Alpha·ESS
your smart energy

V03

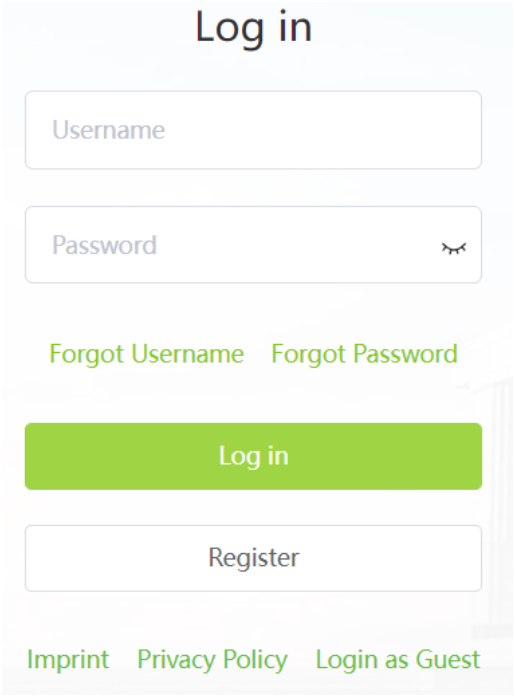
AlphaCloud Online Monitoring Installers User Manual

COPYRIGHT STATEMENT

CONTENT

1. Login Interface

1.1. Login



Input your username and password, then click “Log in” to jump to the home page. There would be a prompt after failed login.

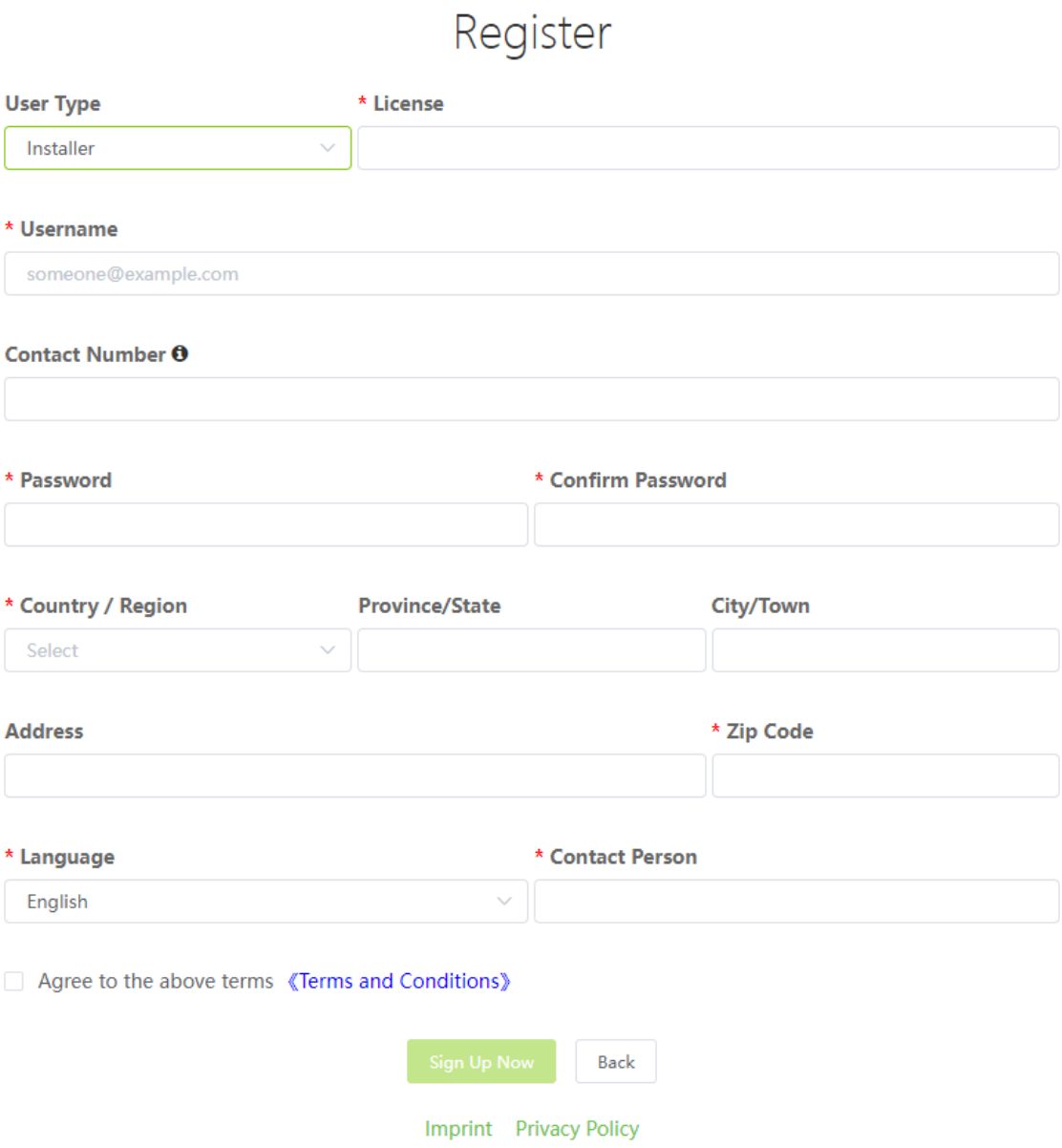
Users who haven't yet registered need to click “Register” to go to the registration page, see section 1.2.

Click “Imprint” to check the contact information on AlphaESS official website

Click “Privacy Policy” to check it

Click “Login as Guest” to check the functions of AlphaCloud

1.2. Register

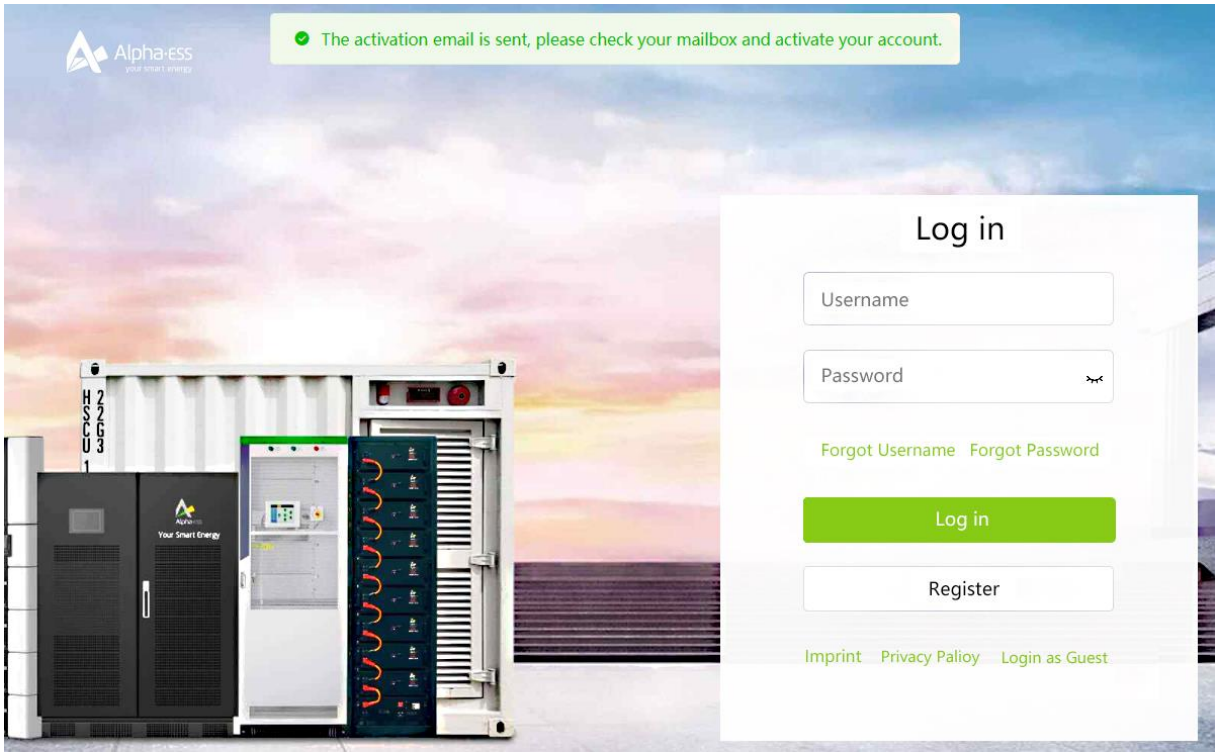


Fields with a "*" mark are required to be filled, and the contents you fill must consist with the facts. There are 2 types of registered users: end users and installers. Please select it according to the actual situation. Then you can select whether you accept auto upgrade or not. Then Click "Log in" to go to the login page.

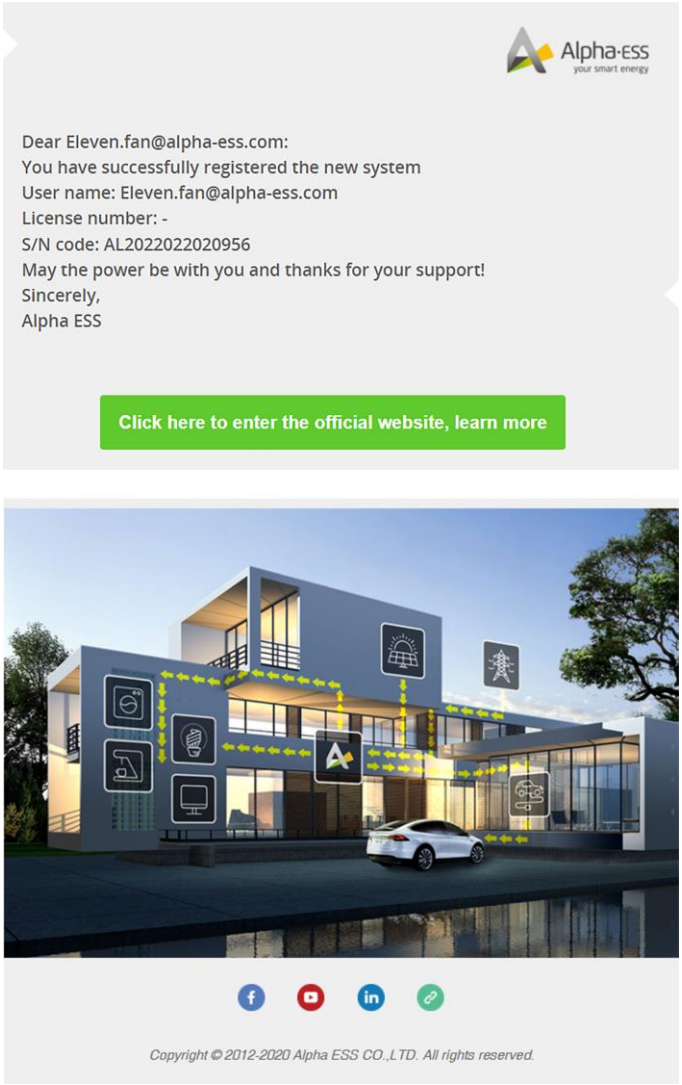
When register the username, you must to use your email address which must be valid. If the email address is not able to receive email, you will not successfully register your account.

You can select the language in the upper right corner of the page. Chinese, English and German are available at present.

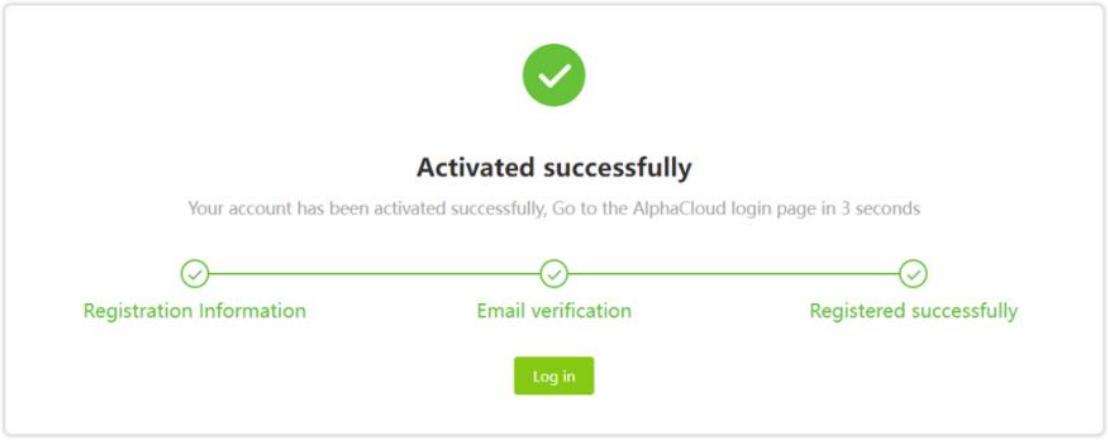
Click "Sign Up Now", a registration activation Email will be sent to your Email address, as shown below:



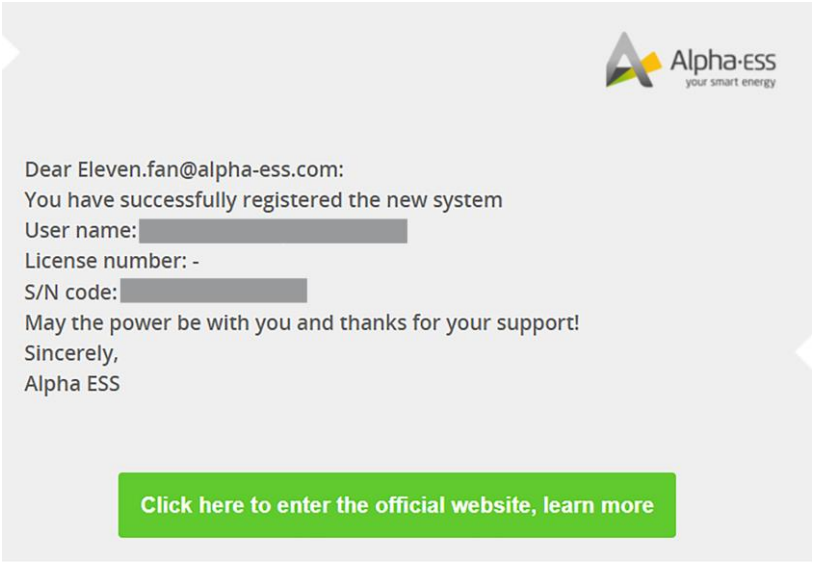
At the same time you will receive an activation email, as shown below:



Click the activation link and it would indicate successful account activation and automatically redirect you to the login page

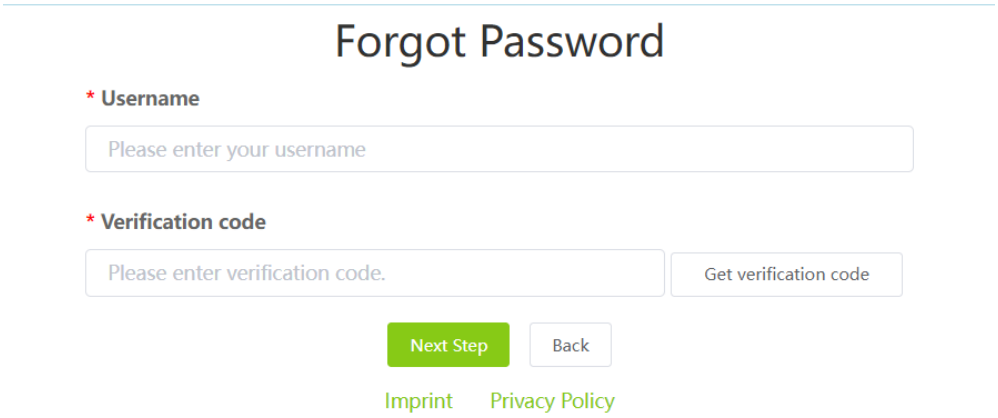


Then, a successful registration email will be sent to your mailbox, as shown below:

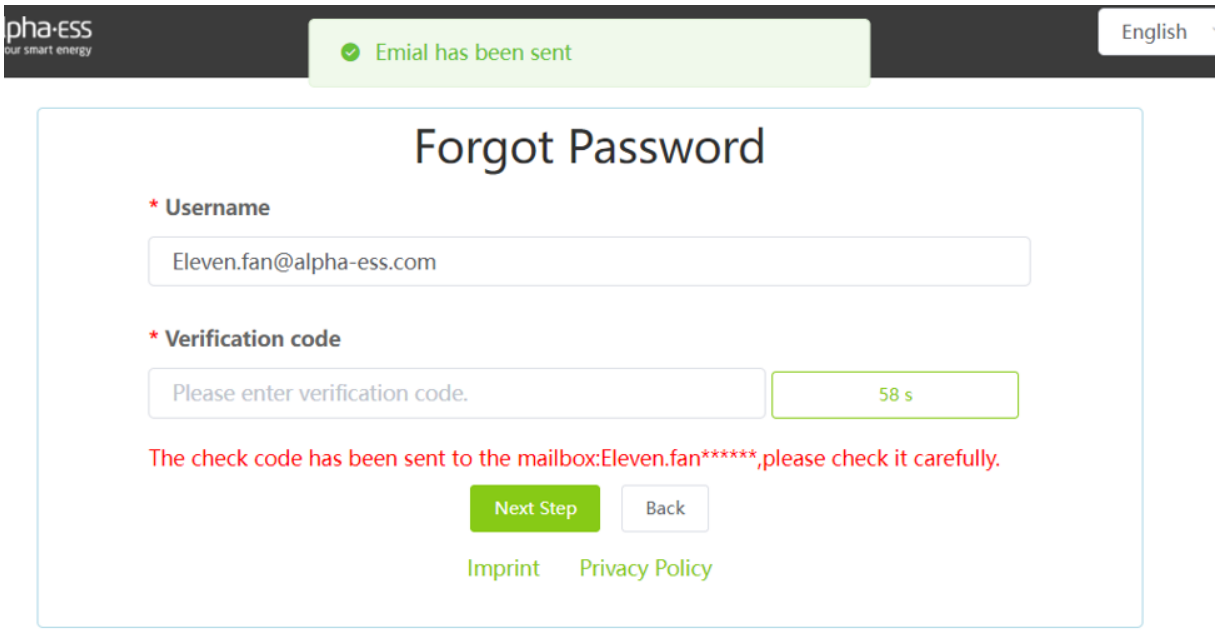


1.3. Forgot Password

If you have forgotten your password, please click “Forgot Password” on the login page.



