

SEMS+ WEB

User Manual

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Note

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

About This Manual

Overview

This document mainly introduces the common operations of SEMS + WEB.

Applicable Personnel

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

Symbol Definition

 Danger
Indicates a highly potential hazard that, if not avoided, will result in death or serious injury.
 Warning
Indicates a moderately potential hazard which, if not avoided, could result in death or serious injury.
 Caution
Indicates a low-level potential hazard that could result in moderate or minor injury if not avoided.
Attention
Highlighting and supplementing the content may also provide product optimization tips or tricks, helping you solve a problem or save time.

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1 Product Introduction

1.1 Supporting Products

Supports monitoring and management of GoodWe brand related equipment, such as inverters, smart meters, data loggers, and charging piles.

1.2 Register Account

NOTICE

Distributor/Installer account registration only supports administrator accounts. If you need to register a technician or marketing personnel account, please ask the administrator to create them through the backend organization management.

Operating Steps:

1. On the SEMS+ WEB login page, click "Register".
2. Select server type and register account type.
3. Enter account details. Click "Confirm" to complete registration.

Welcome to SEMS+
We, the Smart Energy Innovator

Email:

Password:

☐ Remember Password

☒ I have read and agreed to the "Terms of Use"

[Terms of Use](#) [Privacy Policy](#)
Copyright © 2020 Goodwin Technologies Co., Ltd. All Rights Reserved.

Register

1 Account Type

2 Account Details

Account Type

Select your server (International outside except Europe, Australia, America)

Europe Server

Select identity
Please select user identity

☒ Owner ☐ Dealer/Installer

Account Details

Owner

Country/Region
Please Select

Username
First Name Last Name

Email
Please enter email

Slide Right to Verify

Verification Code
Please enter

Password
Please enter

Enter Password Again
Please enter again

☐ I have read and agreed to the "Service Agreement"

Account Details

Dealer/Installer

Organization name
Please enter

Organization Address
Please select

Country/Region
Please Select

Postal Code
Please enter

Username
First Name Last Name

Phone Number
Please enter

Email
Please enter

Slide Right to Verify

☐ I have read and agreed to the "Service Agreement"

SEMS0088

1.3 Login to Web

NOTICE

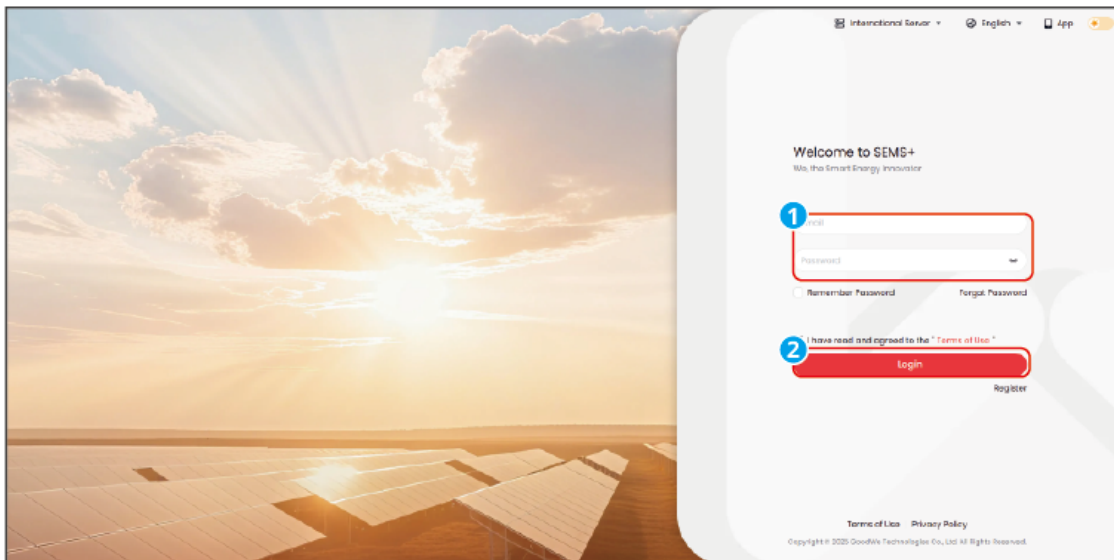
It is recommended that users regularly update the passwords and remember the new password after modification to ensure account security.

Prerequisites:

- Account and password obtained.
- Operating System: Windows 7 or later is recommended.
- Browser: Recommended to use Chrome 87 and above
- Resolution: It is recommended to use 1920*1080 pixels

Login steps:

1. Enter <https://semsplus.goodwe.com/#/login> in the browser address bar, press Enter to access the login page.
2. Enter email and password, then click "Login".
3. If the account is logging in for the first time, please modify the login password, personal preference settings, create station, etc. according to the interface prompts after login.

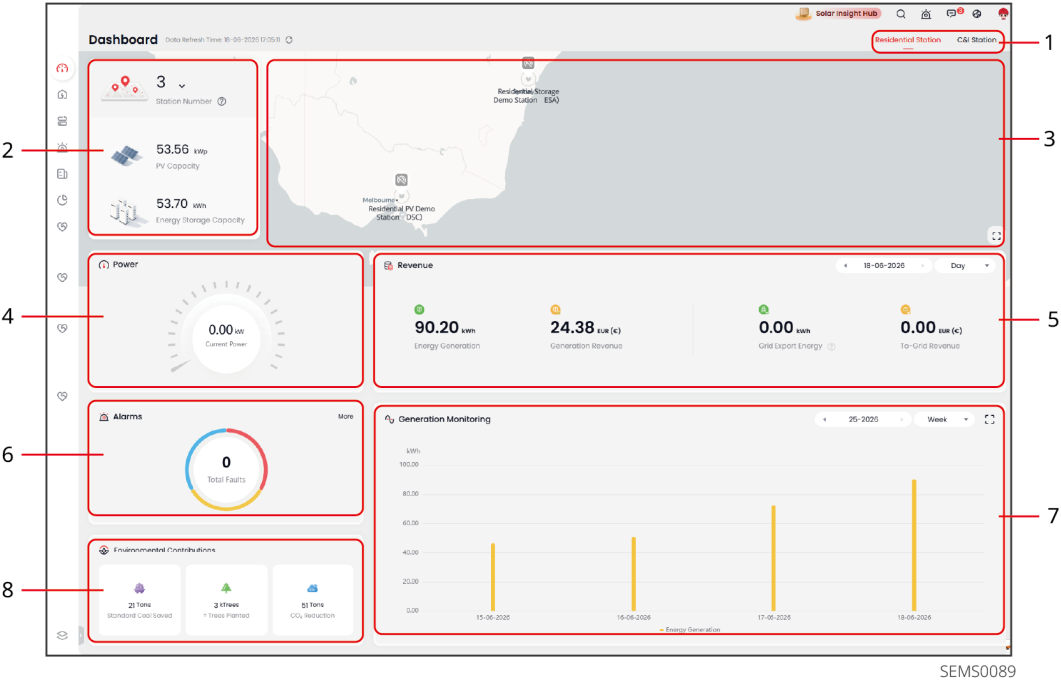


SEMS0090

2 Dashboard

NOTICE

- When the power station type differs, the homepage display interface may vary. Please refer to the actual situation.
- When the number of power stations is 1, the dashboard interface will not be displayed; after login, you will directly enter the power station details interface.
- When the re is no power station, after logging in, enter the power station list interface.



Number	Function Description
1	Power station type switch button. Click to select the power station type. When the power station type is different, the information displayed on the homepage will vary. When the re is only one power station type in the account, this button is not displayed.

Number	Function Description
2	Display parameters such as number, operation status, and capacity of the current type of power station. • Number of power stations: Displays the number of power stations, newly added power stations, and operating status under the current power station type. • PV Capacity: Displays the total installed capacity of PV in the power station under the current station type. • Battery capacity: Display the battery capacity under the current power station type.
3	• Power station distribution map. Display the distribution and operation status of all power stations based on map latitude and longitude. • Click the power station name to enter the corresponding power station details page.
4	Power. Display current active power.

Number	Function Description
5	Revenue. • Power generation revenue: Display the total revenue under the current power station type. ◦ Generation revenue is calculated based on the station-level tariff. $\text{Generation revenue} = \text{Energy Generation} * \text{Export Tariff}$. ◦ When a power station uses a planned tariff, it is calculated according to the organization-level fixed tariff. When a power station uses a fixed tariff, it is calculated and accounted according to the power station-level tariff. • Energy Generation: Displays the total energy generation under the current station type. • Grid revenue: displays the total grid revenue under the current power plant type. ◦ To-Grid Revenue is calculated based on the grid electricity price at the power station level. $\text{To-Grid Revenue} = \text{Grid Export Energy} \times \text{Grid Electricity Price}$. ◦ When some power stations have planned tariffs, they are all calculated according to the fixed tariff policy based on the power station-level fixed Export Tariff. • Grid-connected energy: Displays the total grid-connected energy under the current station type.
6	Alarm. It displays the proportion of each alarm level occurring in each equipment under the current power station type. Click "More" to go to the alarm list page to view detailed alarm information.
7	Energy Generation detection. Display the Energy Generation status of all power stations, supporting statistics of Energy Generation by day, month, year, and full lifecycle dimensions.
8	Environmental Contributions. Show the environmental benefits of PV generation, including: reduction of CO₂, standard coal saved, equivalent trees planted, etc.

3 Monitoring Power Station

Supports through the "Power Station Monitoring" interface to view power station over view and detailed information, create station, share power station, favorite power station, delete power station, modify basic information of the power station, view power station alarm information, manage power station equipment, etc.

3.1 Create Power Station

Support creating power plants based on actual requirements.

Operation steps:

1. Click "Station Monitoring">"Add Station" to enter the station creation interface.
2. Set the power station address, then click "Next". Supports manual input or click on the map on the right to locate the location.
3. Set the basic information of the power station according to the actual situation, and click "Next".
4. Set the owner email. If needed, visitor email and visitor permissions can also be configured.
5. Click "Finish" to create station.

Dashboard

Station List

Device List

Alarm Center

Report Center

Analysis

Service Center

Station List

Filter

Station/Device, Email, SN

Station Address

Email

Q

C

All (7)

Monthly New (0)

Running (5)

Waiting (0)

Offline (2)

Hour (0)

Station Information	Station Status	Today's Generation (kwh)	PV Power (kw)	Safe Operation Days (Day)	Note	Operation
Residential Storage Demo Station... XV121CM Ascent, Bay of Plenty Regio... 23.90kw	Running	88.20	0.00	683	--	☆ ...
Residential Storage Demo Station... 27 Southon Ave, C2008 P81 NW 254, A... 10.00kw	Running	66.30	0.13	683	--	☆ ...
C&I Demo Station (417)						

New Station

Station List

Device List

Alarm Center

Report Center

Analysis

Service Center

1

2

3

4

5

3

Station Address

Please Enter

Longitude 103.818836

Latitude 1.352083

Please search and fill in the accurate station address. An incorrect address may affect energy scheduling, statistics, and revenue calculations.

Detailed Address

Please Enter

Country/Region

SG

Time Zone

Asia/Singapore (UTC+08:00)

☒
 Authorize the use of third-party services to update time zone information

4

Next

Station List

Device List

Alarm Center

Report Center

Analysis

Service Center

1

2

3

4

5

6

5

Station Type

☐ Residential PV Station
 ☐ Residential Storage Station

☐ C&I PV Station
 ☐ C&I Storage Station

Station Name

Please Enter

Rated Power

Please Enter

Auto Get

kW

PV Capacity

Please Enter

kWp

PV Installation Angle

Please Enter

Commercial Operation Date

Please Select

Note

Please Enter

6

Previous

Next

Station Image

Manually upload or drag the station picture into the selection box

Support jpg, jpeg or png format images
 Image size not exceeding 8MB
 Recommended Size (px): 460 * 330

Dashboard

Station List

Device List

Alarm Center

Report Center

Analysis

Service Center

1

2

3

4

5

6

7

8

7

Organization Code

610162674

Owner's Email

Please Enter

Visitor information

+ User

+ Organization

8

Previous

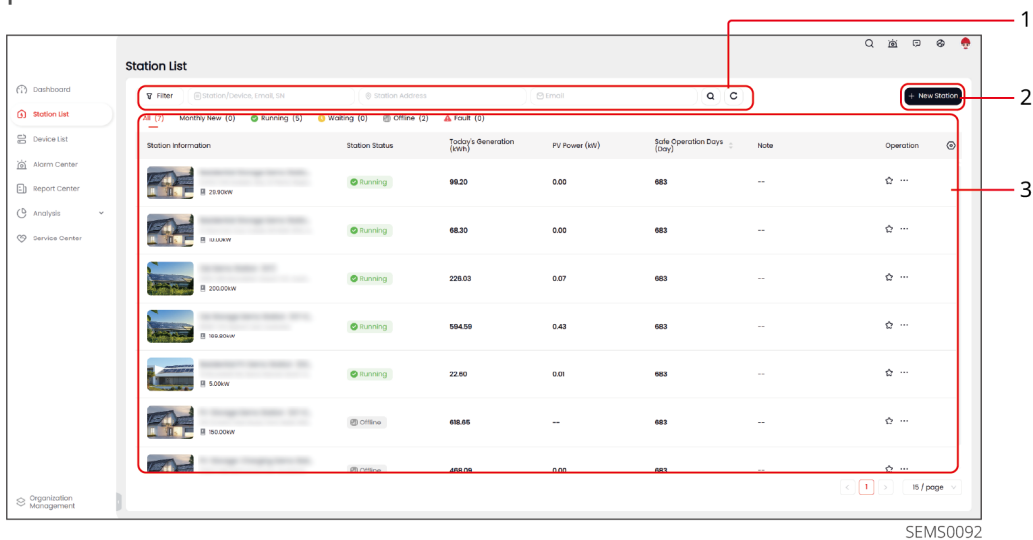
Complete

SEMS0091

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

3.2 Power Station List Overview

In the main menu bar, select "Power Station Monitoring" to enter the power station list interface, where you can view the over view information of all power stations in the account, and perform actions such as favoriting, sharing, and deleting on the power stations.

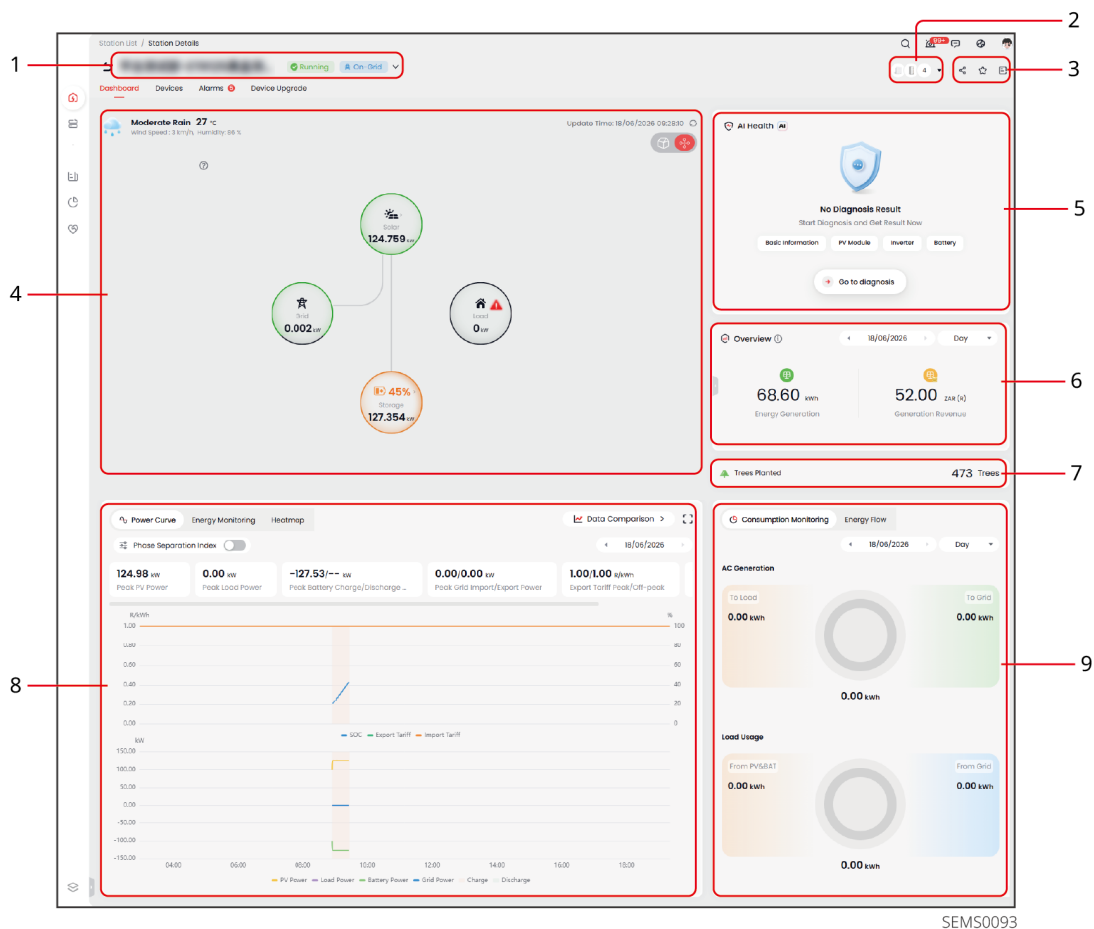


Number	Function Description
1	Quickly locate the power station you need to view by filtering or entering power station information.
2	Click to create a new power station.
3	Display the over view information of all power stations under the account. • Information such as power station operating status, energy generation, and power. The display information can be configured via . • Click  to share the power station with other organizations or individual users, and set sharing permissions and time limits. If you need to share the power station with unregistered users, please fill in the email and other information as prompted on the interface, and the account will be automatically registered. • Click  to favorite the power station. Click  to unfavorite. • Click ... >  to delete the power station.

3.3 Power Station Details

In the power station list on the "Power Station Monitoring" interface, click any power station name to enter the power station details interface. On the power station details interface, you can view basic information about the power station, Energy Generation, revenue, energy flow diagram, Environmental Contributions, and other information.

3.3.1 Power Station Dashboard



SEMS0093

Number	Function Description
1	- Display the current power station name, operation status and On/Off-grid status. - Click ▼ to quickly switch power stations.
2	- Total number and types of current power station equipment. - Click ▼ to display the quantities and operating status of different types of devices.

Number	Function Description
3	Operate the power station. - Click  to share the power station to organizations or individual users and set the sharing permissions and period. - Click  to favorite the power station. Click  to unfavorite it. - Click  to view or modify the basic information and tariff information of the power station.
4	- Energy flow diagram can display the current energy flow direction of the power station. - Display the weather conditions at the power station location. - Support switching between 2D/3D energy flow diagrams. After switching the 2D/3D energy flow diagram of any one power station, all power stations of the same type in the account will switch simultaneously.
5	- AI Health. Based on AI algorithms and big data analysis capabilities, conduct multi-dimensional health status diagnosis of the power station. - AI Health Diagnosis is only applicable to industrial and commercial scenarios. - Click "Go to Diagnosis" to enter the diagnosis details page to view the specific diagnosis report. For detailed operation, please refer to 3.3.9.Station Health Diagnosis(Page 24).

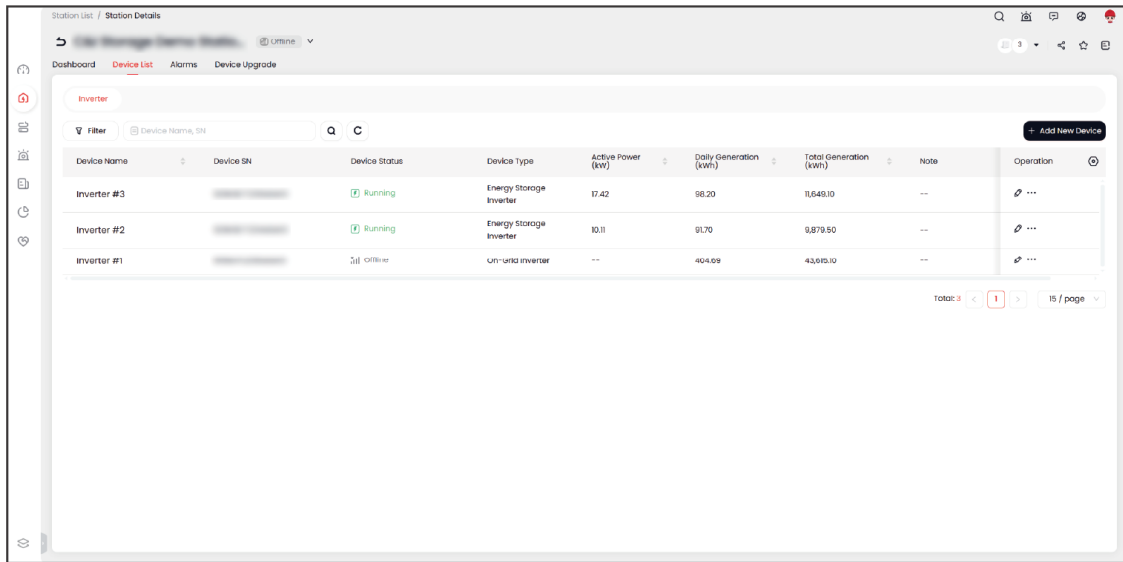
Number	Function Description
6	Revenue. Revenue statistics require configuring the Tariff when creating a new power station; otherwise, the system cannot calculate revenue data. • Power generation revenue: Display the total revenue under the current power station type. ◦ Generation revenue is calculated based on the tariff at each power station level. $\text{Generation revenue} = \text{Energy Generation} * \text{Export Tariff}$. ◦ When a power station uses a planned tariff, it is calculated according to the organization-level fixed tariff. When a power station uses a fixed tariff, it is calculated and accounted according to the power station-level tariff. • Energy Generation: Displays the total energy generation under the current station type. • Grid revenue: displays the total grid revenue under the current power plant type. ◦ Export Revenue is calculated based on the export tariff at each station level. $\text{Export Revenue} = \text{Export Energy} * \text{Export Tariff}$. ◦ When some power stations have planned tariffs, the y are all calculated according to the fixed tariff policy based on the power station-level fixed Export Tariff. • Grid-connected energy: Displays the total grid-connected energy under the current station type.
7	Environmental Contributions. Display the environmental benefits of solar power generation, including: reduced CO₂, standard coal saved, equivalent trees planted, etc.
8	• Power Curve/Energy Monitoring/Heatmap. Through visual charts, display the power station's operating status and energy dynamics. • Supports viewing year-on-year data comparison charts. • If the inverters in the power station support split-phase functionality, the "split-phase indicator" can be enabled to activate split-phase power monitoring. Once this function is enabled in any power station, all power stations in the account that support split-phase will automatically have split-phase monitoring turned on.

Number	Function Description
9	Power monitoring/energy flow. Display the flow direction of PV, grid, and load power.

3.3.2 Power Station Device

On the power station details page, click "Device List" to view information about all devices in this power station, including device name, serial number, type, model, status, etc.

- Click the device name to enter the device details interface. You can configure the device. For configuration, please refer to the [4.3.Setting Device Parameters\(Page 35\)](#) section.
- Click "Add New Device", to enter the add device interface. For specific addition methods, please refer to the [3.3.3.Add Power Station Device\(Page 19\)](#) section.
- Click  to adjust the information displayed on the list interface.
- Click  to edit the device name or add a note.
- Click ... >  to delete the device.



Device Name	Device SN	Device Status	Device Type	Active Power (kW)	Daily Generation (kWh)	Total Generation (kWh)	Note	Operation
Inverter #3		Running	Energy Storage Inverter	17.42	98.20	11,649.19	--	 ...
Inverter #2		Running	Energy Storage Inverter	10.11	91.70	9,879.50	--	 ...
Inverter #1		Offline	On-grid inverter	--	404.09	43,615.10	--	 ...

