SOFAR

USER MANUAL

SofarCloud(Web)

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Preface

Purpose

This document describes the common operations of the SofarCloud (Web).

Product version

The following table lists the product versions related to this document.

Product name	Product version
SofarCloud	2.4.0

Intended audience

This document is intended for photovoltaic (PV) system operators and management personnel.

Change history

Changes between document issues are cumulative.

The latest document issue contains all the changes made in previous issues.

01（2025-03-15）

This issue is the first official release of SofarCloud.

02（2025-04-29）

1. Opened the owner's login privileges in the web terminal.
2. Added the process of upgrading an Installer to an Installer Pro.

03（2025-05-30）

1. Added QR code to download the App.
2. Modified the display rules for the inverter firmware version.
3. Added ODM label display to accounts.

04 (2025-09-30)

1. Added plant dashboard
2. Added Announcement
3. Modified the appendix
4. Modified the detail about system
5. Modified the detail about registration

1 Getting Started

This section explains to the installer how to get an account, log in to and out of the system, retrieve the password and monitor the system functions.

Overview

SofarCloud is an intelligent monitoring, operation and maintenance management platform for photovoltaic and energy storage systems developed independently by SOFARSOLAR.

It covers the entire service life of a system, provides differentiated service monitoring for customers, including distributors, installers and end users and features the functions of real-time monitoring, alarm and historical data analysis, device management and maintenance (including remote upgrading and parameter settings).

1.1 Getting an account

This section describes how to get an account.

- If you are a distributor, you can contact SOFAR pre-sales or after-sales to create an account for you.
- If you are an installer, you can register yourself or let your distributor create an account for you.
- If you are an end user, you can register yourself or let your installer or distributor create an account for you.

Accounts can only be created via email. The initial password will be sent to the associated email address automatically.

1.2 User registration

This section describes how to register installer accounts and owner accounts.

1.2.1 Registering an installer account

Description:

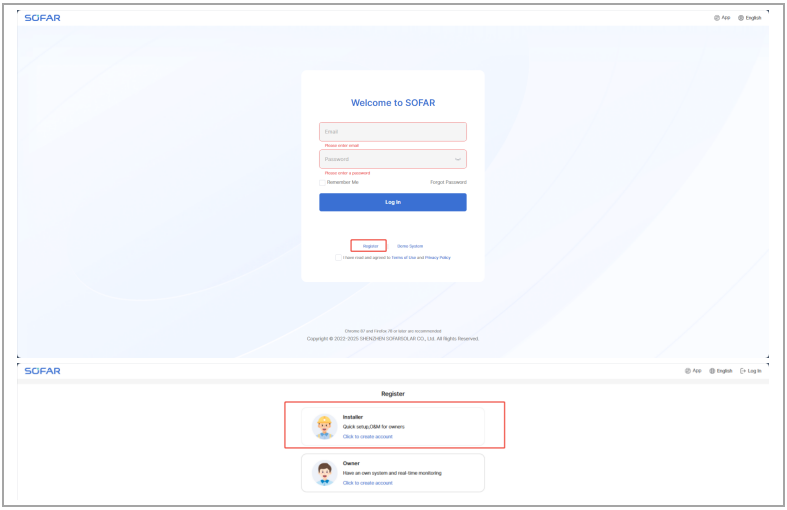
Installers are categorized as Installers and Pro Installers, with the main difference between the two roles being different account permissions.

1) **Registering an Installer account**

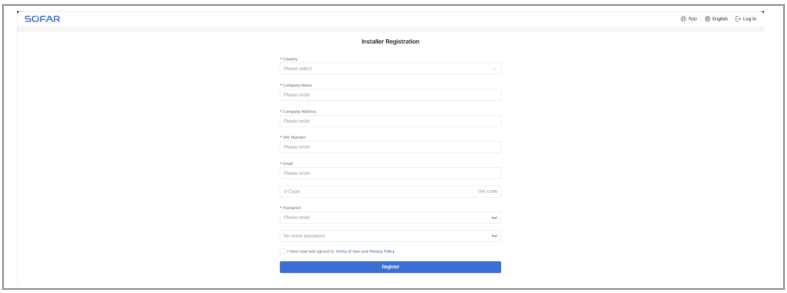
If your company has never registered an account in the management system, you can register it using the **Installer Registration** function. Registering the first installer user also enrols a company.

1 Open a web browser, enter https://eu.sofarcloud.com in the address box and press **Enter**. The login page will be displayed.

2 Click **Register.** The **Registration** page will be displayed.



3 Sign up as an installer as prompted.

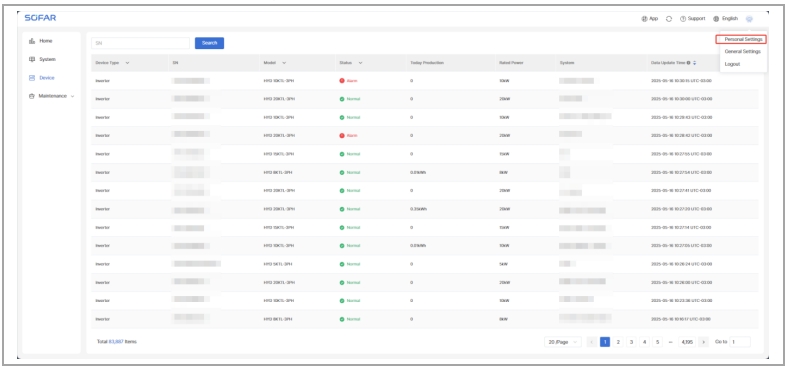


- The email address entered during registration can be used to log into the management system.
- The installer account is a company administrator account.
- The password must consist of between 8 and 32 characters from at least two categories (letters, numbers and special characters).
- The VAT number must meet the following requirements:
  a) For Europe, the VAT number must be entered as an 18-digit number.
  b) For China, the VAT number must be entered as an 18-digit combination of letters and numbers.
  c) For other regions, this field is optional.
- If your company has registered an account in the management system, contact the administrator to add you to the user list.

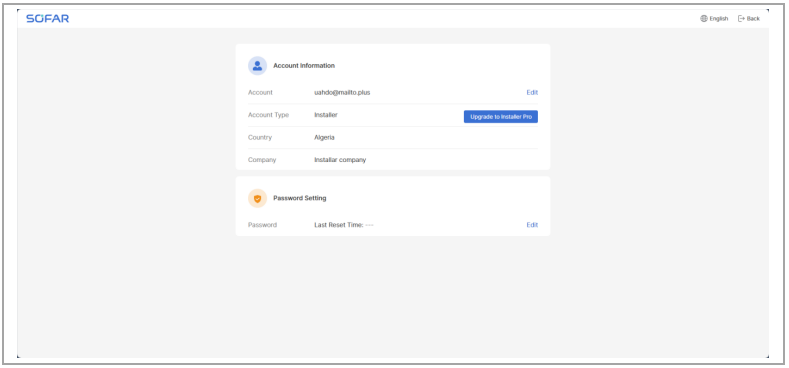
2) **Registering an Installer Pro account**

Before registering for an Installer Pro, you need to register for an Installer account.

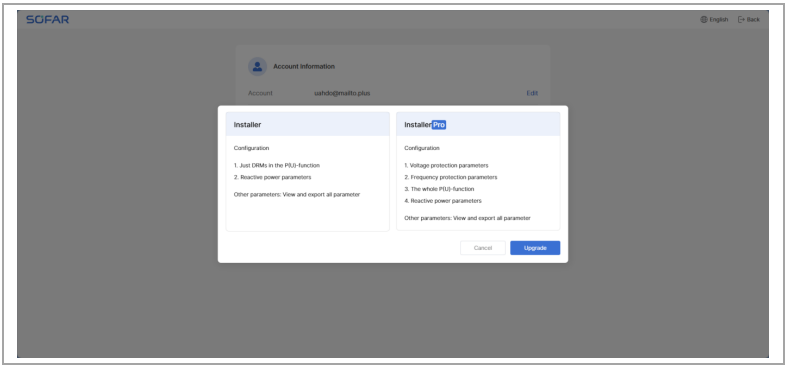
1 Select **Personal Settings** to access the personal settings page.



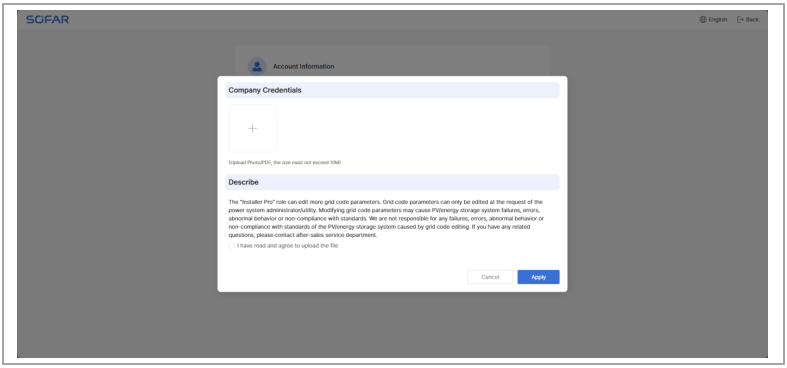
2 Click the blue button to the right of the account type to request an upgrade to Installer Pro.



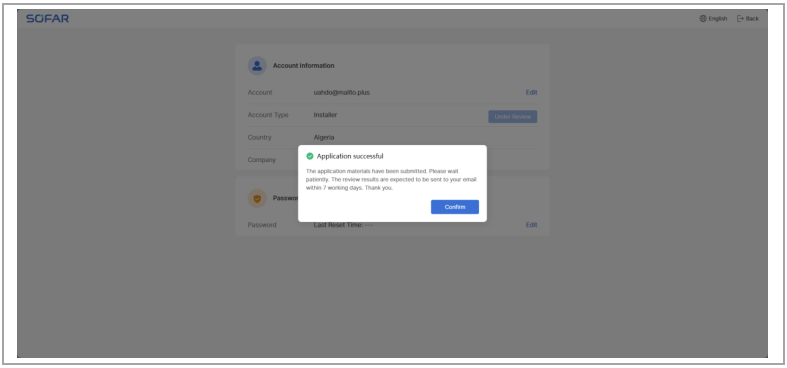
3 Here, you can see the difference between the Installer and the Installer Pro. In the next step, you can click the Upgrade button.



4 Upload company references and submit.



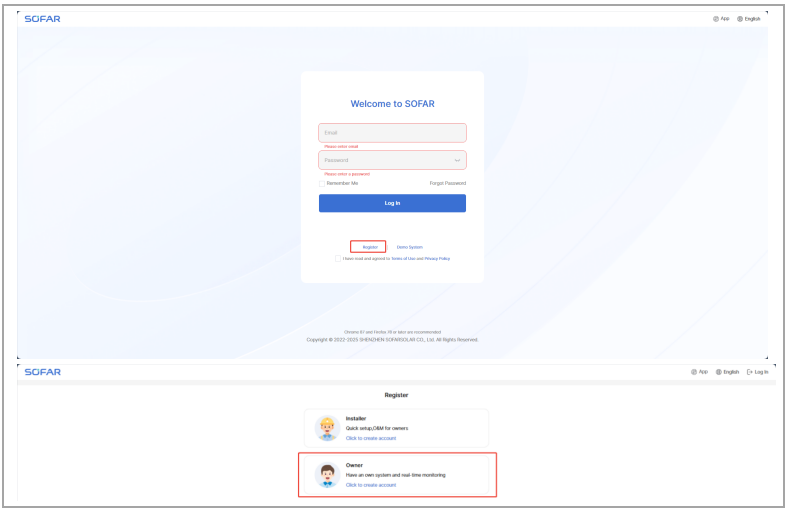
5 After successful submission, wait for the back office staff to review it.



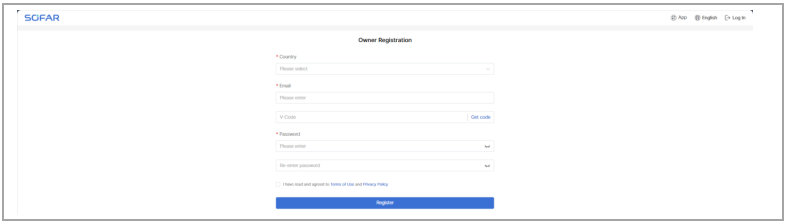
1.2.2 Registering an owner account

1 Open a web browser, enter https://eu.sofarcloud.com in the address box and press **Enter**. The login page will be displayed.

2 Click **Register.** The **Registration** page will be displayed.



3 Sign up as an owner as prompted.



- The email address entered during registration can be used to log into the management system.
- The password must be comprised of between eight and 32 characters from at least two categories (letters, numbers and special characters).

1.3 Logging in and logging out

This section describes how to log in to and out of the system.

Prerequisites

You have obtained the account and password for logging in to the system.

Context

The OS and browser of your PC must meet the following requirements.

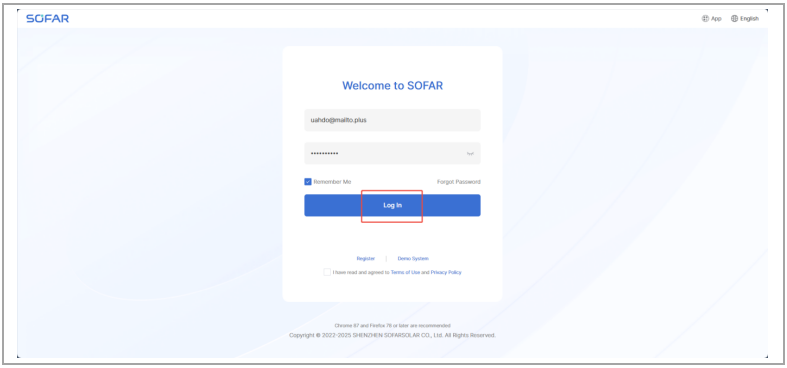
Configuration requirements	
Software Type	**Requirements**
Browser	▸ Chrome 87 or later ▸ Edge 88 or later ▸ Safari 14 or later ▸ Firefox 78 or later
Resolution	Optimal resolution: 1,920 x 1,080 (px)

Procedure

1 Open a web browser, enter https://eu.sofarcloud.com in the address box and press **Enter**. The login page will be displayed.



2 Enter the email address and password and click Log In.



- The user must select the item for agreeing to the **Terms of Use** and **Privacy Policy**.
- If you have changed your password after logging in, keep the new password secure. To ensure account security, change the password periodically and remember the new password. Not changing the

initial password may lead to password disclosure. A password left unchanged for a long period of time may be stolen or cracked. If a password is lost, the user cannot access the system. In these cases, the user is liable for any loss related to the PV system.

- For security purposes, do not set the browser to remember the password.

Follow-up procedure

To log out, move the pointer to  on the home page and choose **Log Out** from the drop-down list box.



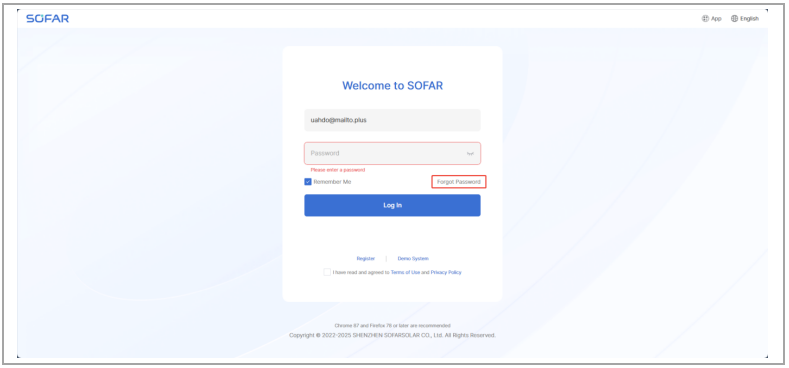
1.4 Password retrieval

You can reset the password using the associated email address if you forget the password.

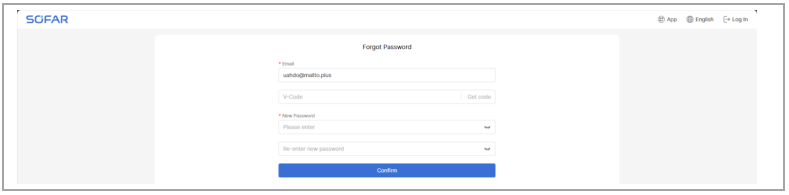
Procedure:

1 Open a web browser, enter https://eu.sofarcloud.com in the address box and press **Enter**. The login page will be displayed.