If your forget the password, you need to input your email address when you register the account. Please click “Get verification code”, then the code will send to your email box.



When you pass the verification, you need to input your new password, then submit it to finish the password change

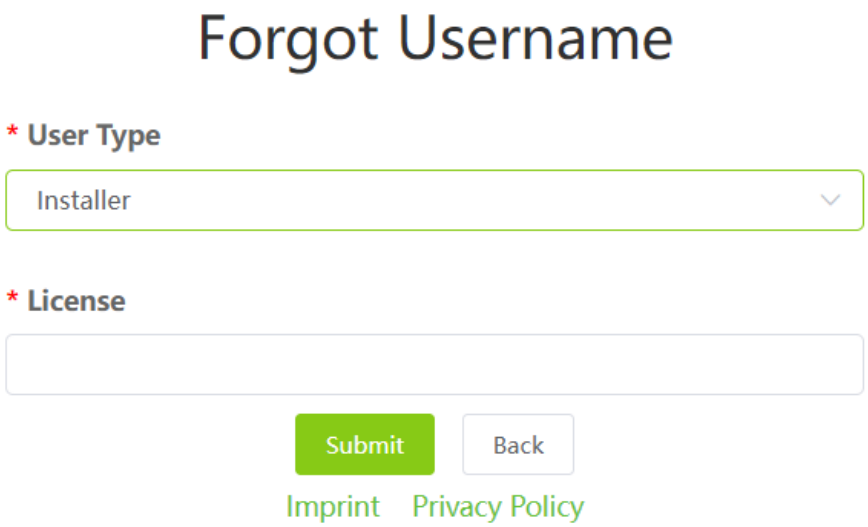
Click “Back” to jump to the login page.

Click “Imprint” to check the contact information on AlphaESS official website

Click ”Privacy Policy” to check it

1.4. Forgot Username

If you have forgotten your username, please click “Forgot Username” on the login page.



After submitting the required information, an email to retrieve your username will be sent to your mailbox.

Click “Back” to jump to the login page.

Click “Imprint” to check the contact information on AlphaESS official website

Click “Privacy Policy” to check it

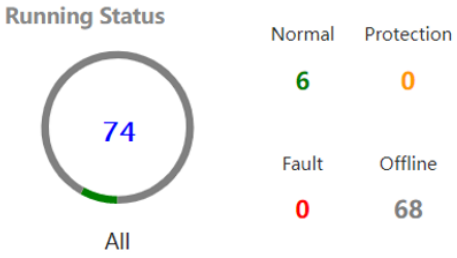
2. Homepage

2.1. Overview

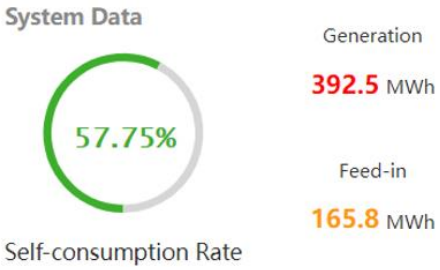
The homepage provides an overview of the information.

From left to right: running status, system data (including self-consumption rate, self-sufficiency rate), installed capacity.

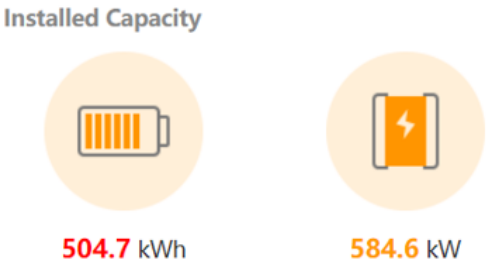
Four running status: Normal, Protection, Fault, Offline



System data: Self-consumption Rate is calculated by (total PV generation - total electricity sold to grid）/ total PV generation



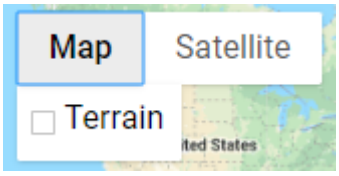
Installed capacity shows installed capacity of the batteries and rated power of the inverter



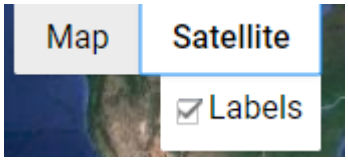
2.2. Map

The icons in the map show distribution information of end users.

Terrain map is available (as shown below).



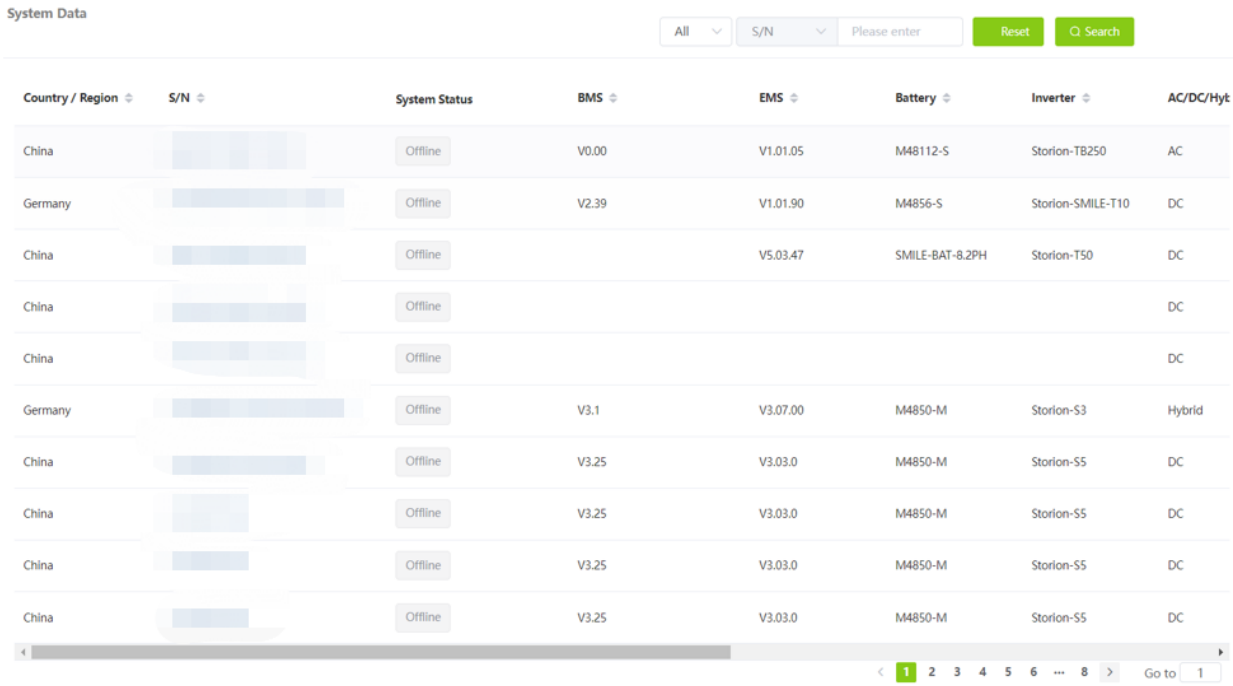
Satellite map with labels is available (as shown below).



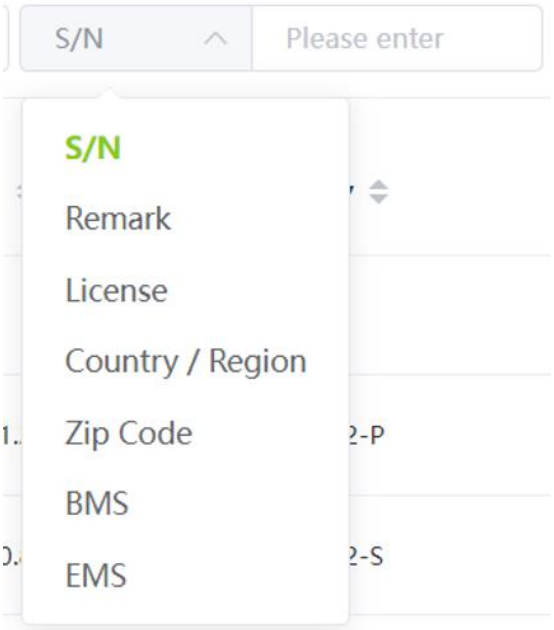
Right-click the icon, then a message prompt panel will show up. Click the S/N to jump to a new page of system data (see 2.3).

There is a map zoom in and out button in the lower right corner of the map (as shown below).

2.3. System Data



System data management (fuzzy queries available): the query conditions include S/N, remark, username, license, country/region, zip code, BMS firmware version, and EMS firmware version, as shown below:

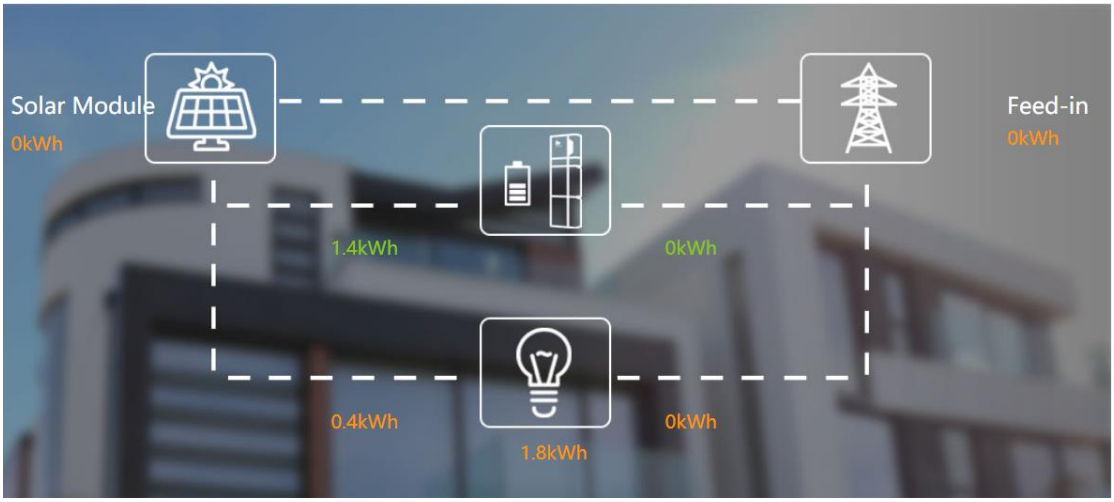

S/N
Please enter
S/N
Remark
License
Country / Region
Zip Code
BMS
EMS

3. List of Storage Systems

3.1. System Info

3.1.1. Energy Flow Charts

The image below shows energy flow chart of the energy storage system without an EV-charger installed.



The image below shows the energy flow chart of the energy storage system with an EV-charger installed:

The above figure shows the total energy flow, which can be queried according to the start time and end time.

Description:

i. Solar Module (1.8kWh): Total energy from PV generation.

Ii. Feed-in (0kWh): Total energy feed-in to grid.

Iii. Red box 1.4kWh: Energy charging battery from PV.

Iv. Green box 0kWh: Energy charging battery from the grid.

V. Blue box 0.4 kWh: Load consumption supplied by PV.

Vi. Cyan box 0kWh: Load consumption supplied by the grid.

Vii. 1.8kWh: Total load consumption.

Viii. White box 0kWh: Consumption of EV-charger.

3.1.2. Real-time Power Map

The image below shows the real-time power map of the energy storage system without an EV-charger installed:

The image below shows the real-time power map of the energy storage system with an EV-charger installed:

PS: Only SMILE series products have this function.

The above figure shows the real-time power map (if the system supports the latest features).

Description:

i. 0 W (orange): Real-time power generated by PV.

Ii. 4 W (yellow): Real-time power feed in to the grid.

Iii. 1109.83 W (green): Real-time power charging or discharging to or from the battery.

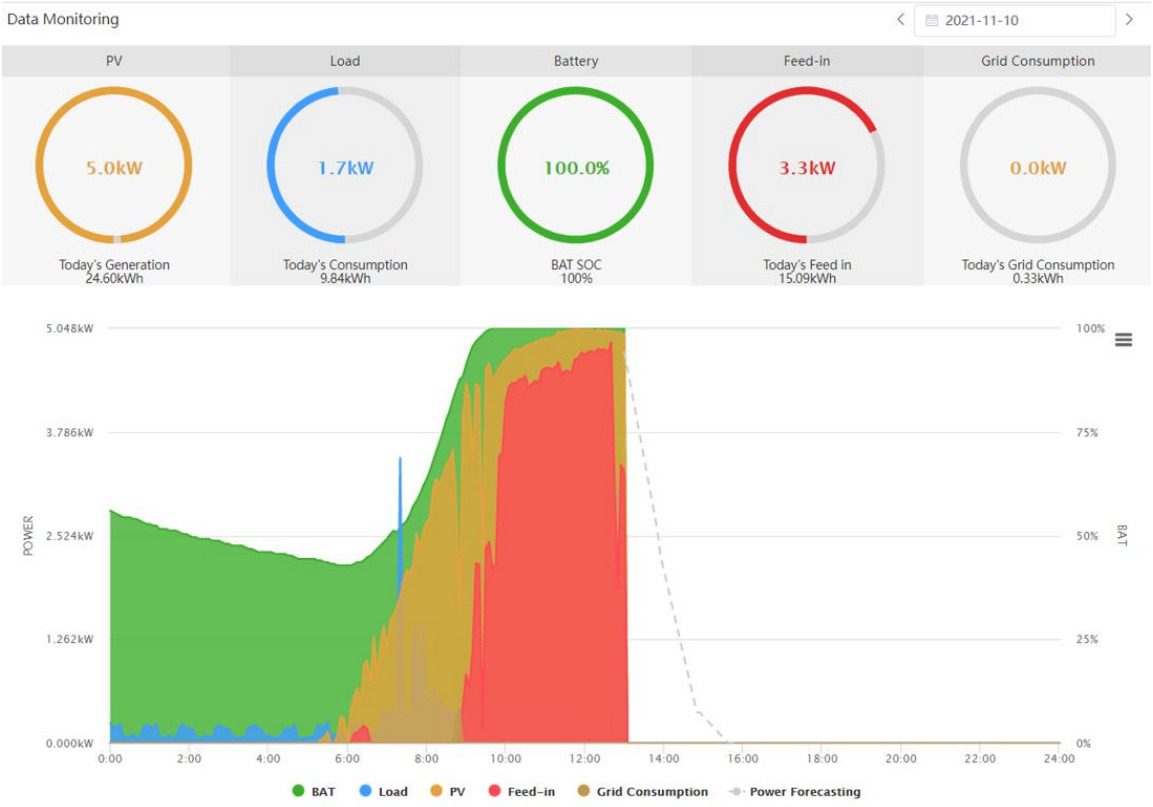
Iv. 0.00W (blue): Real-time load power.

v. 28.4 % (SOC): remaining battery capacity.

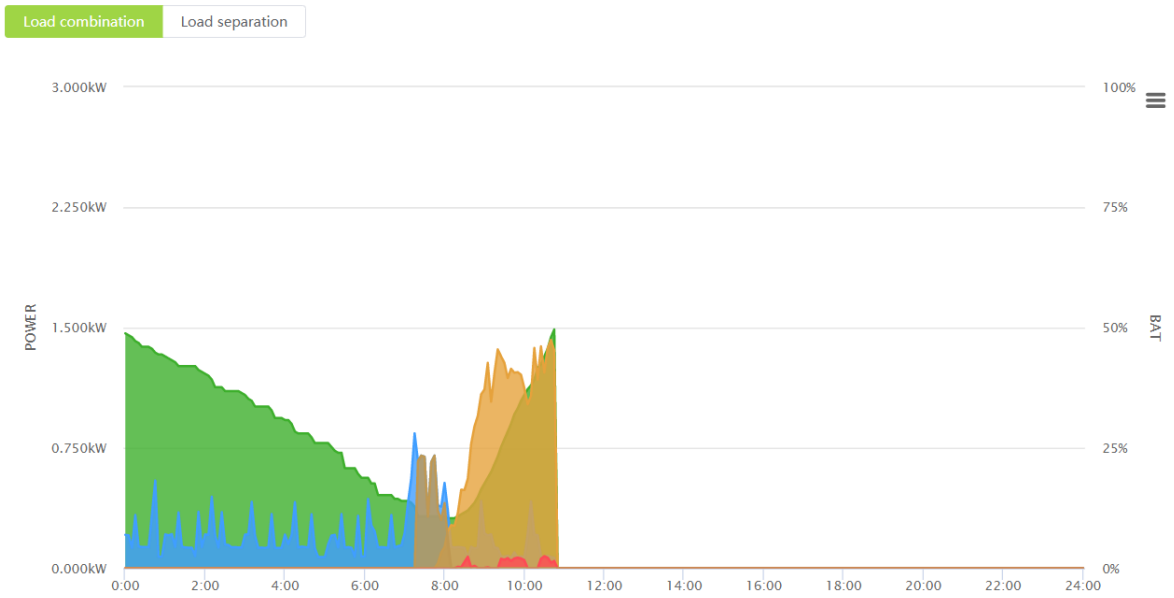
vi. 66W (orange): Load consumption from EV-charger.