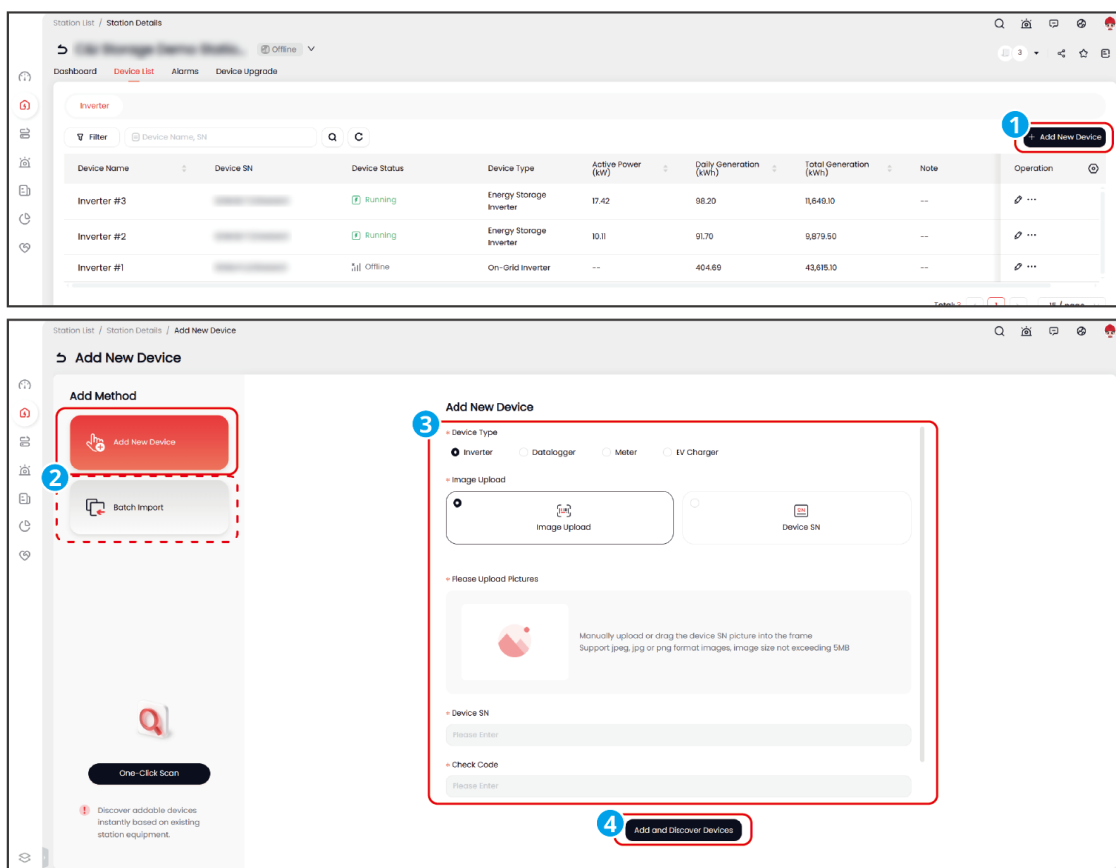
SEMS0094

3.3.3 Add New Device

If equipment needs to be added in the existing power station, it can be added by adding new equipment.

Operation steps:

1. In the power station details page, click "Device List" > "Add Device".
2. Add devices based on actual needs. To automatically add devices, click "One-key Scan" to search for devices that can be added in the power station. To manually add devices, select "Add Device" or "Batch Import" and follow the interface prompts to complete the device search.
 - Add Device: Select the device type, upload the device SN or manually enter the device SN, then click "Add and Discover Device".
 - Batch import: Click "Download Template", fill it out, then upload to the "Upload File" selection box.
3. After completing the device search, confirm the detected device information. Once confirmed, click "Add". After the device is added, if there are any new devices in the system, it will automatically scan and prompt for the newly added devices.

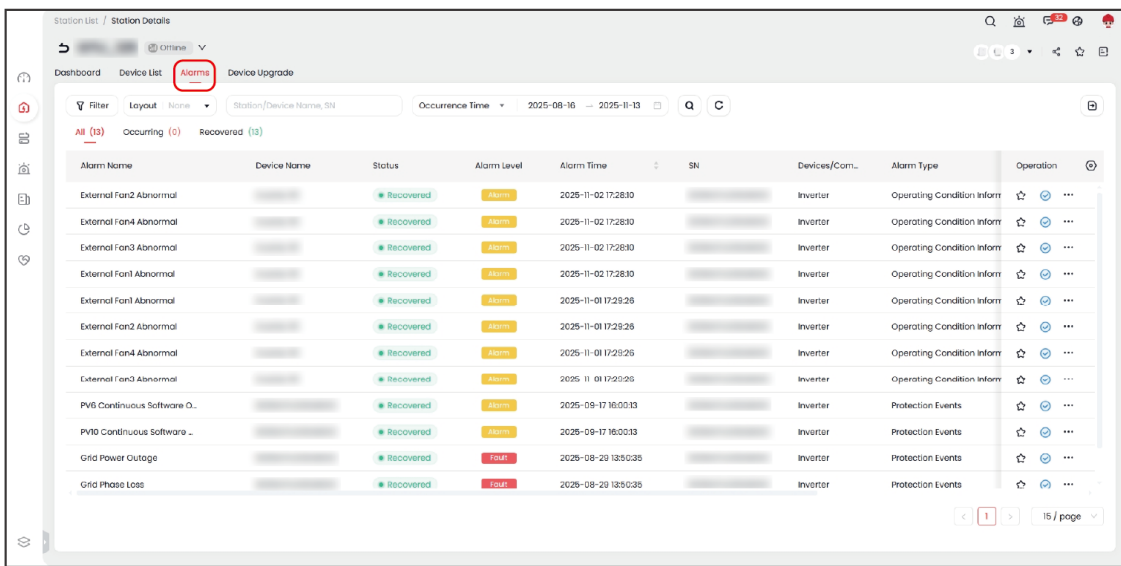


SEMS0095

3.3.4 Power Station Alarm

Operation steps:

1. On the power station detail interface, click "Alarm" to view all alarm information of the current power station.
- Support filtering by actual needs for alarm type, alarm power station, alarm equipment, alarm occurrence time, alarm recovery time, etc.
 - Supports setting the interface view, i. e., selecting the information to be displayed on the interface, and saving the display configuration.
 - Click  to adjust the information displayed on the alarm interface.
 - Click  to export alarm information.



Alarm Name	Device Name	Status	Alarm Level	Alarm Time	SN	Devices/Com.	Alarm Type	Operation
External Fan2 Abnormal		Recovered	Alarm	2025-11-02 17:28:30		Inverter	Operating Condition Inform	☆ ↻ ⋮
External Fan4 Abnormal		Recovered	Alarm	2025-11-02 17:28:30		Inverter	Operating Condition Inform	☆ ↻ ⋮
External Fan3 Abnormal		Recovered	Alarm	2025-11-02 17:28:30		Inverter	Operating Condition Inform	☆ ↻ ⋮
External Fan1 Abnormal		Recovered	Alarm	2025-11-02 17:28:30		Inverter	Operating Condition Inform	☆ ↻ ⋮
External Fan1 Abnormal		Recovered	Alarm	2025-11-01 17:29:26		Inverter	Operating Condition Inform	☆ ↻ ⋮
External Fan2 Abnormal		Recovered	Alarm	2025-11-01 17:29:26		Inverter	Operating Condition Inform	☆ ↻ ⋮
External Fan4 Abnormal		Recovered	Alarm	2025-11-01 17:29:26		Inverter	Operating Condition Inform	☆ ↻ ⋮
External Fan3 Abnormal		Recovered	Alarm	2025-11-01 17:29:26		Inverter	Operating Condition Inform	☆ ↻ ⋮
PV6 Continuous Software D...		Recovered	Alarm	2025-09-17 16:00:33		Inverter	Protection Events	☆ ↻ ⋮
PV10 Continuous Software ...		Recovered	Alarm	2025-09-17 16:00:33		Inverter	Protection Events	☆ ↻ ⋮
Grid Power Outage		Recovered	Fault	2025-08-20 13:50:35		Inverter	Protection Events	☆ ↻ ⋮
Grid Phase Loss		Recovered	Fault	2025-08-20 13:50:35		Inverter	Protection Events	☆ ↻ ⋮

SEMS0096

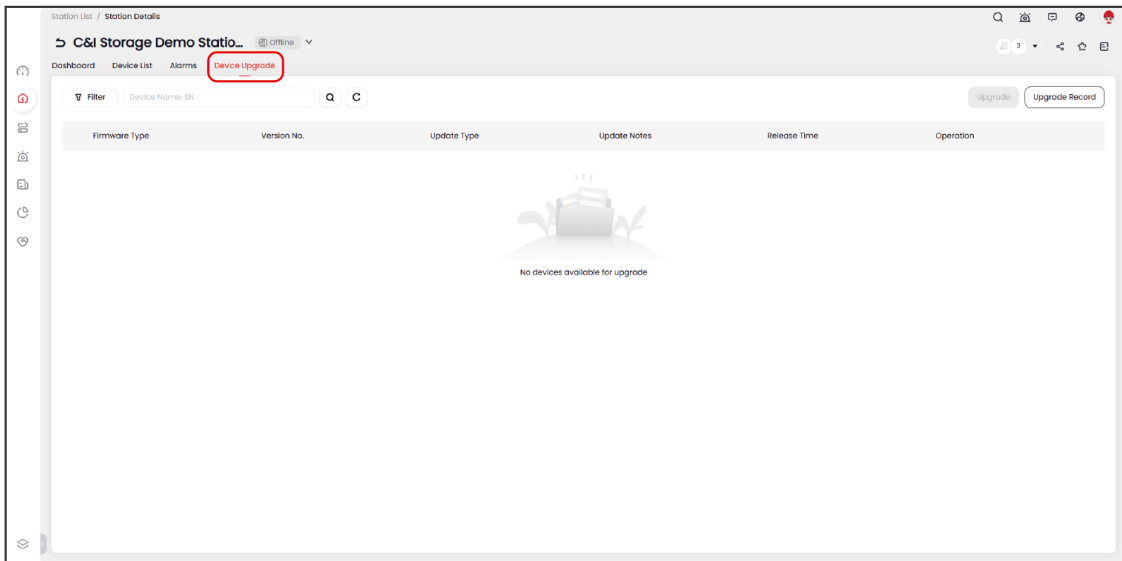
3.3.5 Device Upgrade

Supports upgrading a single device in the current power station or batch upgrading multiple devices in the power station.

During the upgrade process, if an upgrade interruption, device offline, etc. occur, the system will continue the upgrade after detecting that it has returned to normal.

Operating Steps:

1. On the power station details interface, click "Device Upgrade".
2. (Optional) Filter device type or search device.
3. Click  to upgrade the firmware of a single device. To batch upgrade, after clicking "Upgrade", select multiple devices and click "Batch Upgrade".



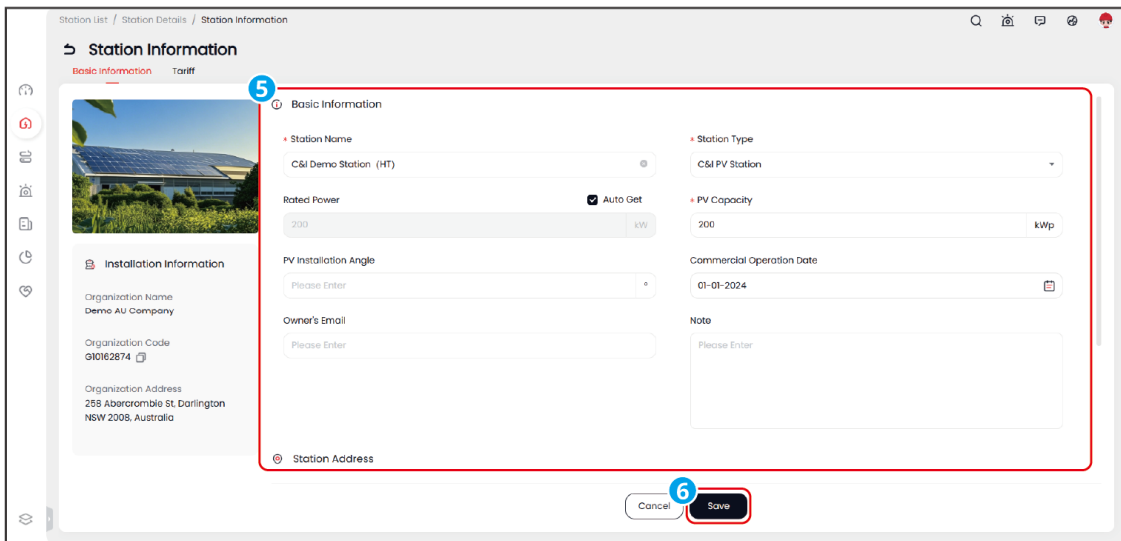
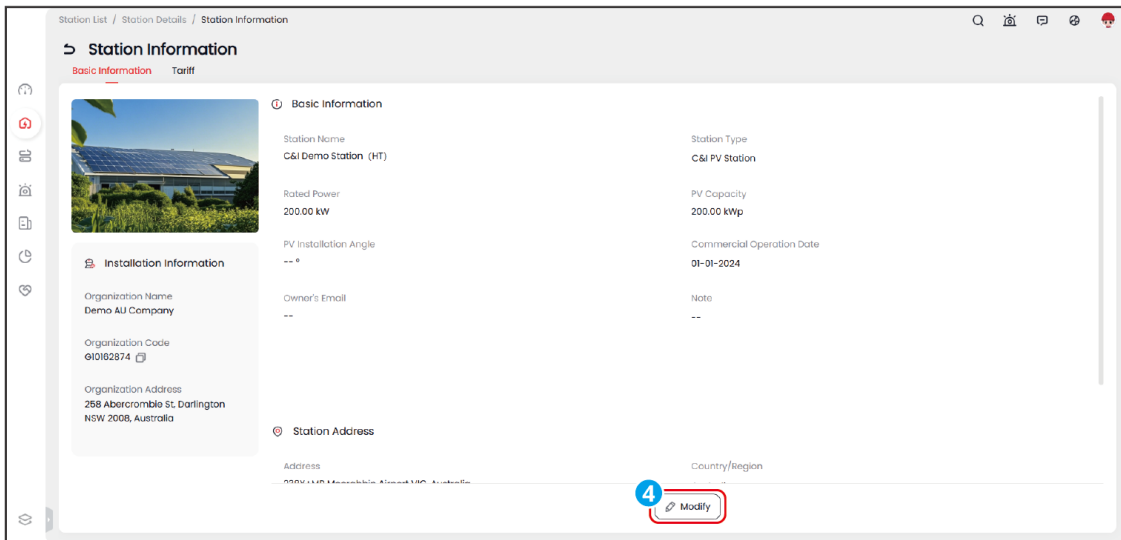
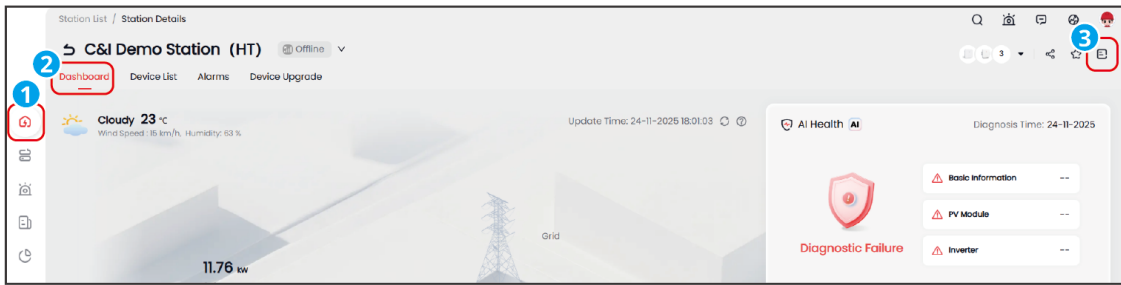
SEMS0097

3.3.6 Modify Basic Information of Power Station

The basic information set during the creation of a power station supports modification, including the power station name, power station type, Rated Power, PV capacity, etc.

Operation steps:

1. On the station details page, click  to enter the "Basic Information" page.
2. Click "Modify" and fill in the information according to actual requirements.
3. Click "Save" to complete the modification.



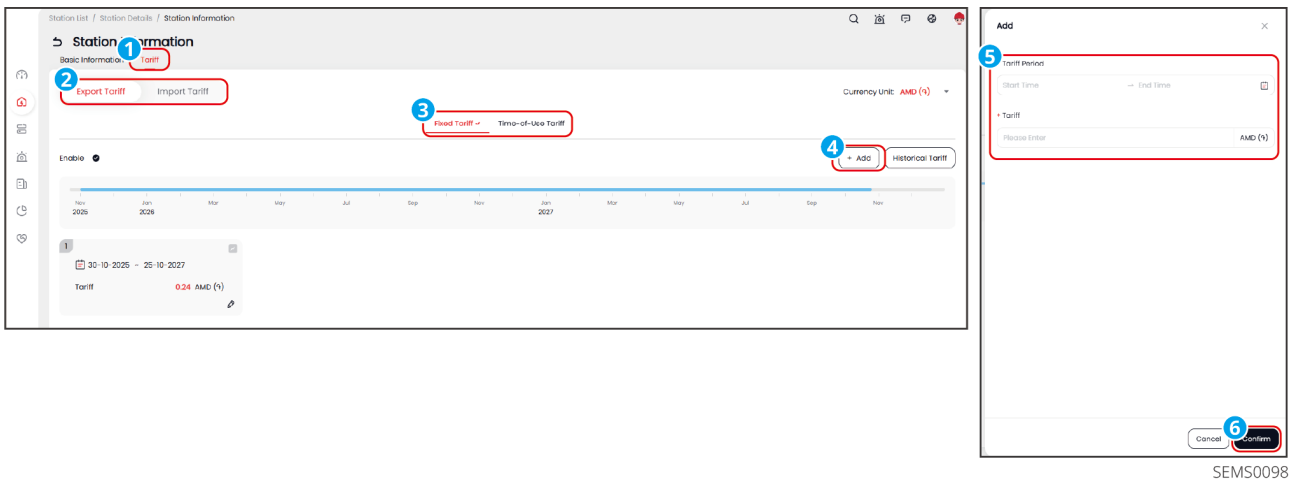
SEMS0128

3.3.7 Configure Tariff Information

Support viewing or setting the power station Tariff information based on actual conditions.

Operation steps:

1. On the power station details page, click  > "Tariff".
2. Select "Export Tariff" or "Electricity Purchase Tariff". And set the tariff type, supporting "Fixed Tariff", "Time-of-Use Tariff", and "Dynamic Pricing".
 - Fixed Tariff: The user sets according to the actual Tariff.
 - Time-of-Use Tariff: Users can set tariff information for different time periods based on the actual tariff. Supports setting multiple groups of tariffs.
 - Dynamic Pricing: Obtain dynamic pricing from the utility company, and combine with user-set tariff surcharges to dynamically adjust the actual electricity buying and selling tariffs. Applicable only to certain regions and certain equipment.
3. According to the actual Tariff information.
4. After filling in the tariff information, click "Confirm" to complete the setting.



SEMS0098

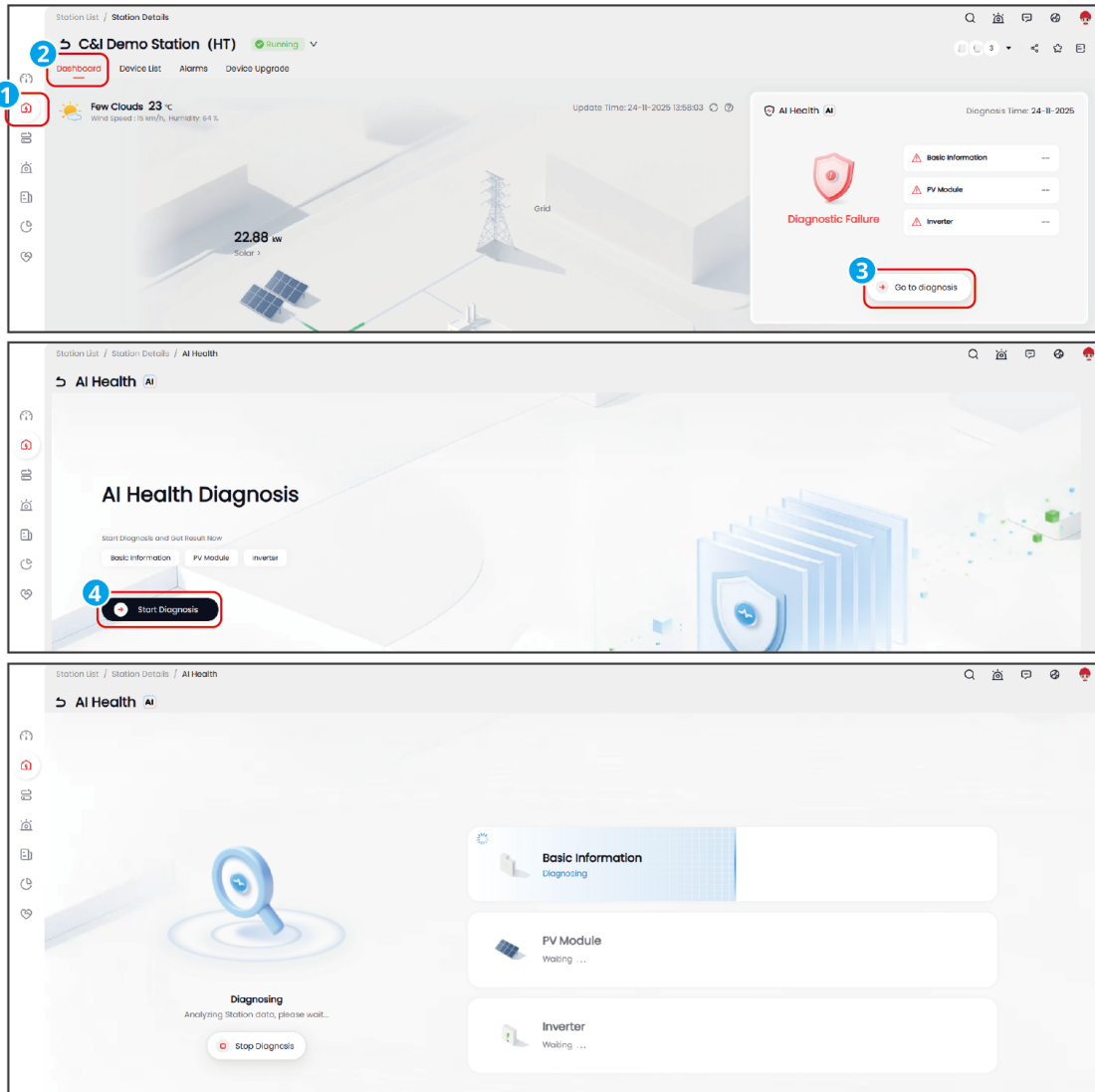
3.3.8 Diagnose Power Station Health

AI Health Diagnosis is only applicable to commercial and industrial scenarios. Based on AI algorithms and big data analysis capability, it performs multi-dimensional health status diagnosis for the power station, including but not limited to:

- Basic information: Basic information of the power station.
- PV modules: Analyze module power generation efficiency and shading conditions.
- Inverter: Detect deviation of inverter current dispersion rate.
- Energy Storage Consistency: Evaluate Energy Storage Battery Consistency.

Operation steps:

1. View the "AI Health" on the station dashboard.
2. Click "Go to Diagnosis">"Start Diagnosis".
3. After diagnosis is complete, click each module to view specific diagnosis results and recommendations.



SEMS0099

3.3.9 Set the System Operating Mode

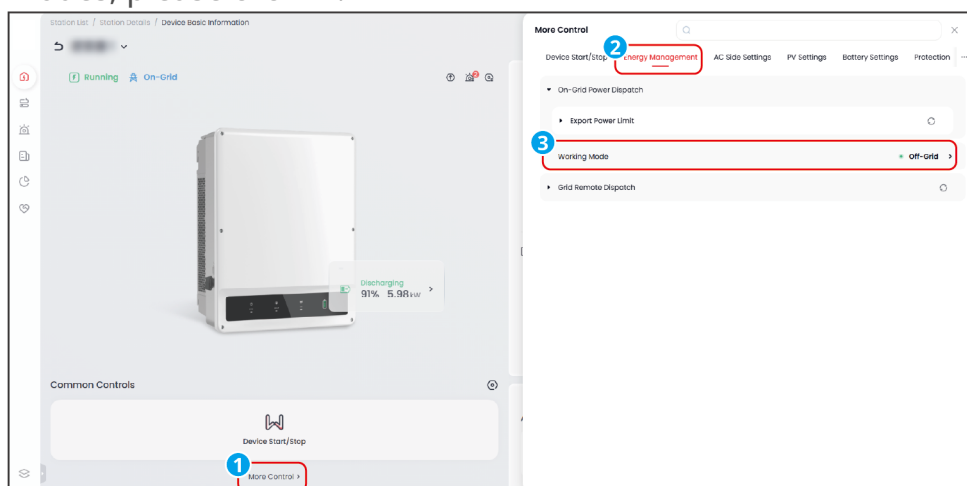
Support for selecting system operation modes based on tariff, electricity demand, or power supply conditions. Once configured, the system automatically coordinates photovoltaic, battery, and grid to dispatch electricity according to actual needs.

NOTICE

- Default working mode is Self-consumption Mode.
- Different systems support different configurable working modes. Please refer to the interface for details.
- When setting the working mode through the inverter, the priority of working modes is: Off-grid Mode > Demand Management > Smart Charging > TO U > Backup Mode > Self-consumption.
- When setting the working mode through the Home Energy Management System, the working mode priority is: Backup Mode > AI Mode > Demand Management > TO U Mode > Self-consumption.
- When the power station supports cloud EMS function, the power station-level working mode can be set; otherwise, only setting working mode through the device is supported.
- Cloud EMS function is currently only applicable to some power stations that have installed a single energy storage machine.