2 Click "**Forgot Password**" to set password.



3 Set a new password as prompted.



1.5 Demo system

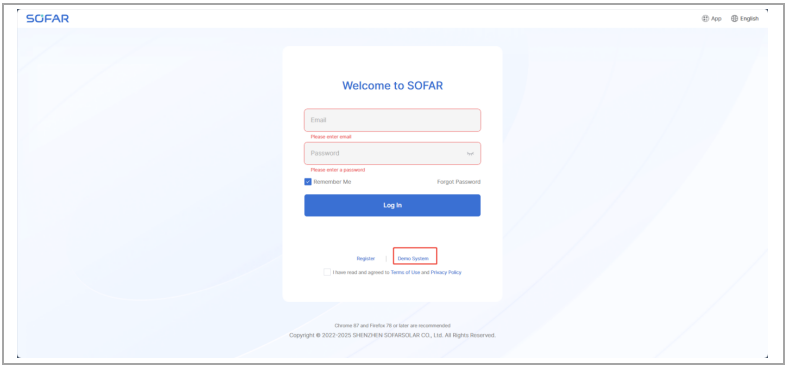
This section describes how to log in to the system as a guest to promote the value of the management system to customers, and browse system information to help users understand the functions of the management system.

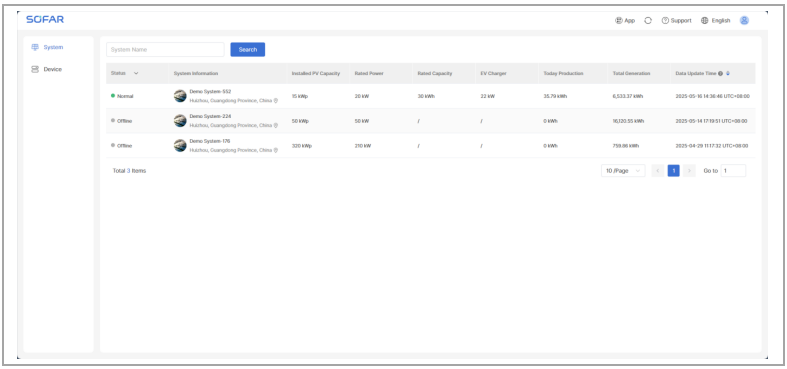
Procedure:

1 Open a web browser, enter https://eu.sofarcloud.com in the address box and press **Enter**. The login page is displayed.



2 Click **Demo System** to experience what a system is like.



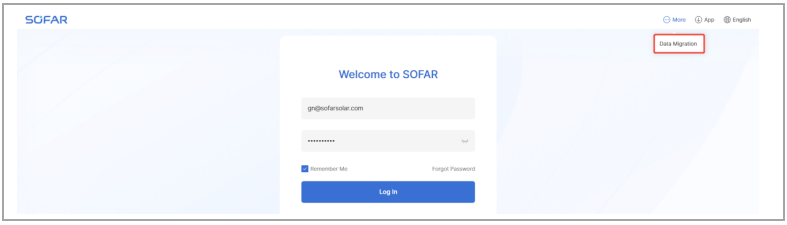


- With the “demo system”, you can use the functions of the app without an account.
- The systems in the demo system are real systems, so only the user is allowed to view the data, but the user is not allowed to operate them. For this reason, some functions related to operation are not shown in the demo system.
- Demo system functions are described in detail in other chapters.

1.6 Data migration

Description: This section describes how to migrate data from Solarman to SofarCloud.

1 Click “More” in the upper-right corner and select “Data Migration”.

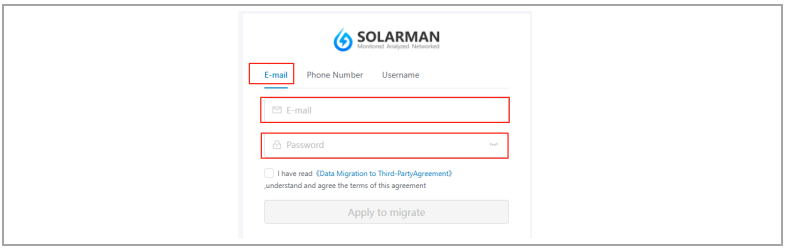


2 Go to the migration page;

1) Enter your Solarman account (E-mail) and password;

2) Agree to the Authorization agreement;

3) Click the **Apply to migrate** button.



Migration can only be initiated by the admin E-mail account. Members or sub accountants do not have permission to perform this action.

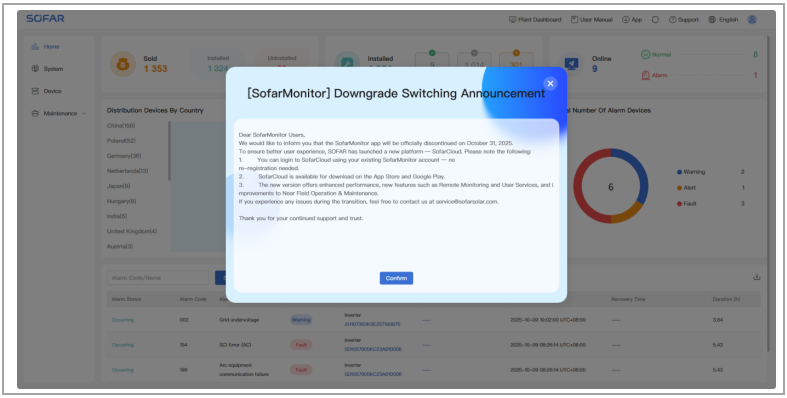
3 Wait for the data migration to be completed.

Once finished, you can check the migration result on the page, then log in to Sofarcloud.

- If you do not have a SofarCloud account (E-mail), your Solarman E-mail account and password will migrate to SofarCloud with data, and you can log in using your Solarman E-mail account and password;
- If you already have a SofarCloud account (E-mail) that is the same as Solarman, we migrate all the data except Solarman E-mail account. After migration, you can log in with your SofarCloud E-mail account and password and see the migrated system and devices.
- The migration time is about 1-3 days, depending on the data volume.

1.7 Announcement

When the server undergoes updates, maintenance, or other important events, an announcement will be displayed immediately upon opening the SofarCloud Web.


[SofarMonitor] Downgrade Switching Announcement
Dear SofarMonitor Users,
We would like to inform you that the SofarMonitor app will be officially discontinued on October 31, 2025.
To ensure better user experience, SOFAR has launched a new platform — SofarCloud. Please note the following:
1. You can login to SofarCloud using your existing SofarMonitor account — no re-registration needed.
2. SofarCloud is available for download on the App Store and Google Play.
3. The new version offers enhanced performance, new features such as Remote Monitoring and User Services, and improvements to Near Field Operation & Maintenance.
If you experience any issues during the transition, feel free to contact us at service@sofarsolar.com.
Thank you for your continued support and trust.
Confirm

----**End**

2 Data Board

Overview

Function access: Choose **Home** from the main menu.

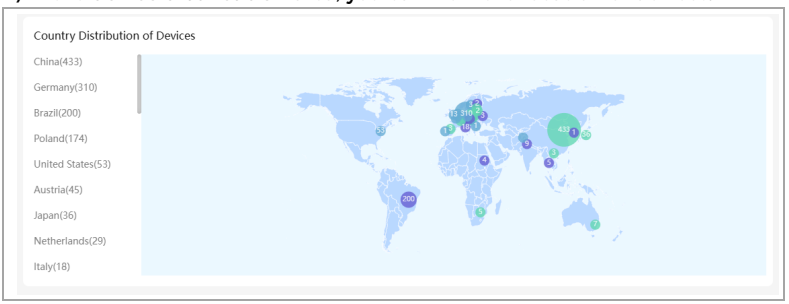
Description:

You can view global information on the device to learn about its running status.

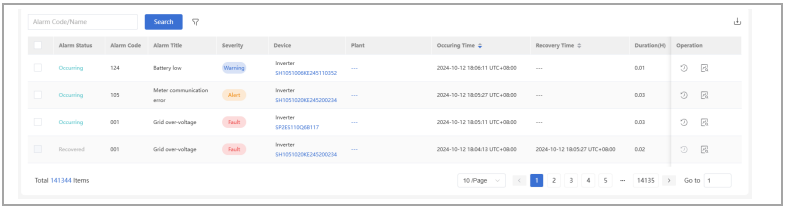
1) In the **device statistics** area, you can view the number of sold / installed / online devices.



2) In the **device distribution** area, you can view the location of devices.



3) In the **alarm list** area, you can view and manually recover device alarms.



----End

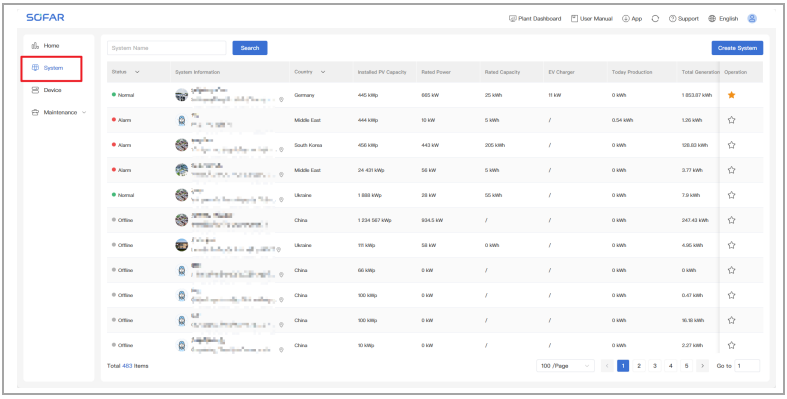
3 System

3.1 System list

Function access: Choose **System** from the main menu.

Description:

On the **System** list page, you can view the basic system information: status, name, address, installed PV capacity, rated power, rated capacity, EV charger, today's generation, total generation and data update time.



- Search for systems: Input system name and click **Search**.
- Filter systems: Click next to **Status**.
- Sort systems: Click next to **Data Update Time**.
- Favorite: Click to bookmark the system, and it will displayed at the top of the list.

Context

System status description		
Status	**Colour**	**Description**
Normal		At least one device is online, and no alarms have occurred in the system.
Alarm		At least one device is online, and an alarm is in progress in the system.

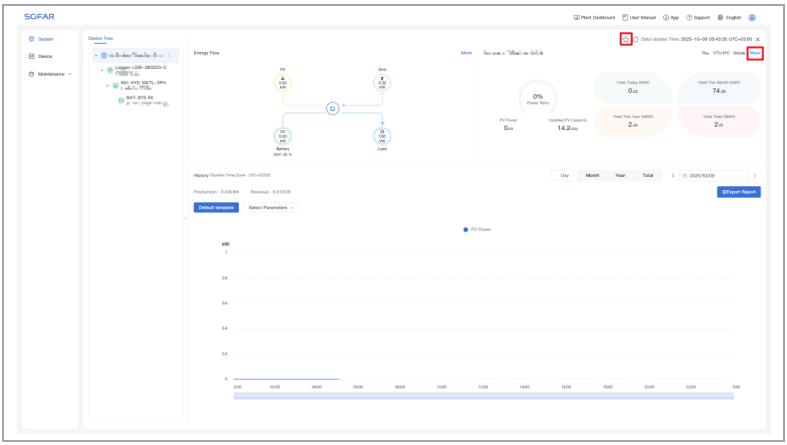
Offline		All devices are offline in the system.
Unconnected		There are no devices in the system.

3.2 System details

Function access: On the **System** list page, click the system to be queried.

Description:

On the **System** details page, you can view the device tree, energy flow diagram, energy yield statistics and history data.



Context

Energy Flow: Power supply direction description.

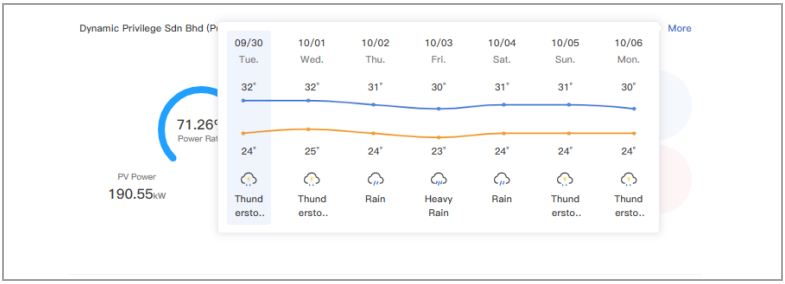
Elements	Description
PV	The arrow pointing to the symbol means PV generating.
Grid	The arrow pointing to the symbol means purchasing electricity. The arrow pointing to the **Grid** means feed-in grid.
Load	The arrow pointing to the **Load** means consumption.

Battery	The arrow pointing to the symbol means discharging. The arrow pointing to the **Battery** means charging.

- At least one logger and one inverter have been accessed in the system.
- In the navigation tree on the left, click the device to be queried. You can view the device details there.
- Click **More** in the top-left corner of the energy flow diagram to view the generation, grid, battery and load data of the system.

Favorite: Click the in the top-right corner of the page to bookmark the system.

More weather: Click the [More] button next to the weather information to view the 7-day forecast, including weather conditions and high/low temperatures.



History: Select day/month/year/total and click **Select Parameters** to view the history data charts.

The choice of parameters for **Day** is different from other categories.

Parameter Form	PV power	Grid power	Load power	Battery power	Average SOC	Yield	Grid feed-in	Purchased	Consumed	Charge	Discharge
Daily	√	√	√	√	√	×	×	×	×	×	×
Monthly,	×	×	×	×	×	√	√	√	√	√	√
Yearly	×	×	×	×	×	√	√	√	√	√	√
Total	×	×	×	×	×	√	√	√	√	√	√

3.3 System management

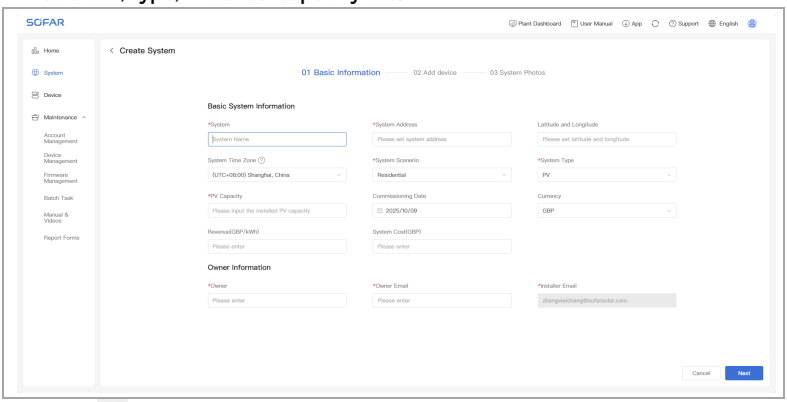
3.3.1 Creating a system

Function access: On the **System** list page, click **Create System** in the top-right corner.

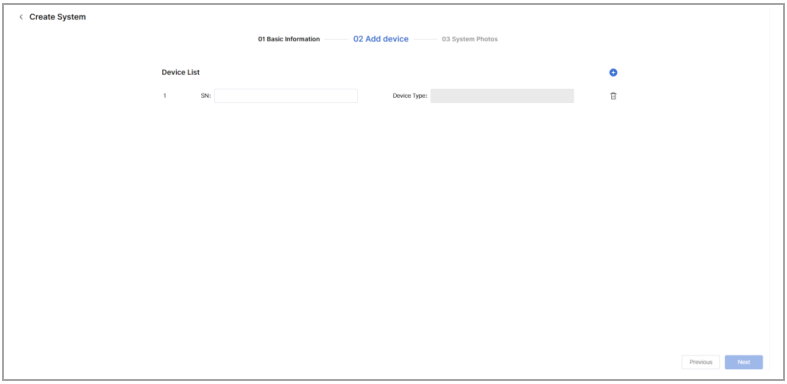
Description:

In the displayed **Create System** dialog box, complete the configuration wizard and click **Save**.

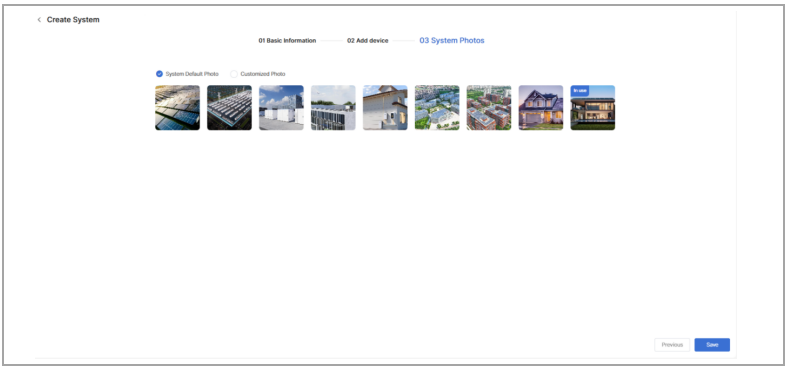
1 Fill in the basic information of the system, including the system name, address, type, installed capacity etc.