3.2. Power Diagram

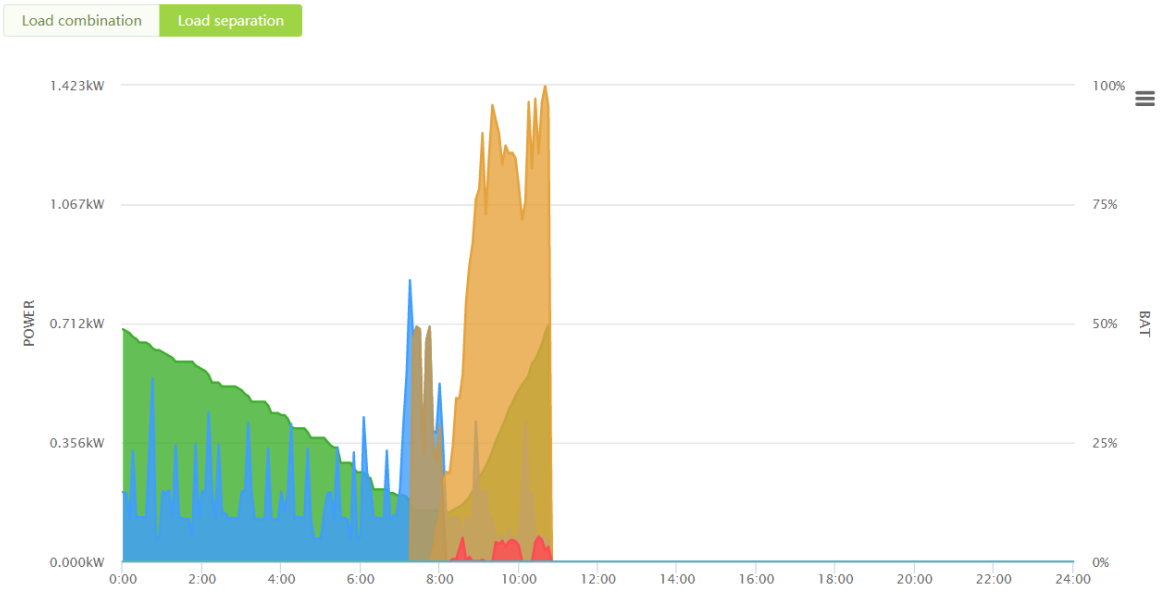
The image below shows the power diagram of the energy storage system without an EV-charger installed:



The image below shows the power diagram of the energy storage system with an EV-charger installed:



Click on "Load combination" to see the power diagram where the user loads and the EV-charger loads are combined into a total load:



Click the power diagram on the home page to view the power map for a specific time period as shown in the above figure.

Description:

Orange (PV): Power generated from PV

Blue (Load): Load consumption

Green (Battery): SOC (battery remaining capacity)

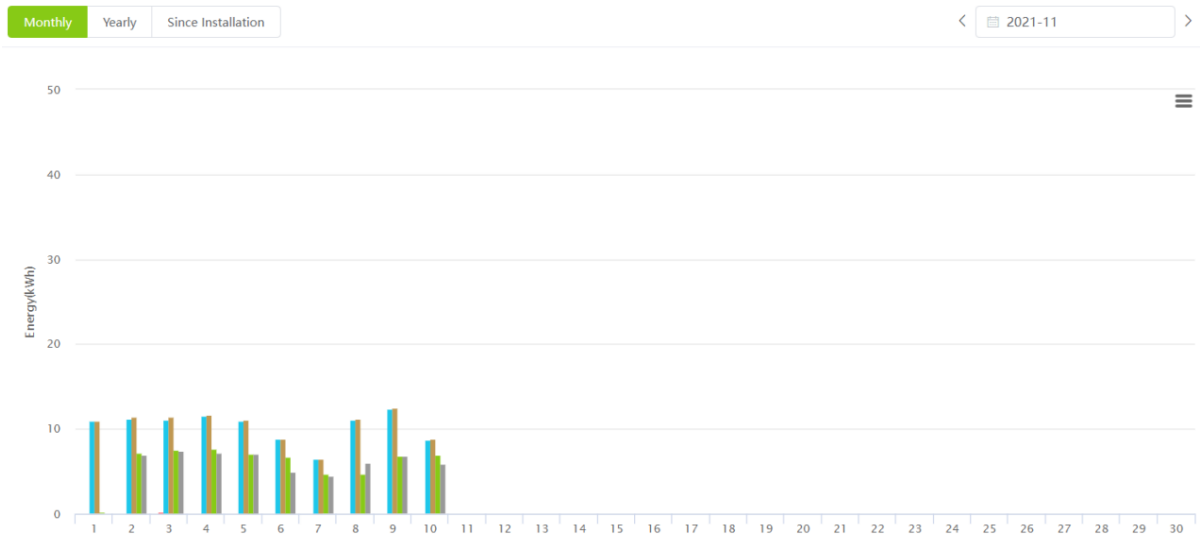
Red (Feed-in): Power feed in to the grid

Brown (Grid consumption): Power supplied by the grid

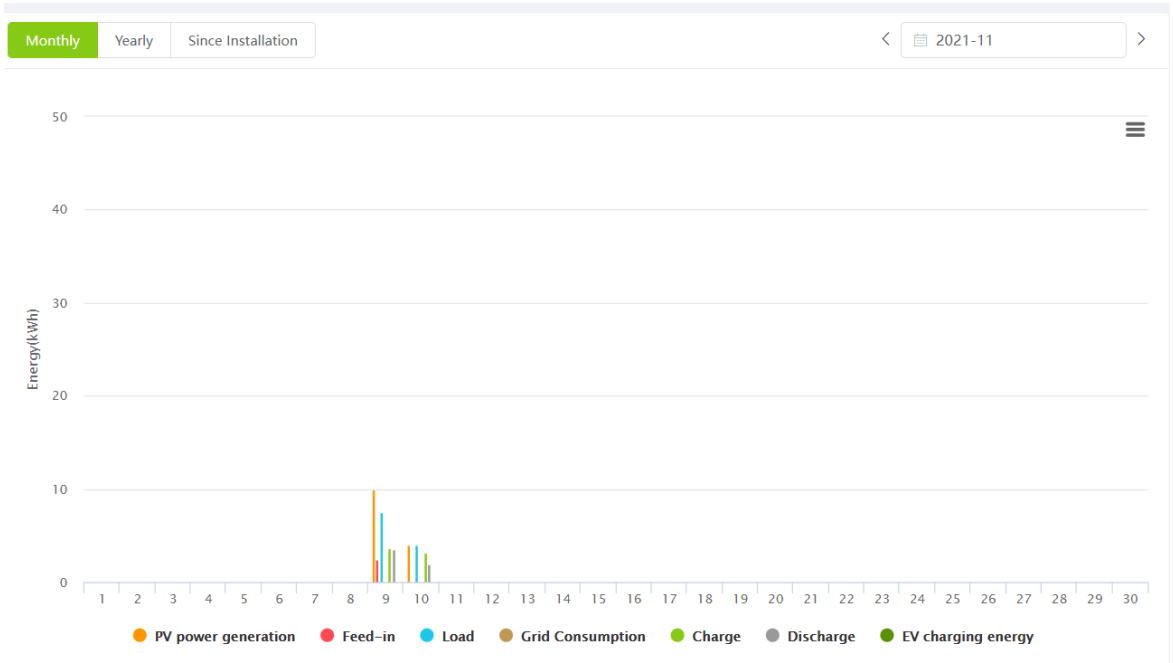
Users can set the date in the upper right corner to check the power data of a certain day. The diagram of a certain period can be zoomed in.

3.3. Statistical Diagram

The image below shows the statistical diagram of the energy storage system without an EV-charger installed:



The image below shows the income graph of your energy storage system with an EV-charger installed:



Click to check the S/N account. Click the home page graph to view the chart on a specific time period.

Description:

Three ways to calculate by month, by year, or since the day of installation.

PV power generation: Total energy generated by PV

Feed-in: Total energy feed in to the grid

Load: Total load consumption

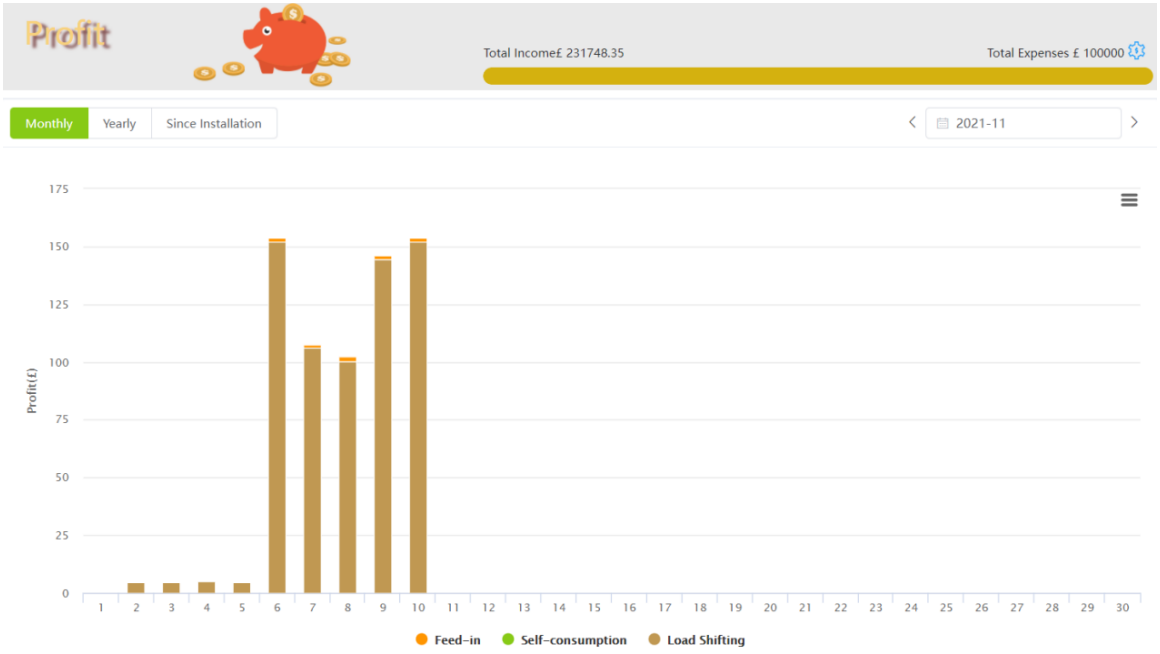
Grid Consumption: Energy consumption from the grid

Charge: Total energy charging the battery

Discharge: Total energy discharging from the battery

EV charging energy: Total energy charging the EV.

3.4. Profit Diagram



Click to check the S/N account. Click the home profit diagram to view the profit for a specific period.

Description:

The income chart can also be calculated monthly, yearly, or from the day of installation.

Total Income: Total income from the benefit of the system

Total Investment: Total investment cost (this value can be set by the customer); Progress bar is the ratio of total income to total cost

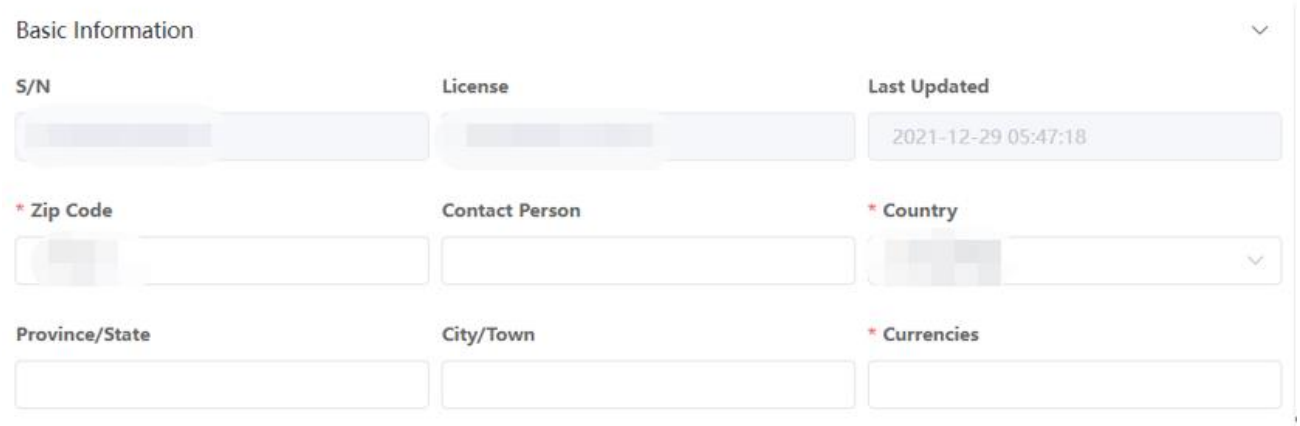
Feed-in: Income from energy feed in to the grid, if there is a feed-in tariff

Self-consumption: income from PV generation

Load shifting: income from charging the battery at low electricity price and use it at high electricity price, if there is different electricity tariff in one day

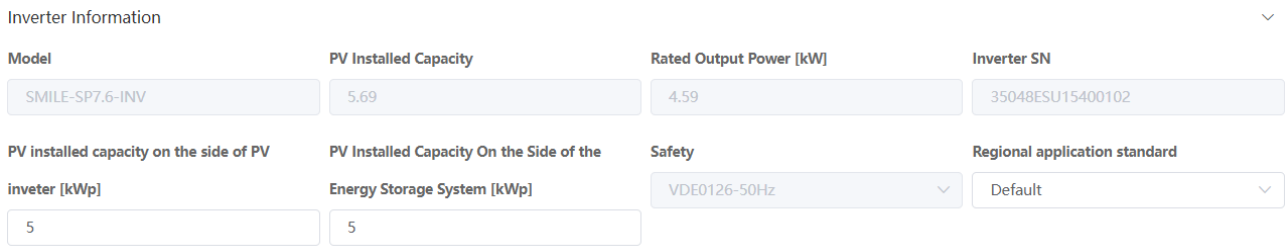
3.5. System Setup

3.5.1. Basic Information



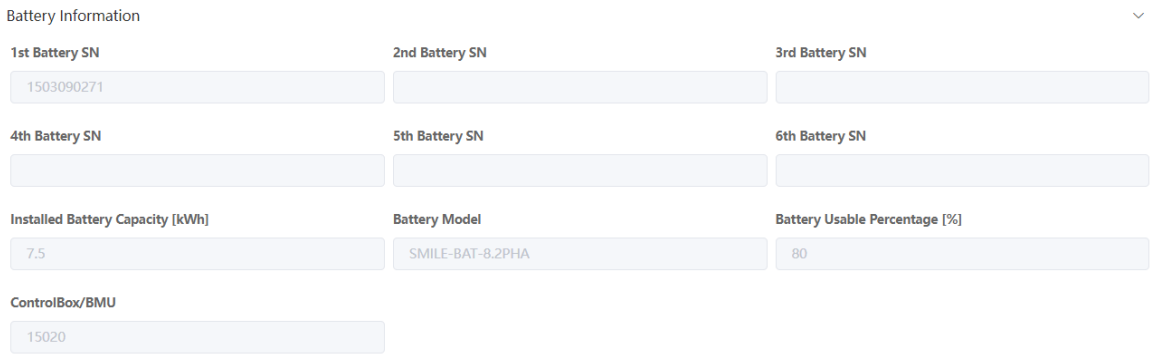
Fields with a "*" mark are required to be filled. Grey fields are default, and all white blank fields need to be filled.

3.5.2. Inverter Information



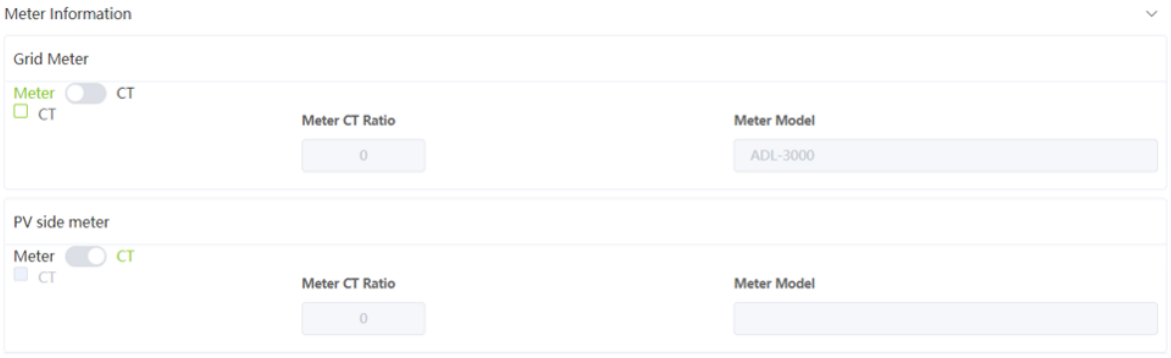
Above figure shows the basic information of the inverter. Grey fields are default, and all white blank fields need to be filled.

3.5.3. Battery Information



Above figure shows the basic information of batteries. Max. 6 batteries for residential systems and max. 18 batteries for commercial systems.

3.5.4. Meter Information



Grid Meter:

When the system is connected to the grid, grid meter should be set.

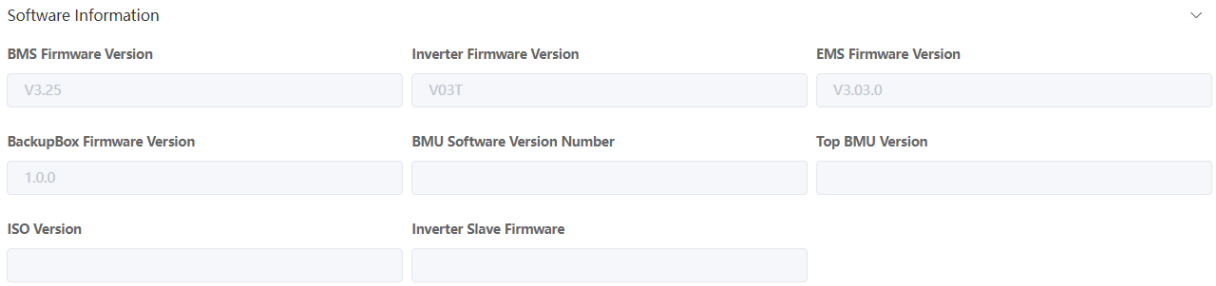
If the grid meter is installed, please select Meter for grid side. If this meter is a CT meter and the CT ratio is not 1, please select CT below and input the Meter CT Ratio. Meter Model cannot be set, it would be sent automatically by EMS. If this meter is not a CT meter or the CT ratio is 1, please do not select CT below. On the grid side, if only a CT is installed, please select CT for grid side.