Device-level Working Mode Operation Steps

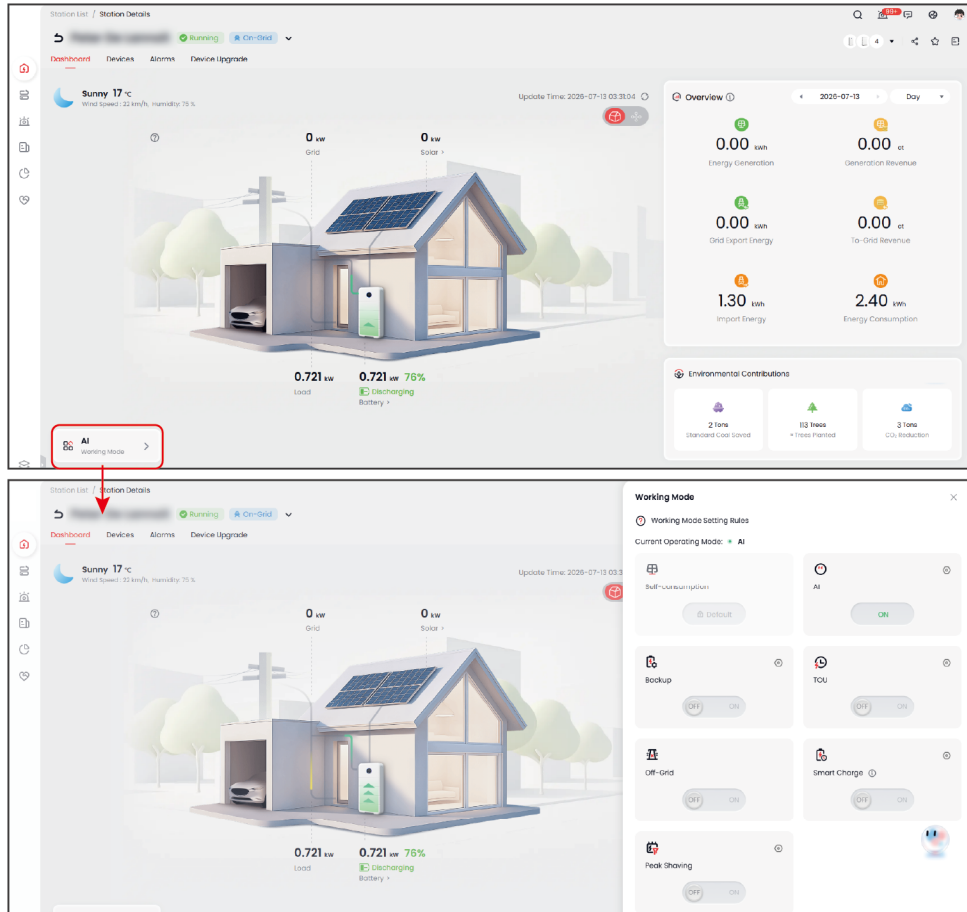
1. On the device details page, access the working mode settings interface via "Common Control" > "Energy Management" > "Working Mode", or by searching for "Working Mode".
2. Please set the working mode according to actual needs. For details about working modes, please click .



SEMS0222

Station-Level Working Mode Configuration Steps

1. On the power station dashboard interface, click "Working Mode".
2. Please set the working mode according to actual needs. If you want to know the details of the working mode, please click 



SEMS0201

Self-consumption

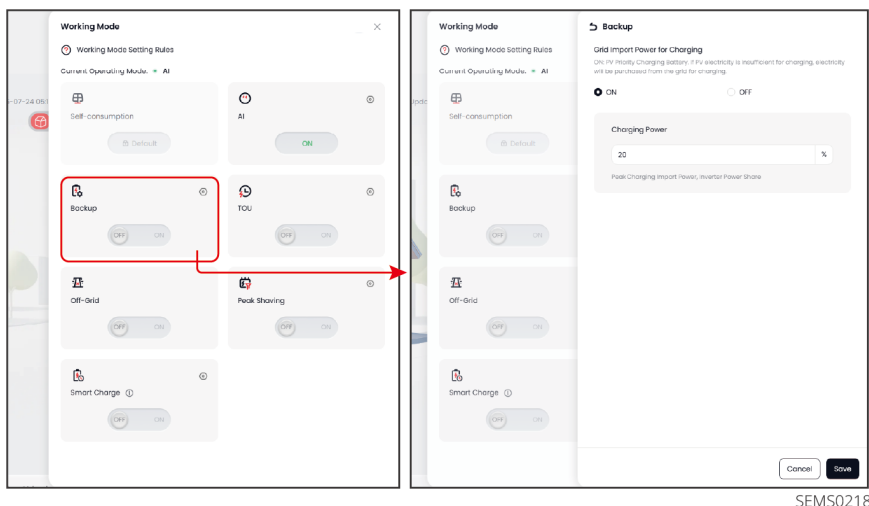
Basic operating modes of the system.

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

Backup Mode

It is recommended for use in areas with unstable power grids.

When a Grid Power Outage occurs, the inverter switches to off-grid mode, and the battery discharges to power the load, ensuring that the BACKUP load remains powered. When the grid is restored, the inverter switches to grid-tied operation.



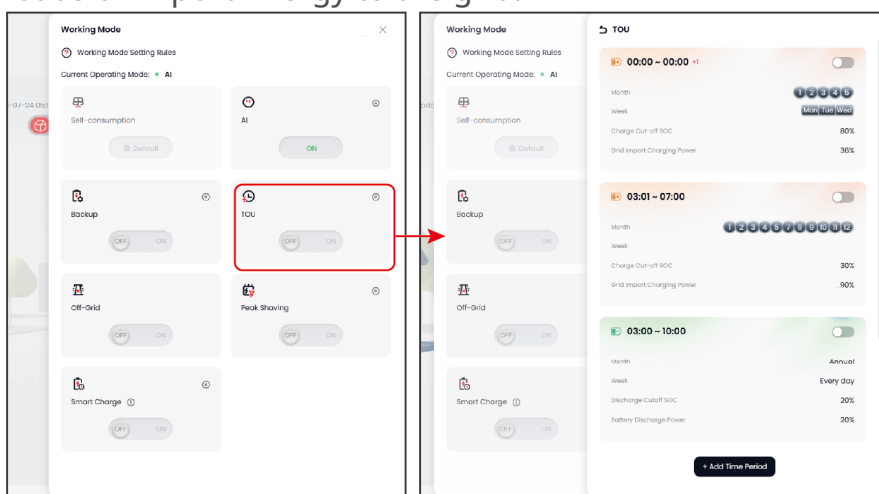
SEMS0218

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

TOU Mode

Suitable for areas with large peak-valley tariff differences.

Under compliance with local laws and regulations, the system's electricity purchase or export is set according to the grid's peak and valley Tariff periods. For example, during low Tariff periods, the battery is set to charging mode to buy electricity from the grid; during high Tariff periods, the battery is set to discharging mode to supply loads or Export Energy to the grid.



SEMS0219

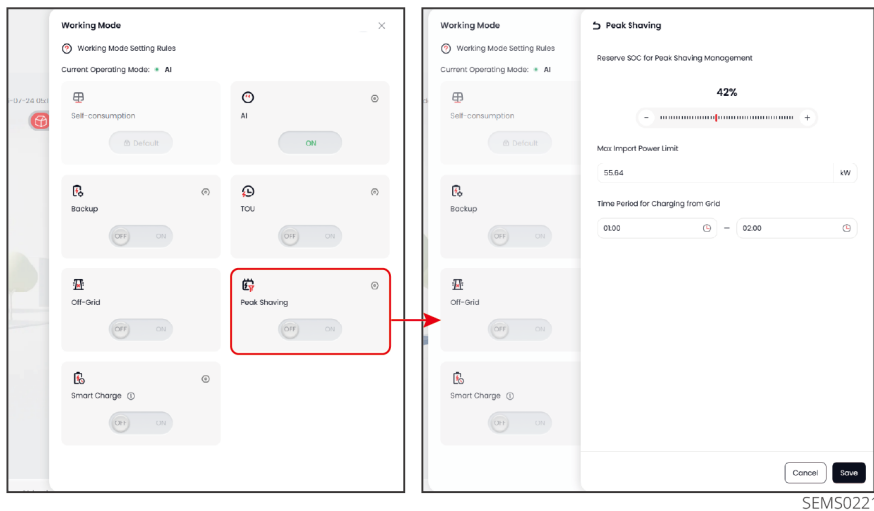
Parameter Name	Description
start time	With in the Start Time and End Time, the battery charges or discharges according to the set charging and discharging mode and Rated Power. Outside the time period, it operates in Self-consumption Mode.
End Time	
charge/discharge mode	Set to charging or discharging based on actual requirements.
Charge cutoff SOC	When the battery SOC reaches the set value, stop charging.
Grid Import Charging Power	Power during charging, as a percentage of the inverter Rated Power.
battery discharge power	Power at discharge, as a percentage of the inverter's Rated Power.

Off-Grid Mode

Suitable for off-grid areas. Photovoltaic (PV) and batteries form a pure off-grid system, where PV power supplies the load and excess energy charges the battery. When PV generation is insufficient to meet load demand, the battery supplies power to the load.

Demand Control Mode

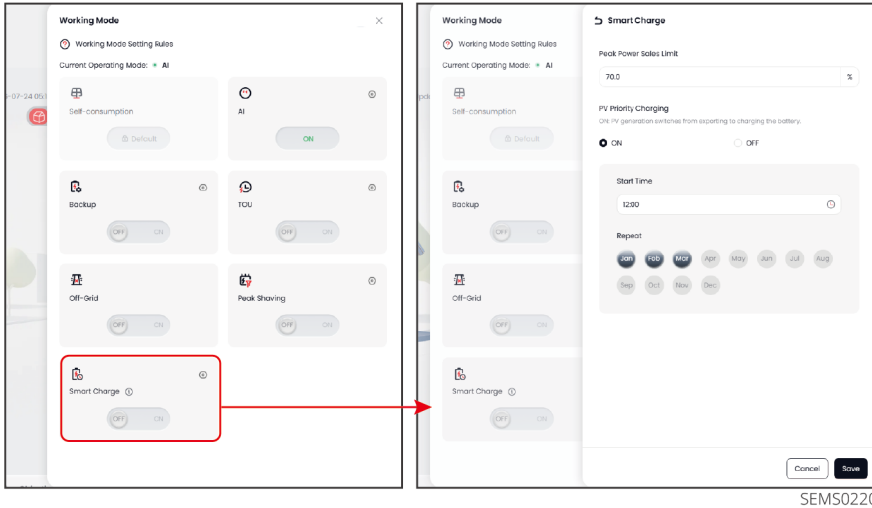
Suitable for scenarios with limited peak power purchase. When the total load power approaches the upper limit of the electricity quota, battery discharge is used to reduce the portion of electricity consumption exceeding the quota.



Parameter Name	Description
Reserve SOC for demand management	In Demand Control Mode, reserved SOC is used for demand control. When the battery SOC is higher than the reserved SOC, the demand control function becomes ineffective.
Peak electricity purchase limit	Set the Maximum Power limit for purchasing electricity from the grid. When the load power value exceeds the sum of the electricity generated by the photovoltaic system and this limit, the battery discharges to make up for the excess power.
Time Period for Charging from Grid	During the Time Period for Charging from Grid, if the load consumption does not exceed the electricity purchase quota, the battery can be charged from the grid. Outside the time period, the battery can only be charged using photovoltaic power generation.

Smart Charging (Delayed Charging)

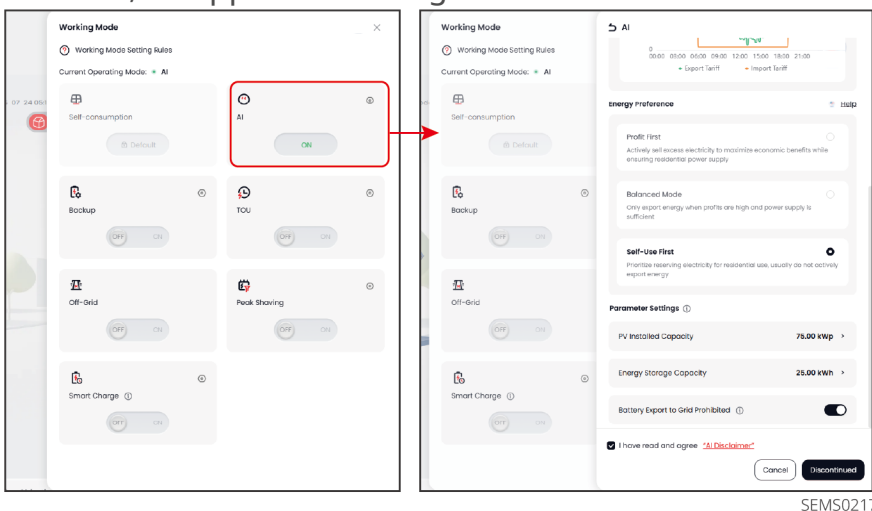
Suitable for areas with grid-connected power output limitations. By setting the peak power limit and Charging Time period, the excess PV generation beyond the grid limit can be used to charge the battery, reducing PV waste.



Parameter Name	Description
Peak Power Sales Limit	According to the grid standard requirements of certain countries or regions, set the peak power limit. The peak power limit must be lower than the local specified output power limit.
PV priority charging	With in the Charging Time period, the excess electricity from PV generation after supplying the load is preferentially used for battery charging. Outside the Charging Time period, the excess electricity from PV generation after supplying the load is preferentially used for Export Energy.
Start Charging Time	

AI Mode

When the system uses home energy management equipment (HEMS) or cloud EMS function, it supports enabling AI Mode.



Set the tariff according to user requirements, combined with AI calculation to optimize scheduling, to maximize energy and economic efficiency. When using AI Mode, during the initial stage of collecting power station information, there may be deviations between the predicted curve and actual conditions.

Before enabling AI Mode, please set the Tariff Plan first. When the Tariff Plan is Fixed Tariff, AI Mode is not supported.

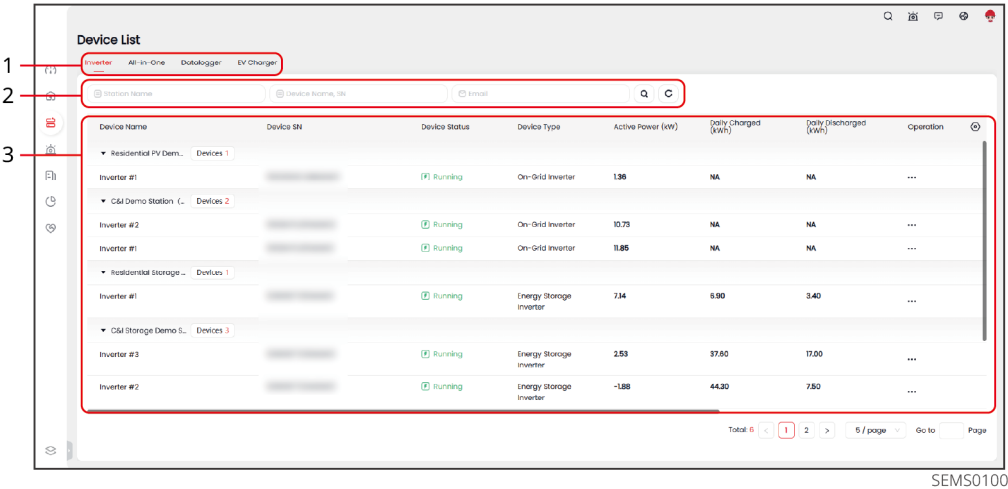
Select Time-of-Use Tariff or Dynamic Pricing, support:

- Dynamic Pricing: Obtain Dynamic Pricing from the utility company, and combine with the tariff surcharge set by the user to dynamically adjust the actual buy and export energy tariff.
- Time-of-Use Tariff: Users can set the tariff information for different time periods based on the actual tariff. Supports setting multiple groups of tariffs.

4 Monitoring Device

4.1 Device List Overview

On the "Device List" interface, it supports viewing an over view of all devices under the account, including device name, device serial number, affiliated power station, operation status, etc.



SEMS0100

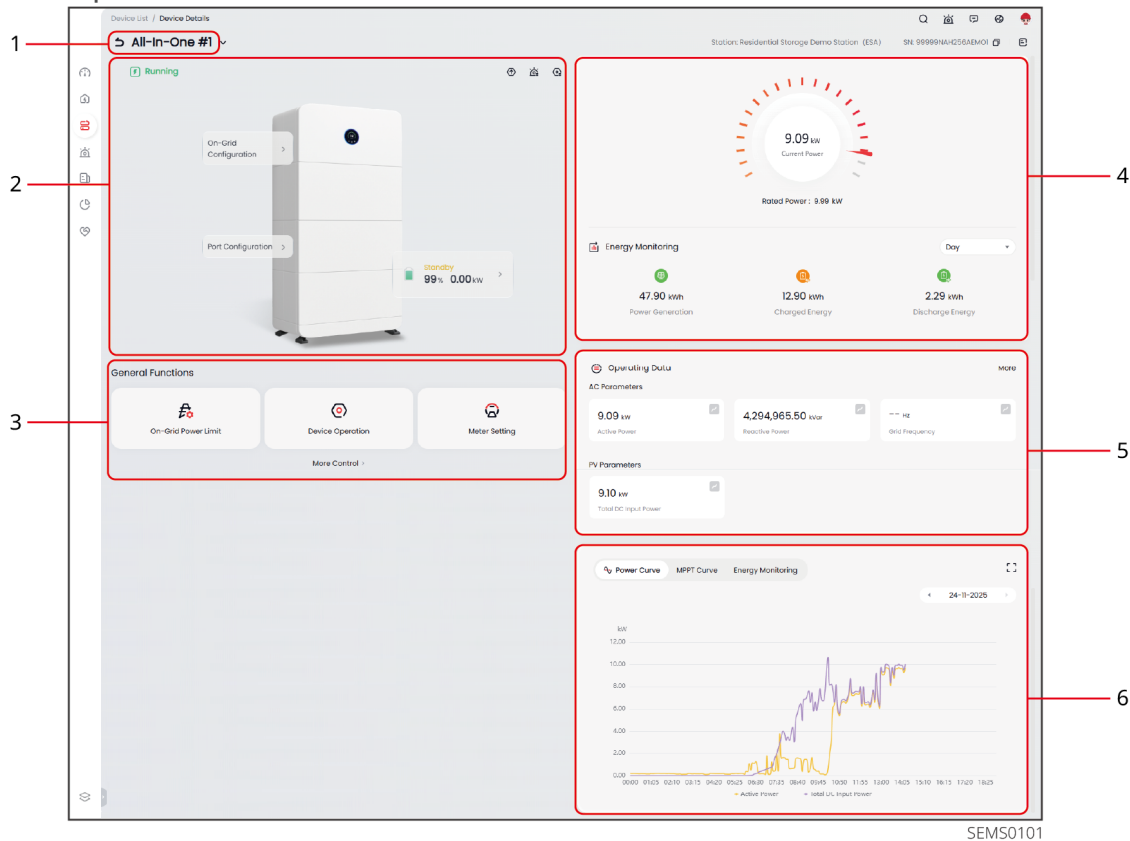
Num ber	Function Description
1	Equipment type tab. Display according to the actual equipment type in the power station.
2	Filter the equipment to be viewed by entering power station information.
3	Display over view information of all similar devices under the account. • Device Name, Power Station, Serial Number, Status, Type, Power, Energy Generation, and other information. Display information can be configured via . • Click the device name to enter the device detail interface. • Click  to modify the device name or add device remarks. • Click ... > , delete device.

4.2 Device Details

In the "Device List", click the specific device "Device Name" you need to view to enter

the "Device Details" interface.

In the "Device Details" interface, you can view device information, operating status, Energy Generation, power curve, or set device parameters such as working mode, grid connection parameters, safety regulation parameters, battery parameters, etc. The detail interface displayed varies by equipment. Please refer to the actual device. The diagram below uses the commercial and industrial integrated cabinet as an example.



Number	Function Description
1	Display device SN, belonging power station and other information. - Click ▼ to switch to other devices in the power station. - Click  to copy the device SN number. - Click  to view device details, such as device type, model, add time, rated power, etc.

Number	Function Description
2	• Equipment operation status. • Click  to upgrade device or view device upgrade history. • Click  to view alarm records. • Click  View device control records。 • For some devices, such as all-in-one units, provide a quick access to view or set details of PCS, battery, etc.
3	• Show common control shortcuts. • Click "More Control" to view all device controls.
4	• Display the current power and Rated Power value. • Display Energy Generation by day, week, month, year and all dimensions.
5	• Display device operating data. • Click  to display the parameter curves. • Click "More" to display all data details.
6	• Display power curves, MPPT curves, and energy monitoring curves in each time dimension. • Click  Enlarge to view curve.

4.3 Set Device Parameters

The parameter items of different devices vary, please refer to the actual interface.
Operation steps:

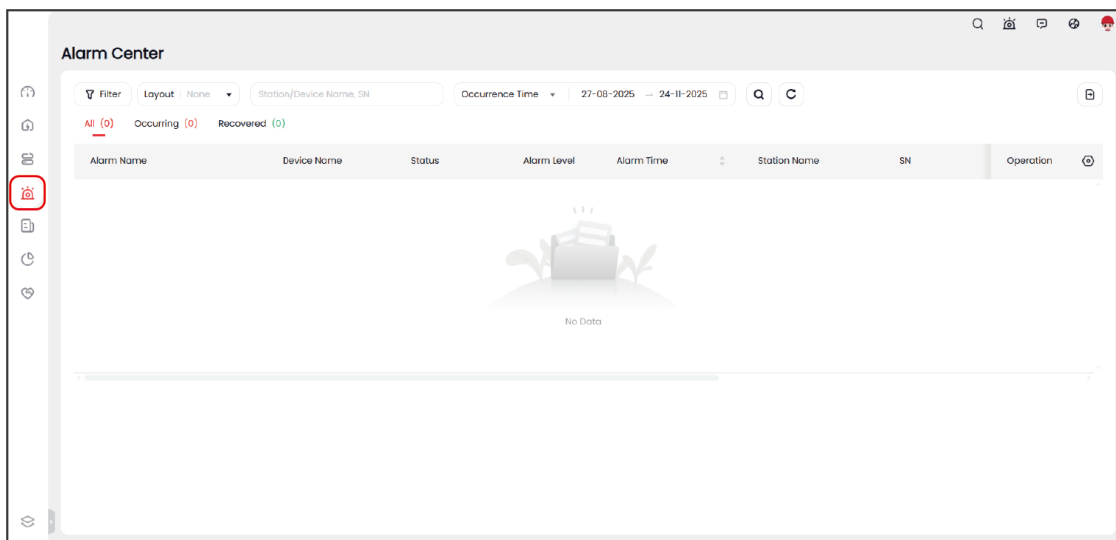
1. Click "Equipment List", and select the equipment type tab according to actual needs.
2. Click the device name to be configured to enter the device details interface.
3. Click "More Settings" and set parameters according to actual requirements.

SEMS0102

5 Alarm Management

Through the alarm center interface, you can view alarms for all power stations in the account, and perform operations such as confirming and downloading alarms.

- Supports filtering by device type, alarm level, alarm type, status, etc., and saving as a view.
- Supports filtering alarm information within a specified time period.
- Supports viewing alarm details by clicking the alarm name.
- Click  to adjust the interface display information type.
- Click  to bookmark the alarm.
- Click  to download alarm information.



6 Intelligent Analysis

Only applicable to some power stations, please refer to the actual interface.

6.1 IV Diagnosis

Based on the analysis of the IV curve, perform fault diagnosis on power station equipment, automatically locate faults, and provide improvement suggestions and generate diagnostic reports.

Before performing IV diagnosis or scanning tasks, please refer to the task setting operation suggestions to confirm that the operating conditions are met.