2 Click  and add the gateway devices of the system.

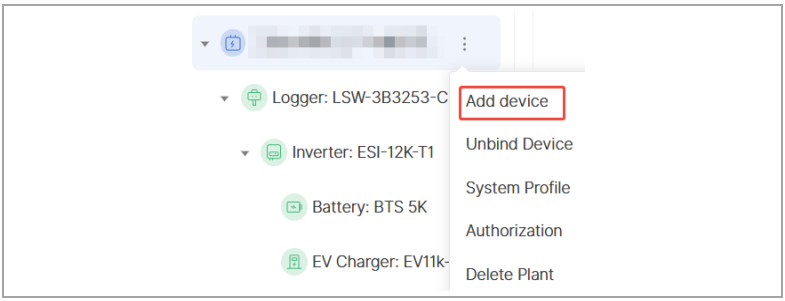


3 Select a photo for the system.



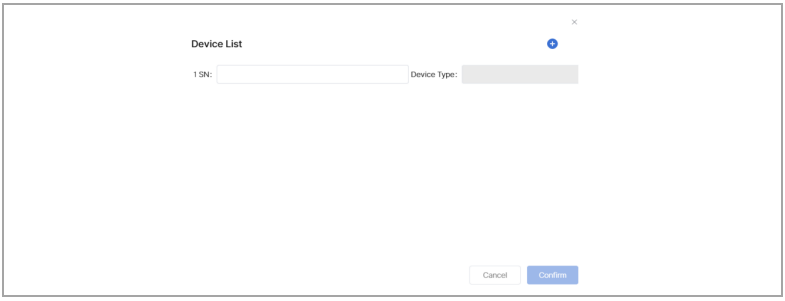
3.3.2 Adding a device

Function access: On the **System** details page, click ⋮ in the navigation tree on the left and then click **Add device**.



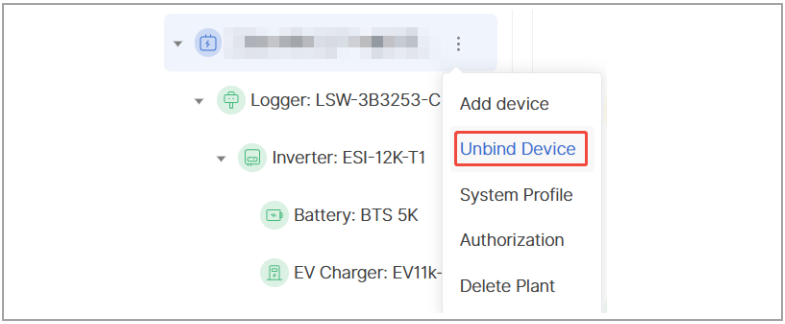
Description:

In the displayed **Add Device** dialog box, complete the configuration wizard and click **Confirm**.



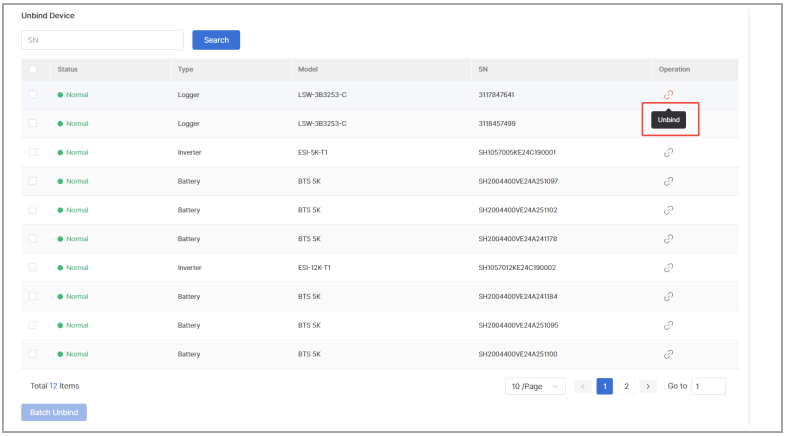
3.3.3 Unbinding a device

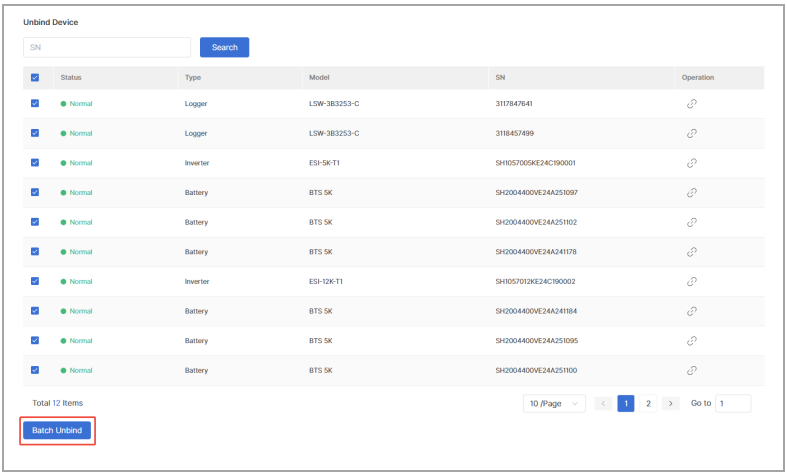
Function access: On the **System** details page, click ⋮ in the navigation tree on the left and then click **Unbind Device**.



Description:

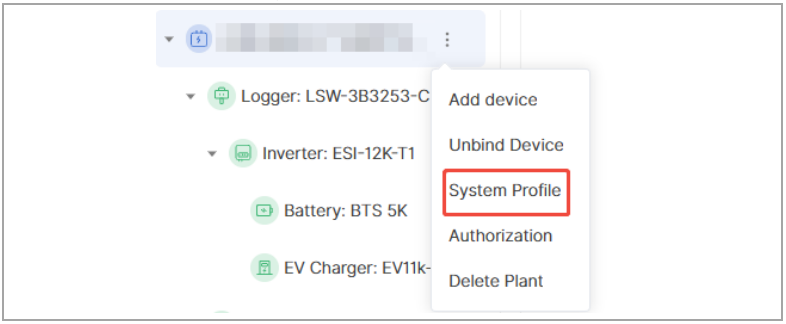
On the displayed **Unbind Device** page, click 🔗 or **Batch Unbind**.





3.3.4 System profile

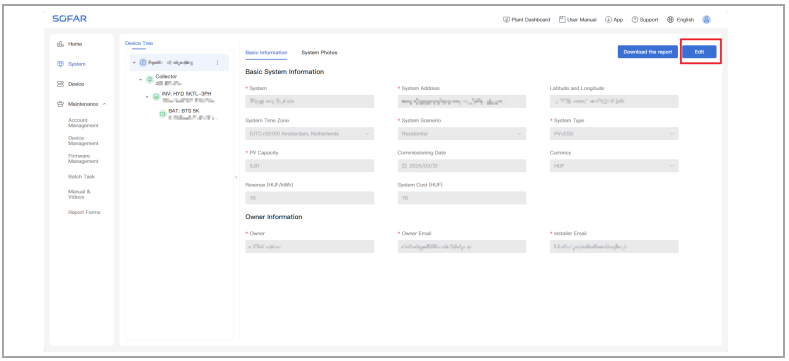
Function access: On the System details page, click ⋮ in the navigation tree on the left and then click **System Profile**.



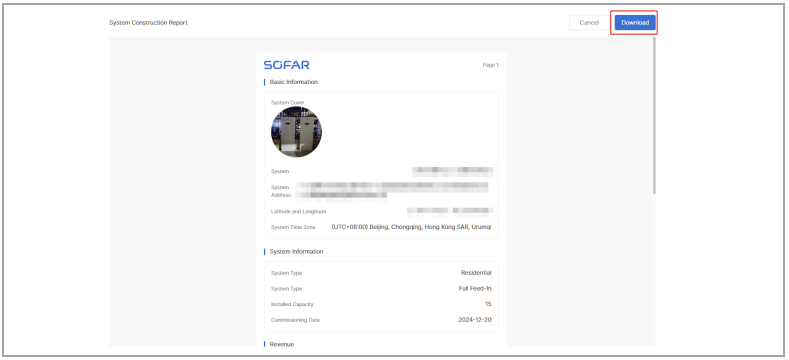
Description

On the **System Profile** page, you can view the basic information of the system.

- Click **Edit** to modify basic information of the system.

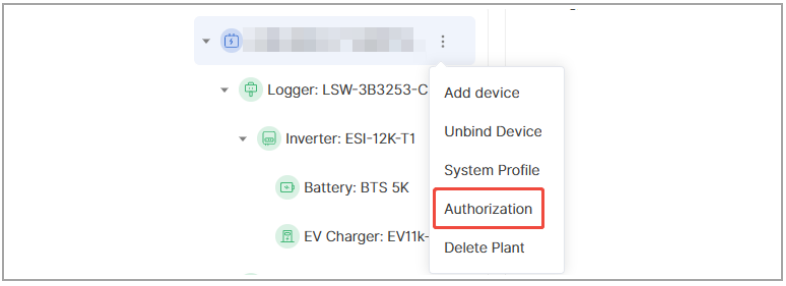


- Click **Download the report** to export the system construction report.



3.3.5 System authorization

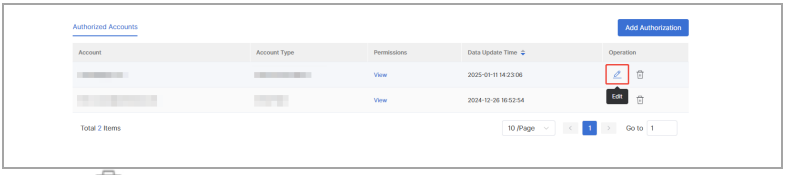
Function access: On the System details page, click ⋮ in the navigation tree on the left and then click **Authorization**.



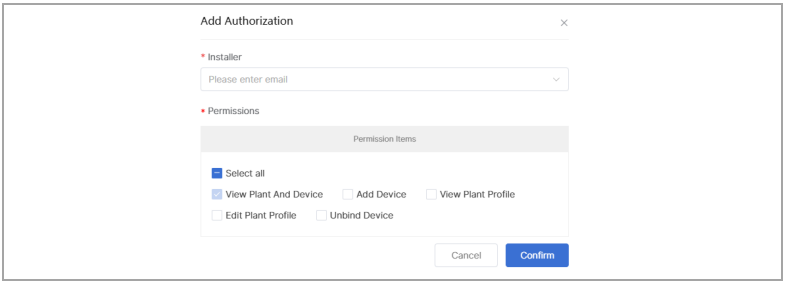
Description:

On the **Authorization** page, you can view the **authorization** list of the system.

- Click  to modify the scope of authority.

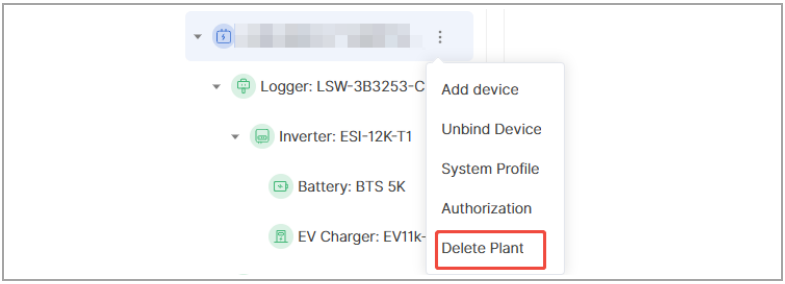


- Click  to cancel the authorization.
- Click **Add Authorization** in the displayed dialog box, complete the configuration wizard and click **Confirm**.



3.3.6 Deleting a system

Function access: On the **System** details page, click in the navigation tree on the left and then click **Delete Plant**.



If you delete a system, all data of the system will be cleared and cannot be recovered.

----End

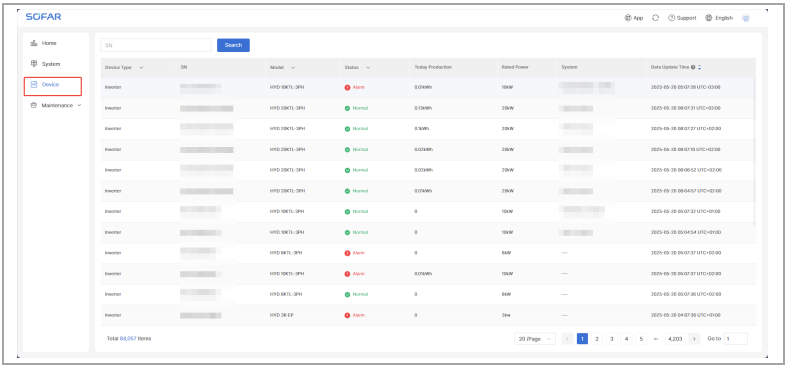
4 Device

4.1 Device list

Function Access: Choose **Device** from the main menu.

Description:

On the **Device** list page, you can view the basic device information: type, SN, model, status, today's generation, rated power, associates system and data update time.



- Search for a device: Input device SN and click Search.
- Filter devices: Click next to Device Type, Model and Status.
- Sort devices: Click next to Data Update Time.

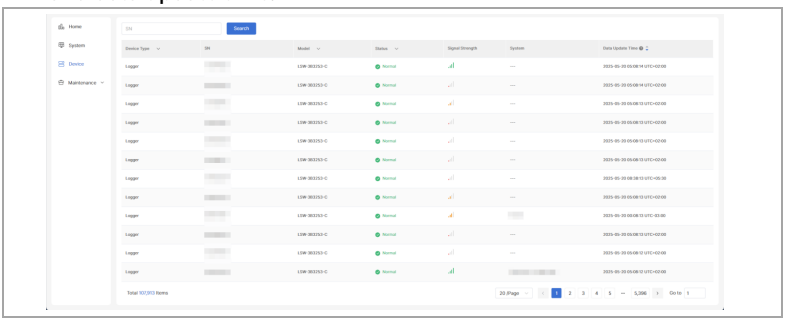
Context

Device type description: including logger, inverter, battery, EV charger, hub, meter, communication box, box transformer, and ENV sensor

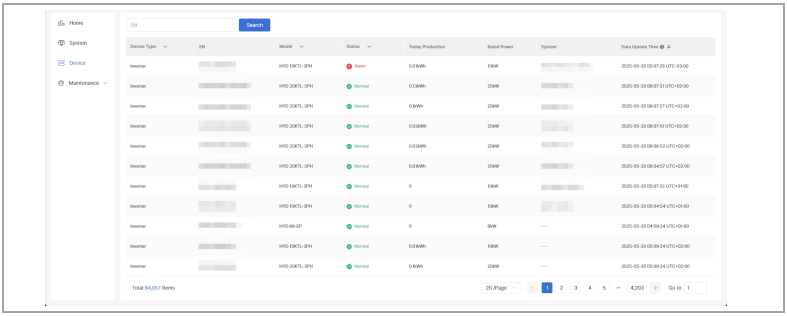
Device status description	
Status	**Description**
Normal	Device is online and not causing an alarm.
Offline	Device isn't reporting data within 30 minutes.
Alarm	Device is online and causing an alarm.
Unconnected	Device has never reported data.

The device list information of different device types displayed is different; please refer to the actual interface.

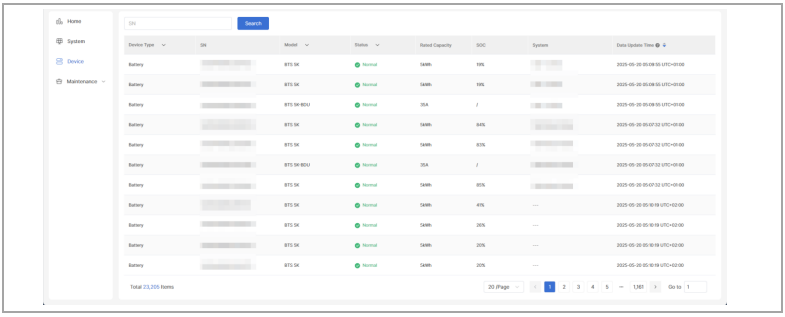
1) **Logger:** device type, SN, model, status, signal strength, associated system and data update time.