PV meter:

When the system is installed with a PV inverter, PV meter should be set.

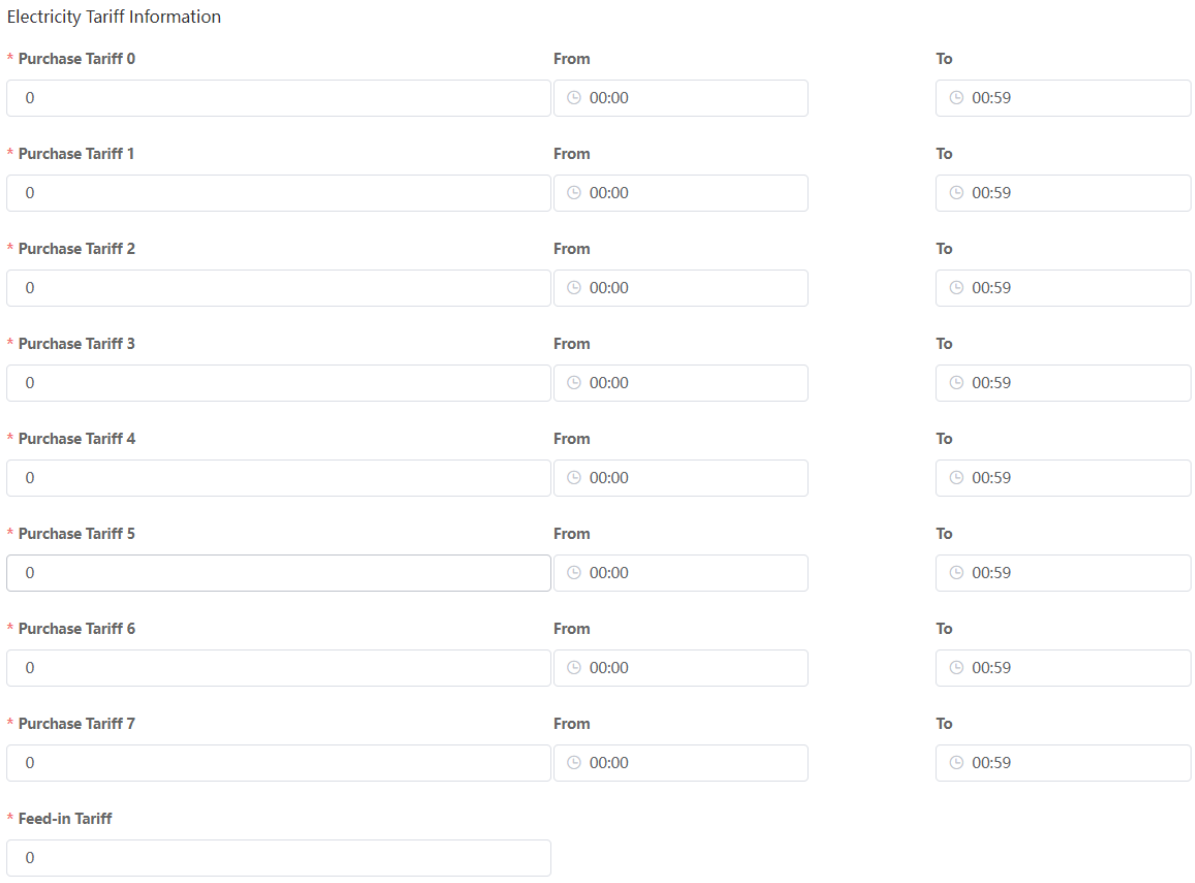
If the PV meter is installed, please select Meter for PV side. If this meter is a CT meter and the CT ratio is not 1, please select CT below and input the Meter CT Ratio. Meter Model cannot be set, it would be sent automatically by EMS. If this meter is not a CT meter or the CT ratio is 1, please do not select CT below. On the PV side, if only a CT is installed, please select CT for PV side

3.5.5. Software Information



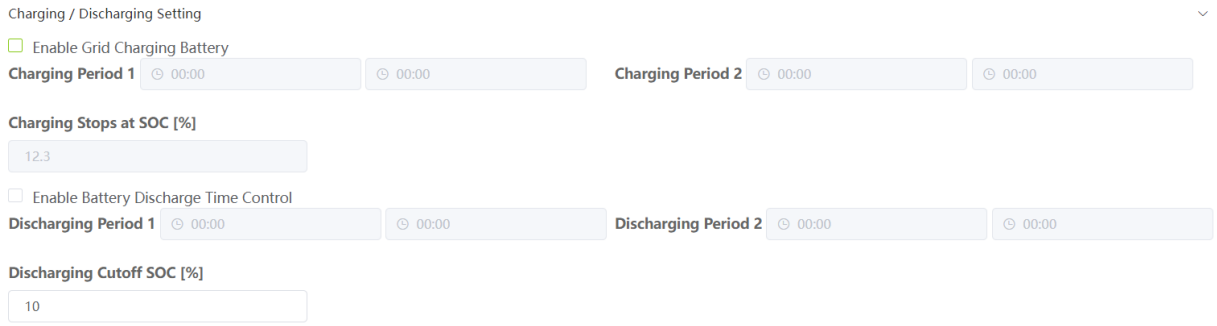
Above figure shows the basic information of software, it is not able to be set.

3.5.6. Electricity Tariff Information



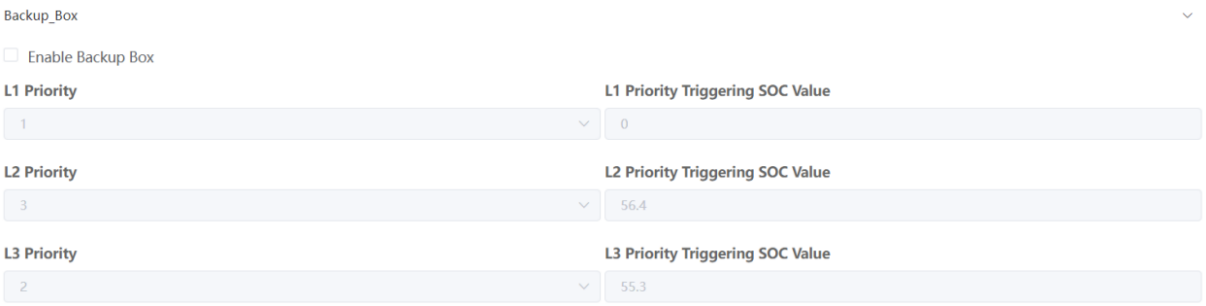
On this page, you can set electricity tariff, tariff period, feed-in tariff, then click “save”.

3.5.7. Charge/Discharge Settings



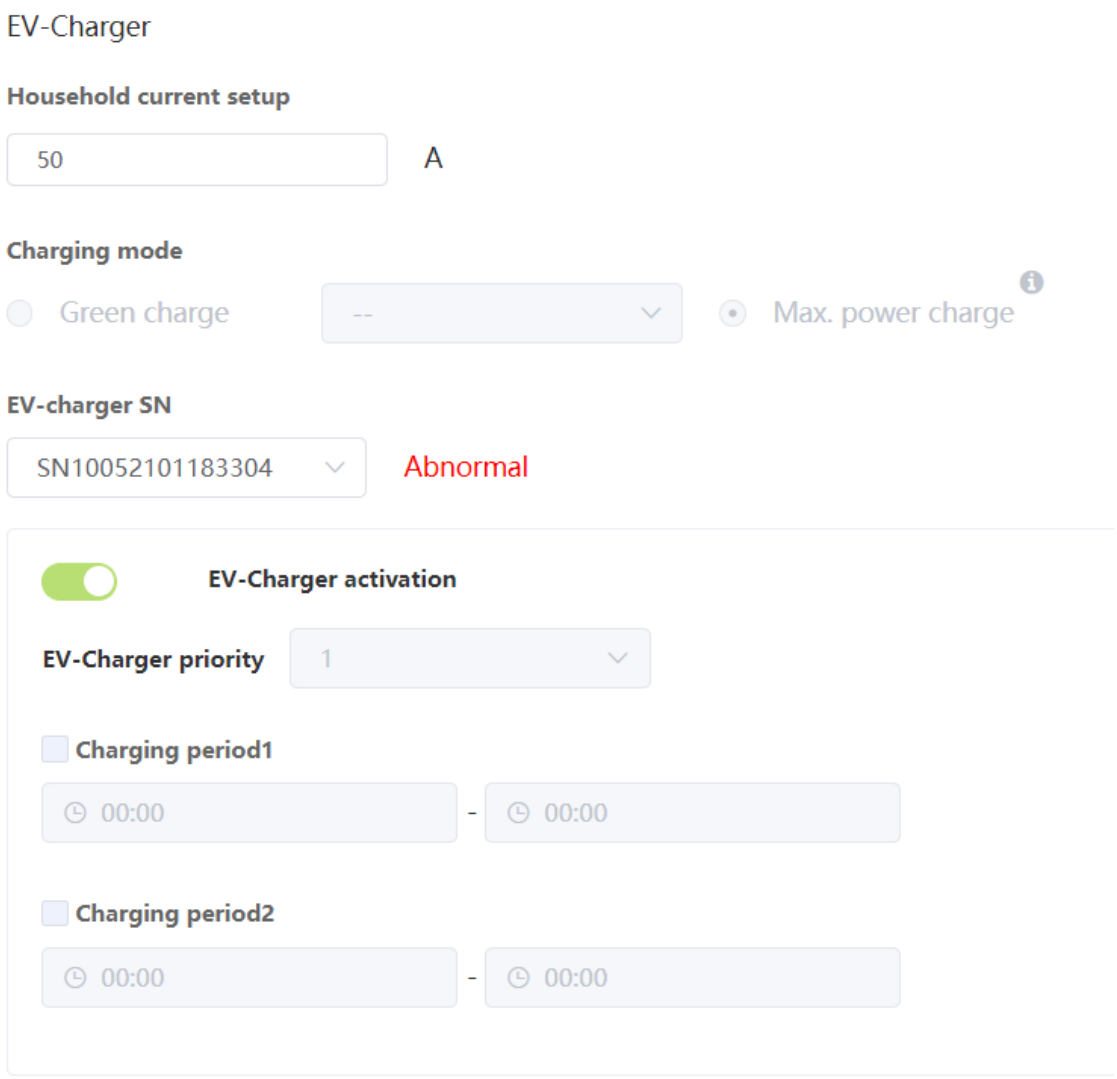
The main function of the charge and discharge setting is to set the charging and discharging time period of the system at the on-grid situation. Users should pay attention to the SOC value to prevent over charging and over discharging of the battery.

3.5.8. Backup Box



Set the priority of each load if a backup box is used.

3.5.9. EV Charger

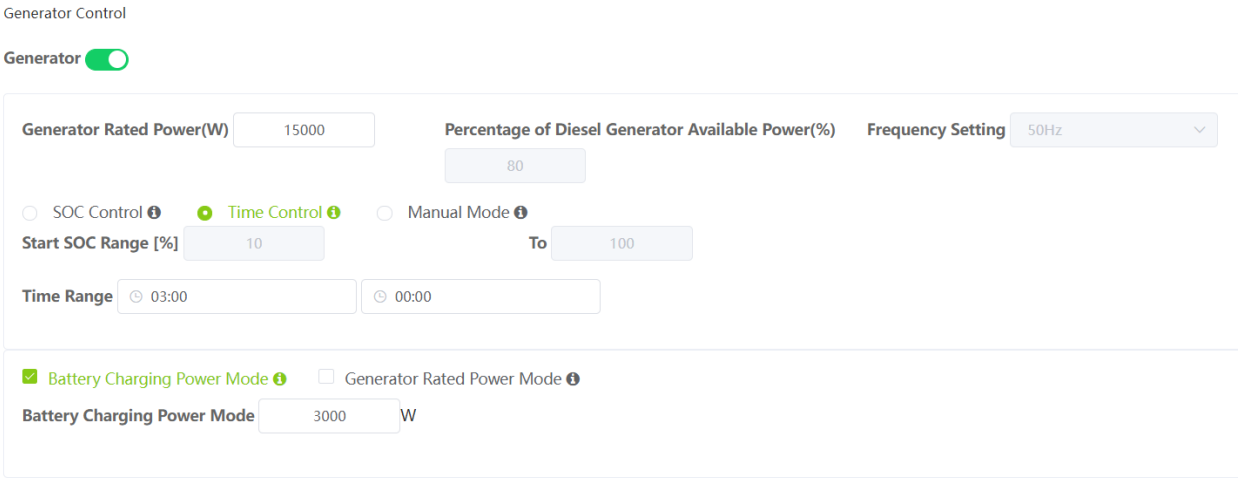


Here, the EV-Charger option will only appear when selecting the SN of your system with an EV-charger installed.

Household current Setup: Set the incoming current.

Currently enable button, EV charger priority, fixed charging time period 1 and 2 can only be set by end users. Charging status will be displayed.

3.5.10. Generator Control



There are three diesel generator control modes:

SOC mode: In this mode, please set a SOC range. When the SOC of the battery is lower than the lower limit of the SOC range, the diesel generator would be turned on; when the battery SOC is higher than the upper limit of the SOC range, the diesel generator would be turned off.

Time period mode: In this mode, please set the start time and a shutdown time of the diesel generator. When the local time is in this period, the diesel generator would be on; when the local time is not in this period, the diesel generator would not be turned on .

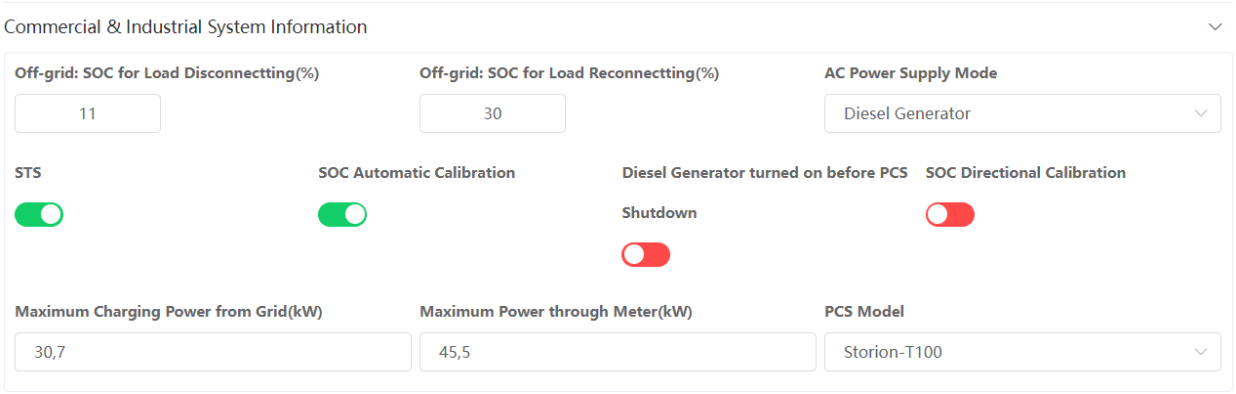
Manual mode: If you select this mode, the diesel generator is always on.

There are two generator charging modes, one is based on the generator rated power mode,and the other is based on battery charging power mode.

Generator rated power mode: In this mode, the inverter's power absorbed from the diesel generator = diesel generator rated power * percentage of diesel generator available power - load side power of the inverter-the PV side power of the inverter. If the calculation is negative, the inverter will not absorb power from the diesel generator.

Battery charging power mode: In this mode, the inverter's power absorbed from the diesel generator = the set battery charging power value, but if the value (diesel generator rated power * percentage of diesel generator available power - load side power of the inverter) is less than the set battery charging power value, the inverter will absorb power from the diesel generator according to the value (the rated power of the diesel generator * percentage of diesel generator available power-the load side power of the inverter).

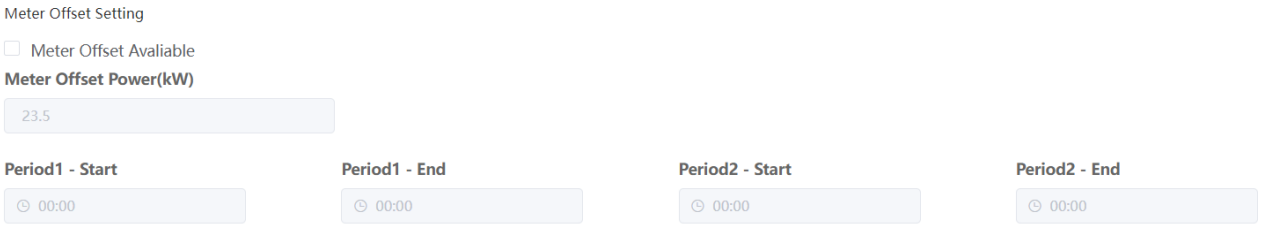
3.5.11. Commercial & Industrial System Information



This option is only available on commercial energy storage systems, whose EMS version is above V5.03.47.

Installers can setup the commercial & industrial system here.