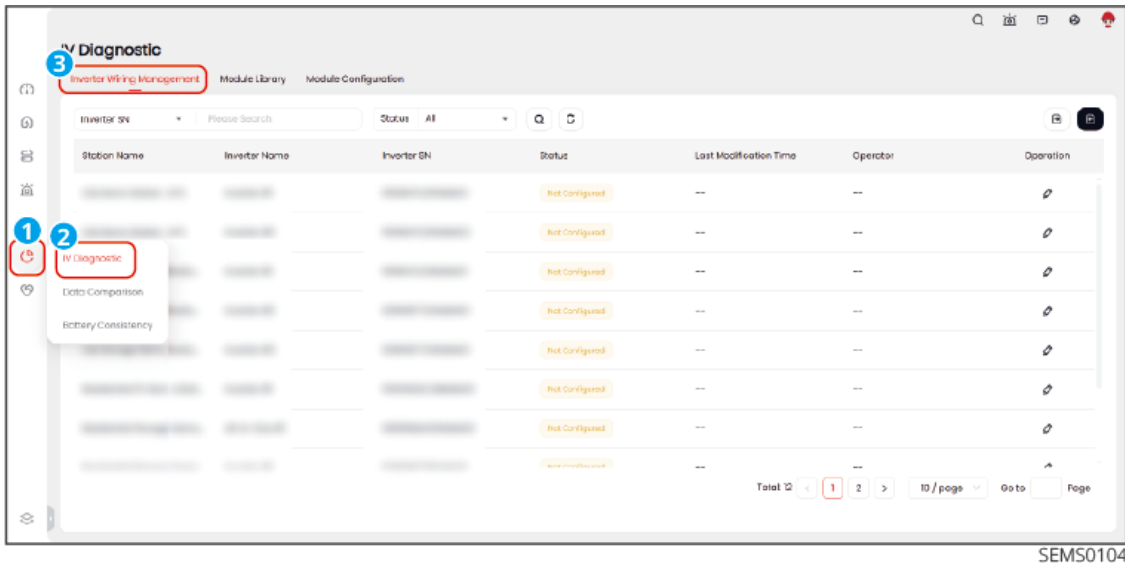
Only applicable to HT 225K series, UT 320K series, and GT G1 series inverters.

6.1.1 Manage Inverter Wiring Information

When the inverter supports multiple strings, it is necessary to configure the ports for the connected strings based on the actual wiring. For example, if inverter A has PV1-10 but only PV1-3 are connected, the configuration should select PV1-3.

Operation steps:

1. Click "Analysis" > "IV Diagnosis" > "Inverter Wiring Management".
2. Edit the inverter wiring information based on actual requirements. After configuration is completed, the status will be displayed as "Configured".
 - If a single inverter needs to be configured, click  to configure.
 - If there are multiple inverters to configure, click "Download Template", fill in the module information in the template, and click  batch upload.



SEMS0104

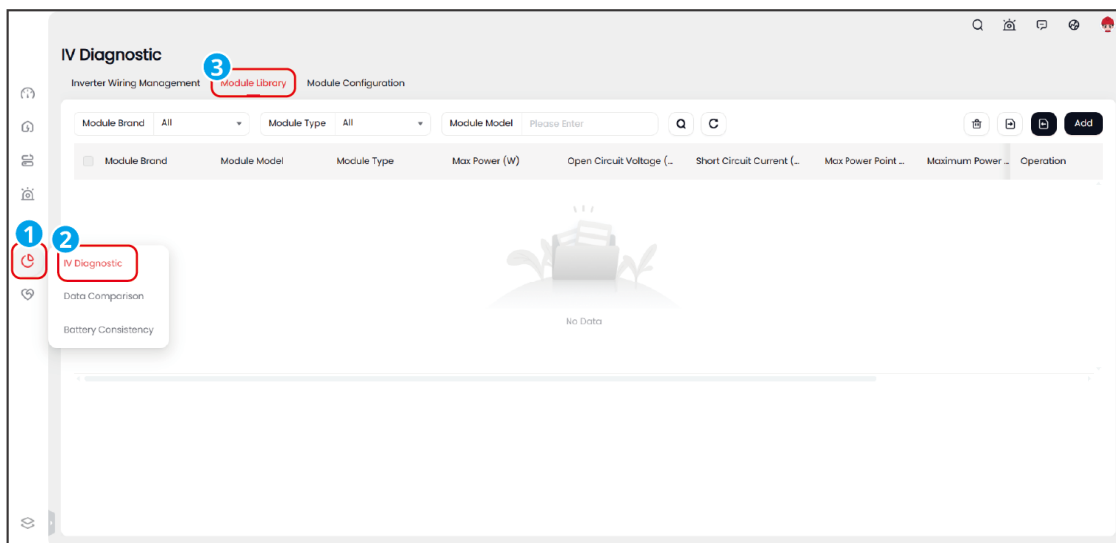
6.1.2 Manage Module Information

Manage Module Library

Supports adding, deleting, or downloading component information in the power station, including component brand, model, type, power, current, voltage, etc.

Operation steps:

1. Click "Analysis" > "IV Diagnosis" > "Module Library" to enter the module library management interface.
2. Add or delete Module Library information based on actual requirements.
 - If a single component needs to be added, click "Add" to add a single component.
 - If there are multiple components to add, click "Download Template", fill in the component information in the template, and click  to upload in batch.
 - After selecting components, click  to delete the selected components.
 - Click  to download the module information in the current module library.



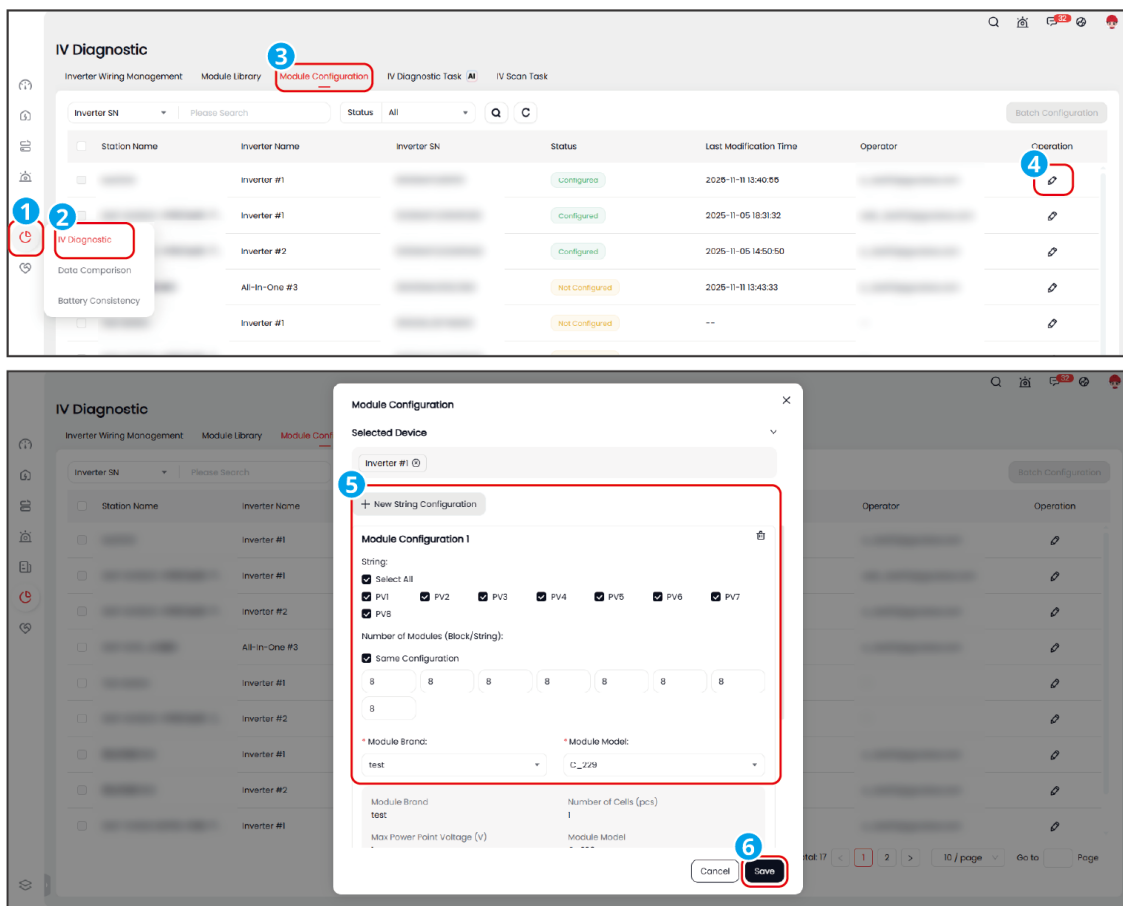
SEMS0105

Manage Component Configuration

Supports configuring module information for each PV input of the inverter. Before configuring inverter module information, please confirm that the corresponding module information has been added in the Module Library.

Operation steps:

1. 点击“Analysis” > “IVDiagnosis” > “Component Configuration”。
2. For inverters in "Not Configured" status, click  to enter the configuration interface.
3. Configure the inverter's component information according to actual needs. Then click "Save".

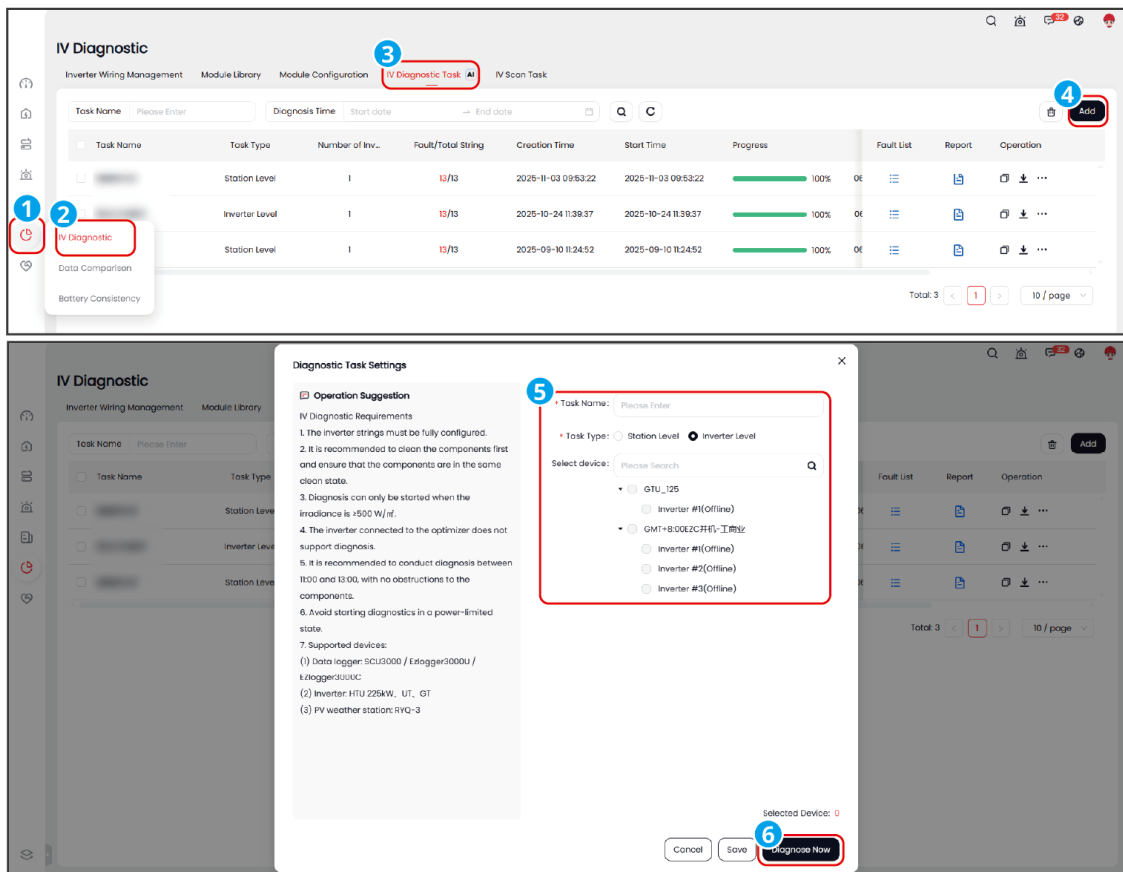


SEMS0106

6.1.3 IV Diagnostic Task

Operation steps:

1. Click "Analysis" > "IV Diagnosis" > "IV Diagnosis Task" to enter the diagnosis interface.
2. Click "Add" to enter the interface for creating a diagnostic task. Fill in the actual task requirements and click "Diagnose Now" to start the task.
3. After diagnosis is completed, it automatically returns to the I-V diagnostic interface, where task progress and other information can be viewed.
 - Click  to view report, export report;
 - Click  to download the report;
 - Click ... >  Delete Report.



SEMS0107

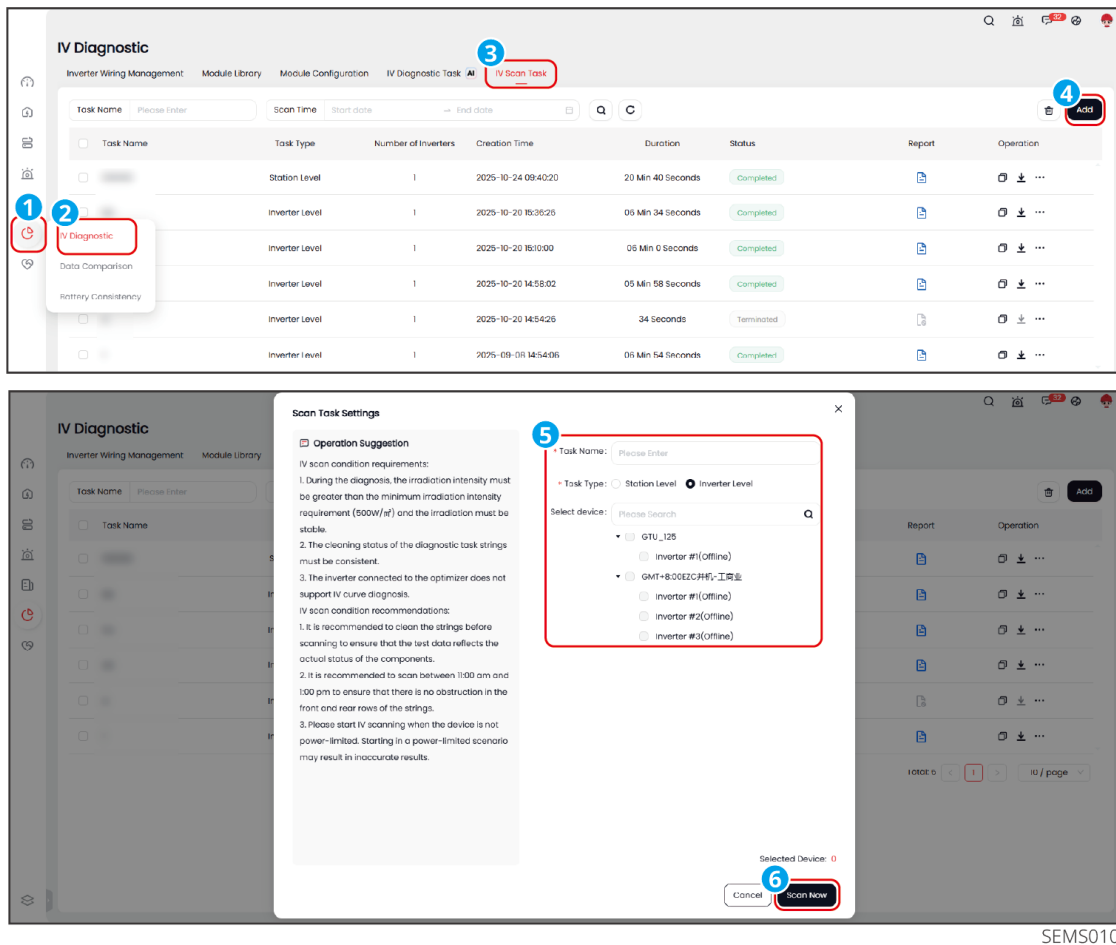
6.1.4 IV Scan Task

Step 1: Click "Analysis" > "IV Diagnosis" > "IV Scan Task" to enter the diagnosis interface.

Step 2: Click "Add" to enter the scan task creation interface. Fill in the task requirements accordingly and click "Start Scan Now" to begin the task.

Step 3: After the scan is complete, it will automatically return to the IV diagnostic interface, where you can view the task progress and other information.

- Click  to view or export the report;
- Click  to download the report;
- Click ... >  Delete Report.



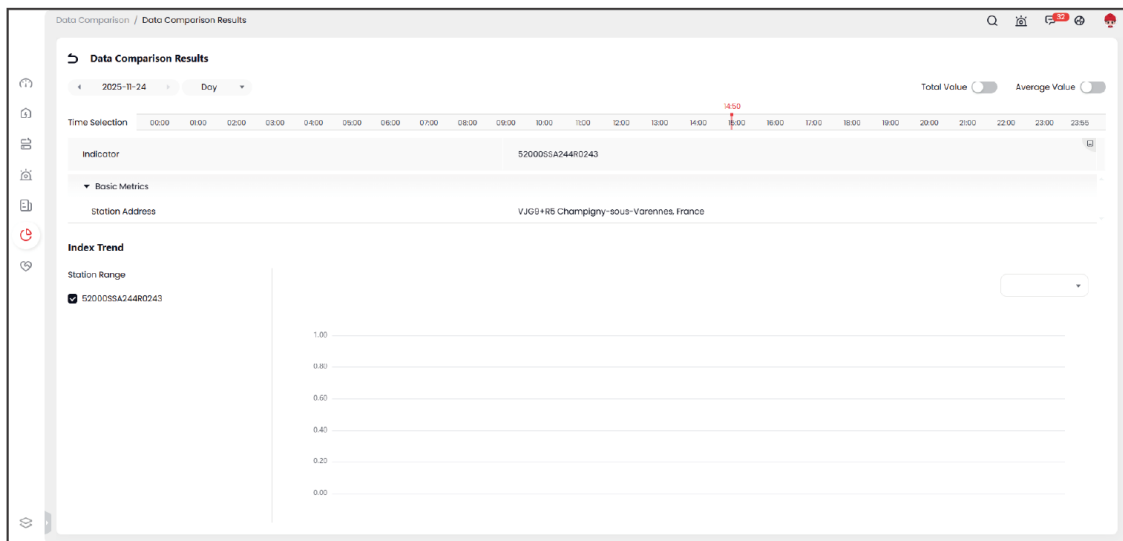
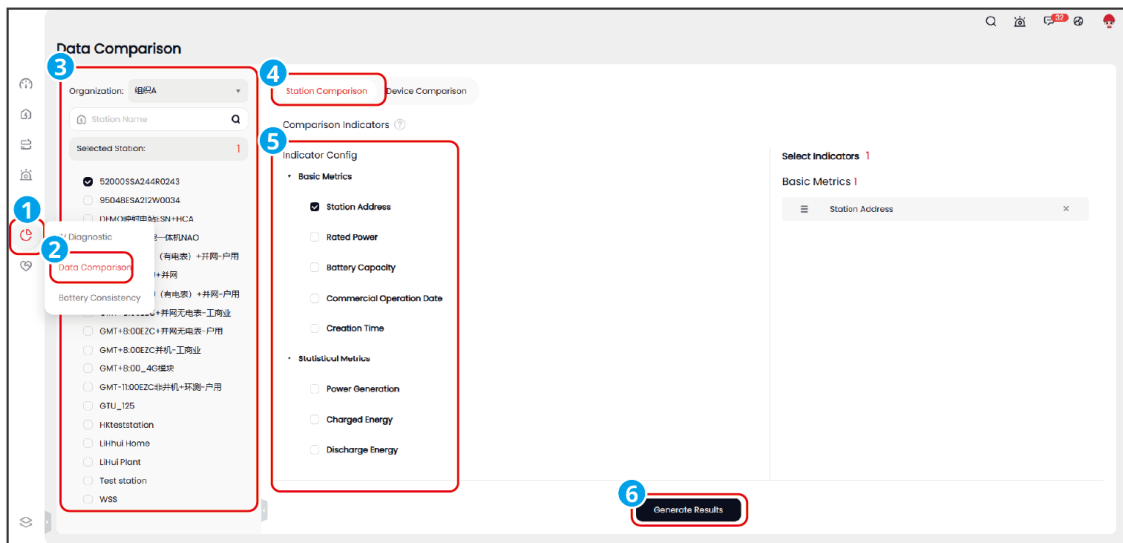
SEMS0108

6.2 Data Comparison

Supports selecting multiple power stations for Data Comparison between power stations and between devices under power stations.

Operation steps:

1. Click "Analysis" > "Data Comparison" to enter the Data Comparison interface.
2. Select the power stations to be compared.
3. According to the actual situation, select "Station Comparison" or "Equipment Comparison", and configure the indicators to be compared.
4. Click "Generate Results" to enter the comparison data display interface.



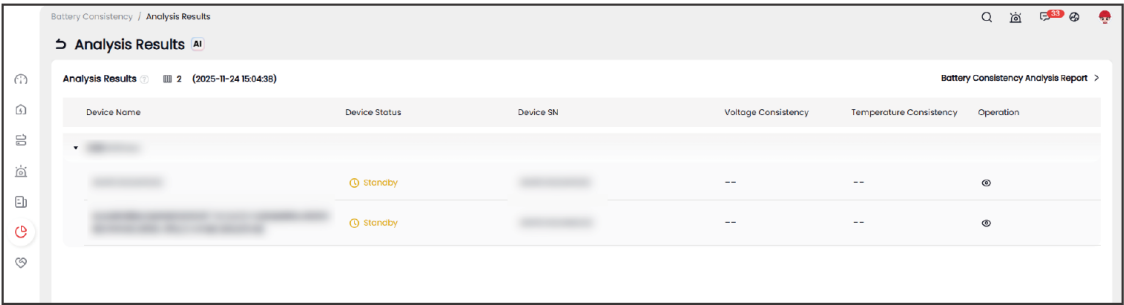
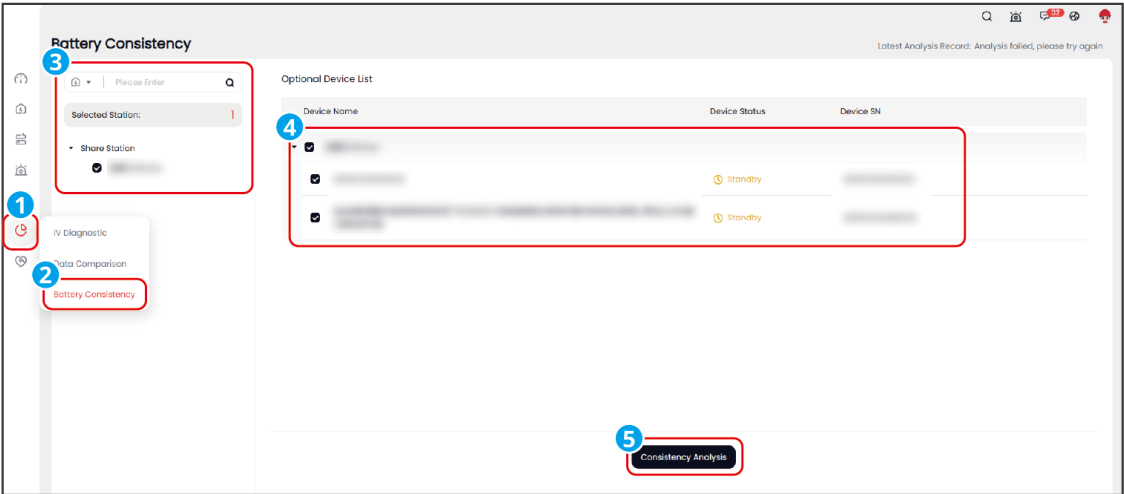
SEMS0109

6.3 Battery Consistency Analysis

Supports selecting multiple batteries to perform batch temperature consistency and voltage consistency analysis, improving monitoring Efficiency.

Operation steps:

1. Click "Analysis" > "Battery Consistency Analysis" to enter the Data Comparison interface.
2. Select the power stations and equipment that need to be compared.
3. Click "Consistency Analysis", and after the analysis is complete, you can enter the analysis result interface. If needed, click to download the consistency analysis report.



SEMS0110

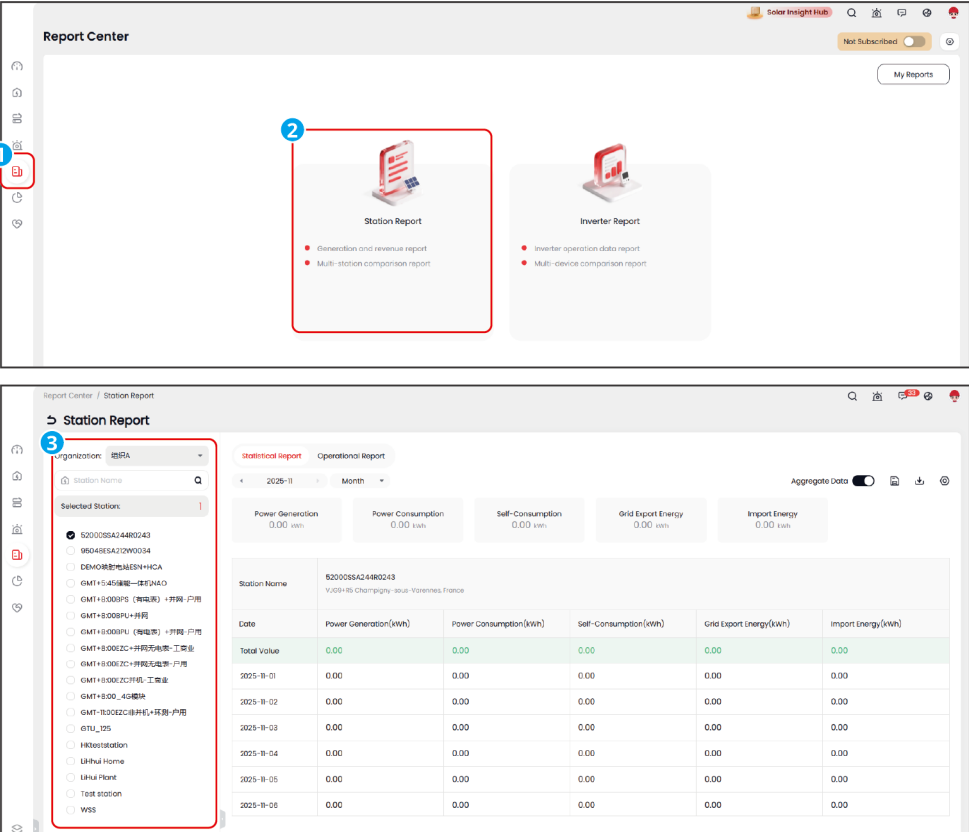
7 Report Management

Log in to WEB, click "Report Center" in the navigation bar to view or set report information.

