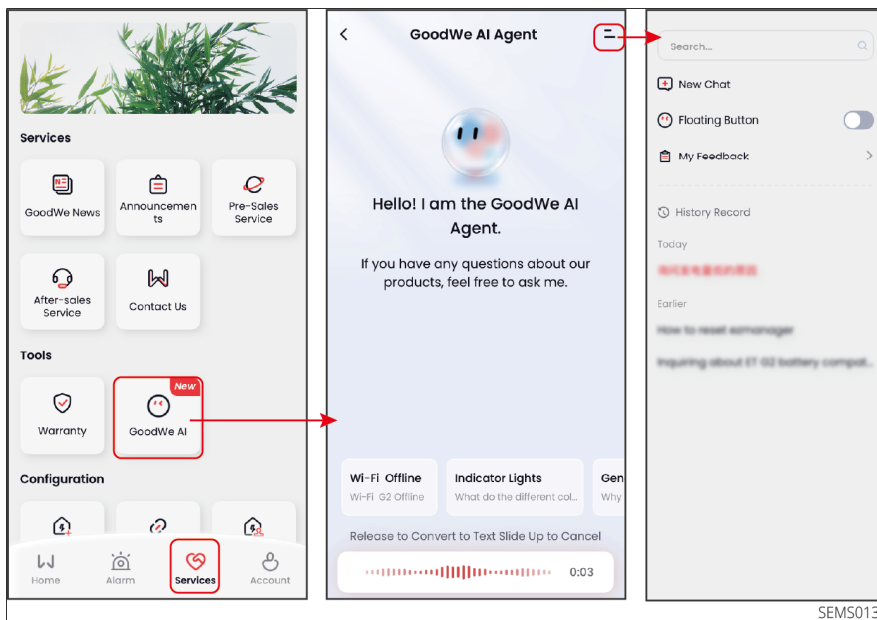


Figure42 AI Assistant

6 Account

6.1 Modify User Information

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

Operating steps:

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

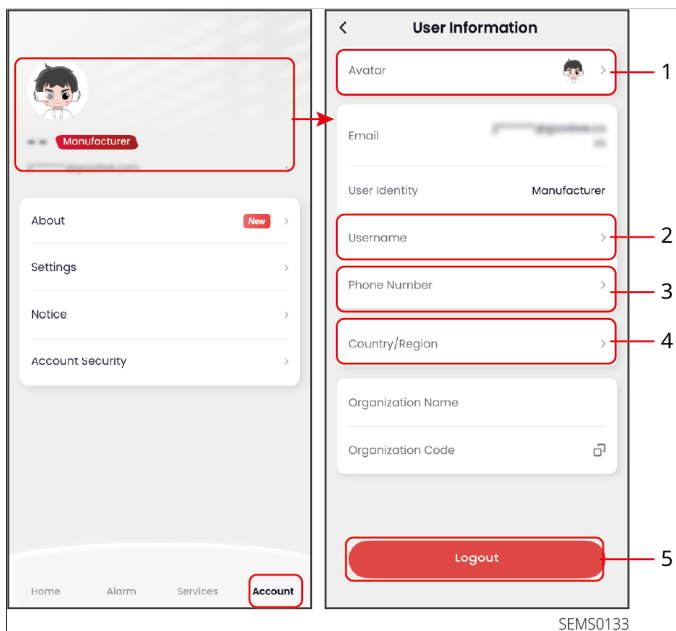


Figure43 Modify User Information

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

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

6.2 Set App Notification Information

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

Operation Steps

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

- Event Subscription: Once enabled, users can receive timely notifications when alarms, faults, or operating status changes occur on the device.
 - Supports setting push channels, i.e., receiving notifications via App message center, email, etc.
 - Supports setting when to push alarm notifications.
 - Supports setting the alarm types and time periods for which notifications are not received.
- Shared Station Subscription: Receive a notification when a new shared station is received.
- Tariff Expiration Reminder: Disabled by default. Once enabled, a notification will be sent when the tariff expires.

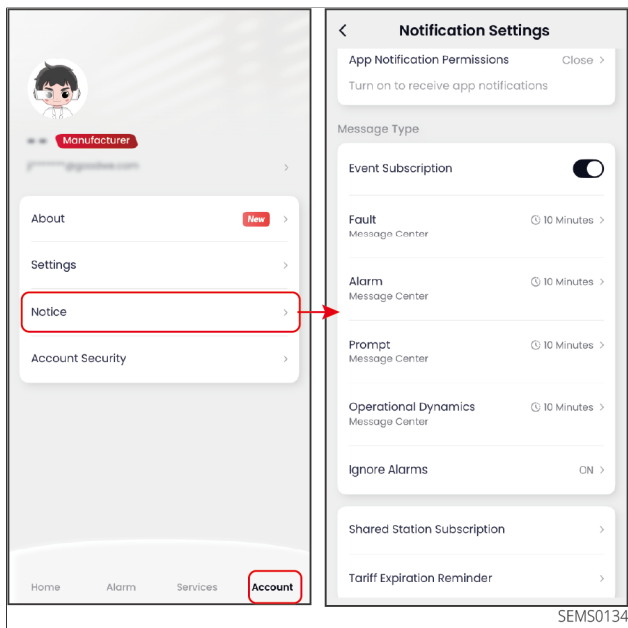


Figure44 Set App Notification Messages

6.3 Set Account Security Information

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

Operation Steps

Tap "Account" > "Account Security" to enter the security settings screen.

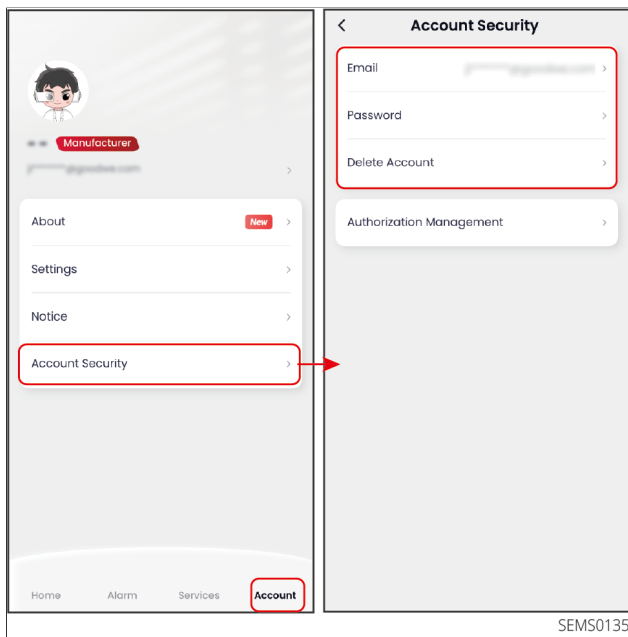


Figure45 Set Account Security Information

6.4 Set Monitoring Permissions

NOTICE

- Only applicable 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 according to the on-screen prompts.
- Monitoring Authorization is only applicable to the owner account. In accordance with European GDPR regulations, owners can set monitoring permissions and Remote O&M permissions as required. Except for the owner and authorized visitors, other accounts cannot monitor or perform O&M on this plant.