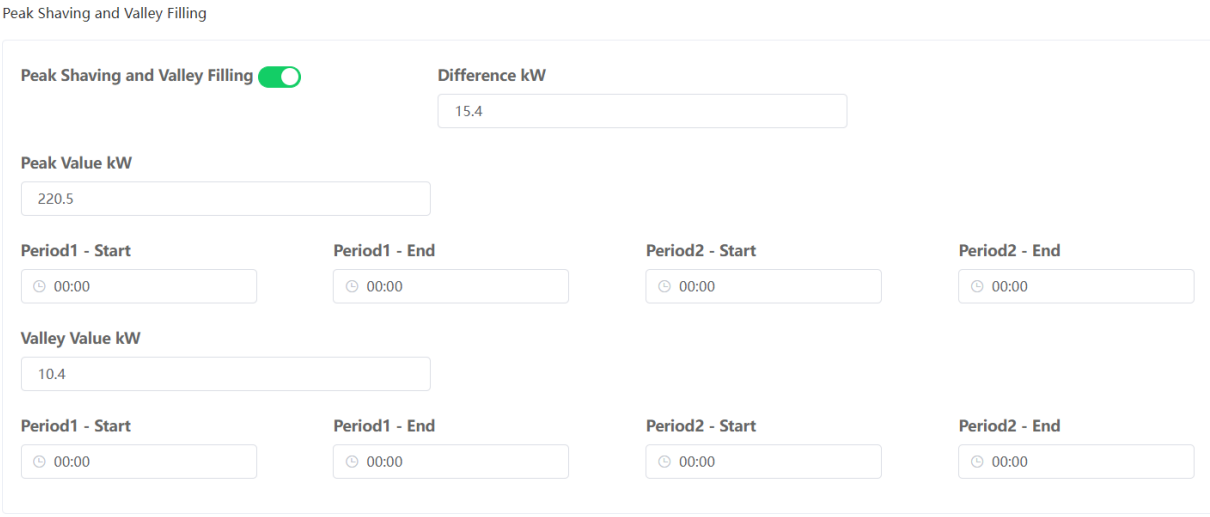
3.5.12. Meter Offset Setting



This option is only available on commercial energy storage systems, whose EMS version is above V5.03.47.

This mode is only effective in on-grid mode. When the function is enabled, the EMS will determine if the current time point is in the set time periods, if so, the EMS will regulate the AC side output power of the PCS according to the set power value, so that the electricity can be absorbed from the grid or feed in to the grid, which will be reflected in the grid meter power value; if the current time point is not in the set time periods, the EMS will execute the self-generation mode or TOU charging/discharging mode.

3.5.13. Peak Shaving and Valley Filling



The peak-shaving and valley-filling function is only available on commercial energy storage systems, whose EMS version is above V5.03.47. The setting parameters include enable button, difference, peak value, start time and end time of peak shaving period 1, start time and end time of peak shaving period 2, valley value, start time and end time of valley filling period 1, start time and end time of valley filling period 2.

When the function is enabled, if the current time point is in peak-shaving time period or valley-filling time period, the system executes peak-shaving and valley-filling logic,

if not, the system executes other logic (self-consumption or time period charge and discharge control).

This mode is only effective in on-grid mode. The EMS first determines whether the function is enabled or not, if so, it determines whether it is effective in the specified time period, which includes the sets of peak shaving time periods and the sets of valley filling time periods, the system will enter the peak shaving and valley filling logic when it is in any of these time periods.

During the peak shaving time period, if the absorbing power of the meter is greater than the peak value, the system will discharge the energy and cut the absorbing power of the meter to the value of peak minus difference.

If the load power is not higher enough to trigger peak shaving and it lasts for 1 minute, then the AC side power of the system would be 0. Triggering peak shaving means that when the system does not discharge, the absorbing power of the meter is more than the peak value.

During the valley filling time period, if the absorbing power of the meter is less than the valley value, the system will be charged and increase the absorbing electric power of the meter to the value of valley plus difference. If the load power is not small enough to trigger valley filling and it lasts for 1 minute, then the AC side power of the system will be 0. Triggering valley filling means that when the system does not charge from the grid, the absorbing power of the meter is less than the valley value.

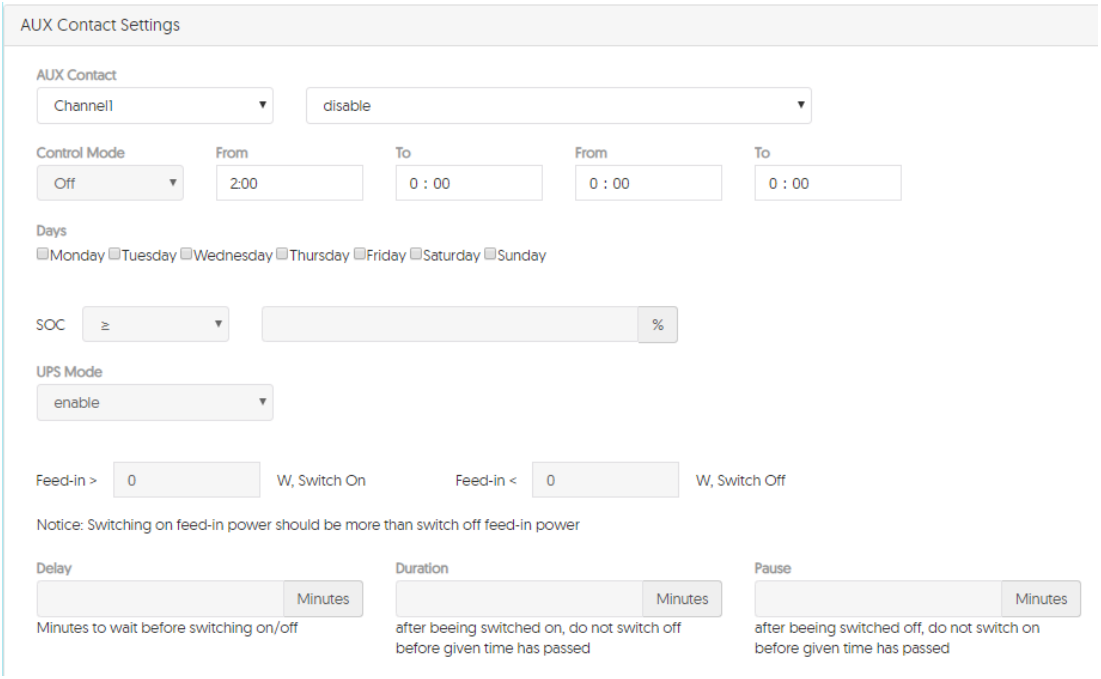
3.5.14. Aux Contact Settings

Aux contact settings is only for the end user, whose energy storage system has aux contact function and who uses a device with dry contact connected correctly with the system. Currently aux contact function is only available on SMILE systems.

Under aux contact function, the UPS mode should be disabled.

After wiring, the aux contact function can be set on the server.

1. Click “System Setup” and click “AUX Contact Setting”, then the following interface appears:



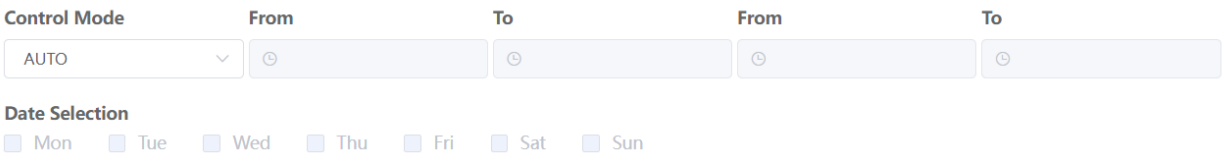
2. Select AUX 1 or AUX 2 in AUX Contact Channel. Two devices can be controlled totally.

3. Set “enable” if the function for the chosen channel is available.

4. Set the Control Mode. There are 3 modes for the AUX contact: On, Off and Auto.

a. Control Mode On

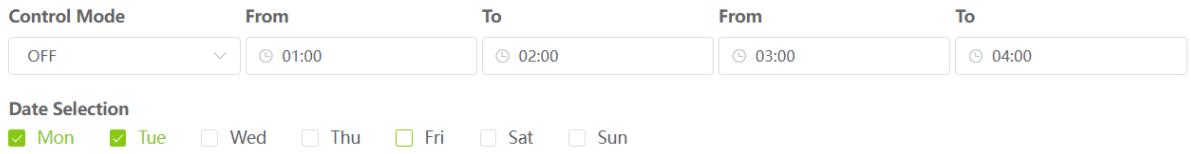
Set the time and date of switching on. You can set one or two time periods. In the set time periods, the Aux Contact will be switched on automatically, otherwise it doesn’t work.



If the two periods are overlapped, only the first period will be active. In this mode the normal self-consumption logic will be executed.

b. Control Mode Off

Set the time and date of switching off. You can set one or two time periods. In the set periods the Aux Contact will be switched off automatically. If you don’t set the period, this function doesn’t work.



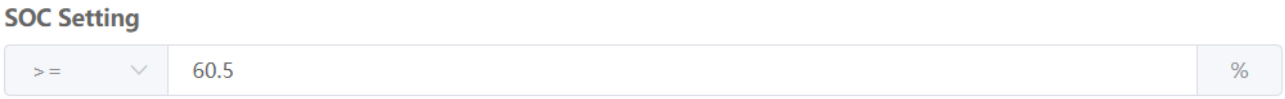
If the two periods are overlapped, only the first period will be active. In this mode the normal self-consumption logic will be executed.

c. Control Mode Auto

It means the Aux contact will be switched automatically on or off according to following logic.

Under Auto Mode, the period control function doesn't work. In this mode the following further specifications should be set.

c.1 set the SOC to activate. Three modes available:



1. "≥", means when SOC ≥ given value, it works.

2. "≤", means when SOC ≤ given value, it works.

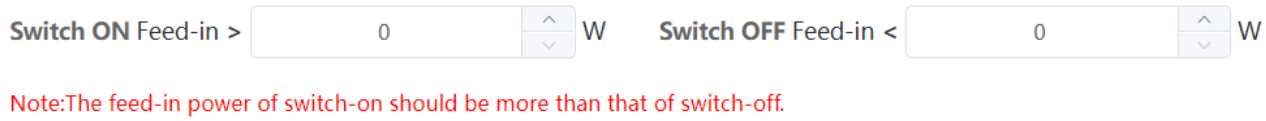
3. "disable", means the Aux contact control is not related to the SOC value.

c.2 set surplus energy range, means the feed-in condition.

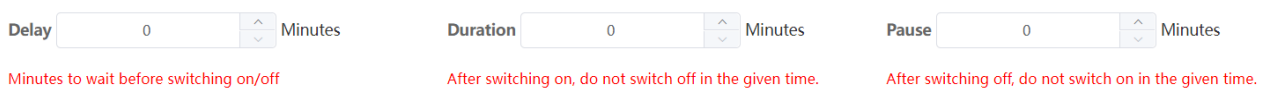
Set the feed-in power values, see figure below.

When the feed-in power > left given value, the Aux contact will be switched on.

When the feed-in power < right given value, the Aux contact will be switched off (or back to the initial situation).



c.3 set the delay, duration and pause time to prevent too frequent switch on and off.



Delay

The Aux contact will work (be switched on/off) after the given time only if some conditions are fulfilled.

Duration

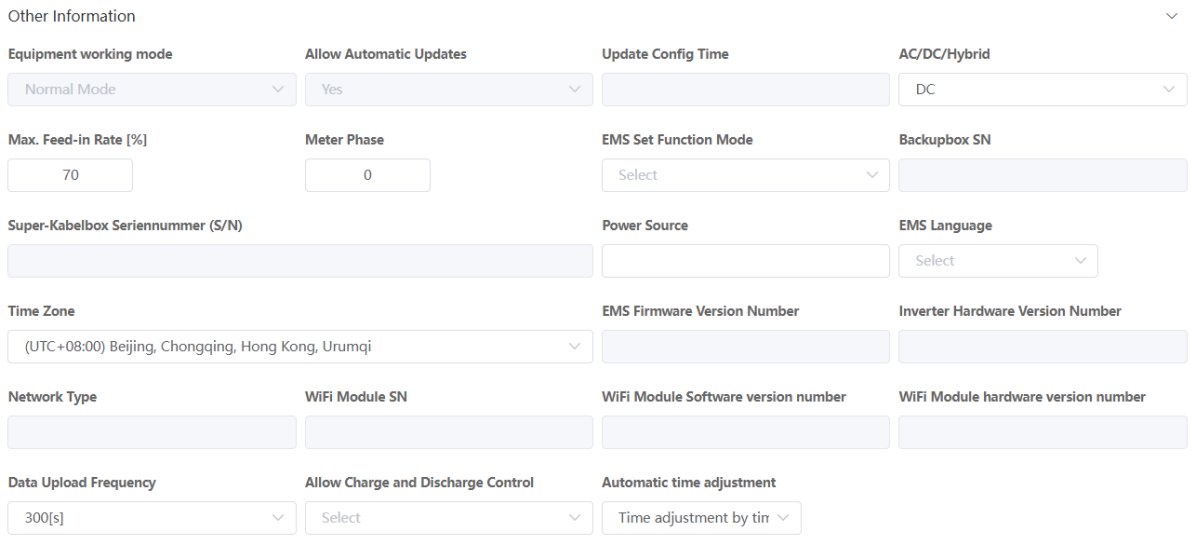
After the Aux contact being switched on, it will not be switched off before the given time passed.

Pause

After the Aux contact being switched off, it will not be switched on before the given time passed

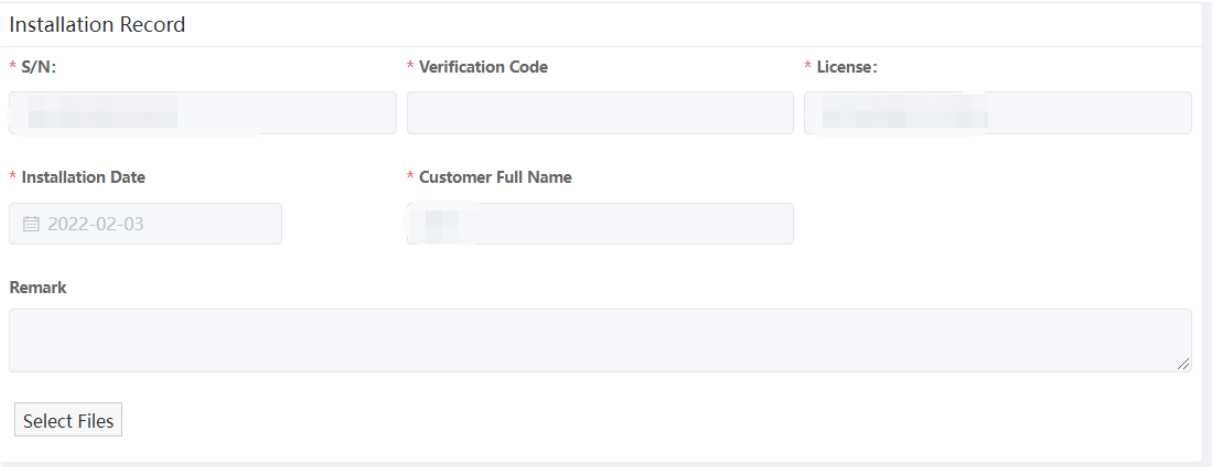
In this mode the normal self-consumption logic will be executed.

3.5.15. Other Information



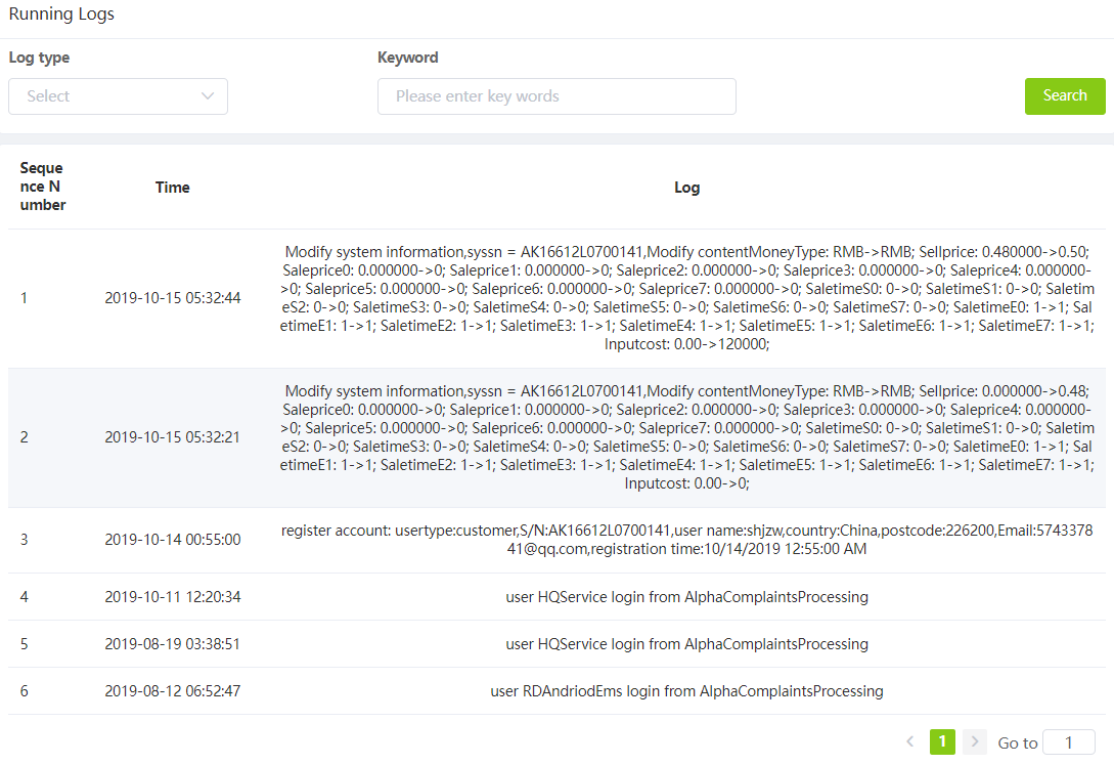
Other information is displayed here, grey fields are default, white blank fields are able to be edited.

3.6. Installation Record



Click the S/N you want to view and click the homepage installation record, as shown in the above picture, the fields with "*" are required to be filled in.