7.1 View Power Station Report

Operation steps:

1. Click "Report Center" > "Power Station Report" to enter the settings interface.
2. Select one or more power stations to view.
3. Select the report type, time range, etc. as needed to display the report information.
Click  to set the statistical indicators, sorting, and other information in the report.
4. (Optional): If needed, click  to download or  to save the report.



The screenshot displays the 'Report Center' interface. The top section shows two report types: 'Station Report' (highlighted with a red box and number 2) and 'Inverter Report'. The 'Station Report' section lists 'Generation and revenue report' and 'Multi-station comparison report'. The bottom section shows the 'Station Report' configuration page. It includes a sidebar with a list of stations (highlighted with a red box and number 3), a main area for selecting the report type (Statistical Report or Operational Report), a time range selector (2025-11, Month), and a table of energy data. The table has columns for Date, Power Generation (kWh), Power Consumption (kWh), Self-Consumption (kWh), Grid Export Energy (kWh), and Import Energy (kWh). The data shows zero values for all metrics across the specified date range.

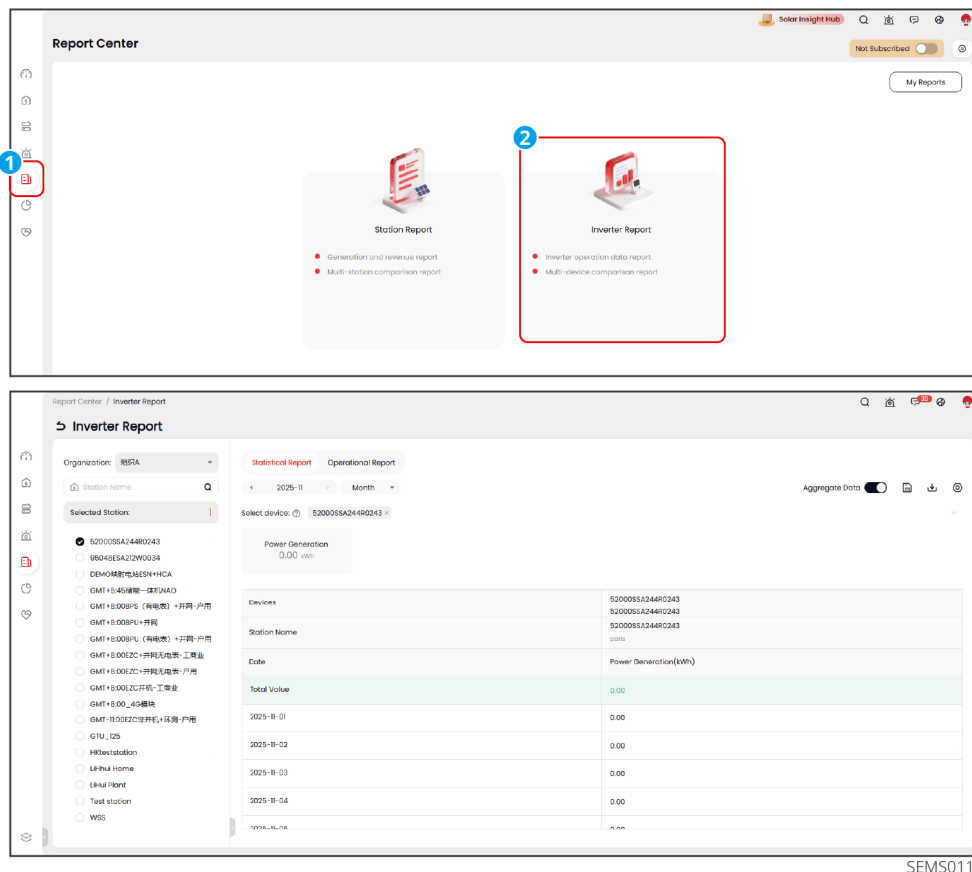
Date	Power Generation(kWh)	Power Consumption(kWh)	Self-Consumption(kWh)	Grid Export Energy(kWh)	Import Energy(kWh)
Total Value	0.00	0.00	0.00	0.00	0.00
2025-11-01	0.00	0.00	0.00	0.00	0.00
2025-11-02	0.00	0.00	0.00	0.00	0.00
2025-11-03	0.00	0.00	0.00	0.00	0.00
2025-11-04	0.00	0.00	0.00	0.00	0.00
2025-11-05	0.00	0.00	0.00	0.00	0.00
2025-11-06	0.00	0.00	0.00	0.00	0.00

SEMS0111

7.2 View Device Report

Operation steps:

1. Click "Report Center" > "Inverter Equipment Report" to enter the settings page.
2. Select one or more power stations to view.
3. Select the report type and time range according to actual needs to display the report information. Click  to set the statistics indicators, sorting, etc. in the report.
4. (Optional): If needed, click  to download or  to save the report.



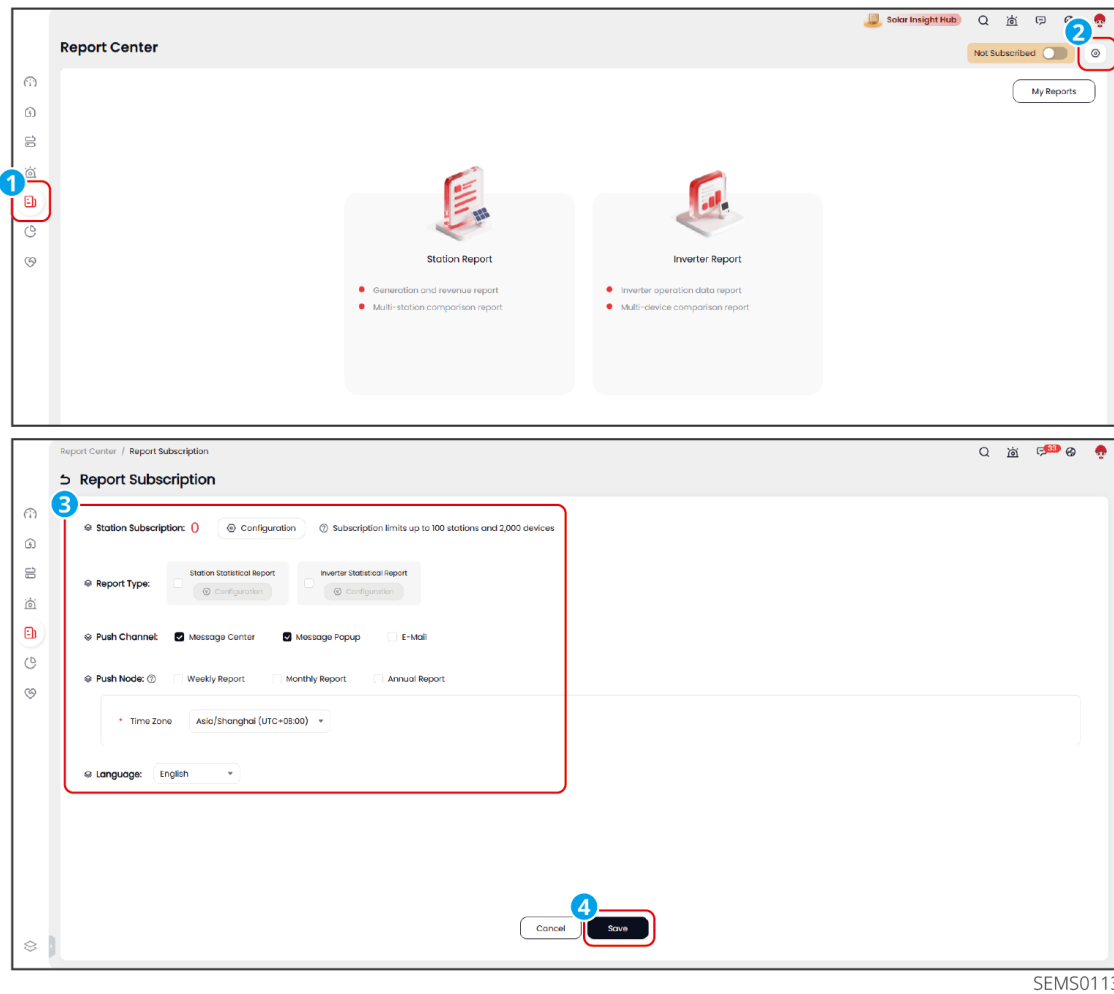
SEMS0112

7.3 Set Report Subscription Information

Supports customizing report information and push methods based on actual needs. Supports selecting the organization type, report type, push node, push channel, etc., for report push.

Operation steps:

1. Click "Report Center" > "Report Subscription" to enter the settings interface.

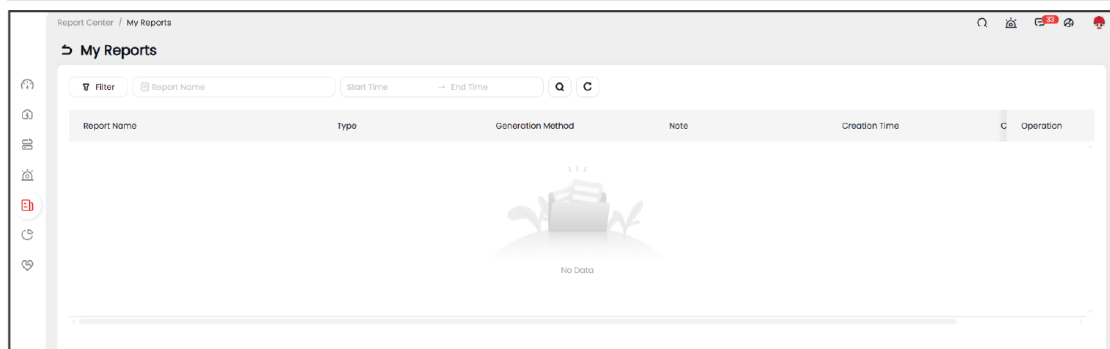
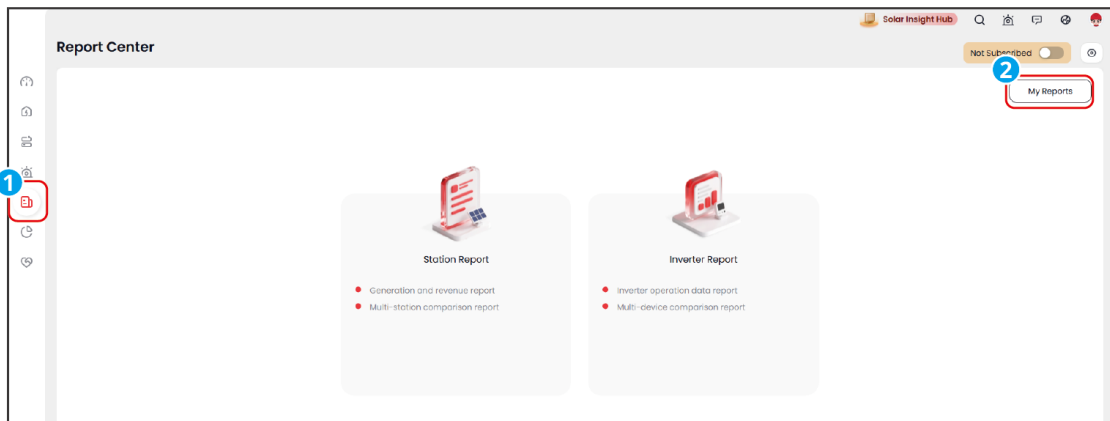


SEMS0113

7.4 Query My Reports

Operation steps:

1. Click "Report Center" > "My Reports" to enter the My Reports interface, and filter, view, download, or delete reports as needed.

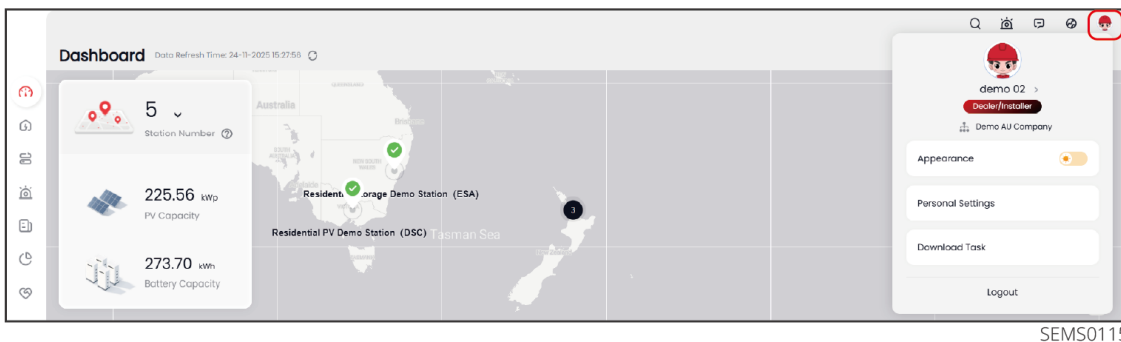


SEMS0114

8 Personal Center Management

Support personalized settings for the account, such as switching the web interface appearance, modifying personal information, viewing download tasks, etc.

- Click "Appearance" to switch the web interface display appearance, supporting light and dark modes.
- Click "Personal Settings" to set personal information, preferences, Subscription Configuration, change password, etc.
- Click "Download Tasks" to view and manage the progress of all export tasks.

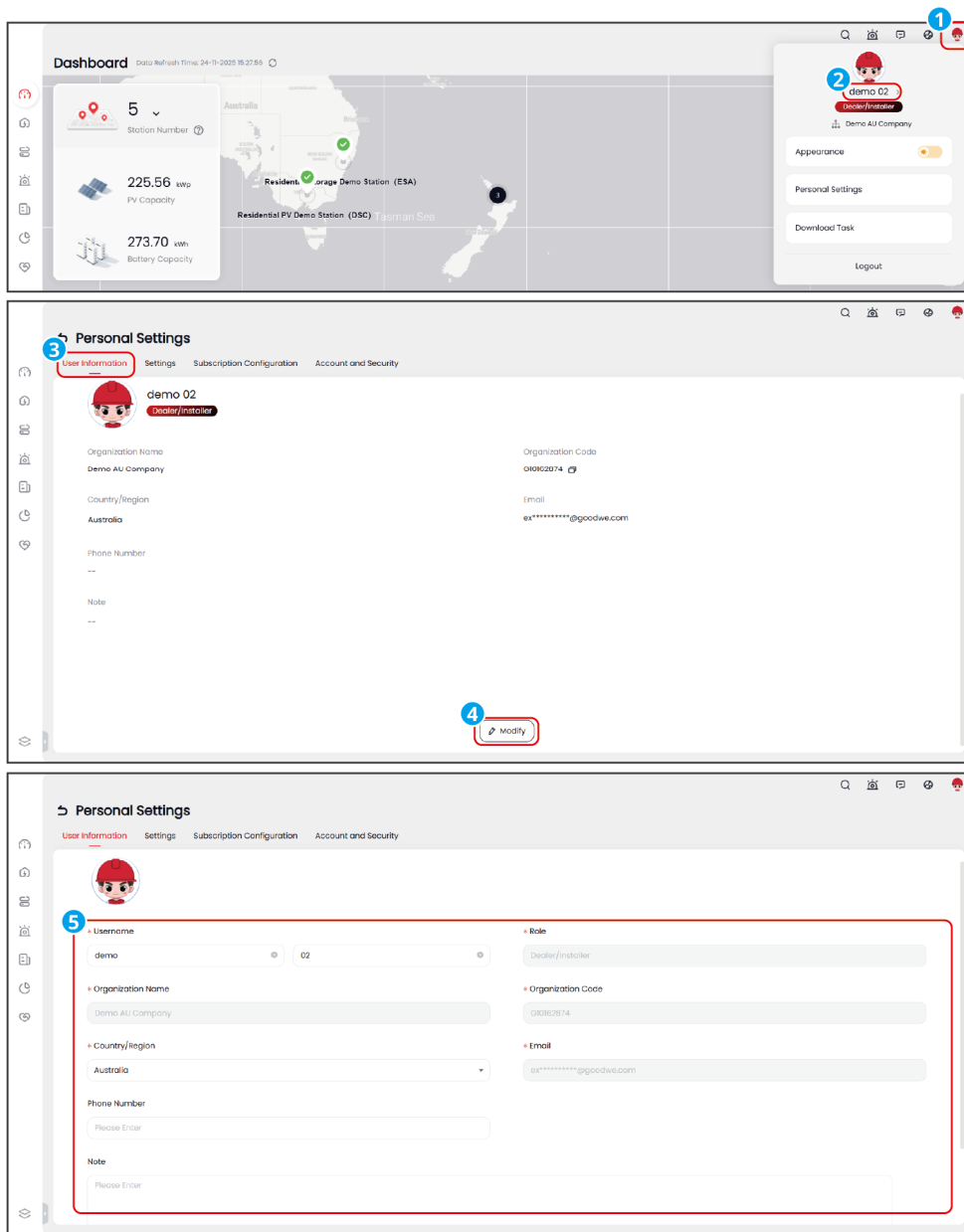


SEMS0115

8.1 Modify User Information

Operation steps:

1. Click the account avatar at the upper right corner of the web interface > "Personal Settings" > "User Information".
2. Click "Modify" to update the account parameters requiring changes, such as avatar, username, country/region.
3. Click "Save" to complete the modification.



SEMS0116

8.2 Using AI Assistant

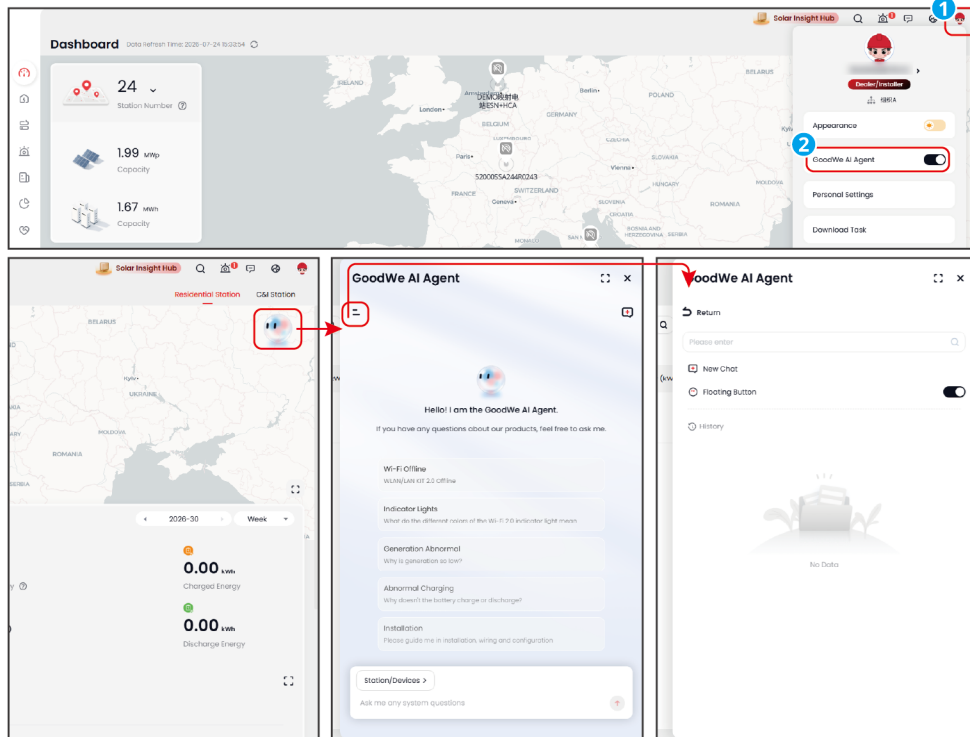
Quickly obtain graphical information through the GoodWe AI Assistant Q&A for mat.

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

- Support feedback suggestions for AI responses. When AI cannot resolve the issue, enable one-click manual escalation and generate an after-sales service ticket.

Operating Steps

1. Click the account avatar at the upper right corner of the interface > "Xiaogu AI Assistant" to enable the AI assistant.
2. Enter the query in the dialog box to quickly generate an answer.

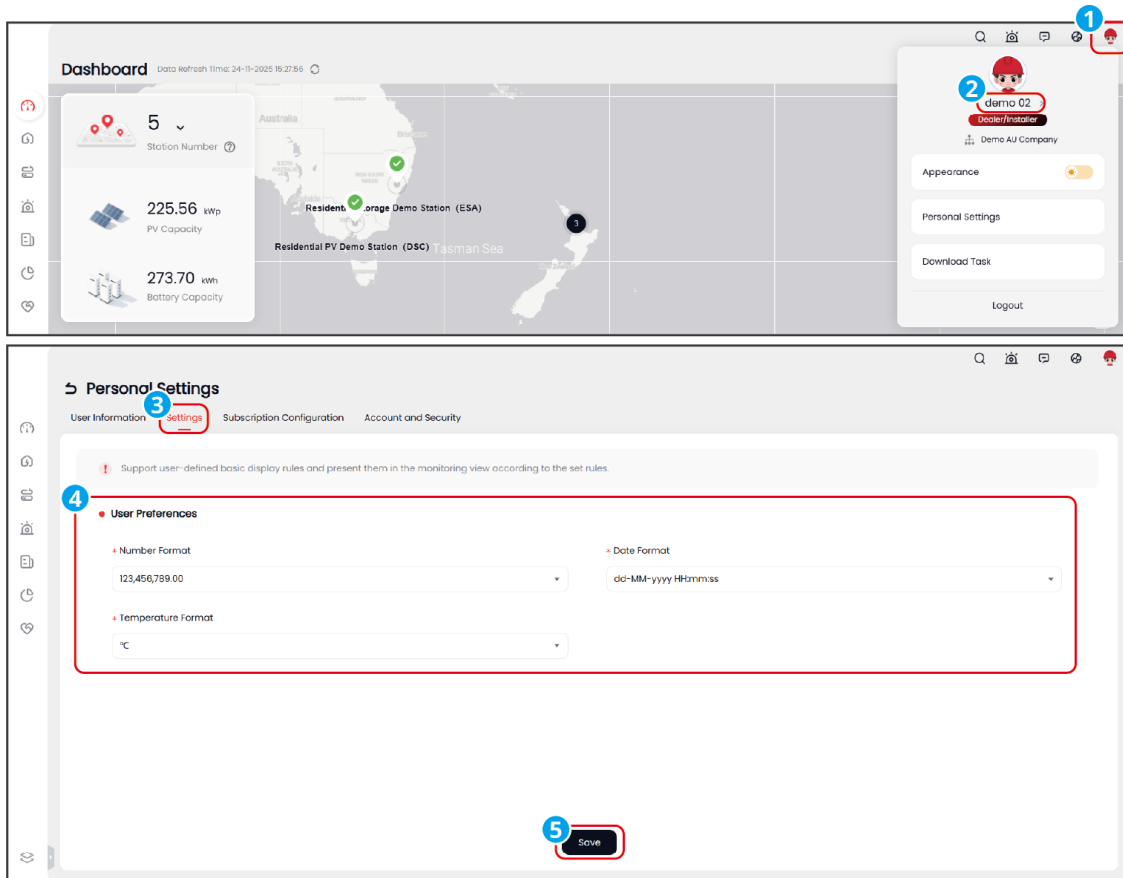


SEMS0192

8.3 Set Preferred Format

Operation steps:

1. Click web the account avatar in the upper right corner of the interface > "Personal Settings" > "Settings".
2. Modify the display for mat of numbers, dates, temperatures, etc.
3. Click "Save" to complete the modification.