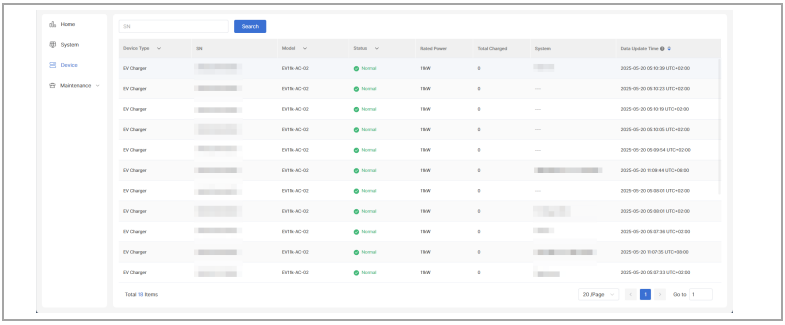
2) **Inverter:** device type, SN, model, status, today's generation, rated power, associated system and data update time.



3) **Battery:** device type, SN, model, status, rated capacity, SOC, associated system and data update time.



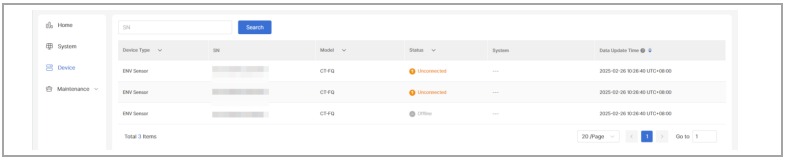
4) **EV Charger:** device type, SN, model, status, rated power, total charged, associated system and data update time.



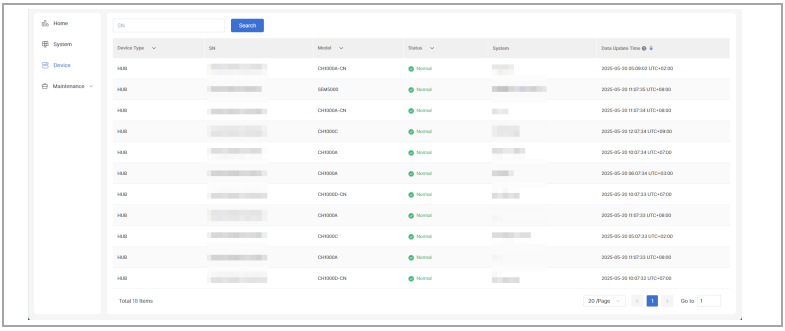
5) **Communication Box:** device type, SN, model, status, associated system and data update time.



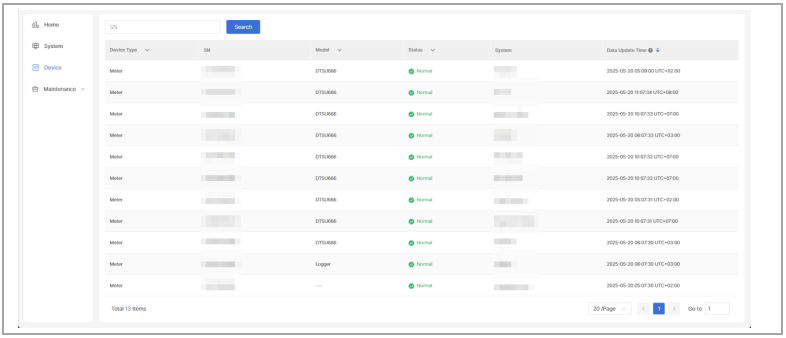
6) **ENV Sensor:** device type, SN, model, status, associated system and data update time.



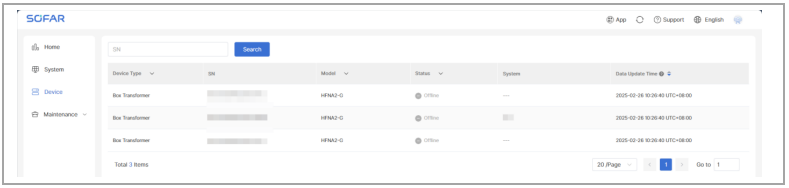
7) **HUB:** device type, SN, model, status, associated system and data update time.



8) **Meter:** device type, SN, model, status, associated system and data update time.



9) **Box Transformer:** device type, SN, model, status, associated system and data update time



4.2 Device details

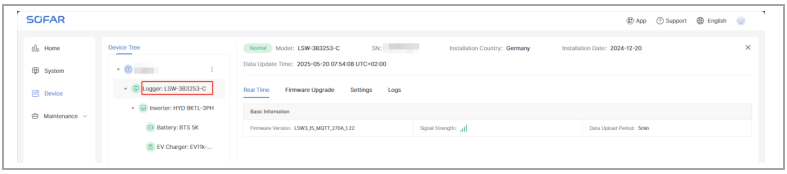
Function access：On the **Device** list page, click the device to be queried.

Description:

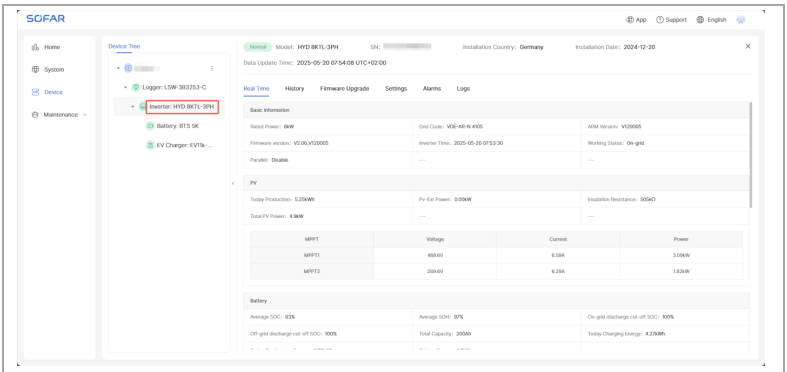
On the **Device** details page, you can view the device tree, real-time & history data and upgrade and control devices remotely.

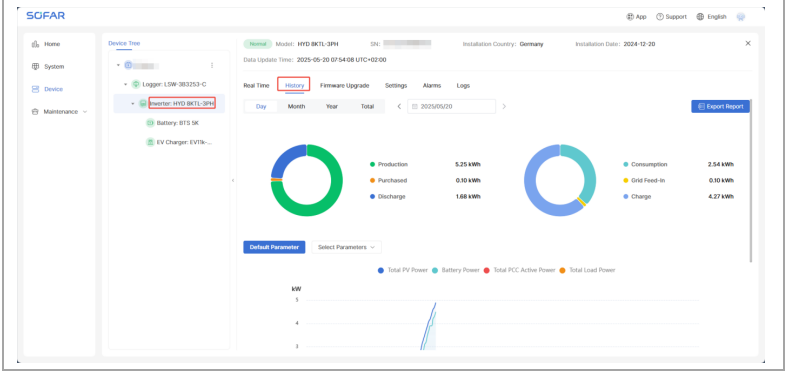
- The **Device** details page of different device types displayed is different; please refer to the actual interface.
- The running information of different device models displayed is different; please refer to the actual interface.

1) **Logger:** real-time data, firmware upgrade, settings and logs.



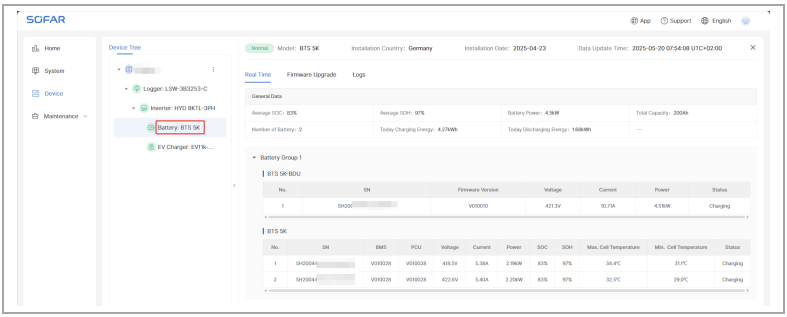
2) **Inverter:** real-time data, history data, firmware upgrade, settings, alarms and logs.



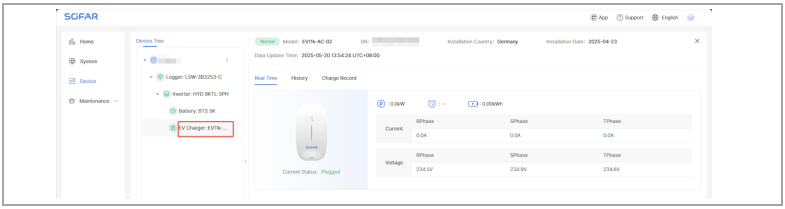


If you click **History**, you can see the day/month/year/total energy statistical data, add a template and export an Excel file.

3) **Battery**: real-time data, firmware upgrade and logs.

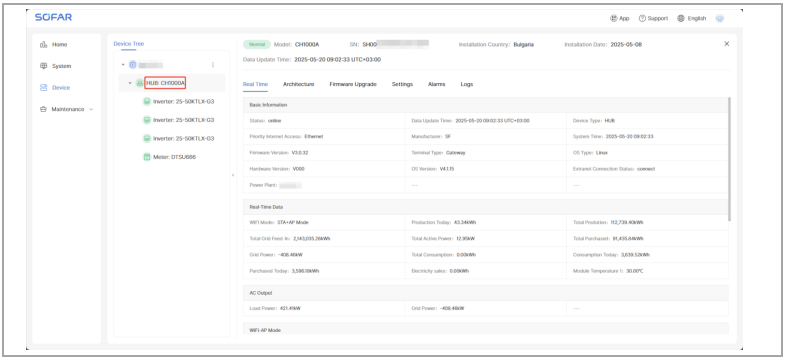


4) **EV Charger**: real-time data, history data and charge record.

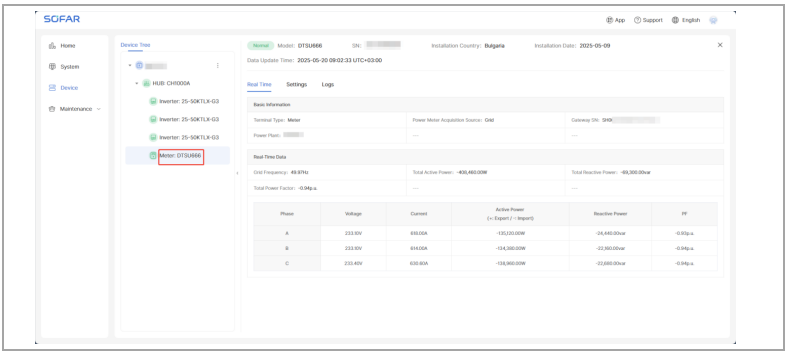


The function is in development. If you need it, please download the SofarCloud app.

5) **HUB**: real-time data, architecture, firmware upgrade, settings, alarms and logs.



6) **Meter**: real-time data, settings and logs.



7) **Communication Box**: real-time data, architecture, firmware upgrade, settings and logs.



8) **Box Transformer**: real-time data.

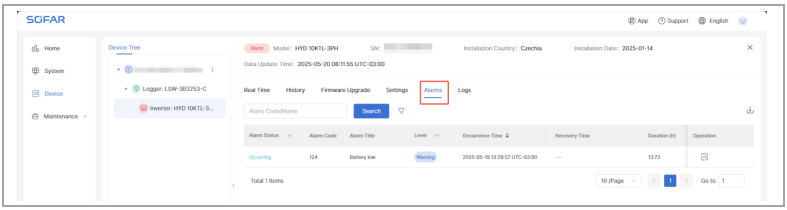


9) **ENV Sensor**: real-time data.



4.3 Device alarms

Function access: On the **Device** details page, click **Alarms**.



- Search for alarms: Input alarm code and name and then click **Search**.
- Filter alarms: Click next to **Alarm Status** and **Level**.
- Sort alarms: Click next to **Occurrence Time** and **Recovery Time**.
- Click to filter alarms by level and occurrence time.
- Click to download the alarm list.

4.4 Device upgrade

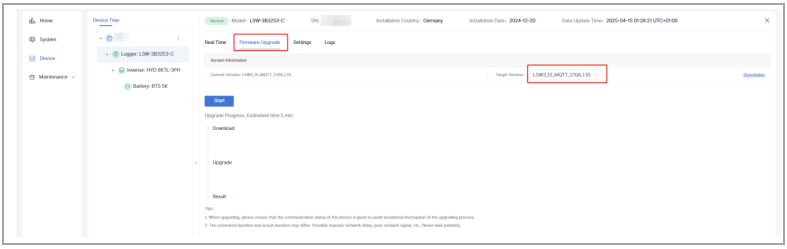
Function access: On the **Device** details page, click **Firmware Upgrade**.

Description:

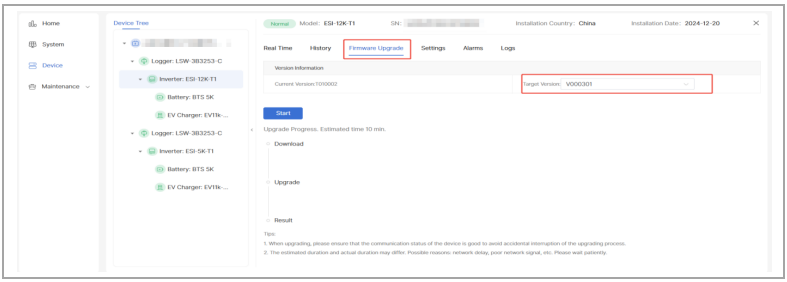
- Select Target Version.
- Click Start.

- The device can only be upgraded when it is online.
- The **Firmware Upgrade** page of different device types displayed is different; please refer to the actual interface.

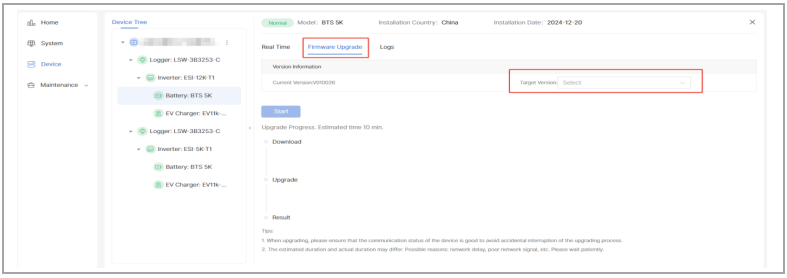
1) **Logger**



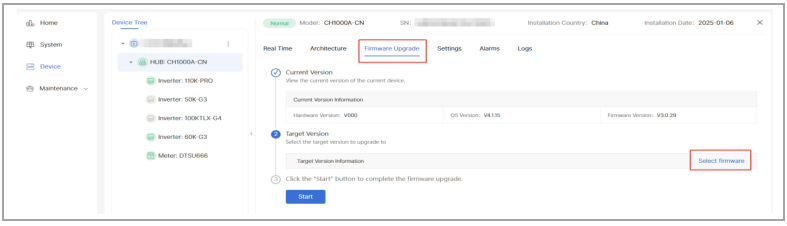
2) Inverter



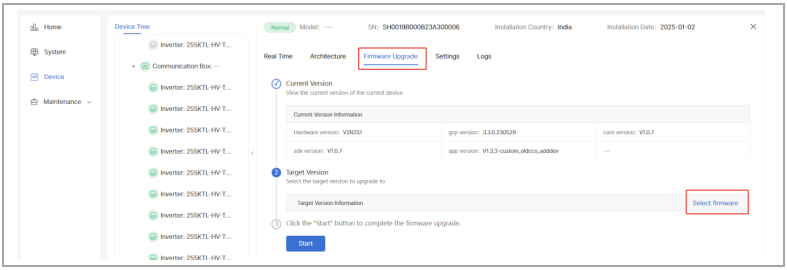
3) Battery



4) HUB



5) Communication Box



4.5 Device settings

4.5.1 Inverter settings

Function access: On the **Device** details page, click **Settings**.

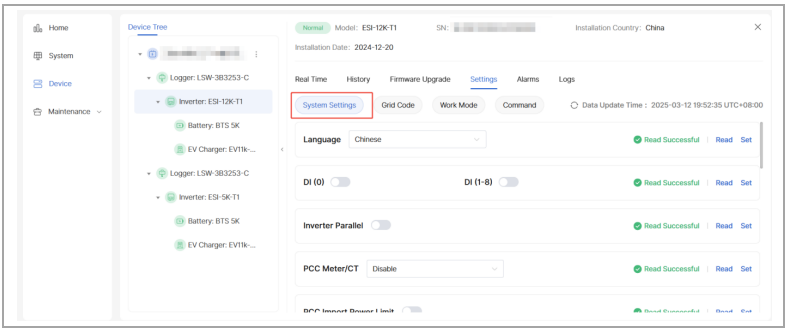


Description:

On the **Settings** page, there are four modules: **System Settings, Grid Code, Work Mode** and **Command**.