3.7. Running Log



Click the S/N you want to view and click the homepage running log, as shown in the above picture. Select the log type and input the keyword.

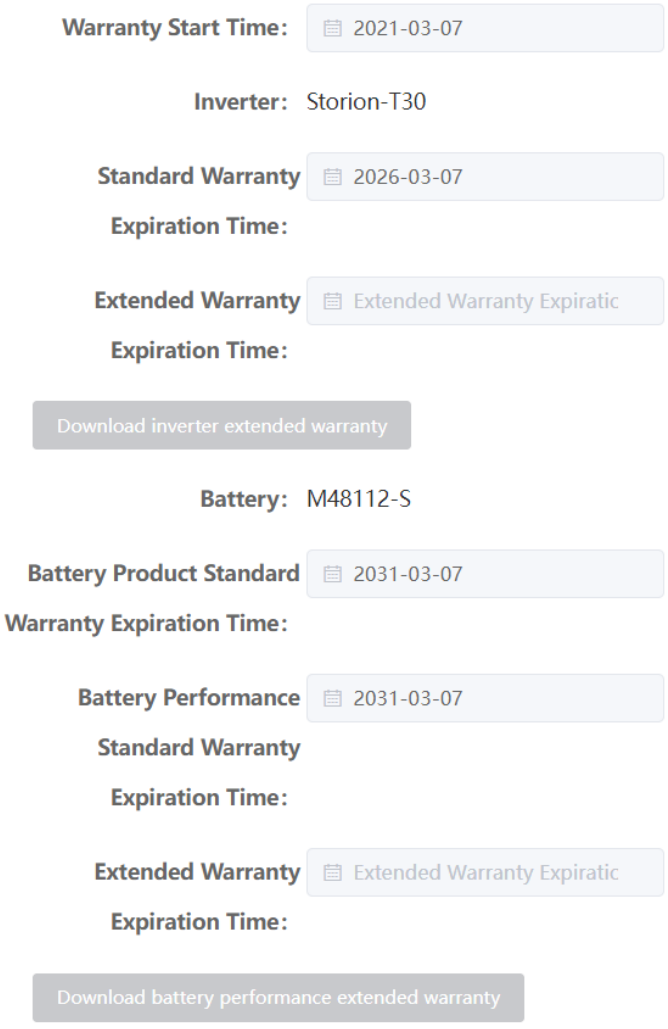
3.8. Data Analysis

Click the S/N you want to check, and then click data analysis on the homepage to check the tracking curve for a specific time period.

3.9. Warranty

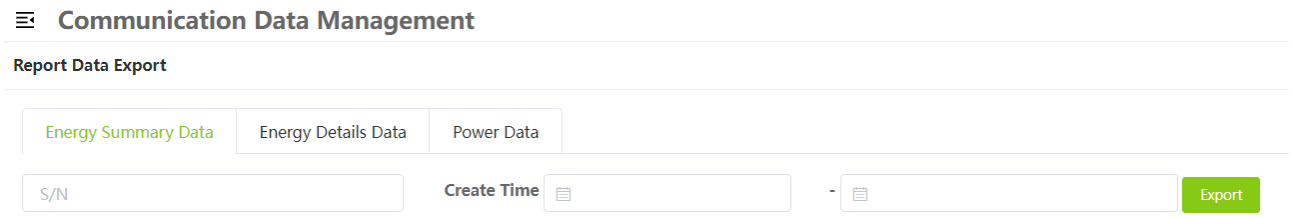
Currently this page is only available for installers who are located in Germany, Austria, Switzerland, for other countries, it will not be displayed.

End-user's product name, start and expiration date of the standard warranty will be displayed. If the end-user has bought an extended warranty, it can be downloaded here.



4. Communication Data Management

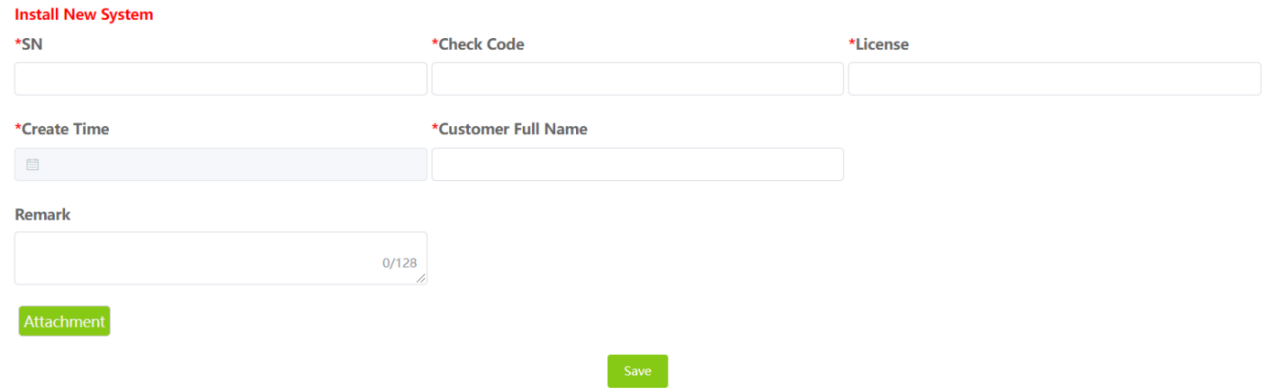
4.1. Report Data Export



As shown in the figure above, the energy summary data, energy details data, and power data of the system can be exported.

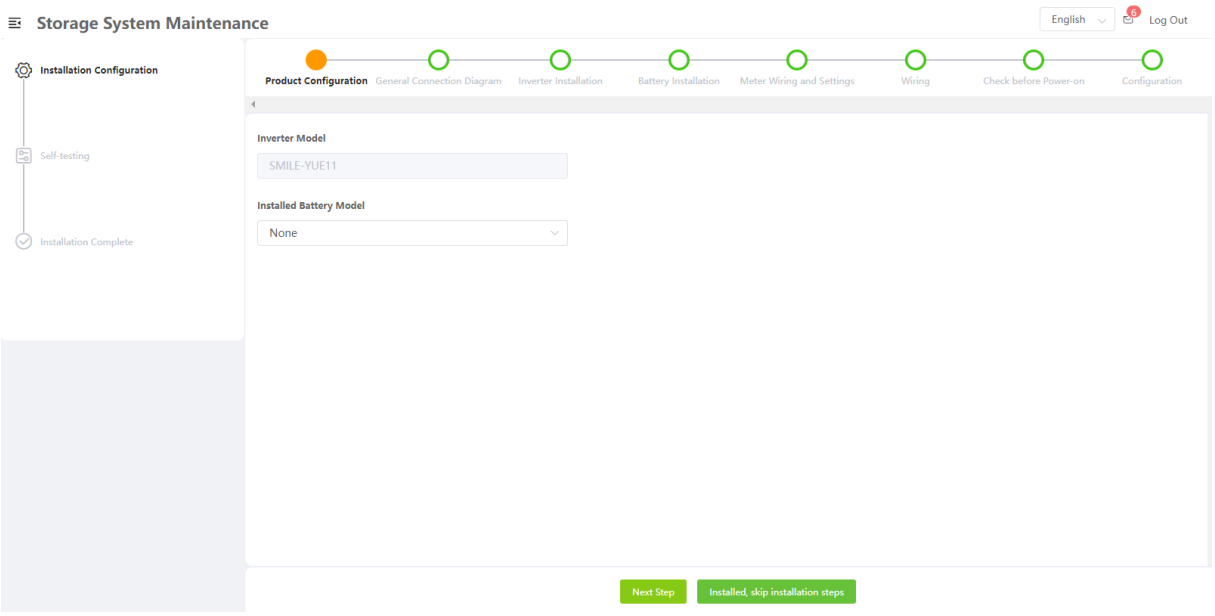
5. Storage System Maintenance

5.1. Install New System



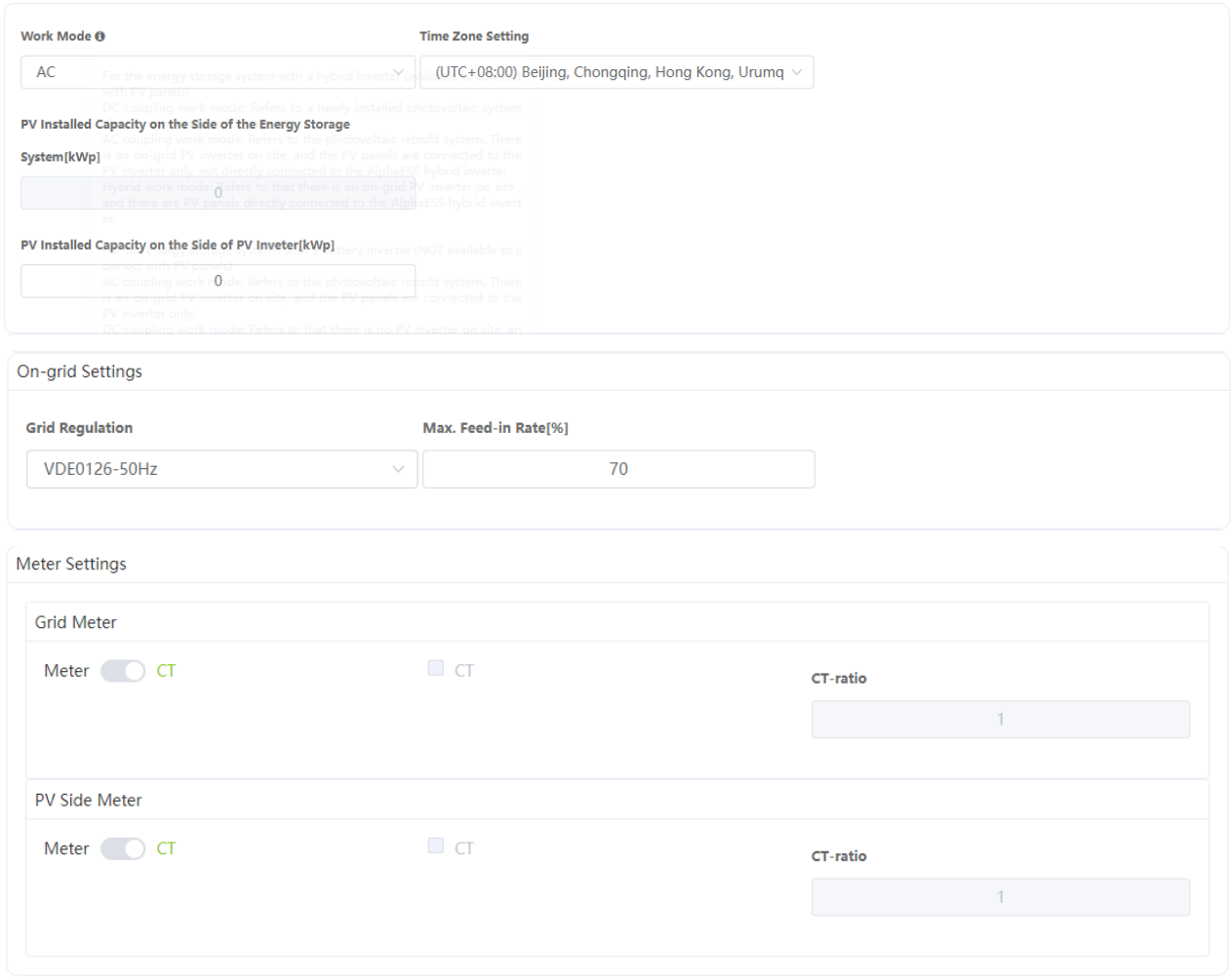
Enter S/N, check code, license, create time, customer full name, contact number, address, and click the save button. Fields with "*" mark are required to be filled. Click the Browse button to select the attachment you want to add.

Click "Save" to go to the Installation Configuration page. Select the Installed Battery Model for your current product.



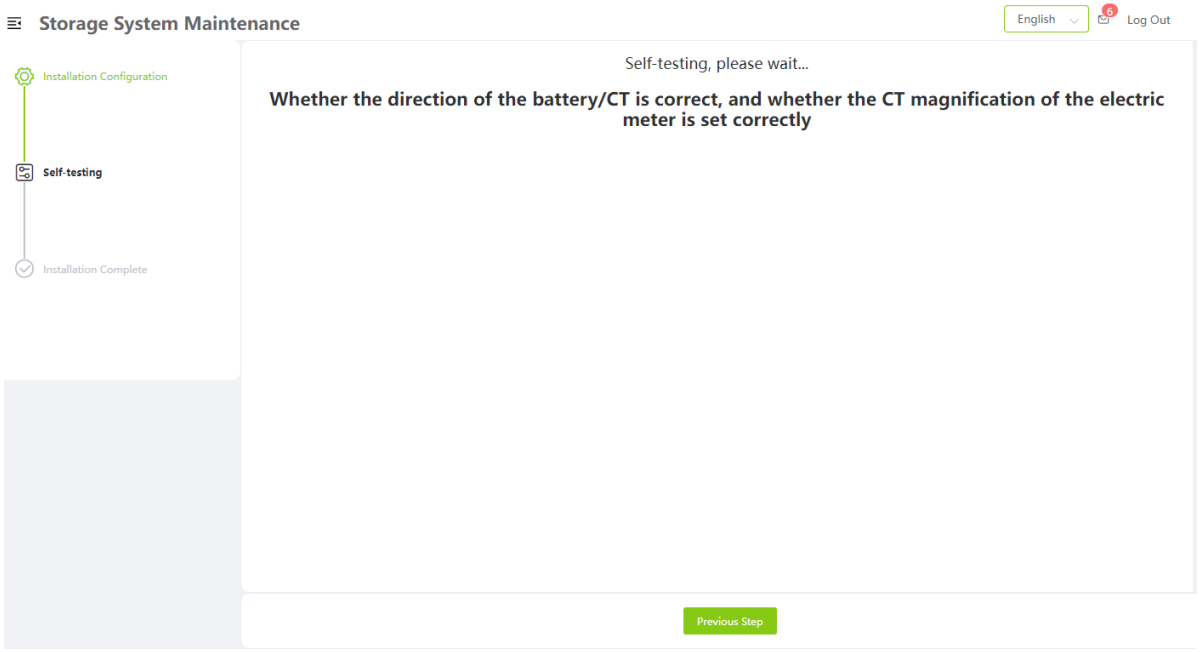
Click "Next Step" to see the quick installation steps, which include General Connection Diagram，Inverter Installation, Battery Installation, Meter Wiring and Settings, Wiring and Check before Power-on.

Click "Installed, skip installation steps" to go to configuration page. Please set the relevant parameter correctly to ensure the system successful operation.

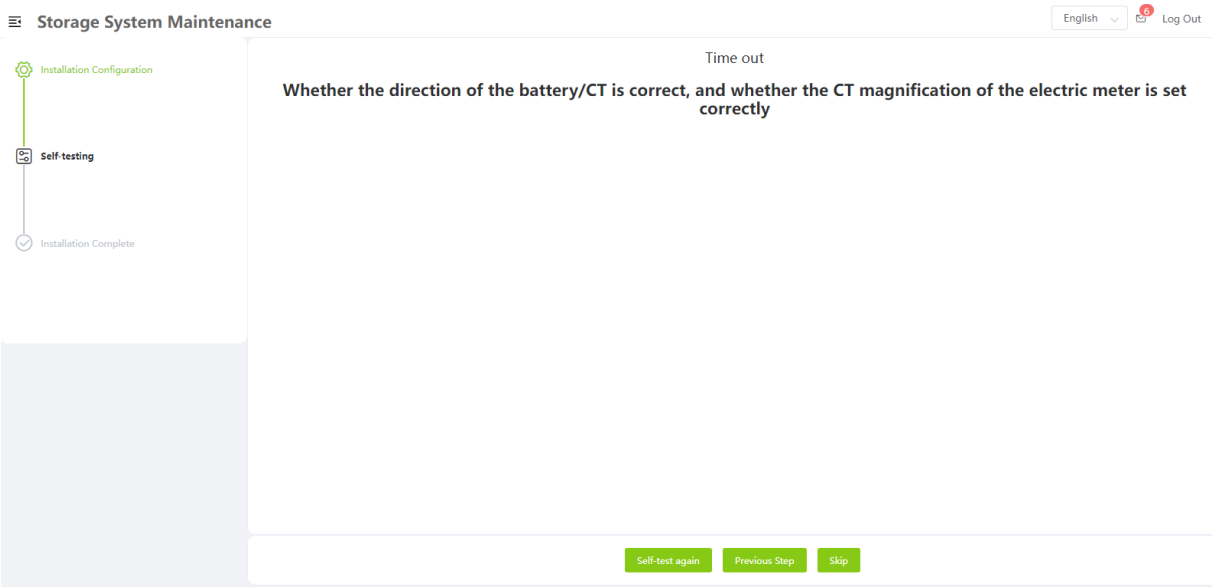


Click "Previous Step" to go backward.

Click "Next Step" to start Self-testing. Currently not all products are able to self-test.