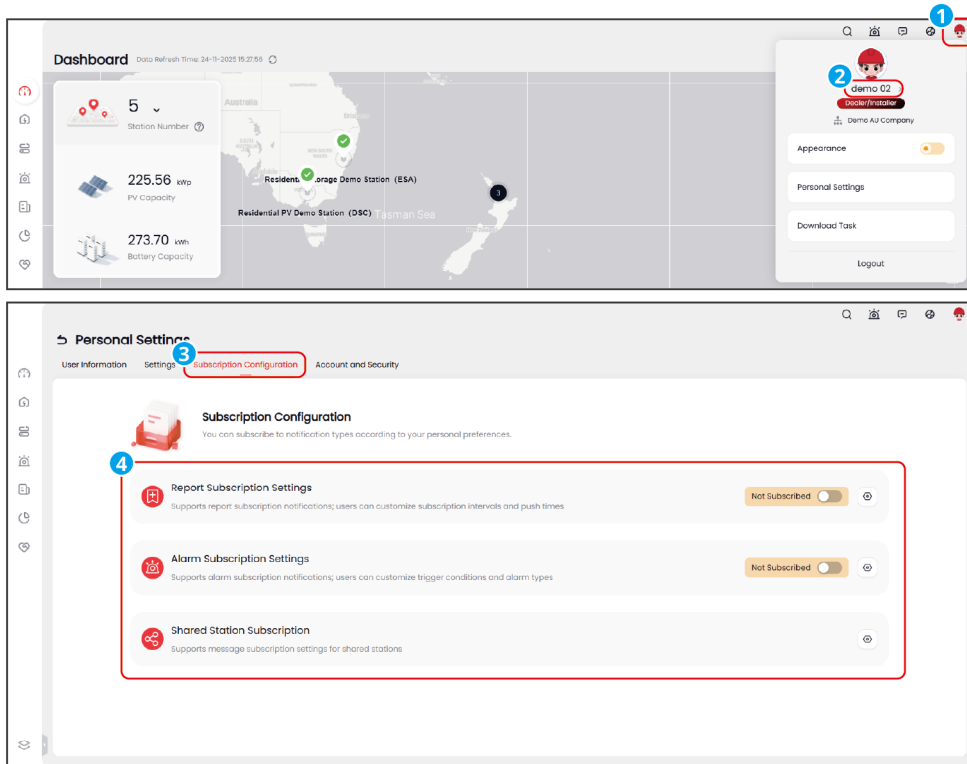


SEMS0117

8.4 Set Subscription Information

Support configuring Report Subscription, Alert Subscription, and Shared Station Subscription information.

- Report Subscription: Supports customizing report information and push methods based on actual needs. Supports selecting the organization type, report type, push node, push channel, etc. for report push.
- Event subscription: When enabled, users will receive notifications when alarms, faults, or operational status changes occur on the device. Supports setting the power station, alarm type, push time, etc., for alarm push.
- Shared Station Subscription: when a power station is shared by others, set the message push channel for the shared power station.
- Tariff expiration reminder: default off. After it is enabled, a notification will be sent when the tariff expires.



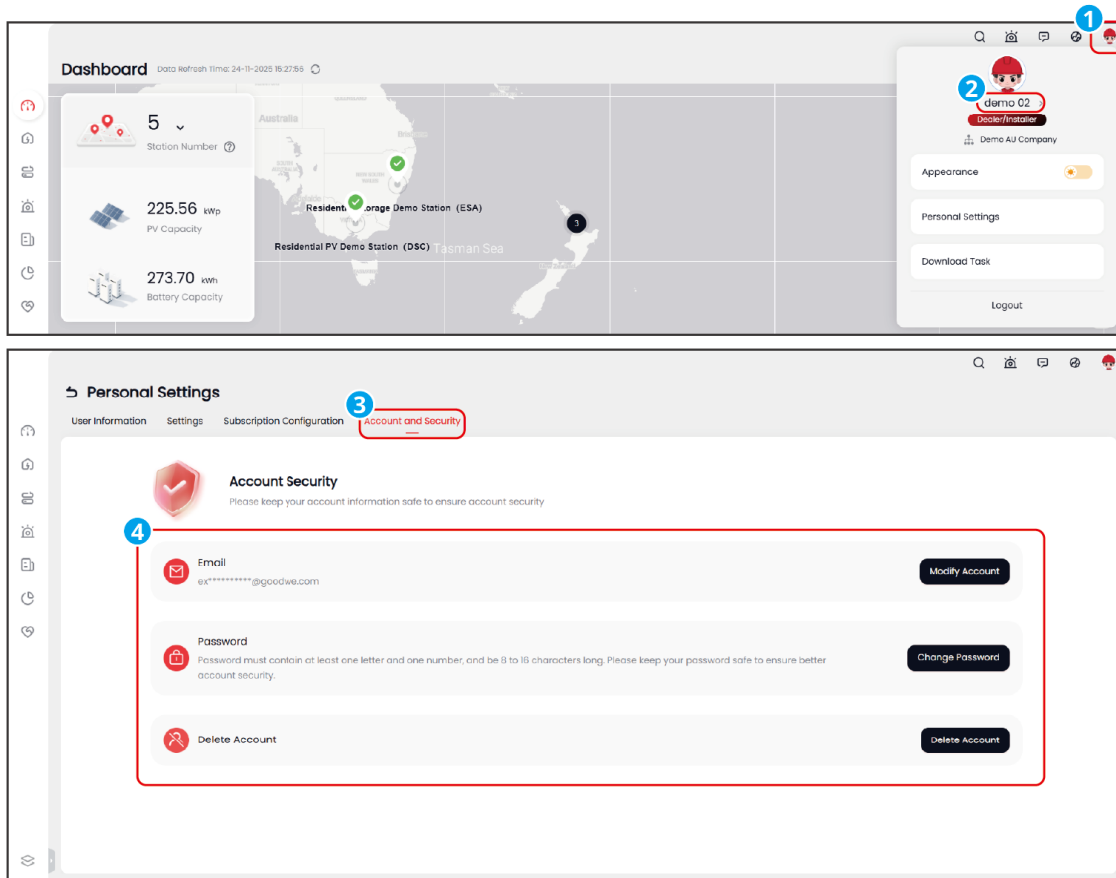
SEMS0118

8.5 Modify Account Information

Support modifying the account-bound email and login password.

Operation steps:

1. Click the account avatar in the upper right corner of the web interface > "Personal Settings" > "Account & Security".
2. Click "Modify Account" or "Modify Password" as needed. After modification, click "Save".
3. After the modification is completed, the interface automatically jumps to the login screen. Please log in again.



SEMS0119

8.6 Set Monitoring Permissions

NOTICE

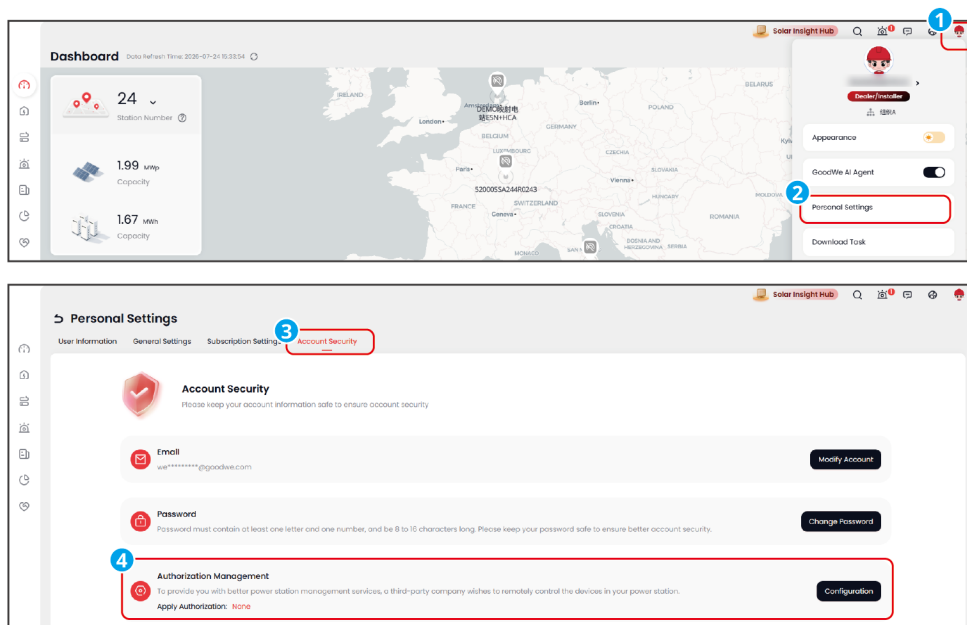
- Only applicable to servers in Europe and Australia.
- If there is a need for third-party Remote Control, please contact the manufacturer to add authorization and fill in the battery capacity and other information as prompted on the interface.
- Monitoring Authorization only applies to the owner account. According to European GDPR regulations, the owner can set monitoring permissions and remote O&M permissions as needed. Except for the owner and authorized visitors, other accounts cannot monitor or perform O&M on this power station.

Operating Steps

1. Click the account avatar at the upper right corner of the web interface > "Personal

Settings" > "Account Security" > "Authorization Management" to enter the authorization management interface.

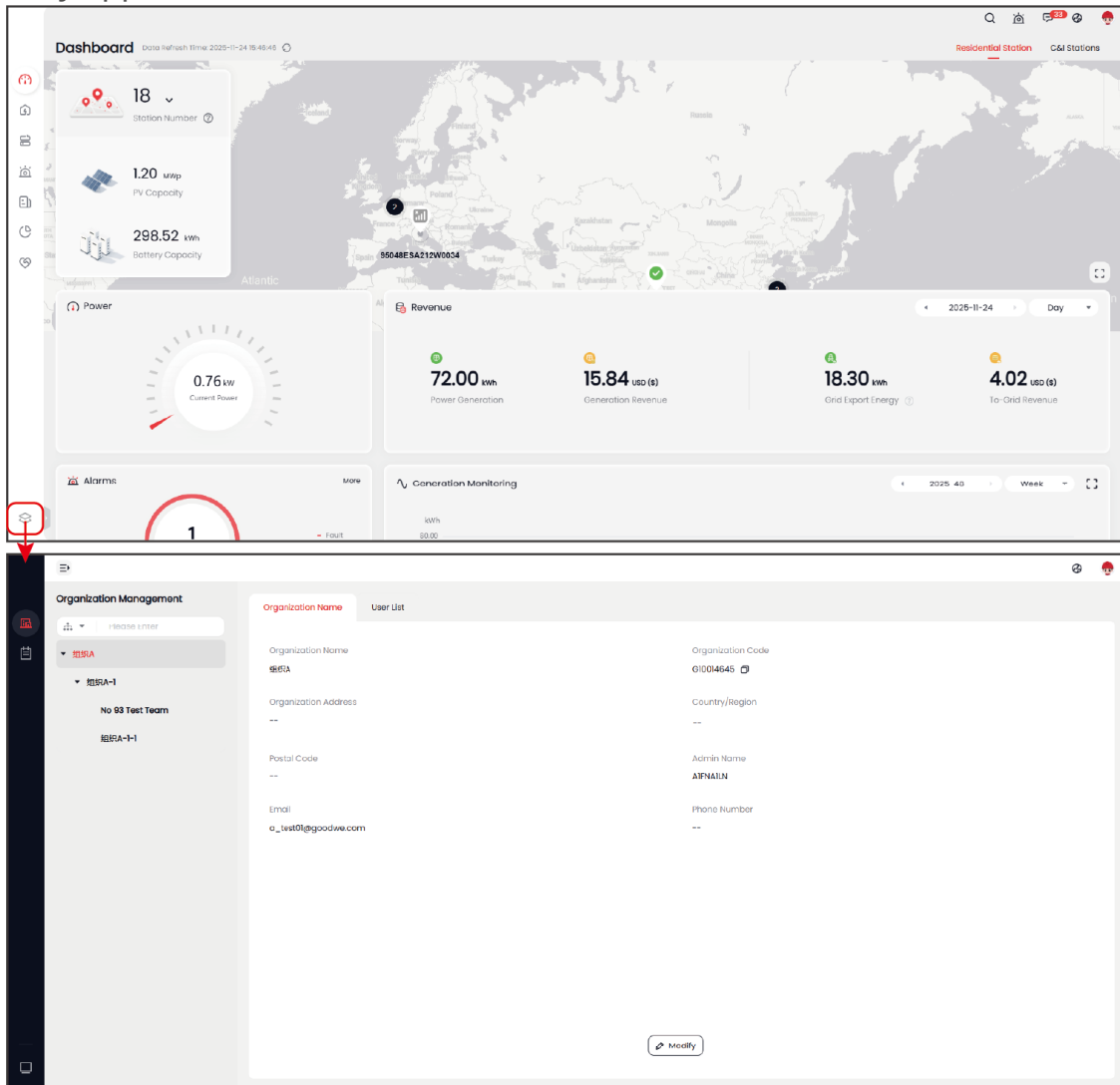
2. Set monitoring permissions according to actual needs.



SEMS0194

9 Organization Management

Only applicable to administrator accounts.



SEMS0120

9.1 Management Organizational Information

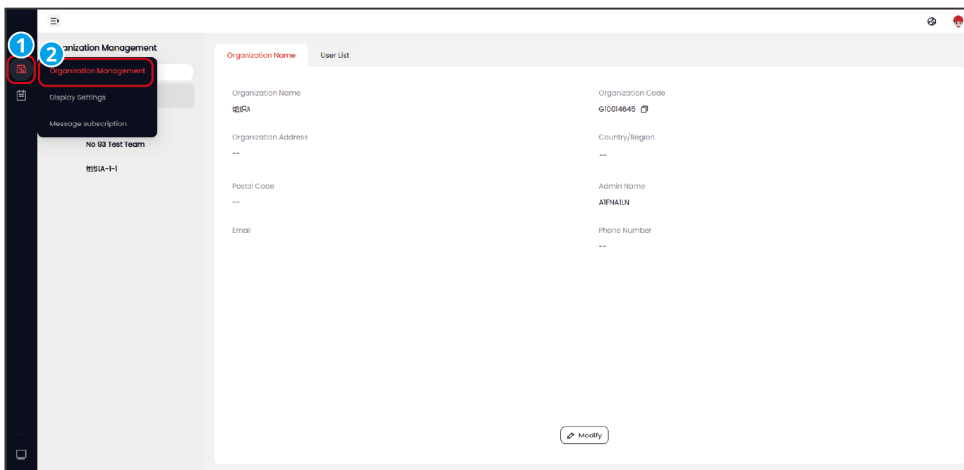
Operation steps:

Click "Backend Management" > "Organization Management" > "Organization Management".

- Supports adding or deleting organizations. Click + after the organization name to create a new organization. Create up to 5 levels; click ... > to delete an

organization.

- Supports modifying organization information. Click "Modify" on the "Organization Information" interface to make changes.
- Supports managing users under the organization. On the "User List" interface, click "New User" to add users under the organization; click  to reset the account password; click  to edit user information; click  to delete the user.



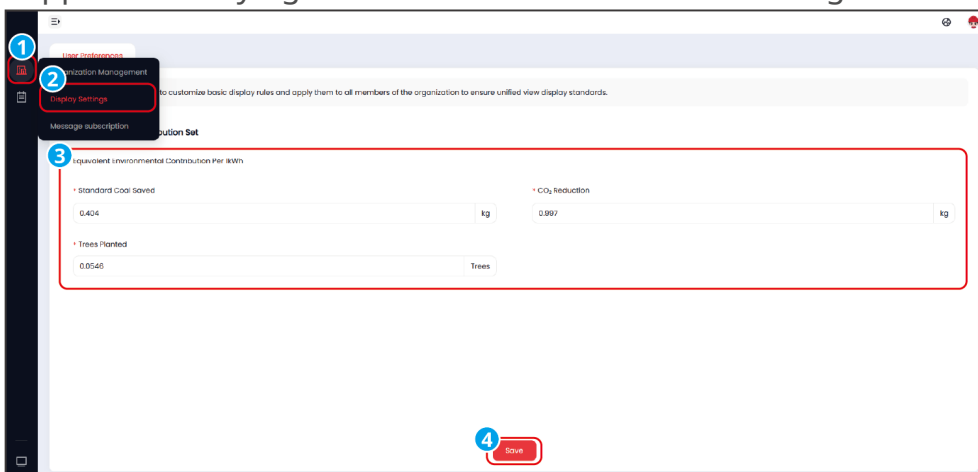
SEMS0121

9.2 Set Display Information

Operation steps:

Click "Backend Management" > "Organization Management" > "Display Settings".

Supports modifying Environmental Contributions configuration.



SEMS0122

9.3 Set subscription information

Support setting organizational-level subscription information. The organizational-level scheme for alarm subscription has priority over the personal setting scheme.

Report Subscription: Supports customizing report information and push methods based on actual needs. Supports selecting the organization type, report type, push node, push channel, push user, etc. for push reports.

Alarm subscription: Customize alarm information and push methods according to actual needs. Supports selecting the power station, alarm type, push time, push user, etc. for pushing alarms.

Operation Steps:

1. Click "Backend Management" > "Message Subscription" > "Add Plan".
2. Set subscription plans based on actual needs.

The top screenshot shows the 'Message Subscription' management page. It includes a sidebar with 'Backend Management' and 'Message Subscription' highlighted. The main area has a 'Report Message Subscription' tab and a table of subscription plans. A red box highlights the '+ New Add' button in the top right corner of the table.

Plan Name	User Count	Plan Description	Plan Activation	Creator	Update Time	Operation
1	0	--	☐	测试未注册号020	2025-09-20 15:57:08	Edit Delete

The bottom screenshot shows the 'New Add' form for creating a subscription plan. It includes fields for Plan Name, Plan Description, Station Subscription, Report Type, Push Channel, Push Node, Time Zone, and Language. The 'Station Subscription' section has a 'Configuration' button. The 'Report Type' section has 'Station statistical report' and 'Inverter statistical report' options. The 'Push Channel' section has 'Message Center', 'Message Popup', and 'E-Mail' options. The 'Push Node' section has 'Weekly Report', 'Monthly Report', and 'Annual Report' options. The 'Time Zone' is set to 'Asia/Shanghai (UTC+08:00)' and the 'Language' is set to 'English'. There are 'Cancel' and 'Save' buttons at the bottom.

SEMS0124

9.4 Management Log

Operation steps:

Click "Backend Management" > "Log Management".

Organization Man...

Organization Management

Display Settings

Message subscription

Log Management

Monitoring Platform

Operator

Start Time → End Time

Operation Module

Operation Type

Q C

Operation Module	Operation Type	Operator	Operation Time	Operation
Login	Login		2026-01-26 14:29:08	
Login	Login		2026-01-26 06:38:06	
Login	Login		2026-01-26 09:29:25	
Login	Login		2026-01-26 09:13:10	
Login	Login		2026-01-23 11:18:40	
Login	Login		2026-01-22 18:26:03	
Logout	Logout		2026-01-22 13:55:42	
Login	Login		2026-01-22 13:54:46	
Logout	Logout		2026-01-22 13:54:30	
Login	Login		2026-01-22 13:54:02	

Total: 19/2

1

2

3

4

5

...

198

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Go to

Page

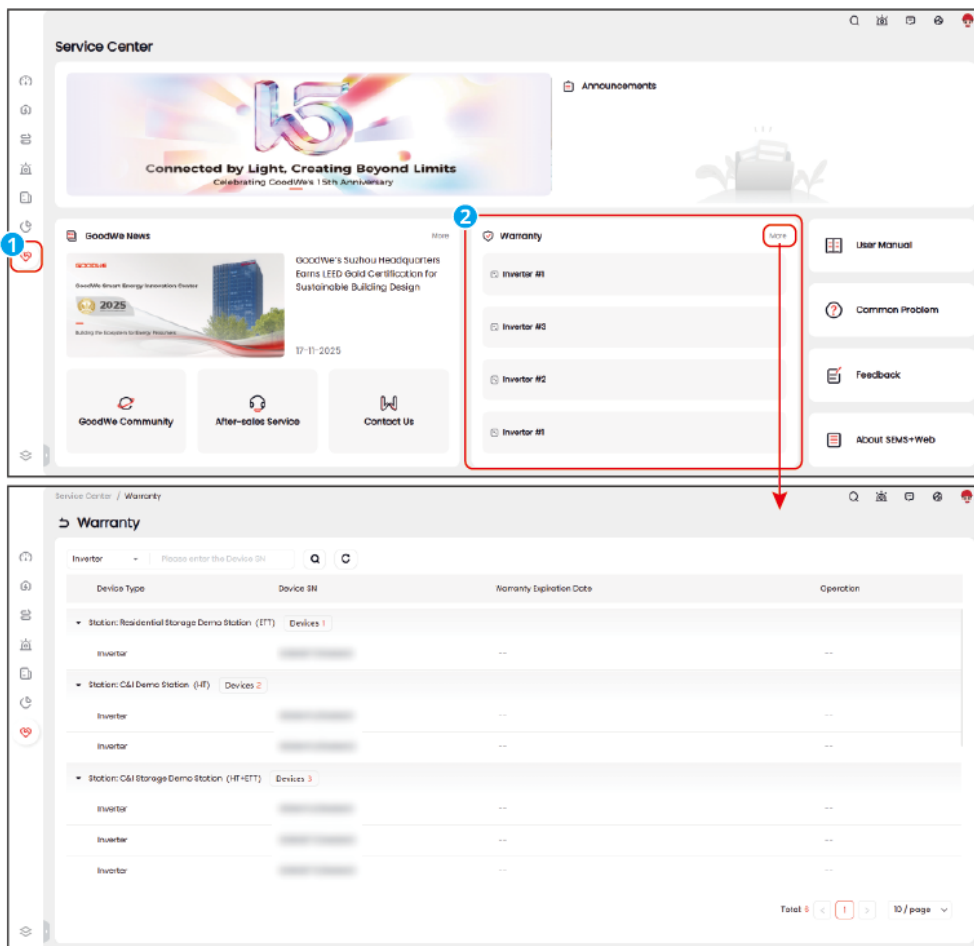
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10 FAQs

10.1 How to Check Warranty Information

Operation steps:

1. Click "Service Center", and in the "Warranty" module, you can view the warranty information for some equipment.
2. Click "More" to enter the warranty details interface. Enter the device SN in the search box to quickly locate the power station or device you need to query.
3. Click  to view warranty details, or  click to download warranty information.

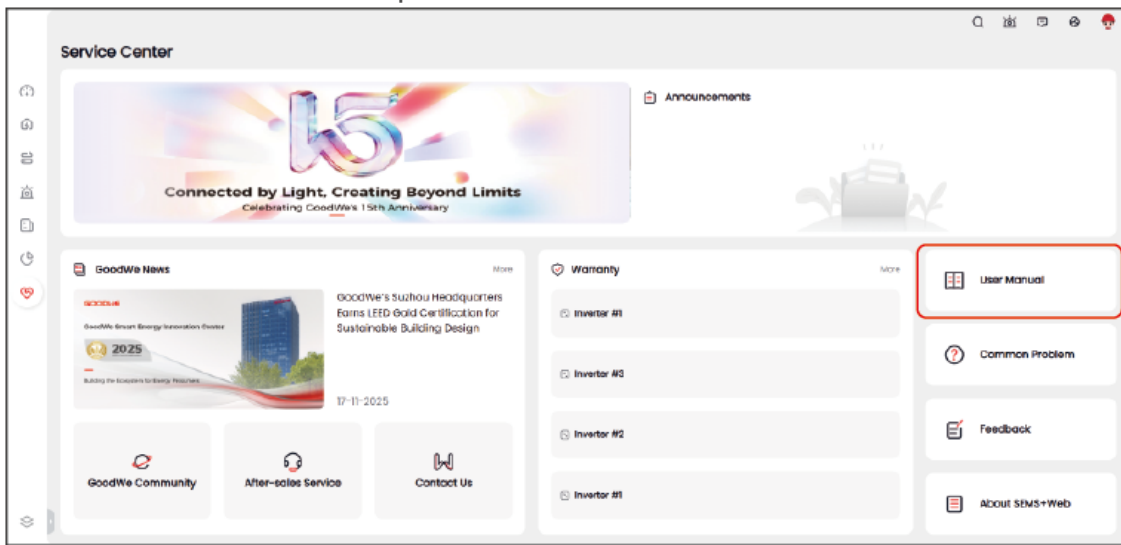


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10.2 How to View the User Manual

Operation steps:

Click "Service Center" > "Operation Manual" to view the User Manual.