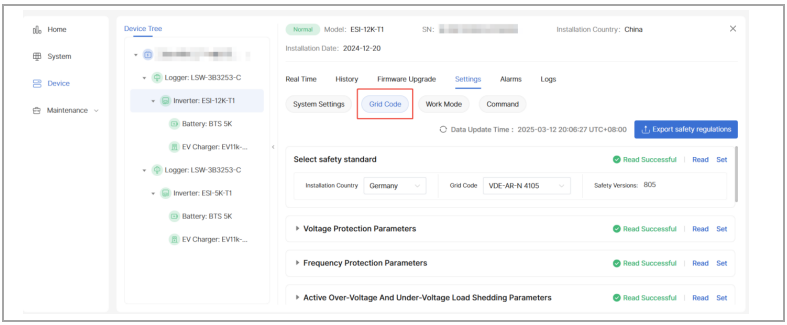
- The device parameter can only be set when the device is online.
- The **Settings** page of different device software versions displayed is different; please refer to the actual interface.
- The **Settings** page of different account permissions displayed is different; please refer to the actual interface.

4.5.1.1 System settings



4.5.1.2 Setting safety parameters (Installer Pro)

- The parameters vary depending on the safety requirements of each country or region.
- Different account roles have distinct safety parameters available for configuration, with specific permissions outlined below.
- If additional settings are required, please contact our after-sales team to request an account upgrade.



Parameters	Installer Pro	Installer	End User
Voltage Protection Parameters	√	×	×
Frequency Protection Parameters	√	×	×
Active over-voltage and under-voltage load shedding parameters (P(U)+DRMS)	√	√	×
Reactive power parameters	√	√	×
Start-up parameters	√	×	×
DCI Protection Parameters	√	×	×

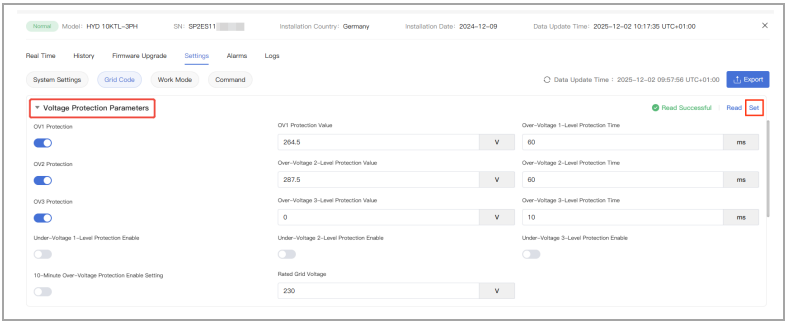
Over-and under-frequency load shedding parameters(P(f))	√	×	×
Voltage ride-through parameters (FRT)	√	×	×
Power setting	√	√	√

Setting voltage protection parameters

1 Tap **Inverter Device** > **Settings** > **Grid Code** > **Voltage Protection Parameters**.

2 Click the "**Voltage Protection Parameters**", and the page will automatically retrieve the parameters and display the value.

3 Set the parameters based on actual needs. Tap "**Set**" to complete the settings.

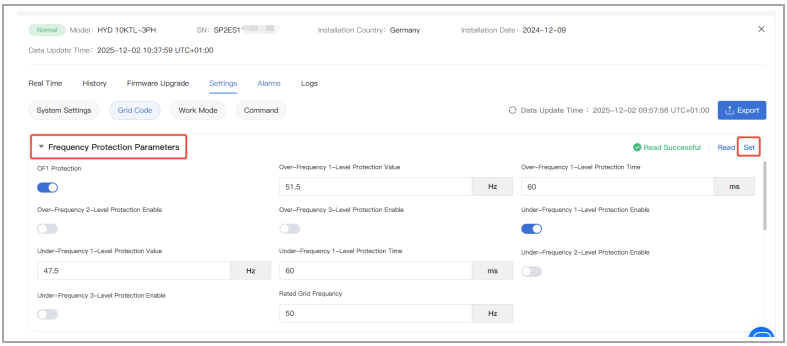


Setting frequency protection parameters

1 Tap **Inverter Device** > **Settings** > **Grid Code** > **Frequency Protection Parameters**.

2 Click the "**Frequency Protection Parameters**", and the page will automatically retrieve the parameters and display the value.

3 Set the parameters based on actual needs. Tap "**Set**" to complete the settings.

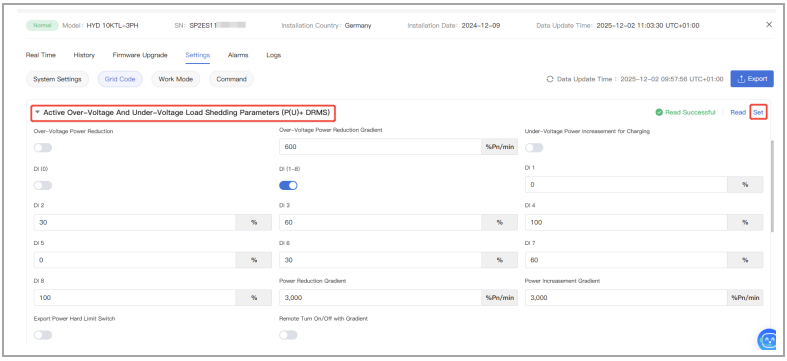


Setting active over-voltage and under-voltage load shedding parameters (P(U)+ DRMS)

1 Tap **Inverter Device** > **Settings** > **Grid Code** > **Active Over-Voltage and Under-Voltage Load Shedding Parameters (P(U)+ DRMS)**

2 Click the "**Active Over-Voltage and Under-Voltage Load Shedding Parameters (P(U)+ DRMS)**", and the page will automatically retrieve the parameters and display the value.

3 Set the parameters based on actual needs. Tap "**Set**" to complete the settings.

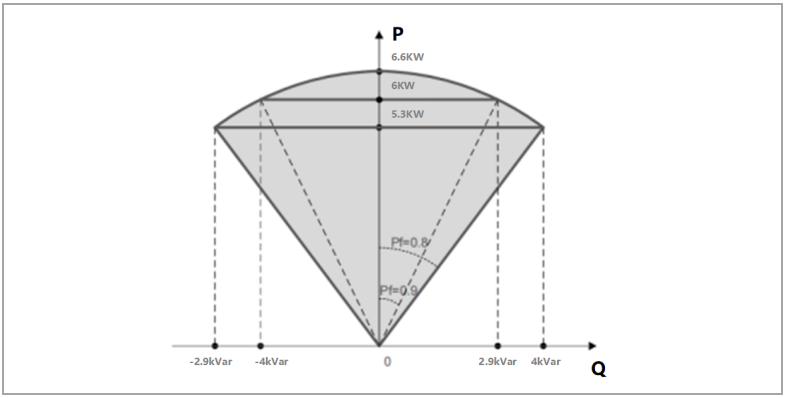


Setting reactive power parameters

1) Setting the reactive mode 1: Constant cos φ

Reactive power regulation through fixed power factor. The adjustable range of power factor PF is 0.8 to 1, -1 to -0.8. After the fixed power factor is set, the

reactive power is calculated according to the current active power. The shaded part of the figure below shows the reactive power calculated from the fixed power factor and active power:

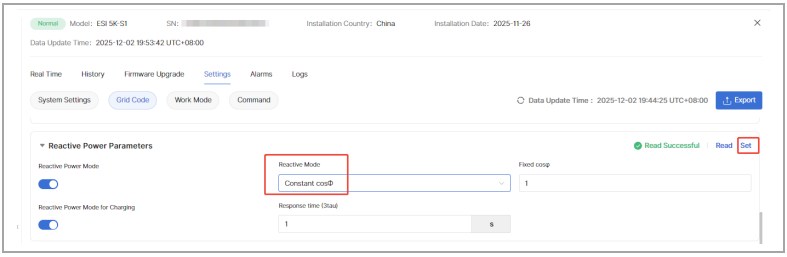


Below is the operation interface of the Web.

1 Tap **Inverter Device** > **Settings** > **Grid Code** > **Reactive Power Parameters**.

2 Click the "**Reactive Power Parameters**", and the page will automatically retrieve the parameters and display it.

3 Set the parameters based on actual needs. Tap "**Set**" to complete the settings.



2) Setting the reactive mode 2: Constant Q

Reactive power regulation through fixed reactive power percentage. The adjustable range of reactive power percentage is from -60% to 60%. In this mode, set a fixed reactive power percentage, and the system will calculate the power factor angle according to the set reactive power percentage, and then calculate the corresponding reactive power according to the current active power.

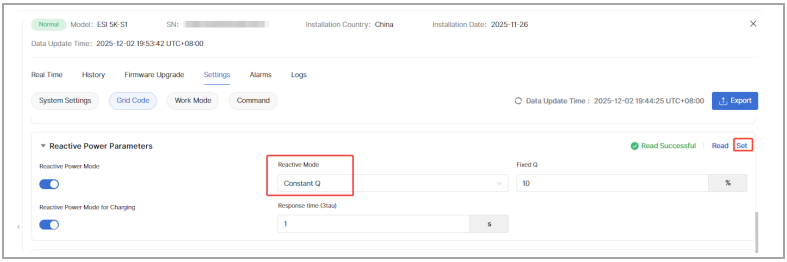
For example, the rated active power of SOFAR 250KTL-HV is 250KW. If the reactive power percentage is set to 40%, the reactive power output is 250*40%= 100kVar.

Below is the operation interface of the Web.

1 Tap **Inverter Device** > **Settings** > **Grid Code** > **Reactive Power Parameters**.

2 Click the "**Reactive Power Parameters**", and the page will automatically retrieve the parameters and display it.

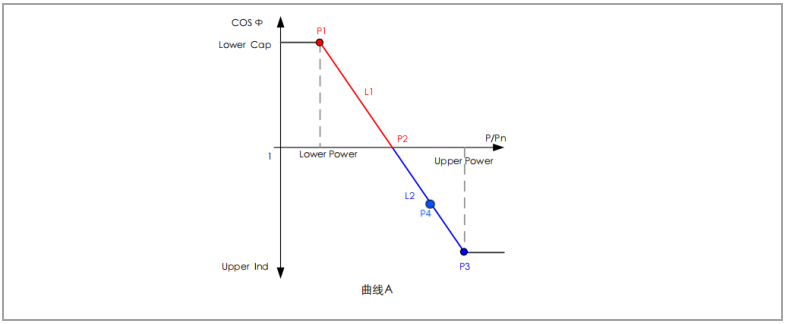
3 Set the parameters based on actual needs. Tap "**Set**" to complete the settings.



3) Setting the reactive mode 3: cos ϕ (P)-curve

The reactive power of the inverter will follow the change of active power. By setting the four-level active power load reduction point, the reactive power is calculated according to the power factor corresponding to the set active power. When the active power changes, the corresponding reactive power also

changes. The corresponding relationship between active power and power factor is shown in the figure:



Parameter	Explain	Range
P_P1	Cos φ (P) Output active power at point p1 on the mode curve	Optional
P_P2	Cos φ (P) Output active power at point P2 on the mode curve	Optional
P_P3	Cos φ (P) Output active power at point P3 on the mode curve	Optional
P_P4	Cos φ (P) Output active power at point P4 on the mode curve	Optional
Cosφ_P1	Cos φ (P) Power factor angle at point p1 on the mode curve	0.8~1
Cosφ_P2	Cos φ (P) Power factor angle at point p2 on the mode curve	0.8~1
Cosφ_P3	Cos φ (P) Power factor angle at point p3 on the mode curve	-1~-0.8
Cosφ_P4	Cos φ (P) Power factor angle at point p4 on the mode curve	-1~-0.8
Sgn(Cosφ)_P1	Cos φ (P) Symbol of the power factor angle at point p1 on the mode curve	leading
Sgn(Cosφ)_P2	Cos φ (P) Symbol of the power factor angle at point p2 on the mode curve	leading

Sgn(Cosφ)_P3	Cos φ (P) Symbol of the power factor angle at point p3 on the mode curve	lagging
Sgn(Cosφ)_P4	Cos φ (P) Symbol of the power factor angle at point p4 on the mode curve	lagging

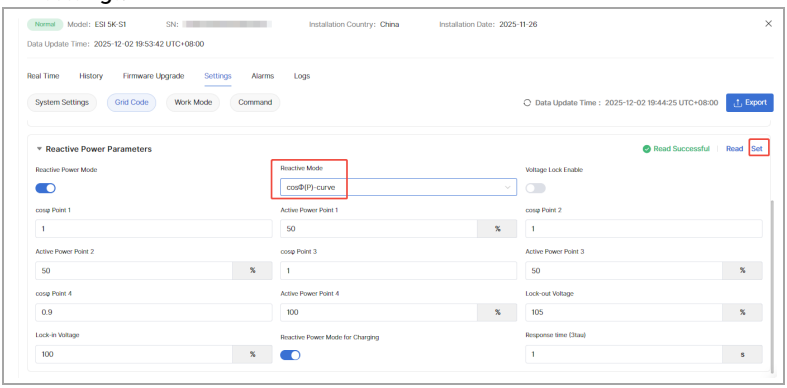
This mode has a voltage entry enable bit. If it is enabled, it is necessary to set the lockinV voltage percentage and lockoutV voltage percentage. When the grid voltage percentage is greater than the lockinV voltage percentage, this mode is normally enabled; When the grid voltage percentage is less than the lockoutV voltage percentage, the reactive power is 0.

Below is the operation interface of the Web.

1 Tap **Inverter Device** > **Settings** > **Grid Code** > **Reactive Power Parameters**.

2 Click the "**Reactive Power Parameters**", and the page will automatically retrieve the parameters and display it.

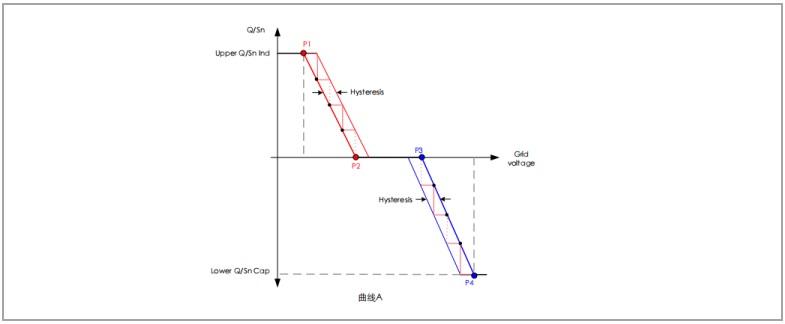
3 Set the parameters based on actual needs. Tap "**Set**" to complete the settings.



4) Setting the Reactive Mode 4: Q(U)-curve

Inverter reactive power continuously changes with grid voltage. The reactive power is adjusted by setting the high-voltage starting point, high-voltage ending point, low-voltage starting point and low-voltage ending point of the

grid voltage, in which the grid voltage changes continuously. The following figure shows the relationship between reactive power and grid voltage:



Parameter	Explain	Range
P1	P1 on the Q (U) mode curve is the starting voltage point of low voltage	Optional
P2	P2 on the Q (U) mode curve is the starting voltage point of low voltage	Optional
P3	P3 on the Q (U) mode curve is the starting voltage point of low voltage	Optional
P4	P4 on the Q (U) mode curve is the starting voltage point of low voltage	Optional

This mode has a voltage entry enable bit. If it is enabled, it is necessary to set the lockinV voltage percentage and lockoutV voltage percentage. When the grid voltage percentage is greater than the lockinV voltage percentage, this mode is normally enabled; When the grid voltage percentage is less than the lockoutV voltage percentage, the reactive power is 0. (Response waiting time during detection can be set).

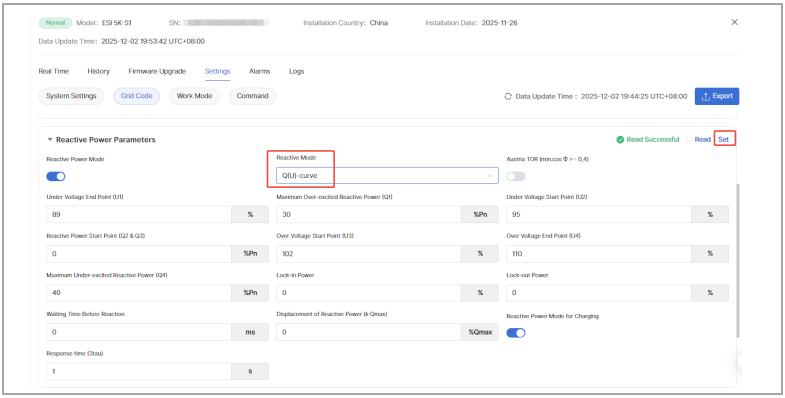
Among them, the reactive power at point P1 is the maximum lagging reactive power, the reactive power at point P2 is the reactive power at the low voltage starting voltage point, the reactive power at point P3 is the reactive power at the high voltage starting voltage point, and the reactive power at point P4 is the maximum leading reactive power.