Operation Steps

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

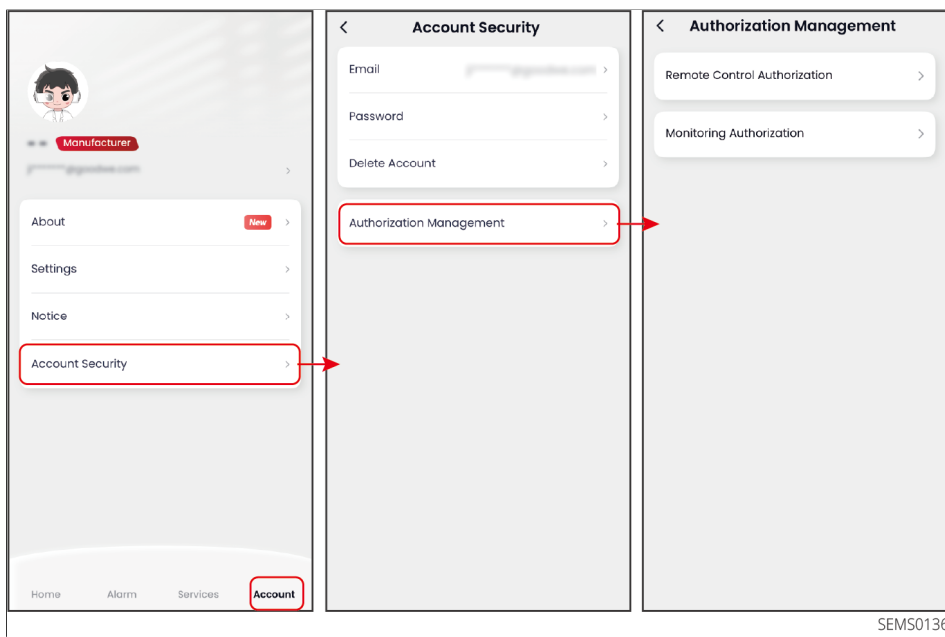


Figure46 Set Monitoring Permissions

7 Fault Handling

No.	Fault Name	Fault Cause	Corrective Measures
1	Unable to Install the App	1. The phone's operating system version is too old. 2. The phone blocks the installation of the software package.	1. Upgrade the phone's operating system. 2. On your phone, go to Settings > Security and select Allow installation of apps from unknown sources.
2	The device's WiFi signal is not displayed in the App's device list.	The App is Not Connected to a WiFi signal.	1. Confirm that the WiFi communication stick is working properly. 2. Refresh the device list. If there is still no device in the device 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 whether the phone's mobile data is enabled and can access the Internet. 2. The App is under maintenance. Please try again later.
4	Unable to launch the App	1. The phone's operating system version is too old. 2. The App version is too old.	1. Upgrade the phone's operating system. 2. Check whether the App version is up to date.

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

8 Appendix

8.1 Safety Regulation Country/Region

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

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

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

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

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

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

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

8.2 Inverter Parameters

Communication Parameters

Parameter Name	Description
RS485 Settings	Set the host communication address of the inverter. For a single inverter, set the communication address according to actual conditions; when multiple inverters are connected, the address of each inverter must be different, and none of the inverters can set the communication address to 247.
PLC	Only applicable to devices communicating via PLC. Set it according to the box-type transformer actually connected to the inverter.

Device Start/Stop Parameters

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

Environmental Control Parameters

Parameter Name	Description
Fan Control	
Fan reverses to remove dust	After being enabled, the fan will periodically and automatically reverse to remove dust.
External Fan Turn-on Temperature Setpoint	After the device temperature reaches the set value, the external fan starts running.
Fan Detection	Detect whether the fan can operate normally.
Silent Mode	
Silent Mode	• Enabling Silent Mode can reduce device noise. • Before enabling Silent Mode, confirm that the device is connected to a stable and reliable power grid; otherwise, it will not take effect. • After Silent Mode is enabled, if the load power consumption in the system is too large and Energy Generation cannot meet the demand, power may be automatically purchased from the grid to ensure load operation. • During the use of Silent Mode, there may be some loss of PV Energy Generation. • Supports setting the Silent Mode time period according to actual requirements.

AC Side Settings Parameters

Parameter Name	Description
AC Port Connection Settings	• According to the port characteristics and the devices actually connected, select Load, Generator, Microgrid Device, etc. The interface display varies by inverter model; please refer to the actual interface. • After the port connection settings are complete, set the port parameters according to actual conditions. For details, refer to 8.2.4.AC Port Parameters(Page 134)。

Parameter Name	Description
Backup Function Settings	• Backup: When enabled, when the grid is disconnected, the loads connected to the inverter's BACK-UP port can be powered by the battery, ensuring uninterrupted power supply to the loads. • The following detection modes are supported: ◦ UPS Mode - Full-wave Detection: Detects whether the grid voltage is too high or too low. ◦ UPS Mode - Half-wave Detection: Detects whether the grid voltage is too low. ◦ EPS Mode - Low Voltage Ride-Through Supported: Disables the grid voltage detection function. • Off-grid First Cold Start: Takes effect only once. After enabling this function, the battery or PV can be used to output backup power in off-grid mode. • Off-grid Cold Start Holding: Takes effect multiple times. After enabling this function, the battery or PV can be used to output backup power in off-grid mode. • Clear Overload Fault: When the 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 in time, the inverter will restart multiple times and perform load detection, and the interval between each restart will continuously increase. After the BACK-UP port load power decreases to within the Rated Power range, you can tap this switch to clear the inverter restart interval, and the inverter will restart immediately.

Parameter Name	Description
Parallel Management	- When the inverter is connected in parallel via RS485, set the Parallel Management parameters. - Manually set the inverter master or slave attributes, and set information such as the slave address. - Through self-organizing network, automatically form a parallel system or a single-phase-to-three-phase system. - When the inverter performs parallel operation through the Ezlink3000 Intelligent communication stick, the number of parallel units in the system needs to be set.
Type of Electrical Supply System	Select single-phase, split-phase, or two-phase grid according to the Type of Electrical Supply System actually supported by the inverter.
Output Method	When the connected grid is a three-phase grid, select three-phase three-wire or three-phase four-wire according to the actual type of electrical supply system connected to the inverter.
Three-Phase Unbalanced Output	When a three-phase inverter is connected to unbalanced loads, such as when L1, L2, and L3 are connected to loads of different powers, the three-phase unbalanced output function needs to be enabled.
Unbalanced Phase Voltage Function	After being enabled, the inverter will perform power Derating or power distribution according to the grid voltage value of each phase to maximize power utilization.

PV Settings Parameters

Parameter Name	Description
PV Access Mode	For some models, you can manually set the PV string Access Mode of the inverter's MPPT port to avoid incorrect identification of the string Access Mode. Supported: • Independent Connection: External PV strings are connected one-to-one to the PV input ports on the inverter side. Do not connect multiple PV strings to a single MPPT port. • Partial Parallel Connection: On the inverter side, every two PV input ports are connected to the same PV string. If the number of channels is odd, the last channel can be connected to a PV string independently. All ports must be connected at the same time; do not leave any port empty. • Parallel Connection: When external PV strings are connected to the PV input ports on the inverter side, multiple PV strings are connected through Y-connectors and then split into multiple branches to connect to multiple PV input ports. All ports must be connected simultaneously; do not leave any port empty.

Parameter Name	Description
PID Settings	- During operation of PV modules, due to the potential difference between the output electrodes and the module grounding frame, over the long term this can lead to degradation of the module's power generation Efficiency, i.e., Potential Induced Degradation (PID). - The PID function of the product works by raising the voltage difference between the PV module and the frame so that it becomes a positive voltage difference (called positive voltage boosting), thereby achieving PID suppression. It is applicable to P-type modules and N-type modules that require positive voltage boosting to suppress the PID effect. For N-type modules that require reducing negative voltage to suppress the PID effect, it is recommended to disable this function. Please consult the module supplier to determine whether N-type modules are of the type that requires positive voltage boosting for PID suppression.
Shadow Scanning Function	When PV modules are severely shaded, enabling the Shadow Scanning function can optimize the inverter's power generation Efficiency.