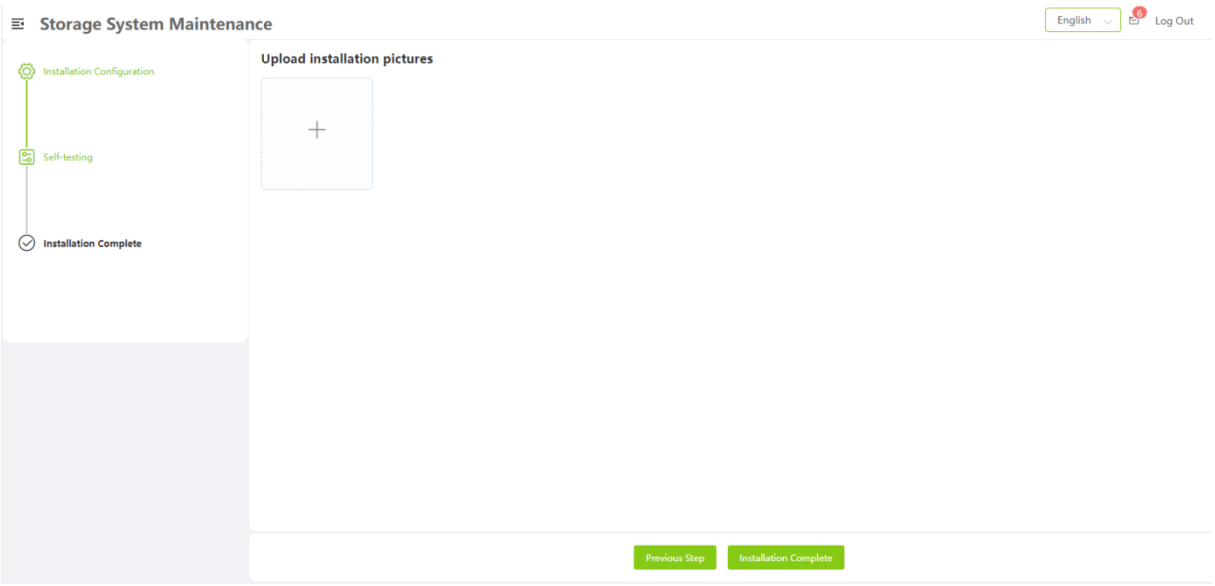
In case of time out, self-testing will be skipped.



Click " Self-test again" to repeat the test.

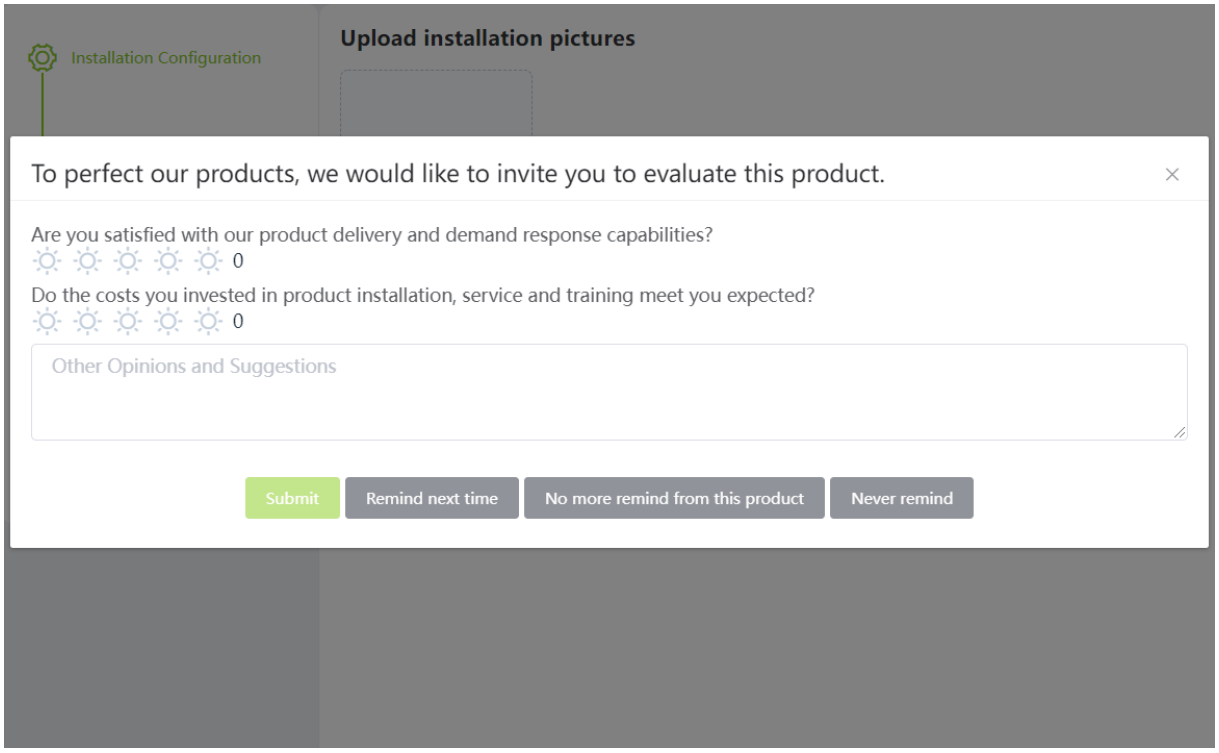
Click "Previous Step" to go back to the starting page and do the configuration again.

Click "Skip" to go to upload installation picture page.



Click "Previous Step" to self-test again.

Click "Installation Complete", a product satisfaction survey page pops up automatically.



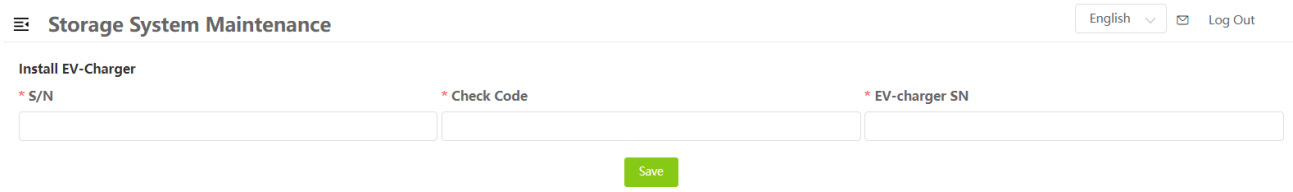
Click "Submit" to submit your satisfaction survey results.

Click "Remind next time", this prompt will appear next time when the installer completes another installation.

Click "No more remind from this product", no prompt for the same product will appear next time.

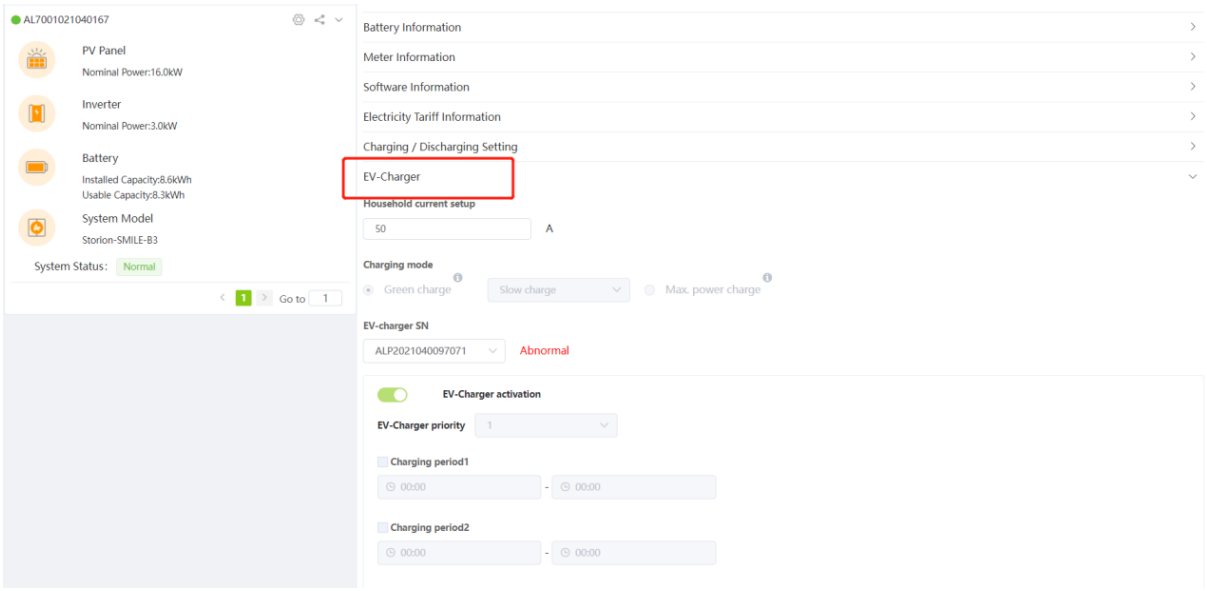
Click "Never remind", no prompts will appear in the future.

5.2. Install EV-Charger

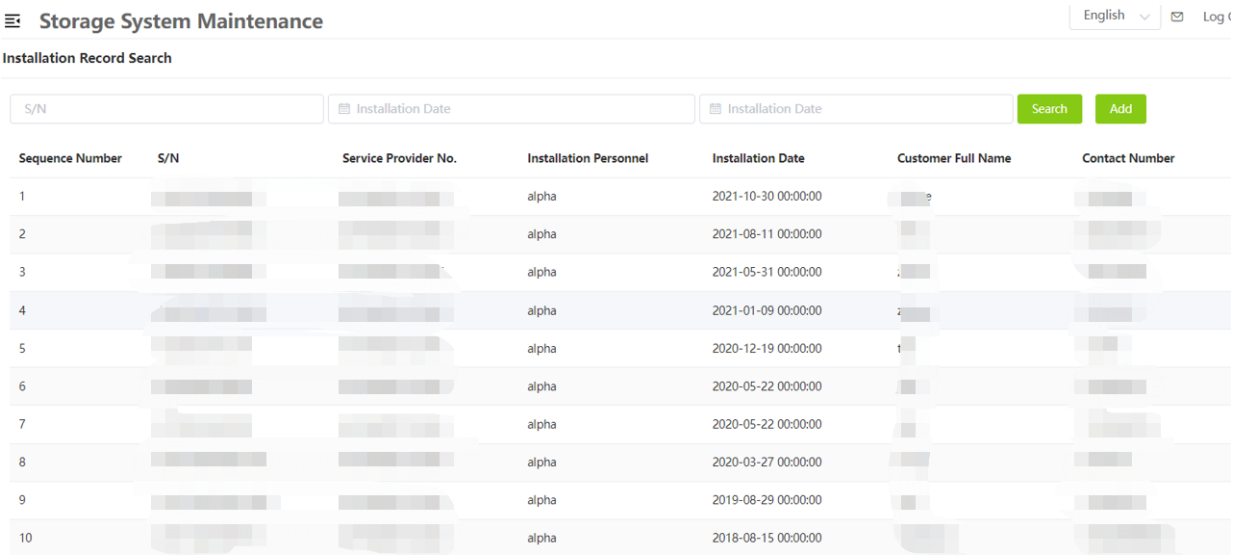


Enter energy system S/N, check code, EV-charger SN. Currently only one EV-charger can be installed.

After being installed, it will be added to the system list.

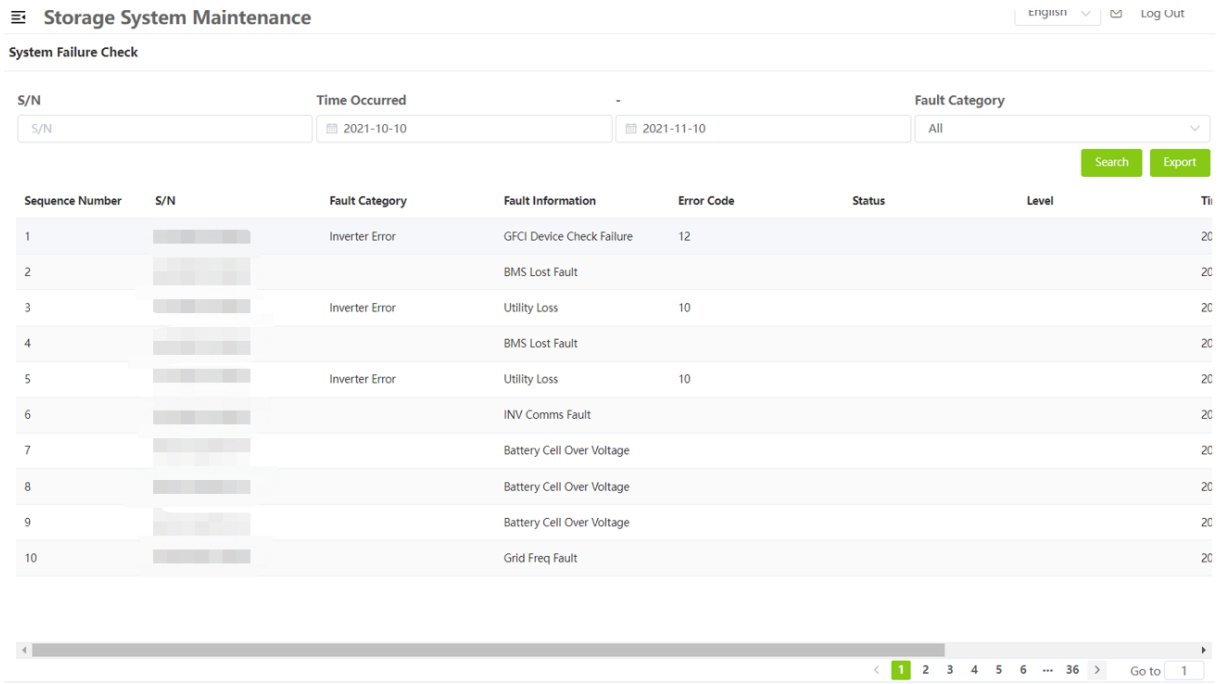


5.3. Installation Record



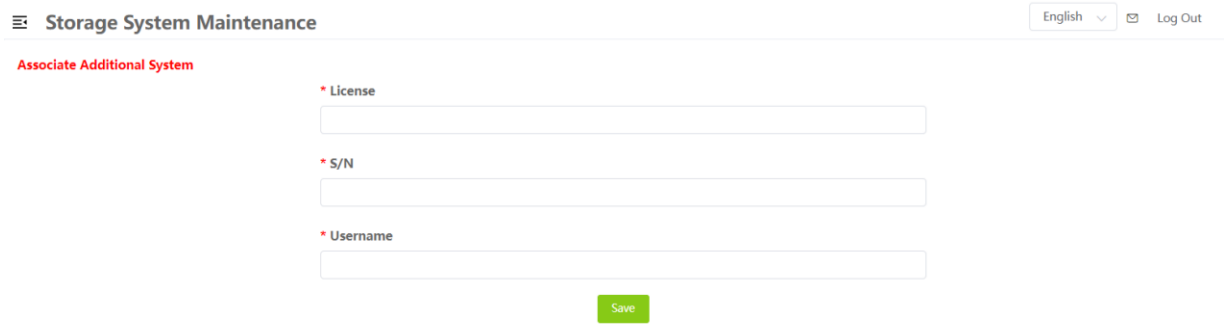
The installation records can be queried by system S/N and a certain period of time (fuzzy queries available). The records can be downloaded.

5.4. System Failure Check



System failures can be queried based on multiple conditional screening criteria. The query results can be exported in an excel file.

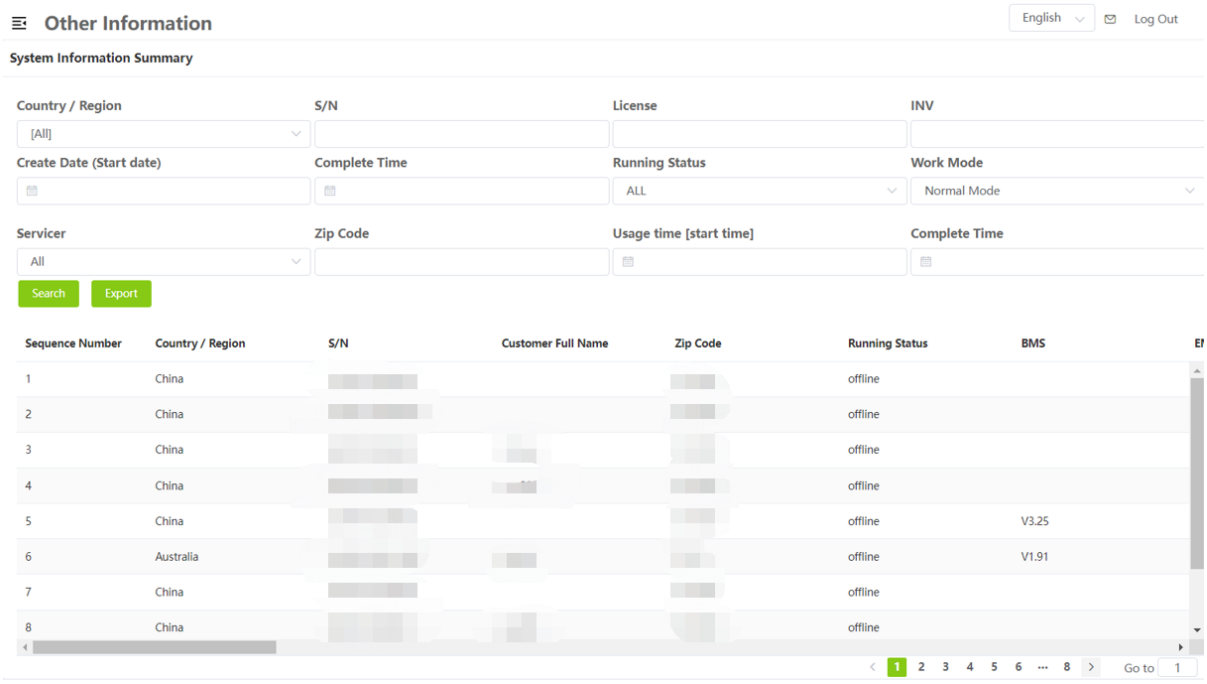
5.5. Associate Additional System



To associate a new system, first enter user license, S/N, username. Click "Save" to associate the new system.