Below is the operation interface of the Web.

1 Tap **Inverter Device** > **Settings** > **Grid Code** > **Reactive Power Parameters**.

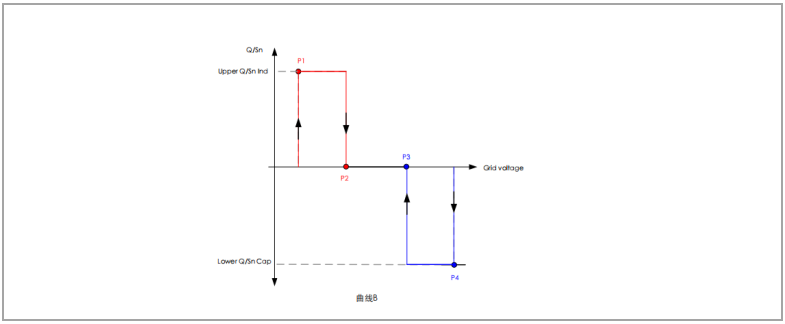
2 Click the "**Reactive Power Parameters**", and the page will automatically retrieve the parameters and display it.

3 Set the parameters based on actual needs. Tap "**Set**" to complete the settings.



5) Setting the reactive mode 5: Simple Q(U) control (without Reactive power)

Inverter reactive power continuously changes with grid voltage. The reactive power is adjusted by setting the high-voltage starting point, high-voltage ending point, low-voltage starting point and low-voltage ending point of the grid voltage, in which the grid voltage changes step by step. The following figure shows the relationship between reactive power and grid voltage:



Parameter	Explain	Range
P1	P1 on the Q (U) mode curve is the starting voltage point of low voltage	Optional
P2	P2 on the Q (U) mode curve is the starting voltage point of low voltage	Optional
P3	P3 on the Q (U) mode curve is the starting voltage point of low voltage	Optional
P4	P4 on the Q (U) mode curve is the starting voltage point of low voltage	Optional

This mode has a voltage entry enable bit. If it is enabled, it is necessary to set the lockinV voltage percentage and lockoutV voltage percentage. When the grid voltage percentage is greater than the lockinV voltage percentage, this mode is normally enabled; When the grid voltage percentage is less than the lockoutV voltage percentage, the reactive power is 0. (Response waiting time during detection can be set).

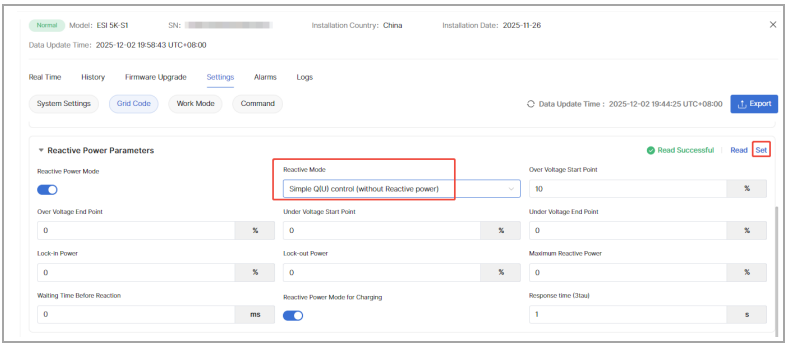
Among them, the reactive power corresponding to P1 and P4 points is the maximum reactive power point. (Both can be set by self-selection)

Below is the operation interface of the Web.

1 Tap **Inverter Device** > **Settings** > **Grid Code** > **Reactive Power Parameters**.

2 Click the "**Reactive Power Parameters**", and the page will automatically retrieve the parameters and display it.

3 Set the parameters based on actual needs. Tap "**Set**" to complete the settings.



6) Setting the reactive mode 6: Max. fixed S (Full reactive power)

The inverter calculates the current output reactive power through constant apparent power.

That is, when the active power does not reach the rated value, the reactive power is calculated according to the rated apparent power, and the calculation formula is. When the active power reaches the rated value, the reactive power is 0.

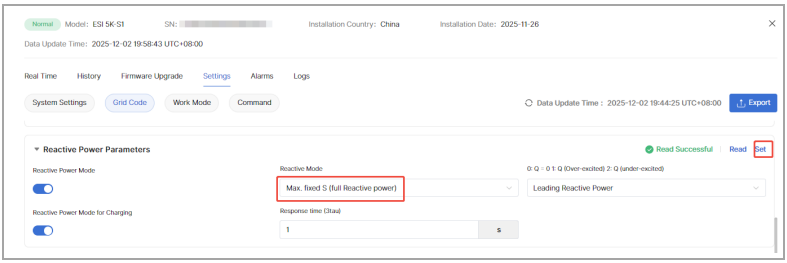
> Phase type can be set: 1 Zero reactive power: reactive power is 0; 2. lagging reactive power: reactive power is negative; 3. leading reactive power: the reactive power is positive.

Below is the operation interface of the Web.

1 Tap **Inverter Device** > **Settings** > **Grid Code** > **Reactive Power Parameters**.

2 Click the "**Reactive Power Parameters**", and the page will automatically retrieve the parameters and display it.

3 Set the parameters based on actual needs. Tap "**Set**" to complete the settings.

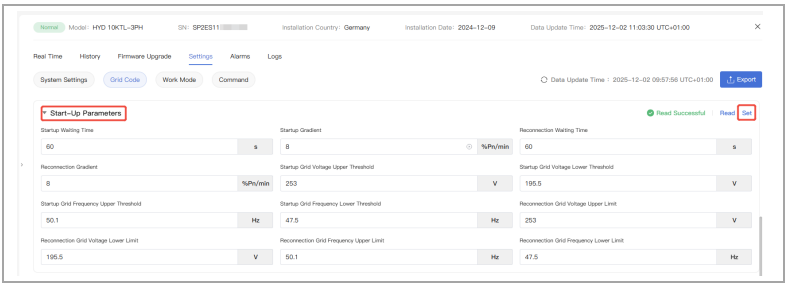


Setting start-up parameters

1 Tap **Inverter Device** > **Settings** > **Grid Code** > **Start-Up Parameters**.

2 Click the "**Start-Up Parameters**", and the page will automatically retrieve the parameters and display it.

3 Set the parameters based on actual needs. Tap "**Set**" to complete the settings.

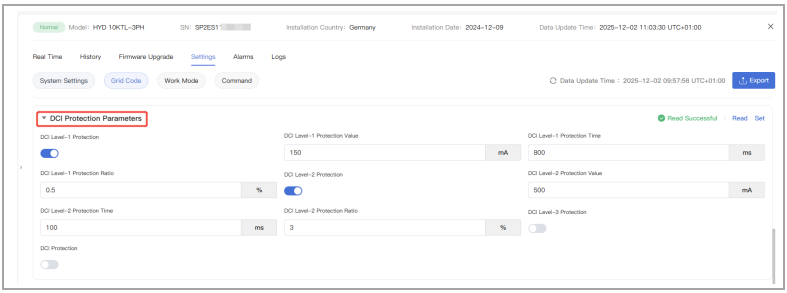


Setting DCI protection parameters

1 Tap **Inverter Device** > **Settings** > **Grid Code** > **DCI Protection Parameters**.

2 Click the "**DCI Protection Parameters**, and the page will automatically retrieve the parameters and display it.

3 Set the parameters based on actual needs. Tap "**Set**" to complete the settings.

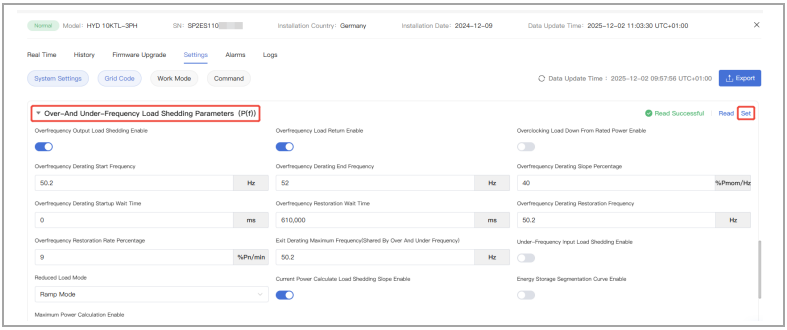


Setting over-and under-frequency load shedding parameters (P(f))

1 Tap **Inverter Device** > **Settings** > **Grid Code** > **Over-and Under-Frequency Load Shedding Parameters(P(f))**.

2 Click the "**Over-and Under-Frequency Load Shedding Parameters(P(f))**", and the page will automatically retrieve the parameters and display it.

3 Set the parameters based on actual needs. Tap "**Set**" to complete the settings.

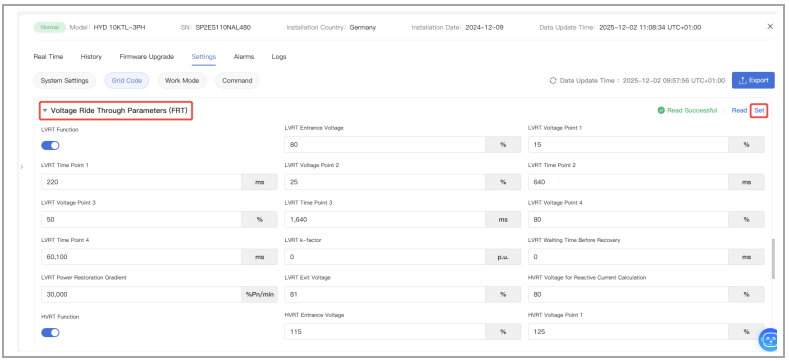


Setting voltage ride-through parameters (FRT)

1 Tap **Inverter Device** > **Settings** > **Grid Code** > **Voltage Ride Through Parameters (FRT)**.

2 Click the "**Voltage Ride Through Parameters (FRT)**", and the page will automatically retrieve the parameters and display it.

3 Set the parameters based on actual needs. Tap "**Set**" to complete the settings.



Setting the power setting

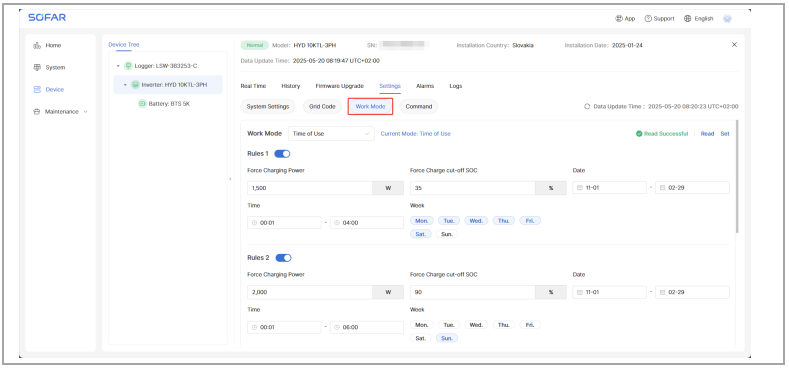
1 Tap **Inverter Device** > **Settings** > **Grid Code** > **Power Setting**.

2 Click the "**Power Setting**", and the page will automatically retrieve the parameters and display it.

3 Set the parameters based on actual needs. Tap "**Set**" to complete the settings.

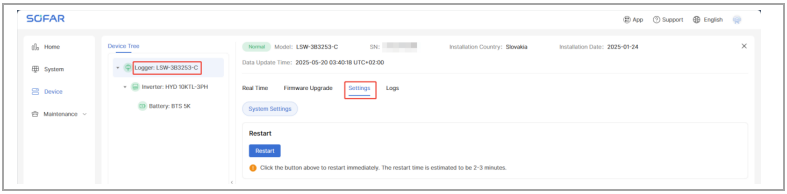


4.5.1.3 Work mode



4.5.2 Logger settings

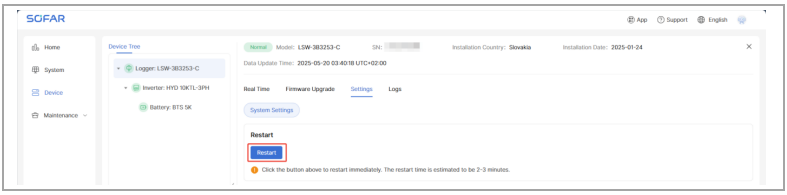
Function access: On the **Logger** details page, click **Settings**.



Description:

You can restart the logger here.

Click the Restart button and wait for 2 to 3 minutes for the capture stick to restart successfully.

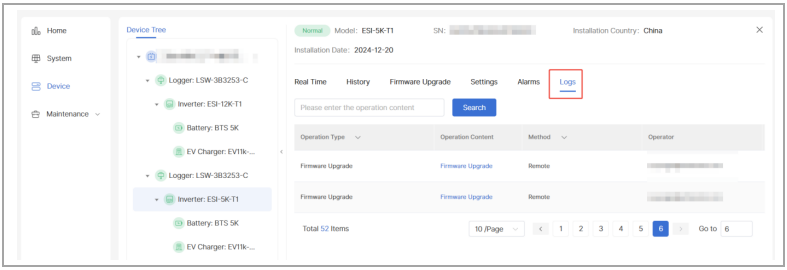


4.6 Logs

Function access: On the **Device** details page, click **Logs**.

Description:

You can view all device upgrade and setting logs.



- Search for logs: Input operation content and click **Search**.
- Filter logs: Click ⌄ next to **Operation Type, Method** and **Result**.

Firmware Upgrade, Settings and Logs permissions need to be assigned separately.

Context

Log description	
Status	**Description**
Result	Contains three types: In Progress, Success and Fail.
Operation Type	Contains two types: Settings and Firmware Upgrade.
Operation Method	Contains two types: Remote and Near Field.

----End

5 Maintenance

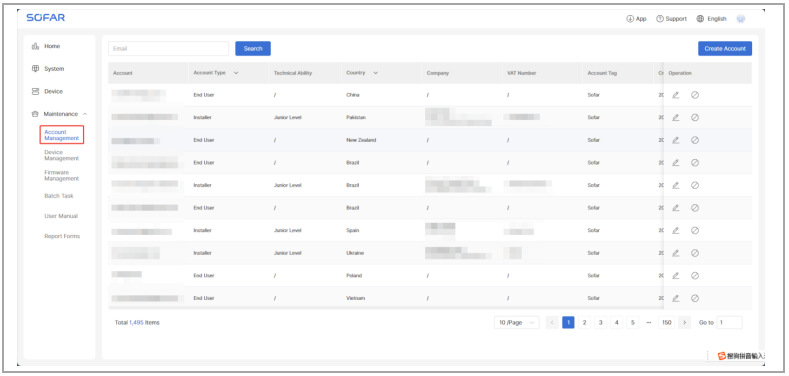
5.1 Account management

5.1.1 Account list

Function access: Choose **Maintenance** > **Account Management** from the main menu.

Description:

On the **Account** list page, you can view the basic account information: account, account type, technical ability, country, company, VAT number, account tag, creation time and operation.



- Search for an account: Input email and click **Search**.
- Filter accounts: Click next to **Account Type** and **Country**.
- Edit an account: Click in the **Operation** column.
- Delete an account: Click in the **Operation** column.
- Disable an account: Click in the **Operation** column.
- Enable an account: Click in the **Operation** column.

Account type description: including SofarCloud Operator, Sales Operator, R&D, Technical Support, Distributor (two levels), Installer (three levels) and End User.

- The account list information of different account types displayed is different; please refer to the actual interface.
- Edit, Delete, Disable and Enable permissions need to be assigned separately.

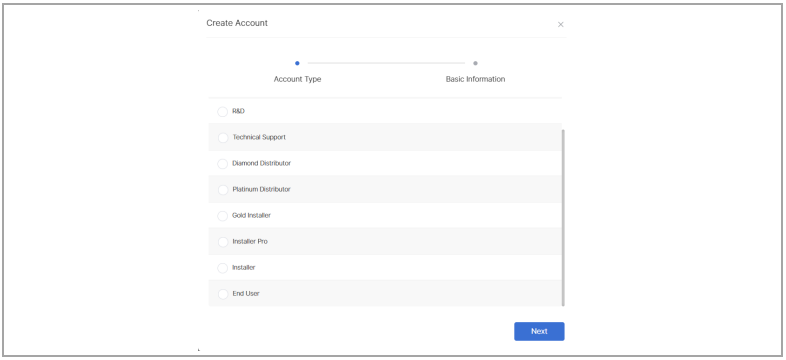
5.1.2 Creating an account

Function access: On the **Account** list page, click **Create Account** in the top-right corner.