Battery Settings

Parameter Name	Description
Battery Activation	If an unactivated battery is purchased, an activation code must be entered to activate the battery function.
BAT Connection Configuration	According to the actual battery connection status, select the battery Access Mode.

Protection Parameters

Parameter Name	Description
Electrical Protection	
Lightning Protection Alarm	After the Lightning Protection Alarm function is enabled, if an abnormality occurs in the lightning protection module, an alarm will be generated to indicate the abnormality.
AFCI Detection	• After the AFCI Detection function is enabled, you can monitor whether the device has an arc hazard. • Click "Arc Failure Self-check" to start self-checking the Arc Detection module and confirm whether its status is normal. Then view the result through "AFCI Detection Status". • If the inverter triggers an Arc Failure alarm fewer than 5 times within 24 hours, the alarm can be automatically cleared. After the 5th Arc Failure alarm, the inverter will shut down for Protection. You need to click "Clear Arc Alarm" to clear the fault before the inverter can work normally.
Backup N-PE Relay Switch	According to the grid standards of some countries or regions, during off-grid operation, it is necessary to ensure that the internal relay of the BACK-UP port remains closed, thereby connecting the N and PE lines.
DC Tripping Detection	After enabling this function, when the machine fails, the inverter DC Switch can automatically trip and disconnect.
On-Grid Point Rated Current Protection	To prevent the household circuit breaker from being damaged or tripping due to excessive current when the inverter imports power from the grid or Export Energy to the grid, set the on-grid point Rated Current to limit the input and output current values.
Grid/On-Grid Protection	
Anti-islanding Protection	Enable or disable the Anti-islanding Protection function according to actual needs.
NS Protection	Enable or disable the NS Protection Function according to the standard requirements of certain countries or regions.

Parameter Name	Description
Safety	
Grid Standard Code	Select the Grid Standard Code according to the country or region where the inverter is located.
Safety Parameter Settings	Grid code parameters must be set according to the requirements of the grid company. If changes are required, consent from the grid company must be obtained.

General Settings Parameters

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

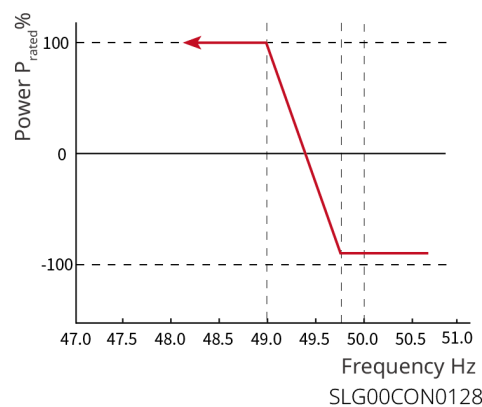
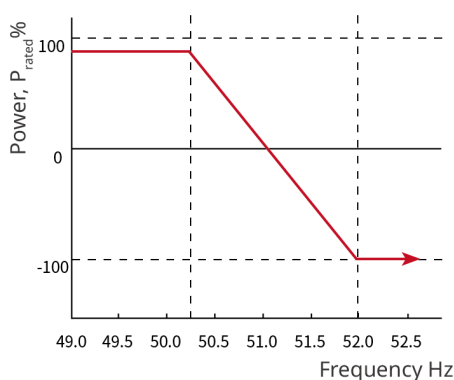
8.2.1 Custom Safety Parameters

NOTICE

Grid code parameters must be set according to the requirements of the grid company. If changes are required, consent from the grid company must be obtained.

Active Power Mode

P(F) Curve



P(U) Curve

Parameter Name	Description
Active Power Output Setting	Set the inverter output power limit.
Power Change Gradient	Set the slope when active power output increases or decreases.
Overfrequency Derating	
P(F) Curve	When the P(F) curve needs to be set according to the grid standard requirements of certain countries or regions, enable this function.
Overfrequency Derating mode	Set the overfrequency Derating mode according to actual requirements. • Slope mode: Adjust power based on the overfrequency point and Derating slope. • Stop mode: Adjust power based on the overfrequency start point and overfrequency end point.
Over-frequency start point	When the grid frequency is too high, the inverter active power output decreases. When the grid frequency is greater than this value, the inverter output power starts to decrease.
Import/Export Energy Transition Frequency	When the set frequency value is reached, the system switches from Export Energy to import energy.
Over-frequency end point	When the grid frequency is too high, the inverter active power output decreases. When the grid frequency is greater than this value, the inverter output power does not continue to decrease.
Overfrequency Power Slope Reference Power	Use Rated Power, current power, Apparent Power, or maximum active power as the reference to adjust the inverter active power output.

Parameter Name	Description
Overfrequency Power Slope	When the grid frequency is higher than the overfrequency point, the inverter output power decreases according to the slope.
Silence time	When the grid frequency is higher than the overfrequency point, the delay response time for the inverter output power change.
Hysteresis Function Enable	Enable the hysteresis function.
Frequency hysteresis point	During overfrequency Derating, if the frequency decreases, the power is output at the lowest point of the Derating power until the frequency is less than the hysteresis point, and then the power recovers.
Hysteresis Waiting Time	For overfrequency Derating, when the frequency decreases, once the frequency is less than the hysteresis point, this is the waiting time for power recovery; that is, the power recovers only after a certain time.
Hysteresis Power Recovery Slope Reference Power	For overfrequency Derating, when the frequency decreases, once the frequency is less than the hysteresis point, this is the reference for power recovery, that is, power recovery is performed according to the recovery slope * reference power change rate. Supported: P _n Rated Power, P _s Apparent Power, P _m current power, P _{max} Max. Power, power difference (ΔP).
Hysteresis power recovery slope	For overfrequency Derating, when the frequency decreases and is below the hysteresis point, the power change slope during power recovery
Underfrequency loading	
P(F) Curve	When the P(F) curve needs to be set according to the grid standard requirements of certain countries or regions, enable this function.

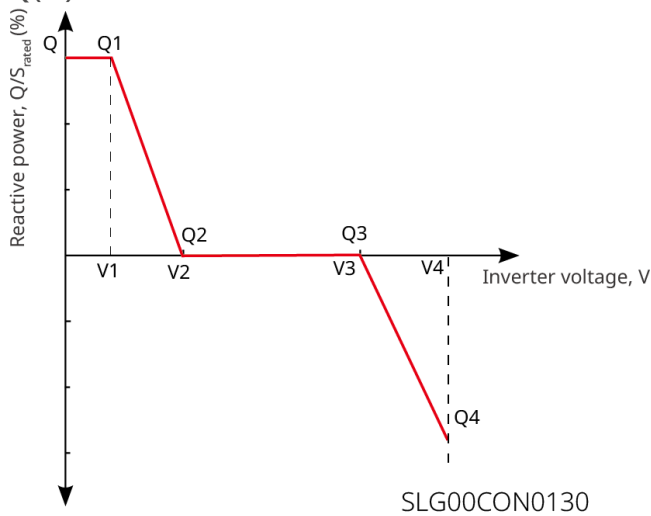
Parameter Name	Description
Underfrequency loading mode	Set the underfrequency loading mode according to actual requirements. • Slope mode: Adjust power based on the underfrequency point and loading slope. • Stop mode: Adjust power based on the underfrequency start point and underfrequency end point.
Under-frequency start point	When the grid frequency is too low, the inverter output active power increases. When the grid frequency is less than this value, the inverter output power starts to increase.
Import/Export Energy Transition Frequency	When the set frequency value is reached, the system switches from Export Energy to import energy.
Under-frequency end point	When the grid frequency is too low, the inverter output active power increases. When the grid frequency is less than this value, the inverter output power does not continue to increase.
Overfrequency Power Slope Reference Power	Use Rated Power, current power, Apparent Power, or maximum active power as the reference to adjust the inverter active power output.
Underfrequency power slope	When the grid frequency is too low, the inverter output active power increases. The slope when the inverter output power rises.
Silence time	When the grid frequency is below the underfrequency point, the delay response time for the inverter output power change.
Hysteresis Function Enable	Enable the hysteresis function.
Frequency hysteresis point	During underfrequency loading, if the frequency increases, the power is output at the lowest point of the loading power until the frequency is higher than the hysteresis point, and then power recovery occurs.