11 Appendix

11.1 National Safety Code

Number	Safety regulation name	Number	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

Num ber	Safety regulation name	Num ber	Safety regulation name
19	NL-16/20A	74	DK-West-D-MVHV
20	NL-A	75	DK-East-D-MVHV
21	NL-B	76	FR-Reunion
22	NL-C	77	BE-LV (>30kVA)
23	NL-D	78	BE-HV
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

Num ber	Safety regulation name	Num ber	Safety regulation name
41	CZ-A1-09	96	GB-G99-A HV
42	CZ-A2-09	97	GB-G99-B LV
43	CZ-B1/B2-09	98	GB-G99-C LV
44	CZ-C	99	UA-B
45	CZ-D	100	UA-C
46	RO-A	101	UA-D
47	RO-B	102	UK-G98
48	RO-D	103	UK-G99-A LV
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

Num ber	Safety regulation name	Num ber	Safety regulation name
2	US-208Vac	39	LUMAPR-2024-240Vac-3P
3	US-240Vac	40	Cayman
4	Mexico-220Vac	41	Brazil-220Vac
5	Mexico-440Vac	42	Brazil-208Vac
6	US-480Vac	43	Brazil-230Vac
7	US-208Vac-3P	44	Brazil-240Vac
8	US-220Vac-3P	45	Brazil-254Vac
9	US-240Vac-3P	46	Brazil-127Vac
10	US-CA-208Vac	47	Brazil-ONS
11	US-CA-240Vac	48	Barbados
12	US-CA-480Vac	49	Chile-BT
13	US-CA-208Vac-3P	50	Chile-MT-A
14	US-CA-220Vac-3P	51	Chile MT-B
15	US-CA-240Vac-3P	52	Colombia
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

Num ber	Safety regulation name	Num ber	Safety regulation name
24	US-Kauai-480Vac	61	Mexico-127V
25	US-Kauai-208Vac-3P	62	Mexico-240V
26	US-Kauai-220Vac-3P	63	US-O&R-208Vac
27	US-Kauai-240Vac-3P	64	US-O&R-240Vac
28	US-ISO-NE-208Vac	65	US-O&R-480Vac
29	US-ISO-NE-240Vac	66	US-O&R-208Vac-3P
30	US-ISO-NE-480Vac	67	US-O&R-220Vac-3P
31	US-ISO-NE-208Vac-3P	68	US-O&R-240Vac-3P
32	US-ISO-NE-220Vac-3P	69	Brazil-277Vac
33	US-ISO-NE-240Vac-3P	70	Chile-BT ≤9MW
34	LUMAPR-2024-208Vac	71	Chile-MT ≤9MW
35	LUMAPR-2024-240Vac	72	Chile > 9MW
36	LUMAPR-2024-480Vac	73	Mexico-277Vac
37	LUMAPR-2024-208Vac-3P		
Oceania			
1	Australia-A	4	Newzealand
2	Australia-B	5	Newzealand:2015
3	Australia-C	6	NZ-GreenGrid
Asia			
1	China A	33	Israel-MV
2	China B	34	Israel-HV
3	China High Voltage	35	Vietnam
4	China's highest voltage	36	Malaysia-LV

Num ber	Safety regulation name	Num ber	Safety regulation name
5	China power plant	37	Malaysia-MV
6	China, Shandong	38	DEWA-LV
7	Hebei, China	39	DEWA-MV
8	China PCS	40	Saudi Arabia-220V-LV
9	Taiwan	41	JP-690Vac-50Hz
10	Hong Kong	42	JP-690Vac-60Hz
11	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

Num ber	Safety regulation name	Num ber	Safety regulation name
27	JP-480Vac-50Hz	59	JP-320Vac-50Hz
28	JP-480Vac-60Hz	60	JP-320Vac-60Hz
29	Srilanka-LV<1MW	61	JP-340Vac-50Hz
30	Singapore	62	JP-340Vac-60Hz
31	Israel-OG	63	JP-380Vac-50Hz
32	Israel-LV	64	JP-380Vac-60Hz
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

11.2 Inverter Parameters

Communication Parameters

Parameter Name	Description
RS-485 configuration	Set the host communication address of the inverter. For a single inverter, set the communication address according to the actual situation; when multiple inverters are connected, the address of each inverter must be different, and none of the inverters can set the communication address to 247.
PLC	Applicable only to devices communicating via PLC. Configure according to the actual box-type transformer to which the inverter is connected.

Device Start/Stop Parameters

Parameter Name	Description
start-up	Control equipment start, stop, and restart.
shutdown	
restart	

Environmental Control Parameters

Parameter Name	Description
Fan Control	
Fan reverses to remove dust	When enabled, the fan automatically reverses periodically for dust removal.
External fan turn-on temperature setpoint	After the equipment temperature reaches the setpoint, the external fan starts to operate.
Fan Detection	Verify whether the fan can operate normally.
Silent Mode	
Silent Mode	• Enabling mute mode can reduce equipment noise. • Before enabling the silent mode, please ensure that the equipment is connected to a stable and reliable power grid, otherwise it will not take effect. • After enabling silent mode, if the load power consumption in the system is too high and the Energy Generation cannot meet the demand, electricity may be automatically purchased from the grid to ensure load operation. • During silent mode, there may be some loss of photovoltaic Energy Generation. • Supports setting silent mode time periods according to actual needs.

AC Side Settings Parameters

Parameter Name	Description
AC Port Connection Settings	According to the inverter port characteristics, it supports connecting loads, generators, microgrid devices, etc. For details, please refer to 11.2.4.Smart Port Parameters(Page 93) .
Backup Function Settings	• Backup: When enabled, during grid power failure, the load connected to the inverter BACK-UP port can be powered by the battery, ensuring uninterrupted power supply to the load. • Supports the following detection modes: ◦ UPS Mode - Full-wave Detection: Detects whether the grid voltage is too high or too low. ◦ UPS mode - half-wave detection: Detect whether the grid voltage is too low. ◦ EPS mode - supports LVRT: disable grid voltage detection function. • Off-grid first cold start: only takes effect once. When this function is enabled, the battery or photovoltaic 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 over load obstacle: When the load power connected to the inverter's BACK-UP port exceeds the Rated Power, the inverter will restart and check the load power again. If not handled in time, the inverter will restart multiple times and perform load detection, with the interval between each restart increasing. After the load power on the BACK-UP port is reduced within the Rated Power range, click this switch to clear the inverter restart interval, and the inverter will restart immediately.

Parameter Name	Description
Parallel Management	- When the inverter implements parallel operation via RS485, set the Parallel Management parameters. - Manually set the master or slave property of the inverter, and set the slave address and other information. - Through self-organizing network, it automatically forms a parallel system or a single-phase to three-phase system. - When inverters achieve parallel operation through the Ezlink3000 intelligent communication stick, the number of paralleled units in the system needs to be configured.
Type of Electrical Supply System	Select single-phase, split-phase, or two-phase electrical grid according to the Type of Electrical Supply System actually adapted by the inverter.
Output Method	When the connected power grid is a three-phase grid, select either three-phase three-wire system or three-phase four-wire system according to the actual grid type that the inverter is connected to.
Three-phase unbalanced output	When a three-phase inverter is connected to unbalanced loads, such as when L1, L2, and L3 are respectively connected to loads of different power levels, the three-phase unbalanced output function needs to be enabled.
Phase Voltage Unbalance Function	After enabling, 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, the PV string connection mode on the inverter MPPT port can be manually set to avoid incorrect string connection identification. Supported: • Independent connection: External PV strings are connected one-to-one with the inverter-side PV input ports. • Partial parallel connection: When one PV string is connected to multiple MPPT ports on the inverter side, there are also other PV modules connected to other MPPT ports on the inverter side. • Parallel connection: When external PV strings are connected to the inverter-side PV input ports, multiple PV strings are first connected via Y terminals, and then split into multiple paths to connect to multiple PV input ports.
PID Settings	• During operation of photovoltaic panels, the potential difference between the output electrode and the grounded frame of the panel can lead to a degradation of the panel's power generation Efficiency over time, known as Potential-Induced Degradation (PID). • The product's PID function works by raising the voltage difference between the photovoltaic panel and the frame to create a positive voltage difference (referred to as raising positive voltage), thereby achieving PID suppression. This is suitable for P-type panels and N-type panels that require raising positive voltage to suppress the PID effect. For N-type panels that require lowering negative voltage to suppress the PID effect, it is recommended to disable this function. Please consult the module supplier to determine whether the N-type module requires raising positive voltage for PID suppression.
Shading Scan Function	When photovoltaic panels are heavily shaded, enabling the shadow scanning function can optimize the inverter power generation Efficiency.

Battery Settings

Parameter Name	Description
battery activation	If purchasing an unactivated battery, an activation code is required to activate the battery function.
BAT Connection Configuration	Select the battery Access Mode based on the actual battery connection status.

Protection Parameters

Parameter Name	Description
Electrical Protection	
Lightning Protection Alarm	After enabling the lightning protection alarm function, when the lightning protection module is abnormal, an alarm will indicate the abnormality.
AFCI Detection	• After the AFCI Detection function is enabled, the equipment can be monitored for arc hazards. • Click "Arc Failure Self-test" to start self-test of the Arc Detection module, confirming whether the status is normal. And view the result through "AFCI Detection Status". • If the inverter triggers Arc Failure alarm <5 times with in 24 hours, it can automatically clear the alarm. After the 5th Arc Failure alarm, the inverter shuts down for Protection, and it is required to click "Clear Arc Alarm" to clear the fault before the inverter can resume normal operation.
Backup N-PE relay switch	According to grid standard requirements in certain countries or regions, during off-grid operation, it is necessary to ensure that the internal relay of the BACK-UP port remains closed, the reby connecting the N and PE conductors.
DC Tripping Detection	After enabling this function, when the machine faults, the inverter DC Switch can automatically trip and disconnect.

Parameter Name	Description
On-Grid Point Rated Current Protection	To prevent damage or tripping of the household air switch caused by excessive current from the inverter when buying power from or exporting energy to the grid, set the rated current at the grid connection point to limit the input and output current values.
Grid/On-Grid Protection	
Anti-islanding Protection	According to actual needs, enable or disable the islanding protection function.
NS Protection	According to the standard requirements of certain countries or regions, enable or disable the NS Protection function.
Safety Regulation	
Grid Standard Code	Select the grid standard code according to the country or region where the inverter is located.
Safety Parameter Settings	Safety regulation parameters shall be set according to the requirements of the power grid company. If changes are needed, consent from the power grid company must be obtained.

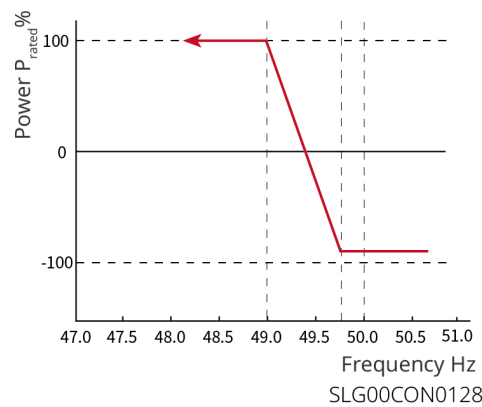
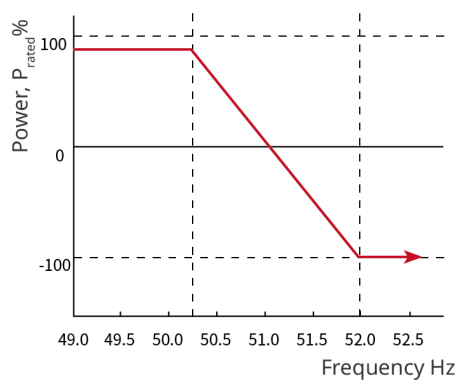
General Setting Parameters

Parameter Name	Description
Equipment self-test	Start equipment status self-check.
Factory reset	Restore some functions to factory default state.

11.2.1 Customized Safety Parameters

Attention
The grid code parameters shall be set according to the requirements of the power grid company. Any changes require the consent of the power grid company.

P(F) curve



P(U) curve

Parameter Name	Description
Active Power Output Setting	Set the inverter output power limit value.
power ramp rate	Set the ramp rate for active output power increase or decrease.
Over-frequency Derating	
P(F) curve	According to grid standard requirements of certain countries or regions, when the P(F) curve needs to be set, enable this function.
Over-frequency Derating Mode	Set the over-frequency derating mode according to actual requirements. - Slope mode: Adjust power based on over-frequency point and Derating slope. - Stop mode: Adjust power based on over-frequency start point and over-frequency end point.
over frequency start point	When the grid frequency is too high, the inverter's output active power decreases. When the grid frequency exceeds this value, the inverter output power begins to decrease.

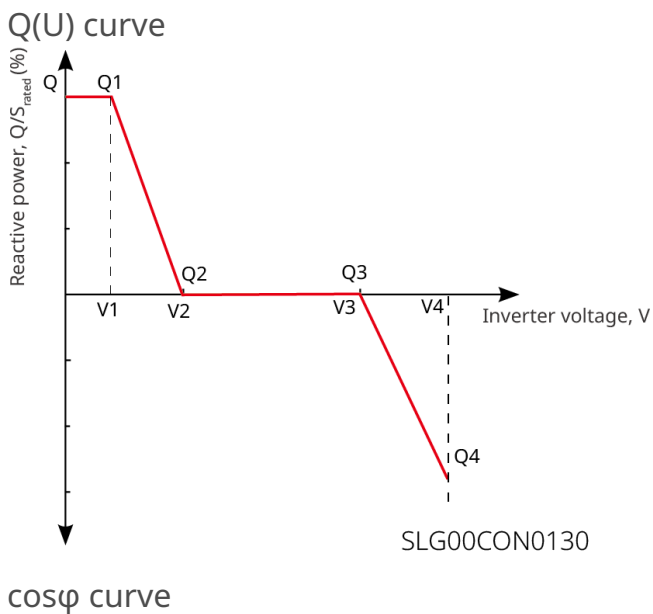
Parameter Name	Description
Buy Energy and Export Energy conversion frequency	When the set frequency value is reached, the system switches from Export Energy to buying energy.
Over frequency Trip Point	When the grid frequency is too high, the inverter reduces its output active power. When the grid frequency exceeds this value, the inverter output power does not continue to decrease.
over-frequency power slope reference power	Adjust the inverter output active power based on Rated Power, current power, Apparent Power, or maximum active power.
over-frequency power slope	When the grid frequency exceeds the over-frequency point, the inverter output power is reduced according to a set slope.
Silent Time	When the grid frequency is higher than the over-frequency point, the inverter output power change delay response time.
Hysteresis function enable	Enable hysteresis function.
frequency hysteresis point	During the over-frequency derating process, if the frequency decreases, the power is output at the minimum point of the derating power until the frequency is less than the hysteresis point, and the power recovers.
hysteresis waiting time	For over-frequency derating and frequency decrease, when the frequency falls below the hysteresis point, there is a waiting time for power recovery, meaning that a certain period of waiting is required before the power is restored.
Hysteresis power recovery slope reference power	For over-frequency derating and frequency decrease, when the frequency falls below the hysteresis point, the reference for power recovery follows the rate of change of recovery slope * base power for power recovery. Supported: Pn Rated Power, Ps Apparent Power, Pm Current Power, Pmax Maximum Power, Power Difference (ΔP).

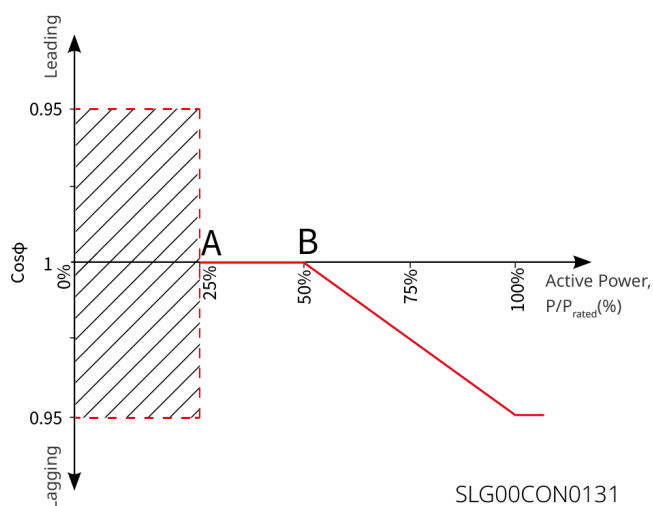
Parameter Name	Description
Hysteresis power recovery slope	For over-frequency derating and frequency decrease, when the frequency drops below the hysteresis point, the power change slope during power recovery.
Under frequency loading	
P(F) curve	According to grid standard requirements of certain countries or regions, when the P(F) curve needs to be set, enable this function.
Under-frequency load shedding mode	Set the under frequency load shedding mode based on actual requirements. • Slope mode: Adjust power based on under-frequency point and load slope. • Stop mode: adjust power based on under-frequency start point and under-frequency end point.
Under frequency starting point	When the grid frequency is too low, the inverter's output active power increases. When the grid frequency is less than that value, the inverter's output power starts to increase.
Buy Energy and Export Energy conversion frequency	When the set frequency value is reached, the system switches from Export Energy to buying energy.
under frequency endpoint	When the grid frequency is too low, the inverter increases its output active power. When the grid frequency is lower than this value, the inverter output power does not continue to increase.
over-frequency power slope reference power	Adjust the inverter output active power based on Rated Power, current power, Apparent Power, or maximum active power.
under frequency power slope	When the grid frequency is too low, the inverter output active power increases. The slope when the inverter output power rises.

Parameter Name	Description
Silent Time	Delay response time of inverter output power variation when grid frequency is below the under frequency point.
Hysteresis function enable	Enable hysteresis function.
frequency hysteresis point	During under-frequency load shedding, if the frequency increases, the power is output according to the minimum point of the load shedding power until the frequency exceeds the hysteresis point, then the power is restored.
hysteresis waiting time	For under-frequency loading, when the frequency increases and exceeds the hysteresis point, the power recovery waiting time refers to the duration that must be waited before power recovery occurs.
hysteresis power recovery slope reference power	For under-frequency loading, when the frequency increases and exceeds the hysteresis point, the power recovery reference is based on the recovery slope multiplied by the rate of change of the reference power. Supported: Rated Power (P _n), Apparent Power (P _s), Current Power (P _m), Maximum Power (P _{max}), and Power Difference (ΔP).
Hysteresis power recovery slope	For under-frequency load increase, as the frequency rises, the ramp rate of power recovery when the frequency exceeds the hysteresis point.
P(U) curve enable	According to grid standard requirements of certain countries or regions, when P(U) curve needs to be set, enable this function.
V _n voltage	The ratio of the actual voltage at point V _n to the Nominal Voltage, n=1,2,3,4. For example, when set to 90, it means: V/V _{rated} %=90%.
V _n active power	The ratio of active power to Apparent Power output by the inverter at point V _n , n=1, 2, 3, 4. For example, when set to 48.5, it means: P/P _{rated} %=48.5%.

Parameter Name	Description
Output response mode	Set active power output response mode. Supported: - First-order low-pass filtering achieves output regulation according to the first-order low-pass curve with in the response time constant. - Ramp rate scheduling, which regulates output according to the set power ramp rate.
power ramp rate	When the output response mode is set to slope scheduling, 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.
Over load function switch	After being enabled, the maximum active power output is 1.1 times the Rated Power; otherwise, the maximum active power output is consistent with the Rated Power value.

Reactive Power Mode





Parameter Name	Description
Constant PF	
Constant PF	According to the grid standard requirements of certain countries or regions, when a fixed PF value is required, this function is enabled. After the parameter setting is successful, the Power Factor remains unchanged during inverter operation.
under-excitation	Set the Power Factor as positive or negative according to the grid standard requirements of the country or region and actual usage needs.
over excitation	
Power Factor	Set the Power Factor according to actual needs, with a range of -1 to -0.8 and +0.8 to +1.
Constant Q	
Constant Q	According to the grid standard requirements of some countries or regions, enable this function when Fixed Reactive Power is required.
over-excitation/under-excitation	Set the reactive power as inductive reactive power or capacitive reactive power according to the grid standard requirements of the country or region and the actual usage requirements.
reactive power	Set the ratio of Reactive Power to Apparent Power.

Parameter Name	Description
Q(U) curve	
Q(U) curve	According to grid standard requirements of certain countries or regions, when the Q(U) curve needs to be set, enable this function.
mode selection	Set Q(U) curve mode, supporting basic mode and slope mode.
Vn voltage	Ratio of actual voltage at point Vn to Nominal Voltage, n=1,2,3,4. For example, when set to 90, it means: $V/V_{rated}\% = 90\%$.
Vn reactive	The ratio of reactive power to Apparent Power output by the inverter at point Vn, n=1, 2, 3, 4. For example, when set to 48.5, it means: $Q/S_{rated}\% = 48.5\%$.
voltage dead band width	When the Q(U) curve mode is set to slope mode, a voltage dead band is configured. Within the dead band, there is no requirement for reactive power output.
over excitation slope	When the Q(U) curve mode is set to slope mode, set the power change slope to a positive or negative number.
under-excitation slope	
Vn reactive	The ratio of reactive power to Apparent Power output by the inverter at point Vn, n=1, 2, 3, 4. For example, when set to 48.5, it means: $Q/S_{rated}\% = 48.5\%$.
Q(U) curve response time constant	The power must reach 95% according to a first-order low-pass curve within 3 response time constants.
Extended Function Enable	Enable extended functions and set corresponding parameters.
curve power entry	When the ratio of the inverter's output reactive power to the Rated Power is between the entry curve power and the exit curve power, the Q(U) curve requirement is satisfied.
Exit curve power	

Parameter Name	Description
cosφ-P curve	
cosφ-P curve	When it is required to set the Cosφ curve according to the grid standard requirements of certain countries or regions, select this function.
mode selection	Set cosφ(P) curve mode, supporting basic mode and slope mode.
N-point power	N-point inverter output active power/Rated Power percentage. N=A, B, C, D, E.
cos φ value at point N	N-point Power Factor. N=A, B, C, D, E.
over excitation slope	When the cosφ(P) curve mode is set to slope mode, set the power change slope to a positive or negative number.
under-excitation slope	
n-point power	Active Power Output / Rated Power Percentage at N-point. N=A, B, C.
n-point cosφ values	Power Factor at point N. N = A, B, C.
cosφ (P) curve response time constant	The power must reach 95% according to a first-order low-pass curve with in 3 response time constants.
Extended Function Enable	Enable extended functions and set corresponding parameters.
Enter curve voltage	When the grid voltage is between the entry curve voltage and the exit curve voltage, the voltage meets the requirements of the Cosφ curve.
disconnection curve voltage	
Q(P) curve	

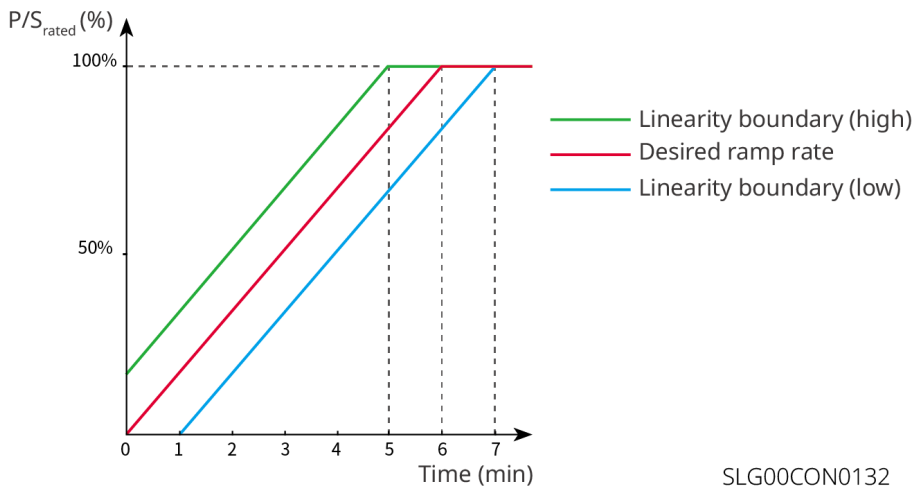
Parameter Name	Description
Q(P) curve enable	According to the grid standard requirements of certain countries or regions, enable this function when the Q(P) curve needs to be set.
mode selection	Set Q(P) curve mode, supporting basic mode and slope mode.
Power at Pn point	Ratio of reactive power to Rated Power at point Pn, n=1, 2, 3, 4, 5, 6. For example, when set to 90, it indicates: $Q/P_{rated}\%=90\%$.
Reactive power at Pn point	The ratio of active power at point Pn to Rated Power, n=1, 2, 3, 4, 5, 6. For example, when set to 90, it means: $P/P_{rated}\%=90\%$.
over excitation slope	When the Q(P) curve mode is set to slope mode, set the power change slope to a positive or negative number.
under-excitation slope	
Power at Pn point	The ratio of reactive power at point Pn to Rated Power, n=1, 2, 3. For example, when set to 90, it indicates: $Q/P_{rated}\%=90\%$.
Reactive power at Pn point	Ratio of active power at point Pn to Rated Power, n=1,2,3. For example, when set to 90, it means: $P/P_{rated}\%=90\%$.
response time constant	The power must reach 95% according to a first-order low-pass curve with in 3 response time constants.

Grid Protection Parameters

Parameter Name	Description
n-th order over voltage trigger value	Set grid over voltage trigger n-order Protection points, n=1, 2, 3, 4.