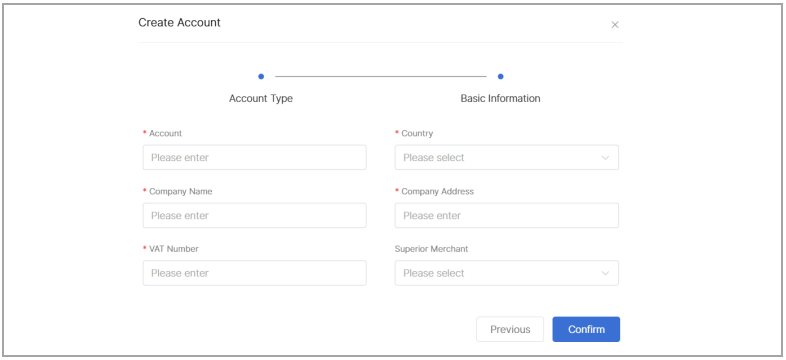
Description:

In the displayed **Create Account** dialog box, complete the configuration wizard and click **Confirm.**

1 Select the account type.



2 Fill in the basic information of the account, including an account email address, country, company name, company address, VAT number etc.



The subordinate and sub-account type information of different account types displayed is different; please refer to the actual interface.

- SofarCloud Operator can only be created by a SOFAR admin.
- Sales Operator, R&D and Technical Support can only be created by a SofarCloud Operator.
- An Installer admin can create sub-accounts for their colleagues.
- End Users can let Installers who provide service to them create accounts. In such cases, Installers can see the system created by the End User.

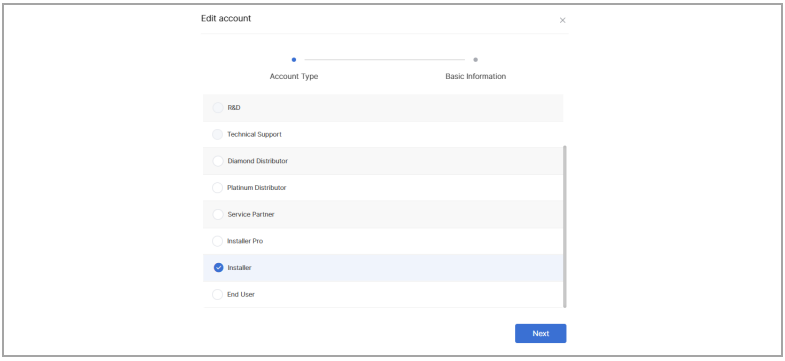
5.1.3 Editing an account

Function access: On the **Account** list page, click in the **Operation** column.

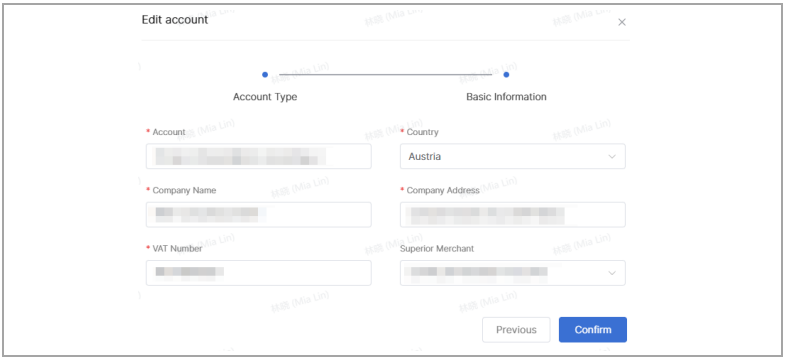
Description:

In the displayed **Edit Account** dialog box, complete the configuration wizard and click **Confirm**.

1 Edit the account type.



2 Edit the account information.



- The subordinate and sub-account information of different account types displayed is different; please refer to the actual interface.
- An internal account can only be modified as an internal account, and an external account can only be modified as an external account.

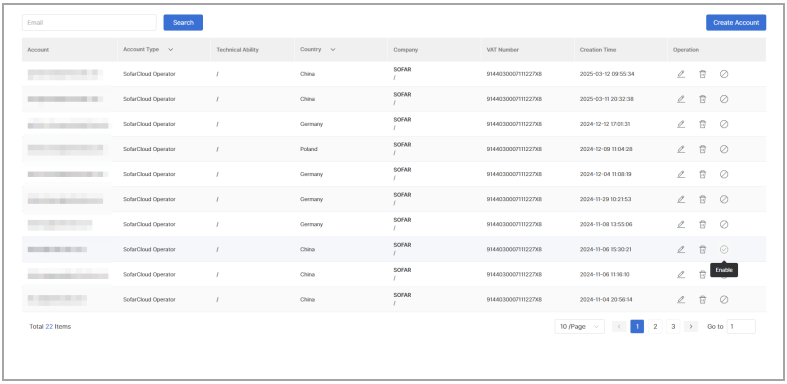
5.1.4 Disabling/enabling an account

Function access: On the **Account** list page, click or in the **Operation** column.

- **Disabling an account**



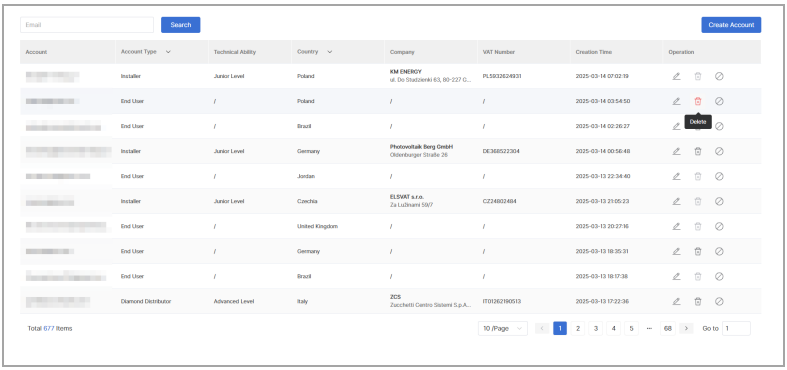
- **Enabling an account**



A disabled account cannot log in.

5.1.5 Deleting an account

Function access: On the **Account** list page, click in the **Operation** column.



Accounts associated with a system, device, firmware or sub-account cannot be deleted.

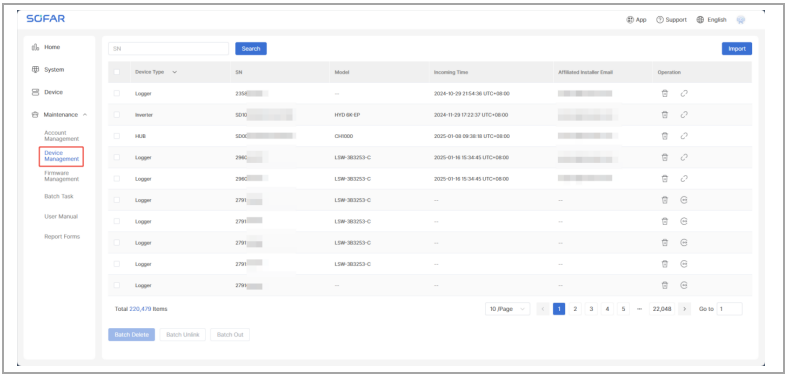
5.2 Device management

5.2.1 Device warehouse

Function access: Choose **Maintenance** > **Device Management** from the main menu.

Description:

On the **Device Management** list page, you can view the basic device information: device type, SN, model, incoming time, affiliated installer email and operation.



- Search for a device: Input SN and click **Search**.
- Filter devices: Click next to **Device Type**.
- Delete a device: Click in the **Operation** column.
- Outbound a device: Click in the **Operation** column.
- Unlink a device: Click in the **Operation** column.

> Delete, Outbound and Unlink permissions need to be assigned separately.

Context

Device type description: including logger, inverter, battery, EV charger, hub, meter, communication box, box transformer and ENV sensor.

5.2.2 Importing a device

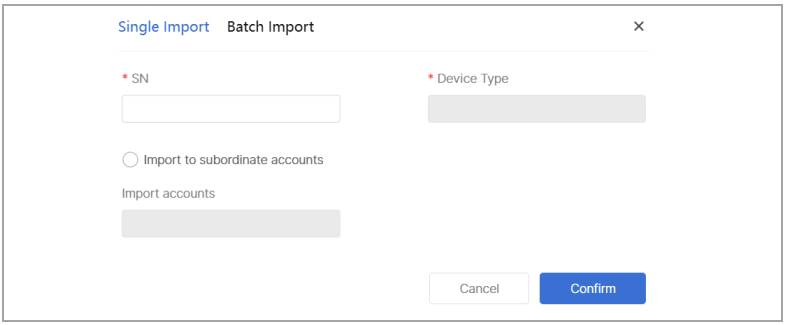
Function access: On the **Device Management** list page, click **Import** in the top-right corner.

Description:

In the displayed **Import** dialog box, complete the configuration wizard and click **Confirm**.

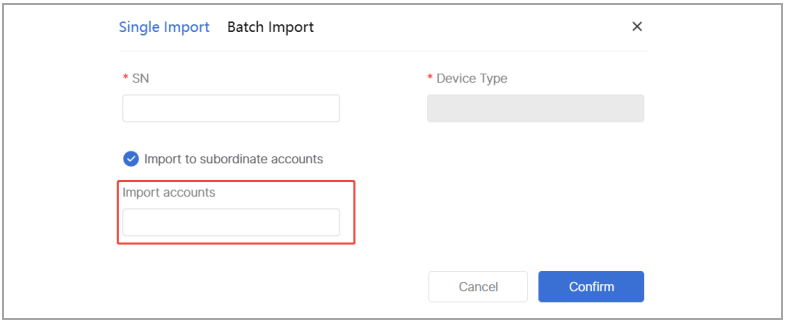
5.2.2.1 Single Import

1 Select **Single Import**.



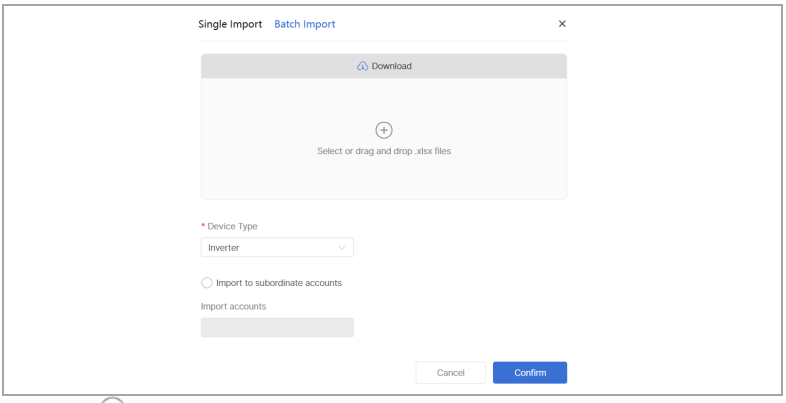
2 Fill in the device SN.

3 Click ◯ and input the subordinate accounts.



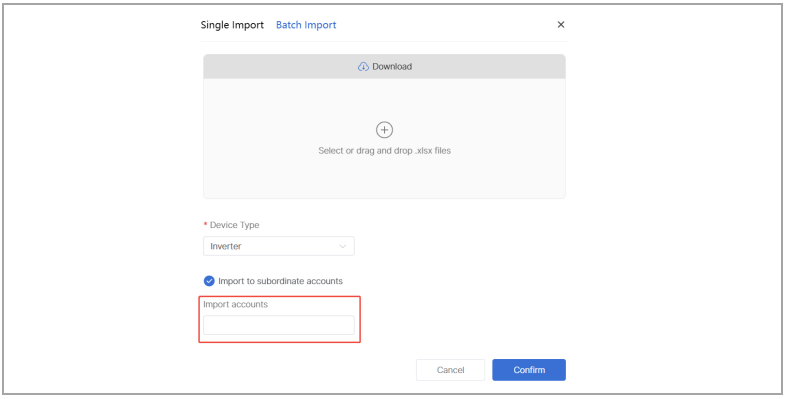
5.2.2.2 Batch Import

1 Select **Batch Import**



2 Click ⊕ to upload a file including the device's SN information.

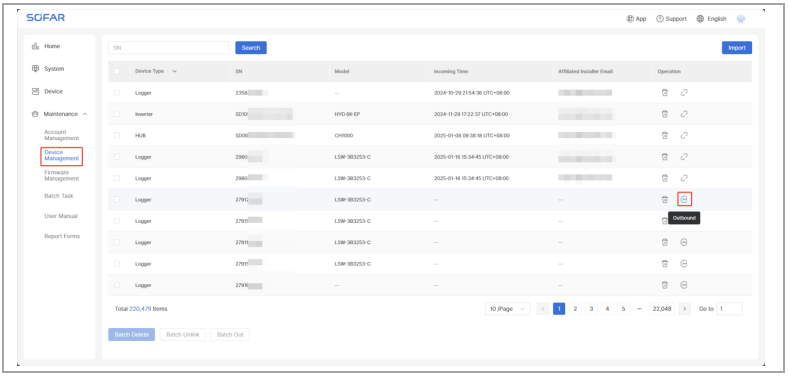
3 Click ○ to input subordinate accounts.



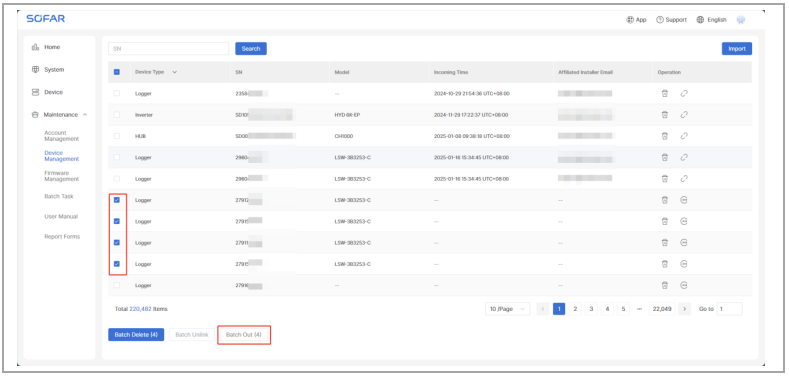
5.2.3 Outbounding a device

Function access: On the **Device Management** list page, click ⇢ in the **Operation** column or select devices and then click the **Batch Out** button.

5.2.3.1 Outbounding one by one

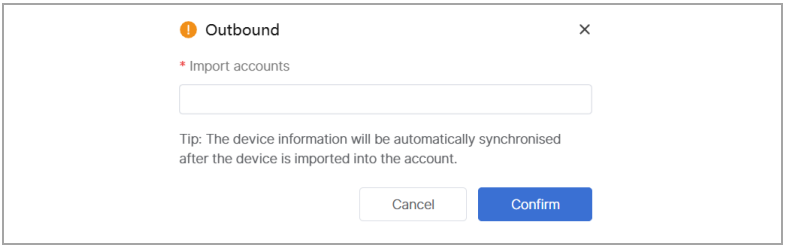


5.2.3.2 Batching out



Description:

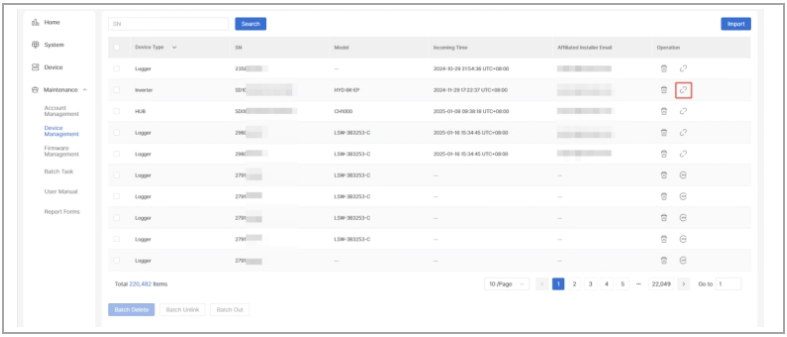
In the displayed **Outbound** dialog box, input the import accounts and click **Confirm**.