Parameter Name	Description
Hysteresis Waiting Time	For underfrequency loading, when the frequency increases and is above the hysteresis point, the waiting time for power recovery, that is, a certain time must be waited before power recovery is performed.
Hysteresis power recovery slope reference power	For underfrequency loading, when the frequency increases and is above the hysteresis point, the reference for power recovery, that is, power recovery is performed according to the change rate of recovery slope * reference power. Supported: Pn Rated Power, Ps Apparent Power, Pm current power, Pmax Max. Power, power difference (ΔP).
Hysteresis power recovery slope	For underfrequency loading, when the frequency increases and is above the hysteresis point, the power change slope during power recovery.
P(U) curve enable	When P(U) curves need to be set according to the grid code requirements of certain countries or regions, enable this function.
Vn voltage	The ratio of the actual voltage at point Vn to the Nominal Voltage, n=1, 2, 3, 4. For example: when set to 90, it indicates: $V/V_{rated}\%=90\%$.
Vn active power	The ratio of the inverter output active power at point Vn to the Apparent Power, n=1, 2, 3, 4. For example: when set to 48.5, it indicates: $P/P_{rated}\%=48.5\%$.
Output response mode	Set the active power output response mode. Supported: • First-order low-pass filtering: within the response time constant, output regulation is implemented according to the first-order low-pass curve. • Slope dispatch: output regulation is implemented according to the configured power change slope.

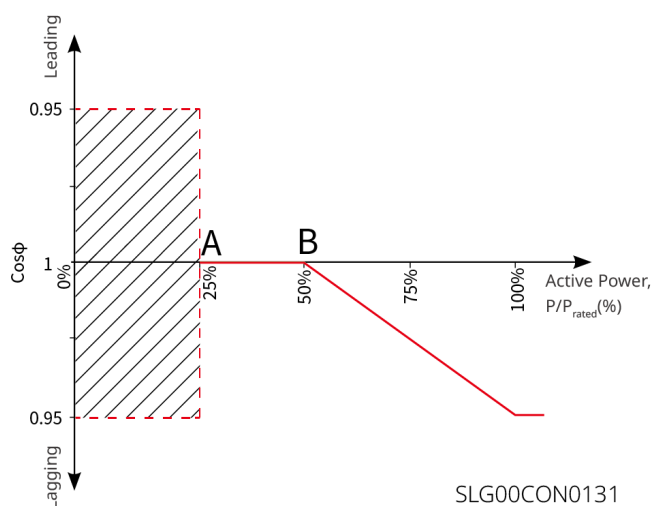
Parameter Name	Description
Power Change Gradient	When the output response mode is set to slope dispatch, Active Dispatch is implemented according to the power change gradient.
First-Order Low-Pass Filter Time Parameter	When the output response mode is set to first-order low-pass filtering, the time constant when active power changes according to the first-order low-pass filtering curve.
Overload Function Switch	After it is enabled, the maximum active power output is 1.1 times the Rated Power; otherwise, the maximum active power output is consistent with the Rated Power value.

Reactive Power Mode

Q(U) Curve



Cosφ Curve



Parameter Name	Description
Fixed PF	
Fixed PF	According to the grid code requirements of certain countries or regions, when a fixed PF value is required, enable this function. After the parameters are set successfully, the Power Factor remains unchanged during inverter operation.
Under-Excitation	According to the grid code requirements of the country or region where it is located and actual usage requirements, set the Power Factor to a positive or negative value.
Over-Excitation	
Power Factor	Set the Power Factor according to actual needs; the range is -1 to -0.8 and +0.8 to +1.
Fixed Q	
Fixed Q	According to the grid code requirements of certain countries or regions, when Fixed Reactive Power is required, enable this function.
Over-Excitation/Under-Excitation	According to the grid code requirements of the country or region where it is located and actual usage requirements, set the reactive power as inductive reactive power or capacitive reactive power.
Reactive Power	Set the ratio of Reactive Power to Apparent Power.
Q(U) Curve	

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

Parameter Name	Description
cosφ(P) curve	
cosφ(P) curve	Select this function when the Cosφ curve needs to be set according to the grid code requirements of certain countries or regions.
Mode Selection	Set the cosφ(P) curve mode; basic mode and slope mode are supported.
Power at point N	Percentage of inverter output active power to Rated Power at point N. N=A, B, C, D, E.
cosφ value at point N	Power Factor at point N. N=A, B, C, D, E.
Over-excitation slope	When the cosφ(P) curve mode is set to slope mode, set the power change slope to a positive or negative value.
Under-excitation slope	
Power at point n	Percentage of inverter output active power to Rated Power at point N. N=A, B, C.
cosφ value at point n	Power Factor at point N. N=A, B, C.
cosφ(P) curve response time constant	The power must reach 95% within 3 response time constants according to a first-order low-pass curve.
Extended function enable	Enable the extended function and set the corresponding parameters.
Curve entry voltage	When the grid voltage is between the curve entry voltage and the curve exit voltage, the voltage meets the Cosφ curve requirements.
Curve exit voltage	
Q(P) curve	

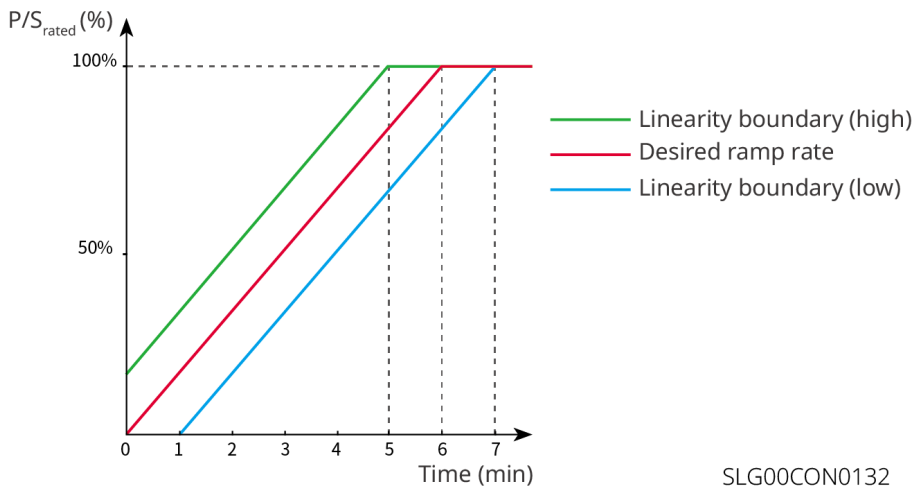
Parameter Name	Description
Q(P) curve enable	When the Q(P) curve needs to be set according to the grid code requirements of certain countries or regions, enable this function.
Mode Selection	Set Q(P) curve mode, supporting Basic mode and Slope mode.
Pn point power	Ratio of reactive power at Pn point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

Grid Protection Parameters

Parameter Name	Description
Over-voltage trigger n-stage value	Set the grid over-voltage trigger n-stage Protection point, n=1, 2, 3, 4.
Over-voltage trigger n-stage trip time	Set the grid over-voltage trigger n-stage trip time, n=1, 2, 3, 4.