Parameter Name	Description
Over voltage-triggered n-order trip time	Set the grid over voltage triggered n-th stage trip time, n=1, 2, 3, 4.
under-voltage trigger N-order value	Set the grid under-voltage trigger n-level Protection points, n=1, 2, 3, 4.
Under voltage trigger n-order trip time	Set the grid under voltage trigger n-order trip time, n=1, 2, 3, 4.
10min Over-voltage Trigger Value	Set the 10min Over-voltage Trigger Value.
10-minute over voltage trip time	Set the 10min Over-voltage Trip tripping time.
n-th order over frequency trigger value	Set over frequency-triggered n-stage protection point of the grid, n=1, 2, 3, 4.
Over frequency triggered n-step trip time	Set the grid over frequency triggered n-stage trip time, where n=1, 2, 3, 4.
Under-frequency trigger n-th order value	Set the grid under frequency trigger n-order Protection point, n=1,2,3,4.
Under frequency trigger n-order trip time	Set the N-stage trip time triggered by grid under frequency, where N=1, 2, 3, 4.

Grid Connection Parameters



Parameter Name	Description
Startup On-Grid	
maximum connection voltage	When the inverter is initially connected to the grid, if the grid voltage exceeds this value, the inverter will be unable to connect to the grid.
Minimum Connection Voltage	When the inverter is first connected to the grid, if the grid voltage is lower than this value, the inverter will not be able to connect to the grid.
Connection frequency upper limit	When the inverter first connects to the grid, if the grid frequency exceeds this value, the inverter will not be able to connect to the grid.
Lower frequency limit for connection	When the inverter makes its initial connection to the grid, if the grid frequency is below this value, the inverter will not be able to connect to the grid.
grid connection waiting time	The waiting time for grid connection after the grid voltage and frequency meet the grid connection requirements when the inverter is first connected to the grid.
Soft Ramp Up Slope Enable	Enable the start-up ramp function.
Soft Ramp Up Slope	According to the standard requirements of certain countries or regions, the percentage of power increment that the inverter can output per minute during its first startup.

Parameter Name	Description
Fault Reconnection	
maximum connection voltage	When the inverter reconnects to the grid after a fault, if the grid voltage exceeds this value, the inverter will not be able to connect.
Minimum Connection Voltage	When an inverter reconnects to the grid after a fault, if the grid voltage is below 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 exceeds this value, the inverter will be unable to connect to the grid.
Lower frequency limit for connection	If the grid frequency is below this value when the inverter reconnects to the grid after a fault, the inverter will not be able to connect to the grid.
grid connection waiting time	The waiting time for the inverter to reconnect to the grid after a fault, once the grid voltage and frequency meet the grid connection requirements.
Reconnection Load Slope Enable	Enable the start-up ramp function.
Reconnection loading slope	According to the standard requirements of certain countries or regions, the percentage of power increment that can be output per minute when the inverter is not connected to the grid for the first time. For example: when set to 10, it means the reconnection loading slope is: 10%P/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 characteristic point to the Nominal Voltage. n=1, 2, 3, 4, 5, 6, 7.

Parameter Name	Description
UVn point time	During LVRT, the ride-through time of LVRT characteristic points. n=1,2,3,4,5,6,7.
Enter LVRT threshold	When the grid voltage is between the entry low voltage ride-through threshold and the exit low voltage ride-through threshold, the inverter does not immediately cause a Grid Power Outage.
LVRT exit threshold	
slope K1	The K factor for reactive power support during low voltage ride-through.
Zero Current Mode Enable	After enabling, during low voltage ride-through, the system outputs zero current.
threshold entry	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 high ride-through characteristic points to the Nominal Voltage. n=1, 2, 3, 4, 5, 6, 7.
OVn time point	During the high voltage ride-through (HVRT) process, the ride-through duration at the HVRT characteristic points. n=1, 2, 3, 4, 5, 6, 7.
enter the high voltage ride-through threshold	When the grid voltage is between the entry threshold and the exit threshold for high-voltage ride-through, the inverter does not immediately cause a Grid Power Outage.
High voltage ride through exit threshold	
slope K2	The K factor of reactive power support during high voltage ride through.
Zero Current Mode Enable	During high voltage ride through, the system outputs zero current.
threshold entry	Threshold for entering Zero Current Mode.

Frequency Fault Ride-Through Parameters

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

11.2.2 On-grid Power Dispatch Parameters

On-Grid Power Limit (General)

Parameter Name	Description
grid-connected power limit	According to the grid standard requirements of certain countries or regions, enable this function when Output Power Limit is required.
Power limit	Set according to the actual Maximum Power that can be fed into the grid.

On-Grid Power Limit Setting (Australia)

Parameter Name	Description
Software power limit	According to the grid standard requirements of certain countries or regions, enable this function when Output Power Limit is required.

Parameter Name	Description
Power limit	• Set according to the actual Maximum Power that can be fed into the grid. • Support setting a fixed power value or percentage. The set percentage is the percentage of the limited power relative to the rated power of the over inverter. • After setting a fixed value, the percentage changes automatically; after setting a percentage, the fixed value changes automatically.
Hardware Power Limitation	After enabling this function, when the power fed into the grid exceeds the limit value, the inverter will automatically disconnect from the grid.

On-Grid Power Limit (UK)

Parameter Name	Description
grid-connected power limit	According to the grid standard requirements of certain countries or regions, enable this function when Output Power Limit is required.
mode selection	• Some models require selection of current limiting mode. Supported: phase current, total current. • When set to phase current, limit the current of each phase; when set to total current, limit the total three-phase current.
current limit	Set based on the actual maximum current that can be input to the grid.

On-Grid Power Limit (Brazil)

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

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

Power Dispatch

Parameter Name	Description
Active Power Dispatch	
Active Dispatch Mode	According to the requirements of the grid company in the country/region where the inverter is located, the active power is controlled according to the selected dispatch mode. Supported: • Not enabled: Active Dispatch is not enabled. • Active power (W): dispatched according to fixed values. • Active Power (%Pn): Dispatch according to the percentage of Active Power to Rated Power.
Reactive Power Dispatch	
Reactive Dispatch mode	Control the reactive power according to the selected dispatch mode based on the requirements of the grid company in the country/region where the inverter is located. Support: • Disabled: Reactive power dispatch is not enabled. • Reactive power (Var): dispatched according to fixed value. • Reactive Power (%Pn): Dispatch according to the percentage of reactive power to Rated Power. • Power Factor Compensation.
Night Reactive Power	
Nighttime reactive power enable	Enable nighttime reactive power function.

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

Power Dispatch Response Parameters

Parameter Name	Description
Active Power Dispatch Response	Reach the active power dispatch value through the dispatch response mode, supporting: • First-order low-pass filtering, that is, with in the response time constant, implements Active Dispatch according to the first-order low-pass curve, and sets the time constant when the active power changes according to the first-order low-pass filtering curve. • Slope mode, which implements Active Dispatch according to the power change slope, and sets the change slope of the Active Power Dispatch.

Parameter Name	Description
Reactive Power Dispatch Response	Achieve the reactive power dispatch setpoint through dispatch response mode, support: • First-order low-pass filtering achieves Reactive Dispatch according to the first-order low-pass curve with in the response time constant, and sets the time constant when the reactive power changes along the first-order low-pass filtering curve. • Slope mode, i. e., implementing Reactive Dispatch according to the power change slope, and setting the reactive power dispatch change slope.

11.2.3 Grid Remote Dispatch Parameters

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

- Remote Shutdown: Implement remote shutdown function via signal control port. When an accident occurs, the device can be controlled to stop working.
- DRED (Demand Response Enabling Device): Control the device via the DRED signal control port to meet the DRED certification requirements in Australia and other regions.
- RCR (Ripple Control Receiver): Control the device through the RCR signal control port to meet the grid dispatch requirements of Germany and other regions.
- EnWG (Energy Industry Act) 14a: All controllable loads must accept the grid's emergency curtailment. Grid operators can temporarily reduce the maximum grid import power of controllable loads to 4.2kW.

11.2.4 Multiplex Port Parameters

Load Control Parameters

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

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

- **Dry Contact Mode:** When the switch status is set to ON, power starts to be supplied to the load; 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:** With in the set time period, the load will automatically supply or cut off power to the load. Standard Mode or Smart Mode can be selected.

Parameter Name	Description
Standard Mode	Power will be supplied to the load with in the set time period.
Smart Mode	During the set time period, when the residual energy generated by photovoltaics exceeds the preset load Rated Power, it starts to supply power to the load.
turn-on time	The time mode will be enabled during the period between the ON time and the OFF time.
shutdown time	
repeat	Set repetition frequency.
Minimum Load Operating Time	Applicable only to Smart Mode. Minimum running time after load is turned on to prevent the load from frequent switching due to energy fluctuations.
Load Rated Power	Only applicable to Smart Mode. When the surplus energy generated by PV exceeds the Rated Power of this load, it starts to supply power to the load.

- **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 to supply power to the load. In off-grid mode, if an over load is detected on the BACK-UP port or GENERATOR port, 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 the ET40-50kW series inverter, generator connection and control are supported only when the inverter is used with an STS.

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

- Not Connected Generator: When no generator is connected to the energy storage system, please select Not Connected Generator.
- Manual control of generator (dry contact connection not supported): The generator start/stop must be manually controlled; the inverter cannot control the generator start/stop.
- Automatic control 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 generator operates; after running for the set operating time, the generator can automatically stop.
 - Auto Control Mode: Prohibit the generator from working during the set prohibited working time period, and the generator works during the Running Time Period.

Parameter Name	Description
Dry Node Control Method	Switch Control Mode/Automatic Control Mode.
Switch Control Mode	
Diesel Generator Dry Node Switch	Only applicable to switch Control Mode.
Operating Time	Generator continuous running duration, after which the generator stops running.
Auto Control Mode	
Working Hours Prohibited	Set the prohibited generator running time period.
Operating Time	After the generator starts operation, it runs continuously for a specified duration, after which the generator stops. If the start operation time includes a prohibited operation period, the generator stops during this period; after the prohibited operation period, the generator resumes operation and timing.

Parameter Name	Description
Generator Information Settings	
Rated Power	Set the Rated Power for generator operation.
Operating 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.
under voltage limit	
upper frequency limit	Set the Frequency Range for generator operation.
lower frequency limit	
Warm-up time	Set the generator no-load preheating time.
Diesel Generator Battery Charging Setting	
switch	Choose whether to use the generator to generate electricity to charge the battery.
Max. Charging Power (%)	Charging power when the generator charges the battery.
Start Charging SOC	When connecting the lithium battery, set the SOC threshold for generator activation. When the battery SOC is lower than the set value, start the generator to charge the battery.
Stop charging SOC	When connecting a lithium battery, set the SOC threshold for generator shutdown. When the battery SOC exceeds the set value, turn off the generator to stop charging the battery.
Start Charging Voltage	When connecting a lead-acid battery, set the voltage threshold for generator activation. When the Battery Voltage falls below the set value, start the generator to charge the battery.
Stop Charging Voltage	When connecting a lead-acid battery, set the voltage threshold for generator shutdown. When the Battery Voltage is higher than the set value, turn off the generator to stop charging the battery.

Micro-grid Control Parameters

Parameter Name	Description
Maximum SOC during charging	When the battery type is lithium battery, set the upper limit of Charging SOC, and stop charging when the upper limit is reached.
Battery maximum charging voltage	When the Battery Type is lead-acid battery, set the charging voltage upper limit, and stop charging after reaching the upper limit value.
Microgrid forced start charging	- When the grid fails, if the battery level is too low to support off-grid operation of the energy storage inverter, click this button to force-start the energy storage inverter to output voltage to the grid-tied inverter, thereby starting the grid-tied inverter. - single-shot
on-the-hour trigger	- When a grid fault occurs and the battery state of charge is too low to support off-grid operation of the energy storage inverter, enabling this function will forcibly start the energy storage inverter to output voltage to the grid-tied inverter at a fixed time, thereby starting the grid-tied inverter. - Effective multiple times
Grid limit power bias value	Set the adjustable range of the actual Maximum Power that the device can purchase from the grid.

11.3 Battery Parameters

Parameter Settings - Information Configuration

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

When installing equipment in areas such as California, please fill in the power station battery capacity information according to local regulatory requirements and complete the JA12 Certification.

Parameter Settings - Lead-acid Settings

When connecting a lead-acid battery, it is necessary to set the lead-acid battery

parameters.

Parameter Name	Description
Battery Parameters	
battery capacity	Set the battery capacity according to actual parameters.
battery internal resistance	Set the battery internal resistance according to actual parameters.
temperature compensation	• When the battery temperature changes, the battery charging voltage is affected. Taking 25°C as the reference, for every degree of temperature change, the charging voltage upper limit is adjusted according to the set value. • For example, set the charging temperature influence coefficient to 10, the n when the battery temperature rises to 26 degrees, the charging voltage upper limit decreases by 10mV.
Discharge Parameters	
discharge parameters	Set the battery discharge parameters according to actual requirements.
Charging Parameters	
constant charge voltage	Set the battery constant voltage charging voltage value according to actual requirements.
float charging voltage	Set the voltage value during battery float charging according to actual requirements.
float charging current	Maximum Charging Current after the battery charging mode transitions from constant charge/equalizing charge to floating charge.
Switch to Float Charging Mode	The duration required for the battery charging mode to transition from constant/equalizing charge to float charge.
equalization cycle	Set the interval days for battery equalizing charge.

Parameter Settings - Lithium Battery Settings

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

Parameter Name	Description
Maximum Charging Current	Applicable to some models. Set the maximum Charging Current for battery charging according to actual requirements.
maximum discharge current	Applicable to some models. Set the maximum discharge current of the battery according to actual requirements.
Battery heating	• Optional. When connecting a battery that supports the heating function, the interface displays this option. After enabling the battery heating function, when the battery temperature does not support battery startup, PV generation or purchased electricity will be used to heat the battery. • Different battery models correspond to different Heating Mode temperatures; please refer to the actual conditions. • Enabling the battery heating function will consume some system power. The battery heating function is enabled by default in Low Power Mode, and can be switched to other power modes as needed. • The start and stop of the battery heating function are automatically controlled by BMS according to the ambient temperature. Therefore, differences in the device installation environment and location may affect the start and stop of the heating function. • It supports setting heating time periods based on actual needs, but within the time period, the heating function is still subject to automatic start and stop influenced by ambient temperature. • If the PV and AC power only meets the load demand, and the battery capacity is insufficient to support self-heating, the heating function cannot be activated.

Parameter Name	Description
Battery wake-up	• After being turned on, when the battery shuts down due to under-voltage Protection, it can be woken up. • Only applicable to lithium batteries with out circuit breakers. After being turned on, the output voltage at the battery port is approximately 60V.
Breathing Light	• Only applicable to the ESA 3-10kW series inverter. • Set the device Breathing Light flashing duration. Supported: always on, always off, 3 min. • Default mode: power-on, lights up for three minutes, the n automatically turns off.

Protection Parameters - Limit Protection

Parameter Name	Description
SOC upper limit	The upper limit of battery charging: charging stops when the battery SOC reaches the upper SOC limit.
SOC Protection	After activation, when the battery capacity falls below the set depth of discharge, the Protection Function can be enabled for the battery.
Grid-connected Battery DOD	Maximum allowable battery discharge during inverter grid-connected operation.
Battery off-grid DOD	Maximum allowable battery discharge during inverter off-grid operation.
Backup SOC Maintenance	To ensure that the battery SOC is sufficient to maintain normal system operation during off-grid mode, when the system is operating in grid-connected mode, the battery will be charged by purchasing electricity from the grid to the set SOC Protection value.

Parameter Name	Description
Off-grid restoration SOC	When the inverter operates in off-grid mode and the battery SOC drops to the lower limit, the inverter stops output and only charges the battery until the SOC returns to the off-grid recovery SOC value. If the lower limit SOC is higher than the off-grid recovery SOC value, the battery will be charged to the lower limit SOC + 10%.

Immediate Charging Parameter

Parameter Name	Description
Immediate Charging	After being enabled, the battery is immediately charged by the grid. Single action only.
SOC for charging termination	When the battery SOC reaches the charging SOC upper limit, charging of the battery will be stopped.
Immediate Charging Power	At the start of Immediate Charging, the charging power as a percentage of the inverter's Rated Power. For example, for an inverter with a Rated Power of 10kW, when set to 60, the charging power is 6kW.
Start	Start Charging immediately
stop	Stop the current charging task immediately.

JA12 Certification

Applicable only to California.

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

11.4 Smart Meter Parameters

Parameter Name	Description
Meter Binding	- When using both grid-tied inverters and energy storage inverters in a photovoltaic system to achieve coupling or microgrid functions, dual meters may be used in the system. Please set the Meter Binding information according to the actual usage. - Only applicable to GoodWe electricity meters.
Meter/CT Auxiliary Detection	Using this function, you can check whether the CT of the electric meter is correctly connected and its current operating status.
External Meter CT Ratio	Set the current ratio between the primary and secondary sides of the external CT of the electricity meter.

11.5 Smart Dongle Parameters

NOTICE

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

Communication Parameters

Parameter Name	Description
WLAN/LAN	
WLAN Control	Default disabled. When this function is enabled, the App can connect via WLAN if it is on the same LAN as the device; otherwise, it cannot connect even if they are on the same LAN.
Modbus TCP	After enabling this function, third-party platforms can access the inverter via Modbus TCP protocol to realize the monitoring function.

Parameter Name	Description
LAN	Automatically identify the LAN network connected to the device.
WLAN	Based on the actual WiFi network selected for the device connection, communicate the device with the router or switch.
4G	
APN settings	• APN settings are only applicable for configuring SIM card information of 4G communication equipment. • If the 4G module does not provide Bluetooth signal, configure the APN parameters via a Bluetooth module or WiFi module first to enable 4G communication.
Bluetooth	
Bluetooth Stays On	Disabled by default. After enabling this function, the device Bluetooth Stays On and remains connected to the App. Otherwise, the device Bluetooth will turn off after 5 minutes and disconnect from the App.
WLAN Networking	
WLAN Networking	• Only applicable to microinverters. • It is recommended to set the inverter with high RSSI strength as the master node in the networking.

Password

Supports modifying the password for logging into the App when Local Access is changed.

When performing Local Access via WiFi, it supports modifying the hotspot password of the WiFi communication stick.

Control/Enable Parameters

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

11.6 Home Energy Management System Parameters

Attention

Please set parameters according to local laws, regulations, and grid standards.

Grid Control Parameters

Number	Parameter Name	Description
1	Enable Function	According to the grid standard requirements of certain countries or regions, enable this function when Output Power Limit is required.
2	Power Limit	According to the requirements of certain countries or regions, set the Maximum Power that the equipment can actually input to the grid.

Number	Parameter Name	Description
3	Power Limited Type	Select the method of controlling the output power of the equipment based on actual conditions. • Total power: Control the total power at the point of interconnection (POI) not to exceed the output power limit. • Single-phase power: Control the power of each phase at the point of interconnection (POI) not to exceed the output power limit.
4	Grid-connected power limit offset	Set the adjustable range of the maximum power that the device can actually deliver to the grid. Maximum power delivered to the grid = Maximum feed-in grid power + Maximum feed-in grid power offset value.
5	Reverse Current Protection Method	When reverse current occurs in the system and exceeds the maximum Protection time (default 5s), the following Protection measures can be taken: • Power limit: The device continues to operate at a percentage of the Rated Power. • Equipment off-grid.
6	Power Limit Protection Handling	The equipment continues to operate at a percentage of its Rated Power.
7	Electric Meter Communication Anomaly Handling	Enable this function, and protection measures will be taken when communication between the meter and the device is abnormal.

Number	Parameter Name	Description
8	Meter Abnormality Handling Method	When the system experiences a meter communication abnormality, the following Protection measures can be taken: • Power limit: The device continues to operate at a percentage of the Rated Power. • Device goes off-grid.
9	Meter Handling Power Limit	The equipment continues to operate at a percentage of its Rated Power.

Power Control Parameters

Number	Parameter Name	Description
RCR: According to standards in Germany and other regions, equipment must provide an RCR (Ripple Control Receiver) signal control port to meet grid dispatching requirements.		
1	RCR	Enable or disable the RCR function.
2	Active Dispatch	• According to the grid company requirements and the RCR fixture type, select one or more DI ports and set the corresponding percentage. The percentage refers to the percentage of system output power to the Rated Power. • Supports configuration of 16 levels of percentage values, set according to the actual requirements of the power grid company. • Do not repeatedly set the status combinations of DI1-DI4; otherwise, the function cannot be executed properly. • If the actual wiring of the DI port does not match the set value, the operation status cannot take effect.

Number	Parameter Name	Description
3	Reactive Dispatch	• According to the requirements of the power grid company and the type of RCR fixture, select one or more DI ports and set the corresponding PF value. • Supports configuration of 16 Power Factor levels, set according to the actual requirements of the power grid company. • PF value range requirement: [-100, -80] or [80,100]; [-100, -80] corresponds to Power Factor lag [-0.99, -0.8], [80,100] corresponds to Power Factor lead [0.8,1]. • Do not repeatedly set the status combinations of DI1-DI4; otherwise, the function cannot be executed properly. • If the actual wiring of the DI port does not match the set value, the operation status cannot take effect.
RCR&EnWG 14a: • According to standards in Germany and other regions, the equipment must provide an RCR (Ripple Control Receiver) signal control port to meet grid dispatching requirements. • For regions subject to EnWG §14a, all controllable loads must accept emergency curtailment from the grid. The grid operator may temporarily reduce the maximum grid purchasing power of controllable loads to 4.2 kW.		
4	RCR&EnWG 14a	Enable or disable the RCR&EnWG 14a function.
5	Import Power Limit	Set the upper limit of power purchased from the grid according to local grid regulations.

Number	Parameter Name	Description
6	Active Dispatch	• DI4 port is fixed for EnWG 14a. • According to the grid company requirements and the RCR fixture type, select one or more DI ports and set the corresponding percentage. The percentage refers to the percentage of system output power to the Rated Power. • Supports configuration of 8 percentage values, please set according to the actual needs of the power grid company. • Do not repeatedly set the status combinations of DI1-DI3, otherwise the functions cannot be executed normally. • If the actual wiring of the DI port does not match the set value, the operation status cannot take effect.
7	Reactive Dispatch	• DI4 port is fixed for EnWG 14a. • According to the requirements of the power grid company and the type of RCR fixture, select one or more DI ports and set the corresponding PF value. • Supports configuration of 8 power factor levels. Please set according to the actual requirements of the grid company. • PF value range requirement: [-100, -80] or [80,100]; [-100, -80] corresponds to Power Factor lag [-0.99, -0.8], [80,100] corresponds to Power Factor lead [0.8,1]. • Do not repeatedly set the status combinations of DI1-DI3, otherwise the functions cannot be executed normally. • If the actual wiring of the DI port does not match the set value, the operation status cannot take effect.
Remote Shutdown: According to requirements of certain countries or regions, the equipment must provide a remote shutdown function to control the equipment to stop working in emergency situations.		
8	Remote Shutdown	Enable or disable the Remote Shutdown function.

Number	Parameter Name	Description
9	Recovery On-Grid Immediate	To resume the on-grid status after the device is shut down, please manually power on the device first, and then click Recovery On-Grid Immediate.

Other Parameters

Number	Parameter Name	Description
Meter setting		
1	Select meter	Select the model of the actually connected electric meter.
2	wiring mode	Set the wiring mode of the meter. Supports: • single-phase single-wire • three-phase three-wire • three-phase four-wire
3	CT ratio	• Set when the meter model is GM330. • Set the CT ratio of the meter.
Antenna Settings		
4	Select antenna	Select a built-in antenna or an external antenna based on actual conditions.
Time setting		
5	Network Time Synchronization	After startup, select the time synchronization server and perform time synchronization according to the selected time source.

Number	Parameter Name	Description
6	time server	Set up time synchronization server. Supports: - time.google.com - pool.ntp.org - ntp.aliyun.com

Export Log

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

11.7 Charger Parameters

Parameter Name	Description
plug and play	- After enabling plug and play, inserting the charging gun into the car will Start Charging. - If charging is interrupted, please re-insert the charging connector or manually start charging.
Scheduled Charging	Set the scheduled Charging Time based on actual needs, supporting the selection of single charging or multiple cycle charging.
Distance per kWh Setting	Set the energy mileage conversion ratio.

11.8 Operation and Maintenance Parameters

Parameter Name	Description
firmware upgrade	• Supports viewing or upgrading firmware versions of the device, including DSP, ARM, BMS, AFCI, STS, communication module, etc. • Supports viewing firmware upgrade history. • Firmware upgrade methods: one-click upgrade of all firmware, single firmware upgrade, and manual import firmware upgrade. Different devices support different upgrade methods; please refer to the actual situation. • Some devices do not support upgrading software version via App, please refer to the actual situation.
Log Export	• Supports exporting, downloading, and sharing logs. • Supports exporting different types of logs, such as communication module logs, inverter logs, etc. • Some models support exporting safety standard parameter files after selecting the safety standard country.
Grid	
Auto Test	When automatic grid connection testing is required according to the grid standards of certain countries or regions, enable this function.

12 Contact Information

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