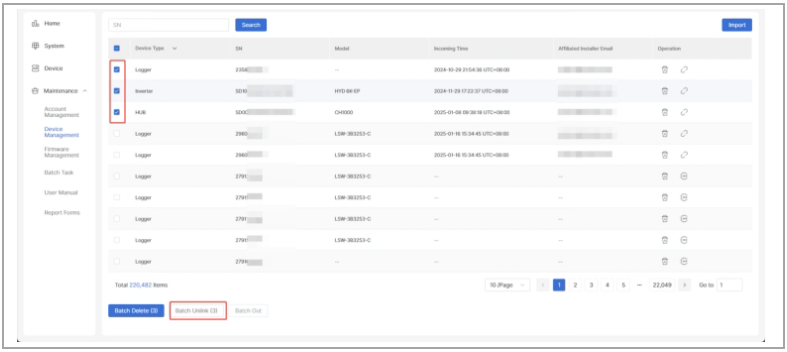
5.2.4 Unlinking a device

Function access: On the **Device Management** list page, click in the **Operation** column or select devices and then click the **Batch Unlink** button

5.2.4.1 Unlinking one by one



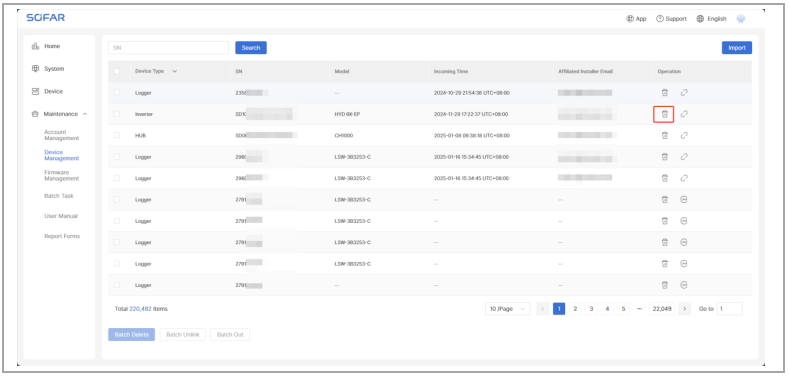
5.2.4.2 Batch unlinking



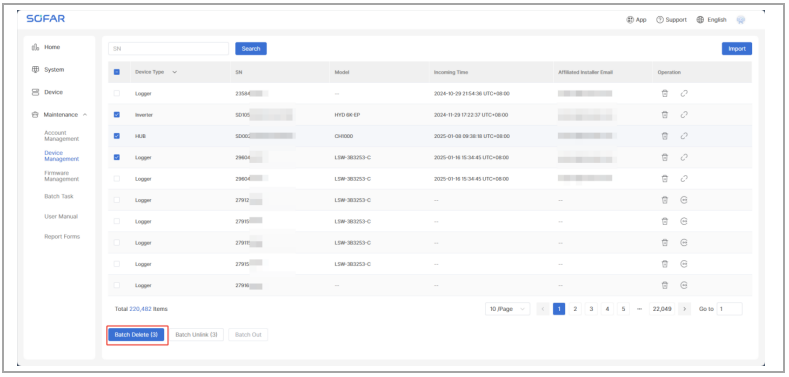
5.2.5 Deleting a device

Function access: On the **Device Management** list page, click in the **Operation** column or select devices and then click the **Batch Delete** button.

5.2.5.1 Deleting one by one



5.2.5.2 Batch deletion



Device data will be removed automatically if devices are deleted.

----End

6 Settings and Navigation Bar

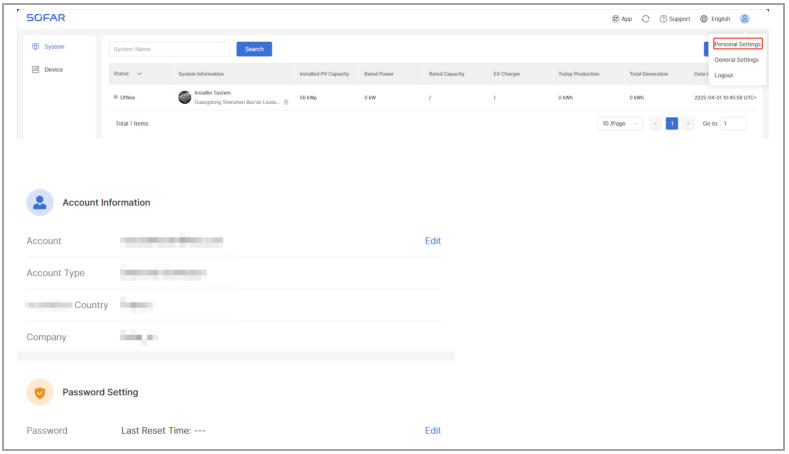
6.1 Account information

Function access: Click  in the navigation bar



Description

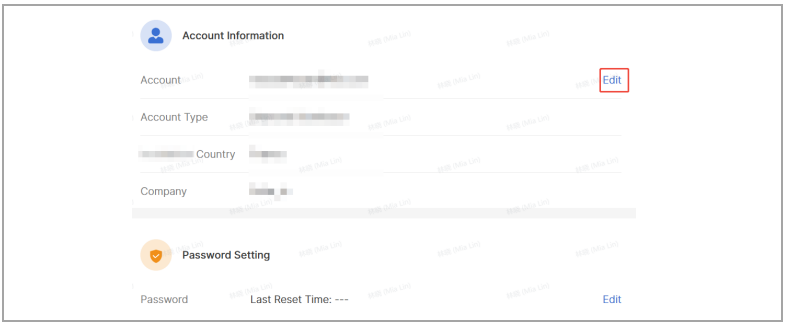
On the **Personal Settings** page, you can view the basic account information: account, account type, country and company.



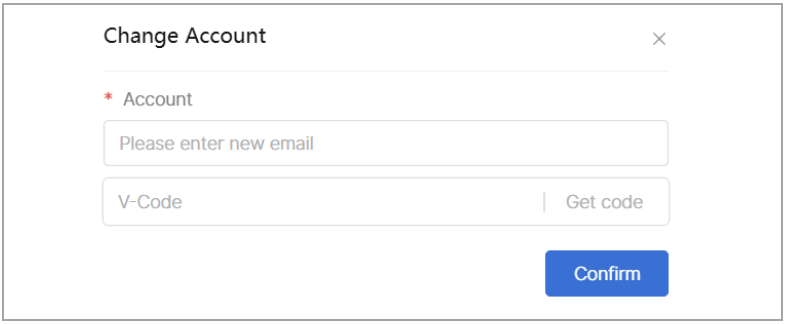
6.2 Account settings

1) Editing an account's email address

1 On the **Personal Settings** page, click **Edit** next to the account.

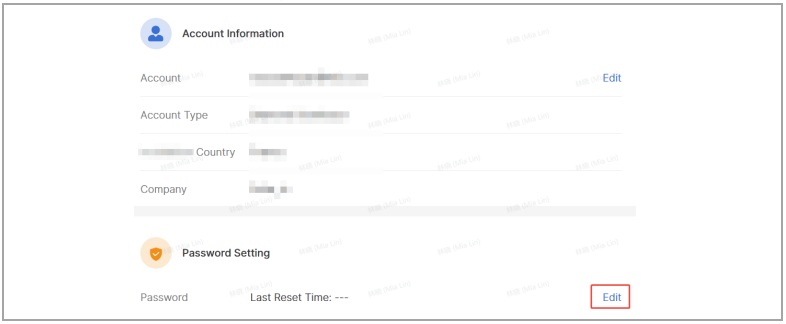


2 On the displayed **Change Account** page, complete the configuration wizard and click **Confirm**

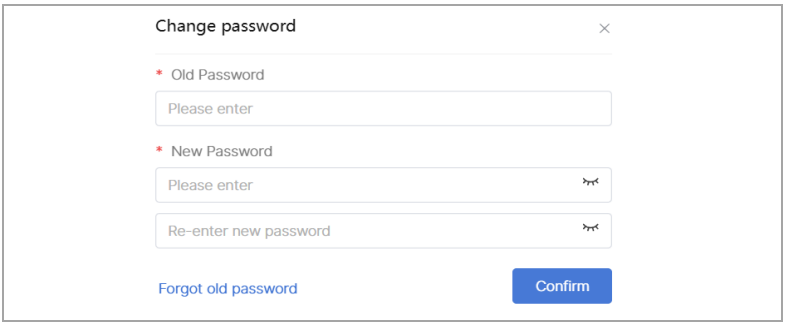


2) Editing an account password

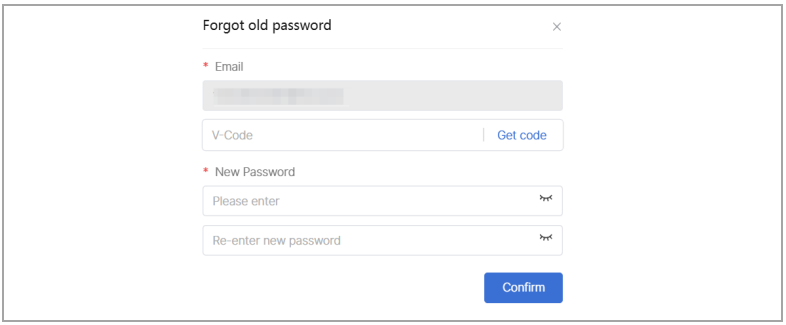
1 On the **Personal Settings** page, click **Edit** next to the password.



2 On the displayed **Change password** page, complete the configuration wizard and click **Confirm**.



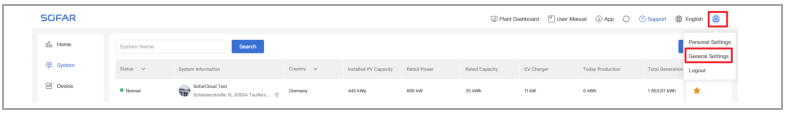
If you forget your old password, please use your account email to reset it.



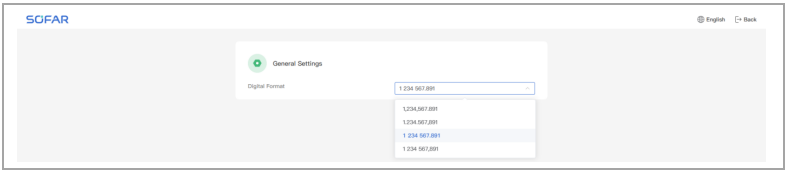
6.3 General settings

On the **General Settings** page, you can view and change digital format.

1 Click in the navigation bar, and then click [General Settings] button.

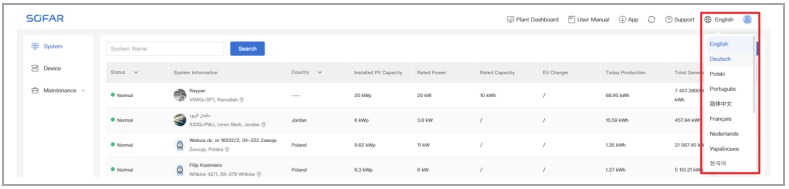


2 Select the digital format.



6.4 Language

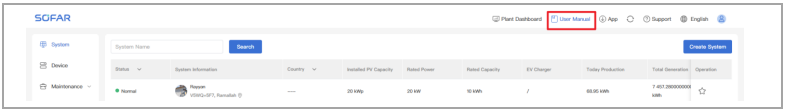
You can click the **language** button in the upper-right corner of the page and select a language from the dropdown list.

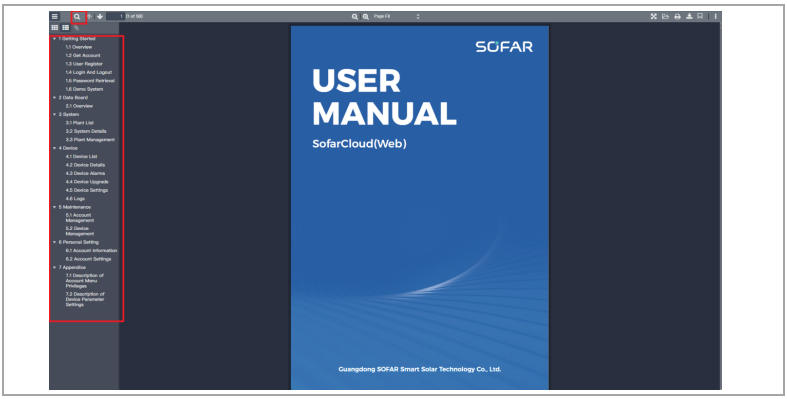


- The app now supports nine languages: Chinese, English, German, Polish, Ukrainian, Portuguese, French, Dutch, Korean, Slovene, Czech, Slovak, Hungarian, Russian, Arabic and Vietnamese.
- The language setting is selected to **use the system language.** If a language is not supported, the text will be displayed in English.

6.5 User manual

Click the User Manual in the top navigation bar to view the SofarCloud Web user manual. You can quickly find the documentation you need through the table of contents, search function, and other methods.

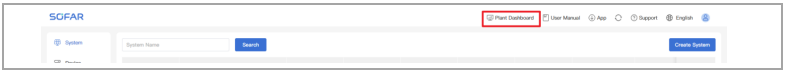


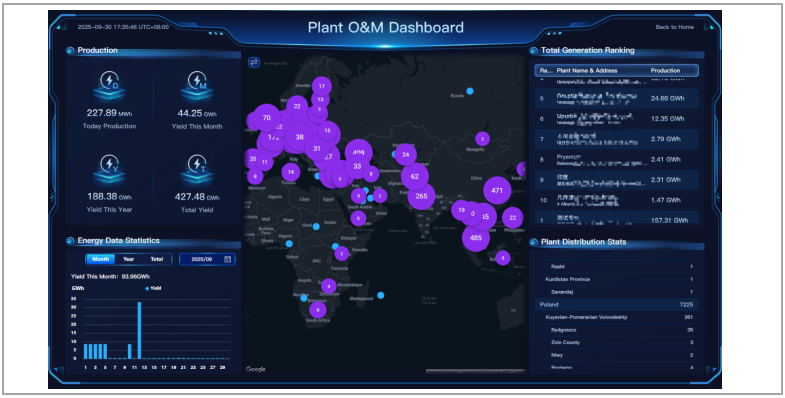


6.6 Plant dashboard

Click the Plant Dashboard in the top navigation bar to enter the Plant O&M Dashboard page.

In the page, you can view summary information for all systems under the current merchant, including: system generation statistics, system distribution, system generation rankings, and other details.





----End

7 Appendix

7.1 Description of account menu privileges

Role name	Description	Remark
SofarCloud Operator	Has access to data board, system, device, account management, device management and firmware management.	Internal
Sales Operator	Has access to data board, account management and device management.	Internal
R&D	Has access to system, device and firmware management.	Internal
Technical Support	Has access to system, device and firmware management.	Internal
Distributor	Has access to data board, system, device, account management and device management.	External
Installer Pro	Has access to system, device and account management.	External
Installer	Has access to system, device and account management.	External
End User	Has access to system and device.	External

7.2 Description of device parameter settings

7.2.1 Inverter

Type	Description
System	Language
	DI
	Inverter parallel
	PCC meter/CT
	PCC power offset
	CT phase sequence and direction
	PCC import power limit
	Feed-in limit
	Unbalance support
	Dry contactor
	Turn on/off
	IV scan
	PV channel
	Grid port
	Battery port
	Battery parameters
	EPS
	Neutral point grounding
	Fan configuration
	Restore factory settings
	Power control
	System time setting

	485 parameter
	PCC power harvesting device
	Input channel
	Resonance Detection Sensitivity
	PBUS-STA setting
	PV branch overcurrent protection
	GFCI filter coefficient setting
	DPWM control
	Terminal stability test
	Terminal temperature fault
	MAC address type
	Protocol channel configuration
	PBUS reste
	Reset terminal temperature warning fault
Grid Settings	Safety standard
	Import Safety
	Voltage protection parameters
	Frequency protection parameters
	Active over-voltage and under-voltage load shedding parameters
	Reactive power parameters
	Start-up parameters
	DCI protection parameters
	Over- and under-frequency load shedding parameters
	Voltage ride-through parameters

	Islanding
	GFCI
	ISO
	Communication interrupt configuration
	Power setting
Work Mode	Self-use
	Feed-in priority
	Peak shaving
	Time of use
	Passive
	Maintenance

7.2.2 Logger

Type	Description
System Settings	Restart
	Set the reporting interval

7.2.3 HUB

Type	Description
Basic Settings	System time setting
	Ethernet
	Wi-Fi antenna type
	CT type
	Restart
	Restore factory settings

System Settings	Internet access
	General parameters
	Feed-in limit
	Emergency stop enable
	Plant switch control
	Active power control
	Reactive power control
	DRM
Work Mode	Self-use
	Feed-in priority
	Peak shaving
	Time of use
	Passive

7.2.4 Communication Box

Type	Description
System Settings	SVG mode
	Reactive power control
	Active power control
	Night operation control
	Emergency stop enable
	Plant switch control
	System time setting

----End

Version 1.4



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