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

Grid Connection Parameters



Parameter Name	Description
Startup On-Grid	
Connection Voltage Upper Limit	When the inverter is connected to the grid for the first time, if the grid voltage is higher than this value, the inverter cannot connect to the grid.
Connection Voltage Lower Limit	When the inverter is connected to the grid for the first time, if the grid voltage is lower than this value, the inverter cannot connect to the grid.
Connection Frequency Upper Limit	When the inverter is connected to the grid for the first time, if the grid frequency is higher than this value, the inverter cannot connect to the grid.
Connection Frequency Lower Limit	When the inverter is connected to the grid for the first time, if the grid frequency is lower than this value, the inverter cannot connect to the grid.
Grid Connection Wait Time	When the inverter is first connected to the grid, this is the wait time to connect to the grid after the grid voltage and frequency meet the grid-connection requirements.
Soft Ramp Up Slope Enable	Enable the startup ramp function.

Parameter Name	Description
Soft Ramp Up Slope	According to the standard requirements of certain countries or regions, this is the percentage of power increment that the inverter can output per minute when the inverter is first started.
Fault Reconnection	
Connection Voltage Upper Limit	When the inverter reconnects to the grid after a fault, if the grid voltage is higher than this value, the inverter cannot connect to the grid.
Connection Voltage Lower Limit	When the inverter reconnects to the grid after a fault, if the grid voltage is lower than this value, the inverter cannot connect to the grid.
Connection Frequency Upper Limit	When the inverter reconnects to the grid after a fault, if the grid frequency is higher than this value, the inverter cannot connect to the grid.
Connection Frequency Lower Limit	When the inverter reconnects to the grid after a fault, if the grid frequency is lower than this value, the inverter cannot connect to the grid.
Grid Connection Wait Time	When the inverter reconnects to the grid after a fault, this is the wait time to connect to the grid after the grid voltage and frequency meet the grid-connection requirements.
Reconnection Ramp-Up Slope Enable	Enable the startup ramp function.
Reconnection Ramp-Up Slope	According to the standard requirements of certain countries or regions, this is the percentage of power increment that the inverter can output per minute when it connects to the grid other than for the first time. For example, when set to 10, the reconnection ramp-up slope is: $10\%P/S_{rated}/min$.

Voltage Fault Ride-Through Parameters

Parameter Name	Description
Low Voltage Ride-Through	
UVn Point Voltage	During low voltage ride-through, the ratio of the ride-through voltage at the LVRT characteristic point to Nominal Voltage. $n = 1, 2, 3, 4, 5, 6, 7$.
UVn point time	During low voltage ride-through, the ride-through time at the LVRT characteristic 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 (Grid Power Outage).
LVRT Exit Threshold	
Slope K1	During low voltage ride-through, the K-value coefficient for reactive power support.
Zero Current Mode Enable	When enabled, the system outputs zero current during low voltage ride-through.
Entry Threshold	Threshold for entering Zero Current Mode.
High Voltage Ride-Through	
OVn point voltage	During high voltage ride-through, the ratio of the ride-through voltage at the HVRT characteristic point to Nominal Voltage. $n = 1, 2, 3, 4, 5, 6, 7$.
OVn point time	During high voltage ride-through, the ride-through time at the HVRT characteristic 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 (Grid Power Outage).
HVRT Exit Threshold	
Slope K2	During high voltage ride-through, the K-value coefficient for reactive power support.
Zero Current Mode Enable	During high voltage ride-through, the system outputs zero current.

Parameter Name	Description
Entry Threshold	Threshold for entering Zero Current Mode.

Frequency Fault Ride-Through Parameters

Parameter Name	Description
Frequency Ride-Through Enable	Enable the frequency ride-through function.
UFn point frequency	Set the frequency at underfrequency point n. n = 1, 2, 3.
UFn point time	Set the underfrequency time at underfrequency point n. n = 1, 2, 3.
OFn Point Frequency	Set the frequency of overfrequency point n. n=1, 2, 3.
OFn Point Time	Set the overfrequency time for overfrequency point n. n=1, 2, 3.

8.2.2 On-Grid Power Dispatch Parameters

If no meter device is detected in the system, this function cannot be enabled.

On-grid Power Limit (General)

Parameter Name	Description
On-grid Power Limit	Enable this function when Output Power Limit is required by the grid standards of certain countries or regions.
Power Limit Value	Set according to the actual Max. Power that can be fed into the grid.

On-grid Power Limit (Australia)

Parameter Name	Description
Software Power Limit	Enable this function when Output Power Limit is required by the grid standards of certain countries or regions.

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

Grid Power Limit (UK)

Parameter Name	Description
On-grid Power Limit	Enable this function when Output Power Limit is required by the grid standards of certain countries or regions.
Mode Selection	• Some models require selecting the current limit mode. Supported: per-phase current, total current. • When set to per-phase current, the current of each phase is limited; when set to total current, the total current of the three phases is limited.
Current Limit	Set according to the actual maximum current that can be fed into the grid.

Grid 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 according to the interface prompt and configure the power limit information for different time periods. After completing the template, upload it to the App to complete time-of-use power limit.

Power Dispatch

Parameter Name	Description
Active Power Dispatch	
Active Dispatch Mode	According to the requirements of the power grid company in the country/region where the inverter is located, active power is controlled according to the selected dispatch mode. Supported: • Disabled: Active Dispatch is disabled. • Active Power (W): Dispatch according to a fixed value. • Active Power (%Pn): Dispatch according to the percentage of active power relative to Rated Power.
Reactive Power Dispatch	
Reactive Dispatch Mode	According to the requirements of the power grid company in the country/region where the inverter is located, reactive power is controlled according to the selected dispatch mode. Supported: • Disabled: Reactive Dispatch is disabled. • Reactive Power (Var): Dispatch according to a fixed value. • Reactive Power (%Pn): Dispatch according to the percentage of reactive power relative to Rated Power. • PF Compensation.
Night Reactive Power	
Night Reactive Power Enable	Enable the night reactive power function.

Parameter Name	Description
Night Reactive Dispatch Mode	According to the requirements of the power grid company in the country/region where the inverter is located, night reactive power is controlled according to the selected dispatch mode. Supported: • Disabled: Reactive Dispatch is disabled. • Night Reactive Dispatch (Var): Dispatch according to a fixed value. • Night Reactive Dispatch (%Pn): Dispatch according to the percentage of reactive power relative to Rated Power.

Power Dispatch Response Parameters

Parameter Name	Description
Active Power Dispatch Response	Achieve the active power dispatch value through the dispatch response mode, supporting: • First-order low-pass filtering, that is, Active Dispatch is implemented according to the first-order low-pass curve within the response time constant, and the time constant when the active power changes according to the first-order low-pass filtering curve is set. • Slope mode, that is, Active Dispatch is implemented according to the power change slope, and the active power dispatch change slope is set.

Parameter Name	Description
Reactive Power Dispatch Response	Achieve the reactive power dispatch value through the dispatch response mode, supporting: • First-order low-pass filtering, that is, Reactive Dispatch is implemented according to the first-order low-pass curve within the response time constant, and the time constant when the reactive power changes according to the first-order low-pass filtering curve is set. • Slope mode, that is, Reactive Dispatch is implemented according to the power change slope, and the reactive power dispatch change slope is set.

8.2.3 Grid Remote Dispatch Parameters

In accordance with the grid standard requirements of certain countries or regions, a third-party dispatch device needs to be connected to implement the remote dispatch function for the PV system.

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

8.2.4 AC Port Parameters

Load Control Parameters

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

For ET40-50kW series inverters, the load control function is supported only 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 set to ON, power supply to the load starts; when the switch status is set to OFF, power supply to the load stops. 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 or de-energized. Standard Mode or Smart Mode can be selected.

Parameter Name	Description
Standard Mode	The load will be supplied with power within the set time period.
Smart Mode	Within the set time period, when the surplus energy generated by the PV system exceeds the preset load Rated Power, the load starts being supplied with power.
Start Time	Time Mode will be enabled during the period between the Start Time and the End Time.
End Time	
Repeat	Set the repeat frequency.
Minimum Load Operating Time	Only applicable to Smart Mode. The minimum operating time after the load is turned on, to prevent the load from frequently switching on and off due to energy fluctuations.
Load Rated Power	Only applicable to Smart Mode. When the surplus energy generated by the PV system exceeds this load Rated Power, the load starts being supplied with power.

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

Diesel Generator Control Parameters

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

For ET40-50kW series inverters, connecting to and controlling a diesel generator is supported only when the inverter is used with an STS.

For ET50-100kW series inverters, connecting to and controlling a diesel generator is

supported only when the inverter is used with an STS.

- Diesel Generator Not Connected: When no diesel generator is connected to the energy storage system, select Diesel Generator Not Connected.
- Manual Diesel Generator Control (dry contact connection not supported): The diesel generator must be started and stopped manually; the inverter cannot control the start/stop of the diesel generator.
- Automatically control the generator (supports dry contact connection): When the generator has a dry contact control port and is connected to the inverter, you need to set the inverter's Diesel Generator Control Mode to Switch Control Mode or Automatic Control Mode in the App.
 - Switch Control Mode: When the switch status is ON, the diesel generator operates; after operating until the set running time, the diesel generator can automatically stop.
 - Automatic Control Mode: The diesel generator is prohibited from operating during the set prohibited operating time period, and operates during the Running Time Period.

Parameter Name	Description
Dry Node Control Method	Switch Control Mode/Automatic Control Mode.
Switch Control Mode	
Diesel Generator Dry Node Switch	Only applicable to Switch Control Mode.
Running Time	Generator continuous running time; after the time is reached, the generator stops running.
Automatic Control Mode	
Prohibited Working Time	Set the Prohibited Running Time Period for the generator.
Running Time	Continuous running time after the generator starts running; when the time is reached, the generator stops running. If the generator startup running time includes Prohibited Working Time, the generator stops running during this period; after the Prohibited Working Time, the generator restarts running and timing.

Parameter Name	Description
Generator Information Settings	
Rated Power	Set the Rated Power for generator operation.
Running Time	Set the continuous running time of the generator; after the continuous running time ends, the generator is shut down.
Voltage Upper Limit	Set the Voltage Range for generator operation.
Voltage Lower Limit	
Frequency Upper Limit	Set the Frequency Range for generator operation.
Frequency Lower Limit	
Warm-up Time	Set the generator no-load warm-up time.
Diesel Generator Battery Charging Setting	
Switch	Select whether to use the generator to charge the battery.
Max. Charging Power (%)	Charging power when the generator charges the battery.
Start Charging SOC	When connected to a lithium battery, set the SOC threshold for starting the generator. When the battery SOC is lower than the set value (Battery SOC Low), start the generator to charge the battery.
Stop Charging SOC	When connected to a lithium battery, set the SOC threshold for turning off the generator. When the battery SOC is higher than the set value, turn off the generator to stop charging the battery.
Start Charging Voltage	When connected to a lead-acid battery, set the voltage threshold for starting the generator. When Battery Voltage is lower than the set value, start the generator to charge the battery.

Parameter Name	Description
Stop Charging Voltage	When connected to a lead-acid battery, set the voltage threshold for turning off the generator. When Battery Voltage is higher than the set value, turn off the generator to stop charging the battery.

Micro-grid Control Parameters

Parameter Name	Description
Battery Maximum Charging SOC	When the Battery Type is lithium battery, set the upper limit of Charging SOC; charging stops after the upper limit is reached.
Battery Maximum Charging Voltage	When the Battery Type is lead-acid battery, set the charging voltage upper limit; charging stops after the upper limit is reached.
Microgrid Forced Start Charging	- In the event of a grid fault, if the battery level is low, the energy storage inverter cannot support off-grid operation. Click this button to force the energy storage inverter to output voltage to the grid-tied inverter, thereby starting the grid-tied inverter. - Takes effect once.
Trigger on the Hour	- In the event of a grid fault, if the battery level is low, the energy storage inverter cannot support off-grid operation. After this function is enabled, the system will force the energy storage inverter to output voltage to the grid-tied inverter at a fixed time, thereby starting the grid-tied inverter. - Takes effect multiple times.
Grid Limit Power Offset Value	Set the adjustable range of the actual Max. Power that the device can purchase from the grid.

8.3 Battery Parameters

Parameter Settings - Information Configuration

Select the battery model based on the actually connected Battery Type.

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

Parameter Settings - Lead-Acid Settings

When a lead-acid battery is connected, lead-acid battery parameters need to be set.

Parameter Name	Description
Battery Parameters	
Battery Capacity	Set the battery capacity according to actual parameters.
Battery Internal Resistance	Set the battery internal resistance according to actual parameters.
Temperature Compensation	• When the battery temperature changes, the battery charging voltage will be affected. With 25°C as the baseline, for every 1°C change in battery temperature, adjust the upper limit of the charging voltage according to the set value. • For example, if the charging temperature influence coefficient is set to 10, when the battery temperature rises to 26°C, the upper limit of the charging voltage decreases by 10 mV.
Discharge Parameters	
Discharge Parameters	Set the battery discharge parameters according to actual requirements.
Charge Parameters	
Constant Charging Voltage	Set the battery constant charging voltage according to actual requirements.
Float Charging Voltage	Set the battery float charging voltage according to actual requirements.

Parameter Name	Description
Float Charging Current	Maximum Charging Current after the battery charging mode switches from constant charging/equalizing charging to float charging.
Switch to Float Charging Mode	Time required for the battery charging mode to switch from constant charging/equalizing charging to float charging.
Equalizing Charge Cycle	Set the interval in days for battery equalizing charging.

Parameter Settings - Lithium Battery Settings

When a lithium battery is connected, lithium battery parameters need to be set.

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

Parameter Name	Description
Battery Heating	• Optional for some products. When a battery that supports the heating function is connected, this option is displayed on the interface. After enabling the battery heating function, when the battery temperature does not support battery startup, PV power generation or purchased electricity will be used to heat the battery. • The temperature for Heating Mode varies by battery model; please refer to actual conditions. • Enabling the battery heating function consumes part of the system power. When the battery heating function is enabled, it operates in Low Power Mode by default; if needed, you can switch to other power modes. • The start and stop of the battery heating function are controlled by BMS automatically according to ambient temperature; therefore, differences in the device installation environment and location affect the start and stop of the heating function. • Supports setting the heating time period according to actual requirements, but within the time period, the heating function is still automatically started and stopped based on ambient temperature. • If PV and AC power only meets load consumption, and the battery level is insufficient to support self-heating, the heating function cannot be enabled.
Battery Wake-up	• After enabled, when the battery shuts down due to undervoltage Protection, the battery can be awakened. • Only applicable to lithium batteries without a circuit breaker. After enabling, the output voltage of the battery port is about 60 V.

Parameter Name	Description
Breathing Light	• Only applicable to ESA 3-10kW/ESA ATHENA series inverters. • Set the flashing duration of the device Breathing Light. • In default mode, it lights up for three minutes after power-on and then automatically turns off.

Protection Parameters - Limit Protection

Parameter Name	Description
SOC Upper Limit	The upper limit for battery charging; charging stops once the battery SOC reaches the SOC upper limit.
SOC Protection	Once enabled, when the battery capacity is lower than the set depth of discharge, the battery Protection Function can be enabled.
Grid-connected SOC Lower Limit	The minimum SOC that the battery must maintain when the inverter is operating in grid-connected mode.
Off-grid SOC Lower Limit	The minimum SOC that the battery must maintain when the inverter is operating in off-grid mode.
Backup SOC Maintenance	To ensure that the battery SOC is sufficient to maintain normal system operation in off-grid mode, when the system is grid-connected, the battery will purchase electricity from the grid to charge up to the set SOC Protection value.
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 used only 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%.

Parameter Name	Description
Energy-saving mode	• Only applicable to Balcony Micro Storage series products. • ESA ATHENA series: To save power, the device automatically enters standby mode 5 minutes after the SOC reaches the SOC lower limit in grid-connected state, or after 2 consecutive hours with no load in off-grid state. After entering standby, the screen turns off and the App cannot monitor temporarily. It can be woken up when PV generation is higher than the device's Start-up Voltage or by toggling the device button once. • ESA ATHENA S3 series: To save power, the device automatically enters standby mode after 2 consecutive hours with no load in off-grid state. After entering standby, the screen turns off and the App cannot monitor temporarily. It can be woken up when any of the following conditions is met: PV generation is higher than the device's Start-up Voltage, the AC grid-connected port is connected to a normal grid, or the device button is toggled once.

Immediate Charging Parameters

Parameter Name	Description
Immediate Charging	Once enabled, the grid immediately charges the battery. Takes effect only once.
SOC to Stop Charging	When the battery SOC reaches the Immediate Charging SOC upper limit, battery charging will stop.
Immediate Charging Power	The percentage of the inverter Rated Power used as the charging power when Immediate Charging starts. For example, for an inverter with Rated Power of 10kW, when set to 60, the charging power is 6kW.
Start	Start Charging immediately.
Stop	Immediately stop the current charging task.

Parameter Name	Description
Preparation for Trip	• Applicable to ESA ATHENA S2 series products. • After this function is enabled, the battery of the residential energy storage all-in-one system (excluding expansion batteries) can be quickly charged to full at the maximum charging rate.

JA12 Certification

Applicable only to California.

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

8.4 Meter Parameters

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

8.5 Intelligent Communication Stick Parameters

NOTICE

When different communication modules are connected to the inverter, the communication configuration screen may differ. Please refer to the actual screen.

Communication Parameters

Parameter Name	Description
WLAN/LAN	
WLAN Control	Disabled by default. After this function is enabled, when the App and the device are on the same LAN, they can connect via WLAN; otherwise, even if they are on the same LAN, the connection cannot be established.
Modbus TCP	After this function is enabled, third-party platforms can access the inverter via the Modbus TCP protocol for monitoring.
LAN	Automatically identifies the LAN network to which the device is connected.
WLAN	Select the WiFi network to which the device connects based on actual conditions, so that the device can communicate with the router or switch.
4G	
APN Settings	• APN settings are only applicable to configuring SIM card information for 4G communication devices. • If the 4G module does not provide a Bluetooth signal, configure the APN parameters via a Bluetooth module or WiFi module first to enable 4G communication.
Bluetooth	

Parameter Name	Description
Bluetooth Stays On	Disabled by default. After this function is enabled, Bluetooth Stays On for the device, maintaining the connection with the App. Otherwise, the device's Bluetooth will turn off after 5 minutes and disconnect from the App.
WLAN Networking	
WLAN Networking	• Only applicable to microinverters. • It is recommended to use the inverter with high RSSI strength in the network as the master node.

Password

Supports changing the password used to log in to the App during Local Access. When using WiFi for Local Access, you can change the hotspot password of the WiFi communication stick.

Control/Enable Parameters

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

8.6 Home Energy Management Device Parameters

NOTICE

Set the 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 Output Power Limit is required by the grid standards of certain countries or regions.
2	Power Limit	According to the requirements of certain countries or regions, set the Max. Power that the device can actually feed into the grid.
3	Power Limited Type	Select the method for controlling the device output power according to actual conditions. • Total power: control the total power at the grid connection point so that it does not exceed the output power limit value. • Single-phase power: control the power of each phase at the grid connection point so that none exceeds the output power limit value.
4	Grid-connected power limit offset	Set the adjustable range of the actual Max. Power that the device can feed into the grid. $\text{Max. Power Delivered to Grid} = \text{Max. Feed-in Grid Power} + \text{Max. Feed-in Grid Power Offset Value}.$
5	Reverse Current Protection Handling Method	When reverse current occurs in the system for longer than the maximum Protection time (default 5s), the following Protection measures can be taken: • Power limit: the device continues to operate at a percentage of Rated Power. • The device is disconnected from the grid.

No.	Parameter Name	Description
6	Power Limit Protection Handling	The device continues to operate at a percentage of its Rated Power.
7	Meter Communication Exception Handling	When this function is enabled, Protection measures will be taken if communication between the meter and the device is abnormal.
8	Meter Abnormality Handling Method	When the system experiences meter communication abnormality, the following Protection measures can be taken: • Power limit: the device continues to operate at a percentage of Rated Power. • Device disconnects from grid.
9	Meter Handling Power Limit	The device continues to operate at a percentage of its Rated Power.

Power Control Parameters

No.	Parameter Name	Description
RCR: According to the standard requirements of Germany and other regions, the device must provide an RCR (Ripple Control Receiver) signal control port to meet grid dispatch requirements.		
1	RCR	Enable or disable the RCR function.

No.	Parameter Name	Description
2	Active Dispatch	• According to the requirements of the utility company and the RCR fixture type, select one or more DI ports and set the corresponding percentage. The percentage refers to the percentage of the system output power relative to the Rated Power. • Supports configuration of 16 levels of percentage values. Set them according to the actual requirements of the utility company. • Do not configure duplicate status combinations for DI1-DI4; otherwise, the function will not work properly. • If the actual wiring of the connected DI ports does not match the set values, the operating status cannot take effect.
3	Reactive Dispatch	• According to the requirements of the utility company and the RCR fixture type, select one or more DI ports and set the corresponding PF values. • Supports configuration of 16 levels of Power Factor. Set them according to the actual requirements of the utility company. • PF value range requirements: [-100, -80] or [80, 100]. [-100, -80] Corresponding Power Factor Lagging [-0.99, -0.8]; [80, 100] Corresponding Power Factor Leading [0.8, 1]. • Do not configure duplicate status combinations for DI1-DI4; otherwise, the function will not work properly. • If the actual wiring of the connected DI ports does not match the set values, the operating status cannot take effect.

No.	Parameter Name	Description
RCR&EnWG 14a:		
- According to the standard requirements of Germany and other regions, the device must provide an RCR (Ripple Control Receiver) signal control port to meet grid dispatch requirements. - For regions where the EnWG 14a regulation applies, all controllable loads must accept emergency dimming from the grid. The grid operator can temporarily reduce the maximum grid import power of controllable loads to 4.2 kW.		
4	RCR&EnWG 14a	Enable or disable the RCR & EnWG 14a function.
5	Import Power Limit	Set the upper limit for importing power from the grid according to local grid code requirements.
6	Active Dispatch	- DI4 port is fixed for EnWG 14a. - According to the requirements of the utility company and the RCR fixture type, select one or more DI ports and set the corresponding percentage. The percentage refers to the percentage of the system output power relative to the Rated Power. - Supports configuration of 8 levels of percentage values. Set them according to the actual requirements of the utility company. - Do not configure duplicate status combinations for DI1-DI3; otherwise, the function will not work properly. - If the actual wiring of the connected DI ports does not match the set values, the operating status cannot take effect.

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

Other Parameters

No.	Parameter Name	Description
Meter Settings		
1	Select Meter	Select the model of the meter that is actually connected.

No.	Parameter Name	Description
2	Wiring Mode	Set the meter 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 CT ratio of the meter.
Antenna Settings		
4	Select Antenna	Select the internal antenna or external antenna based on actual conditions.
Time Settings		
5	Network Time Synchronization	Once enabled, select the time synchronization server; time synchronization is performed based on the selected time source.
6	Time Server	Set the time synchronization server. Supported: • time.google.com • pool.ntp.org • ntp.aliyun.com

Export Logs

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

8.7 EV Charger Parameters

Parameter Name	Description
Plug and Play	• After enabling Plug and Play, insert the charging connector into the vehicle to Start Charging. • If charging is interrupted, unplug and replug the charging connector or manually start charging.
Scheduled Charging	Set the scheduled Charging Time as needed; single charging or multiple recurring charging cycles can be selected.
Distance per kWh Setting	Set the energy-to-distance conversion ratio.

8.8 Operation and Maintenance Parameters

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

Parameter Name	Description
Log Export	• Supports exporting, downloading, and sharing logs. • Supports exporting different types of logs, such as communication module logs and inverter logs. • For some models, after selecting the safety country, exporting safety parameter files is supported.
Grid	
Auto Test	According to the grid standard requirements of certain countries or regions, when automatic grid-connection testing needs to be configured, enable this function.

8.9 Australia Safety Regulations

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

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

Volt-var response set-point values

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

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

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

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

Volt-watt response default set-point values

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

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

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

Passive anti-islanding voltage limit values

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

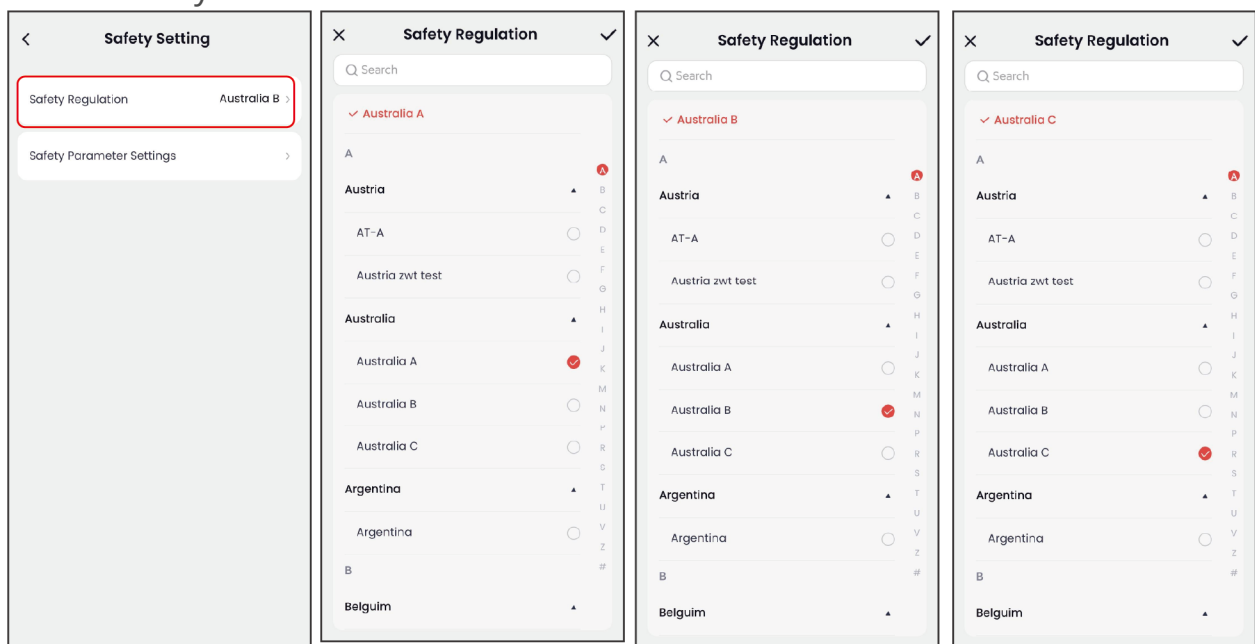
Upper connection and reconnection frequency (f_{URF})

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

Australia C	50.50 Hz
New Zealand	50.15 Hz

Steps to set the safety country:

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



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Steps to set the customized safety parameters:

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

- Voltage Fault Ride-Through
- Frequency Fault Ride Through

Safety Setting

Safety Regulation

Australia B

Safety Parameter Settings

Safety Parameter Settings

Active Power Mode Settings

Reactive Power Mode Settings

Grid Protection Parameters

Grid Connection Parameters

Voltage Fault Ride-Through

Frequency Fault Ride Through

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

Active Power Mode Settings

Overfrequency Derating

Over-Frequency Start Point

Import/Export Switch Frequency

Over-Frequency End Point

Response Delay Time

Hysteresis Function

Frequency Hysteresis Point

Hysteresis Waiting Time

Hysteric Power Recovery Slope

Active Power Mode Settings

P(U) Curve

V1 Voltage

V1 Active Power

V2 Voltage

V2 Active Power

V3 Voltage

V3 Active Power

V4 Voltage

V4 Active Power

Output Response Mode

Active Power Mode Settings

Under-Frequency Loading

Under-Frequency Start Point

Import/Export Switch Frequency

Under-Frequency End Point

Response Delay Time

Hysteresis Function

Frequency Hysteresis Point

Hysteresis Waiting Time

Hysteric Power Recovery Slope

FSM (Frequency Stabilization Mode)

Reactive Power Mode Settin...

Mode Selection

Q(U) Curve

Q(U) Curve Basic Model

V1 Voltage

V1 Reactive Power

V2 Voltage

V2 Reactive Power

V3 Voltage

V3 Reactive Power

V4 Voltage

Grid Protection Parameters

Voltage Protection Parameters

OV Trigger L1 Value

Over-voltage Stage 1 Trip Time

UV Trigger L1 Value

UV Trigger L1 Trip Time

OV Trigger L2 Value

Over-voltage Stage 2 Trip Time

UV Trigger L2 Value

UV Trigger L2 Trip Time

Grid Connection Parameters

Startup On-Grid

Connection Voltage Upper Limit

Connection Voltage Lower Limit

Connection Frequency Upper Limit

Connection Frequency Lower Limit

On-Grid Waiting Time

Startup Ramp Rate

Startup Ramp Rate

Fault Reconnection

Voltage Fault Ride-Through

LVRT

UV1 Voltage

UV1 Time

UV2 Voltage

UV2 Time

UV3 Voltage

UV3 Time

UV4 Voltage

Voltage Fault Ride-Through

HVRT

OV1 Voltage

OV1 Time

OV2 Voltage

OV2 Time

OV3 Voltage

OV3 Time

OV4 Voltage

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9 Contact Information

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