6. Other Information

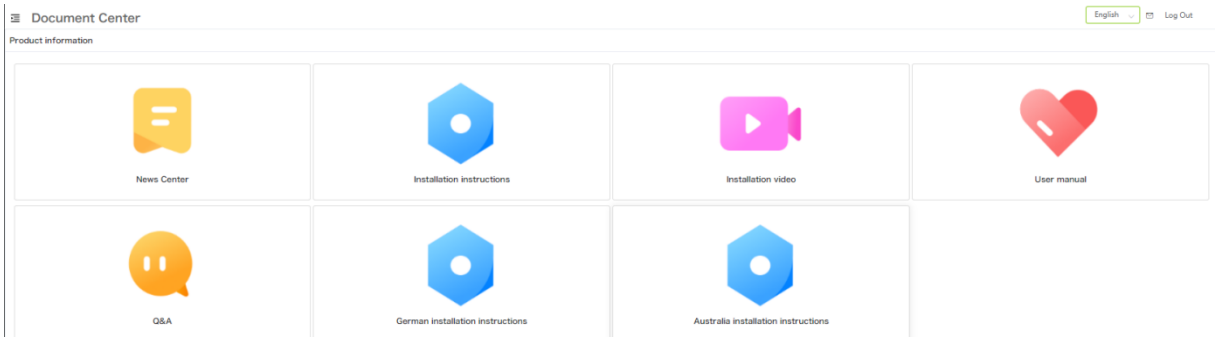
6.1. System Information Summary



Enter country/region, S/N, license No., INV, create date, complete time, running status, work mode, servicer and zip code to check the required information. You can export the query results in an excel file by clicking the Export button in the green box.

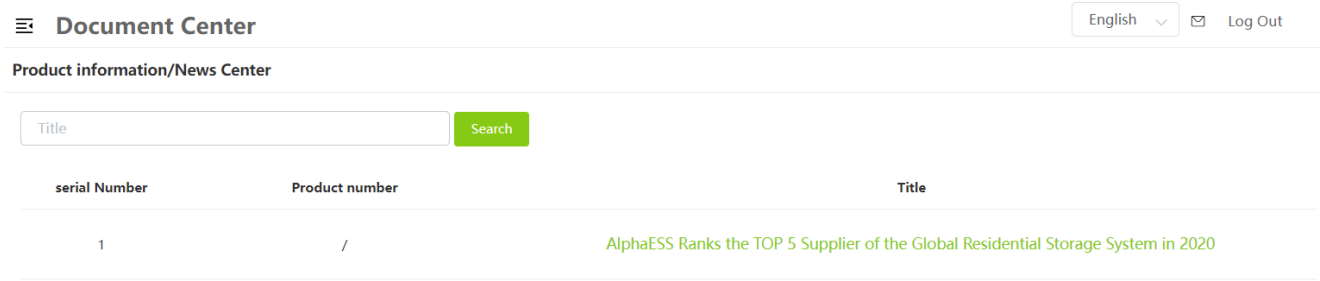
7. Document Center

7.1. Product Information



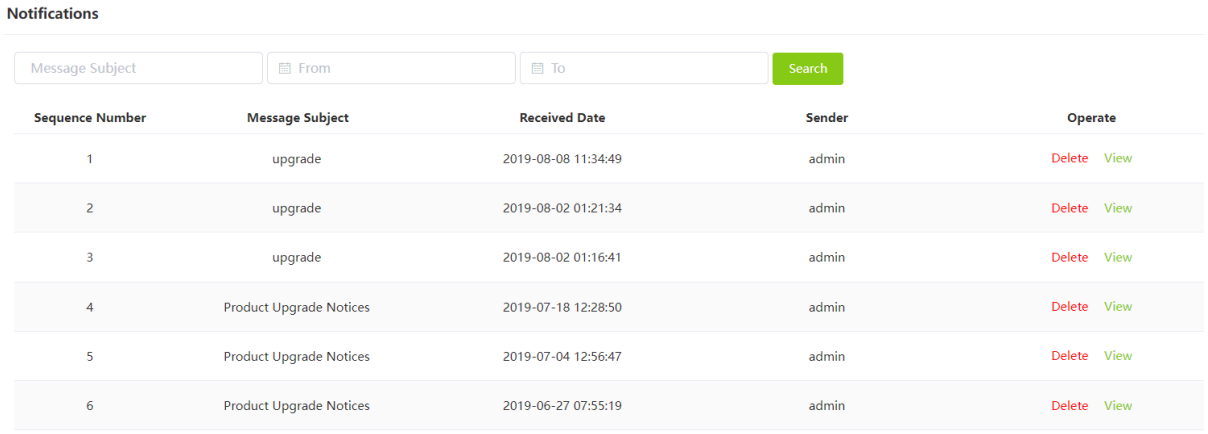
This is where new information is updated from time to time and where end users can view the News Center, Installation instructions, Installation video, User manual, Q&A, German installation instructions and Australia installation instructions. The German installation instructions are only applicable to users whose system is installed in German. Australia installation instructions are only applicable to users whose system is installed in Australia.

Click on one of them to see the relevant content.



8. Basic Settings

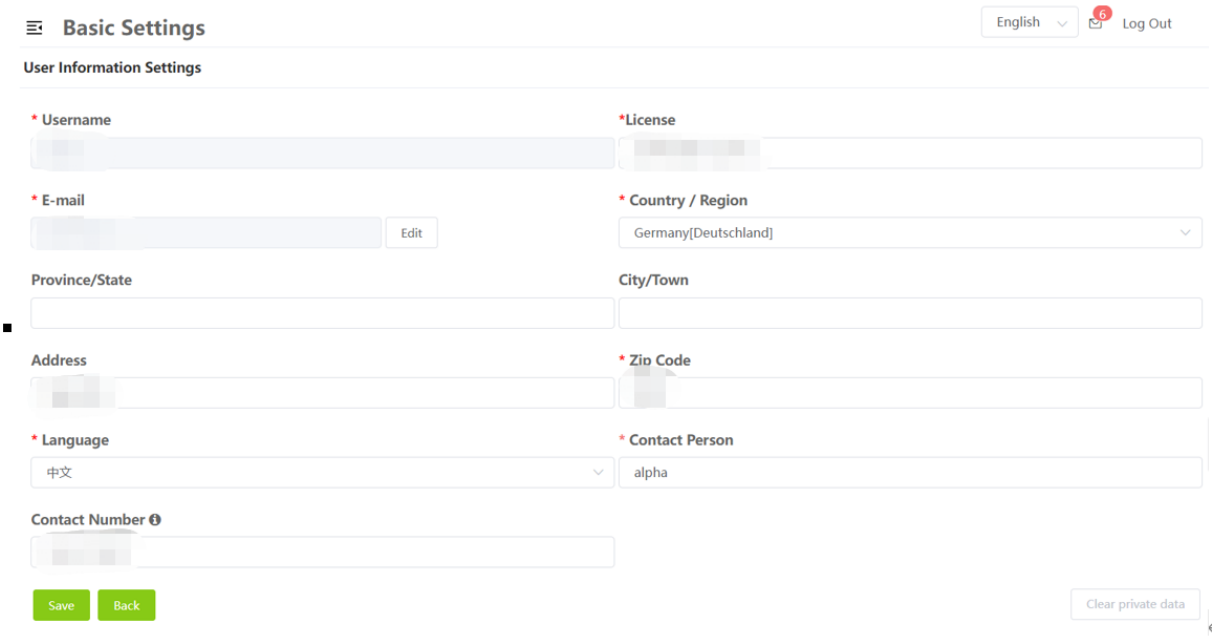
8.1. Notifications



Enter the message subject, start time, and end time to search for message.

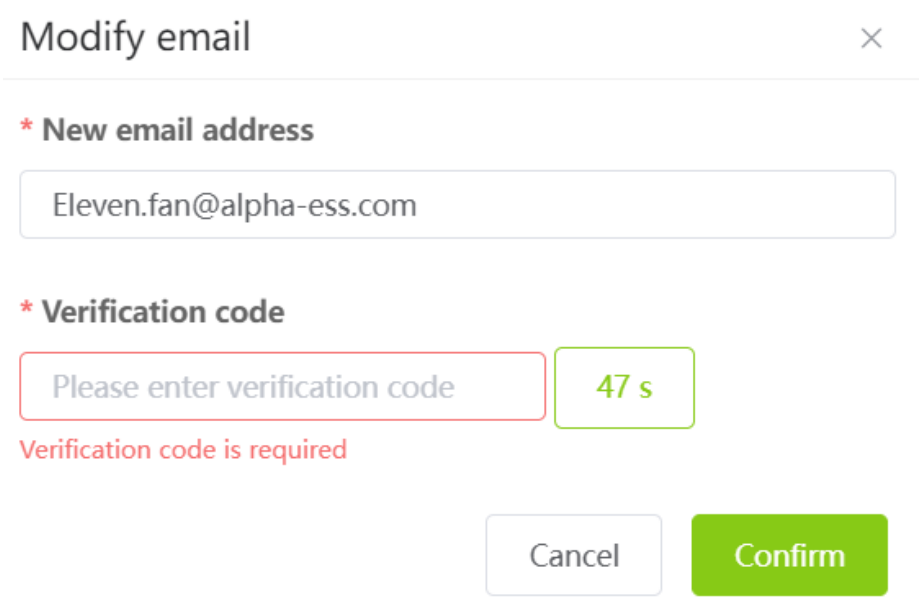
Click "Delete" or "View" to manage the messages.

8.2. User Information Settings



Enter country/region, province/state, city/town, address, zip code, language, contact person, contact number, click "Save" to save user information.

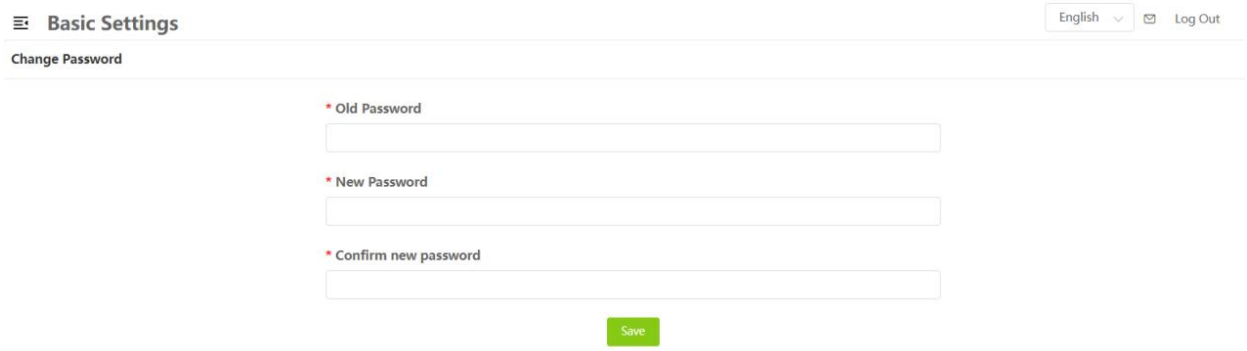
If you need to change you email address, please click “Edit” and input your new email address. Then, the system will send you a verification code to the new email address. The change is successfully completed when you pass the verification. At the same time, the system will send a notice email to inform you that you have successfully changed the email address.



If you click “Clear private data”, the system will delete the all settings including email, address, contact number and all information in customer complaints you created. If you click this , please reset your email. If you do not reset the email, the function of “Forget Username” and “Forget Password” will not available.

Click "Back" to return to the homepage.

8.3. Change Password



Enter the old password and a new password twice, then click “Save” to change password.

9. Customer Feedback

9.1. Complaints

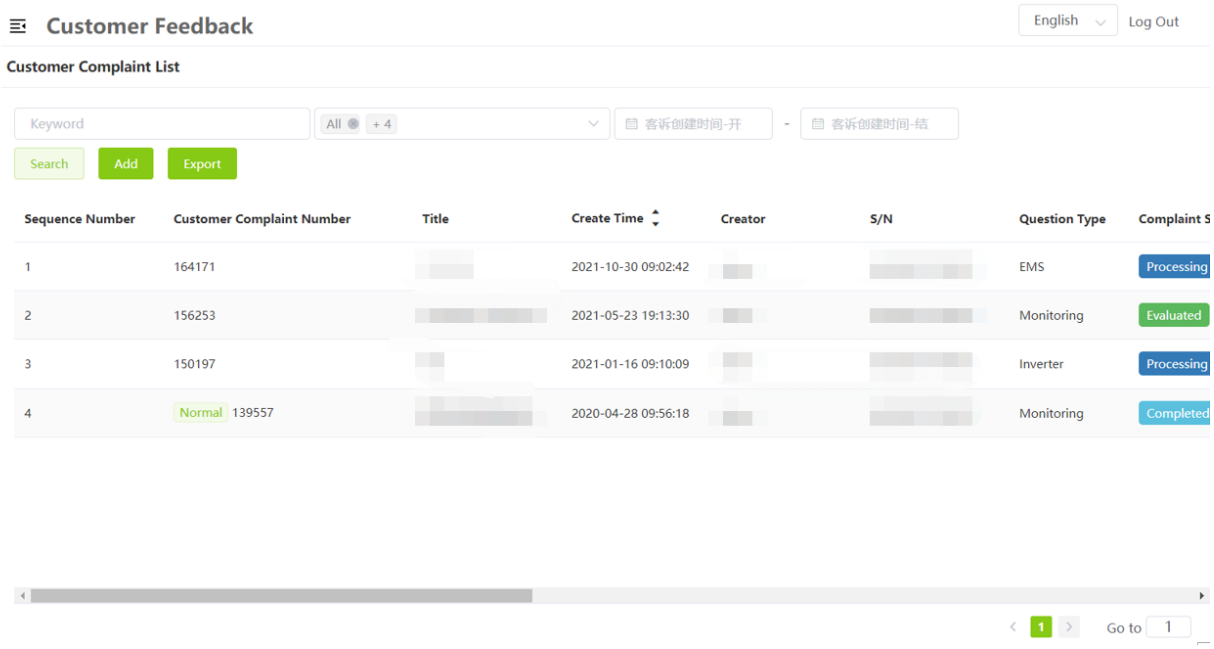
9.1.1. Create Complaint

Before submit，please click “Please confirm that you have obtained his/her consent, initiate a customer complaint for him/her, and fill in his/her contact information. After that the AlphaESS staff will contact the device user based on your consent and provide after-sales service.”

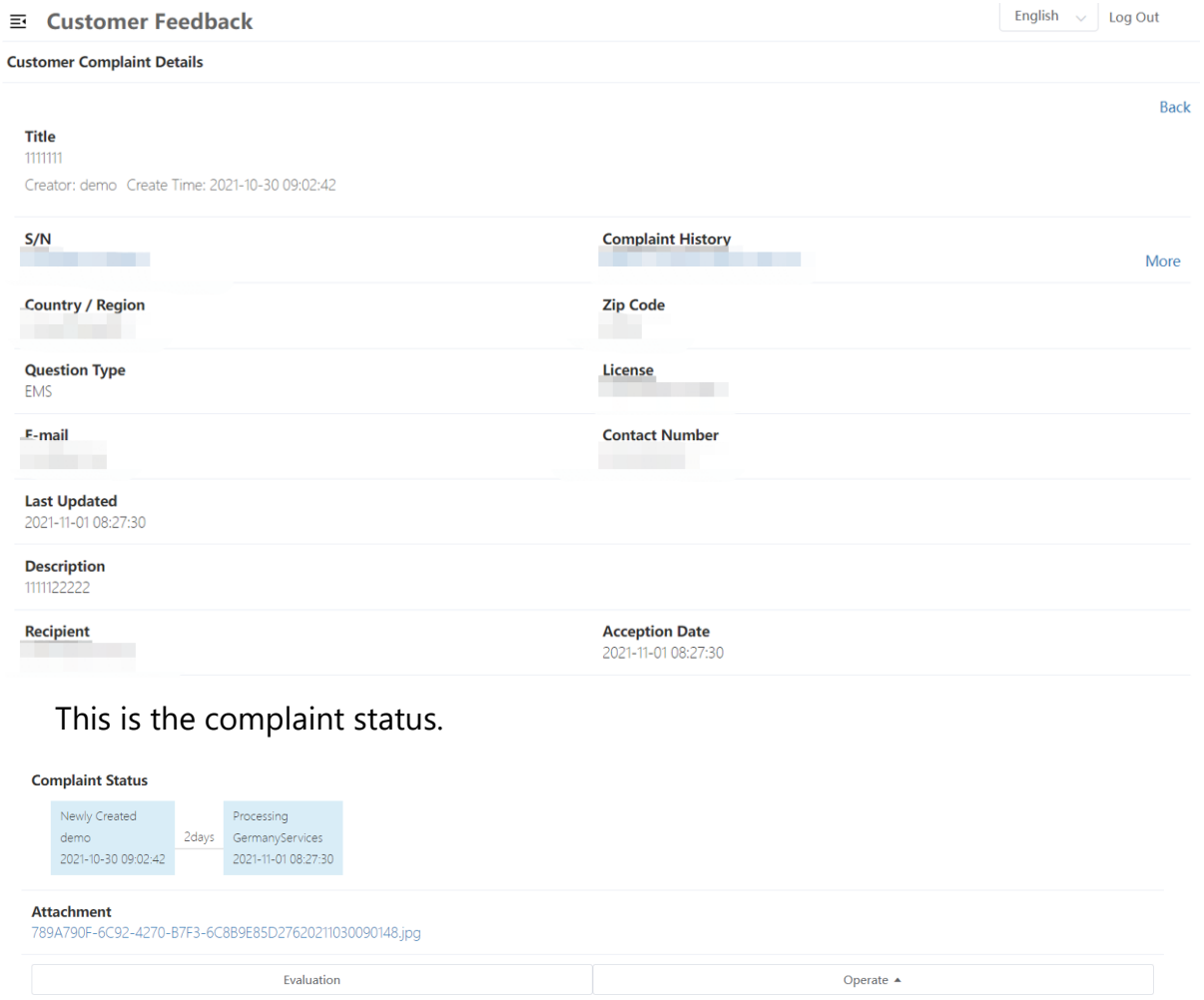
* is required information。fill in the form and click "Submit" to submit your complaint, Alpha after-sales service will deal with your complaint issues. If necessary, you will be contacted via the Contact Number or e-mail you have filled in.

9.1.2. Customer Complaint List

Click Customer Complaint List, you can see the history of the complaints you have submitted.



Click Customer Complain Number, here you can see the details and the progress of your complaint, and other actions.



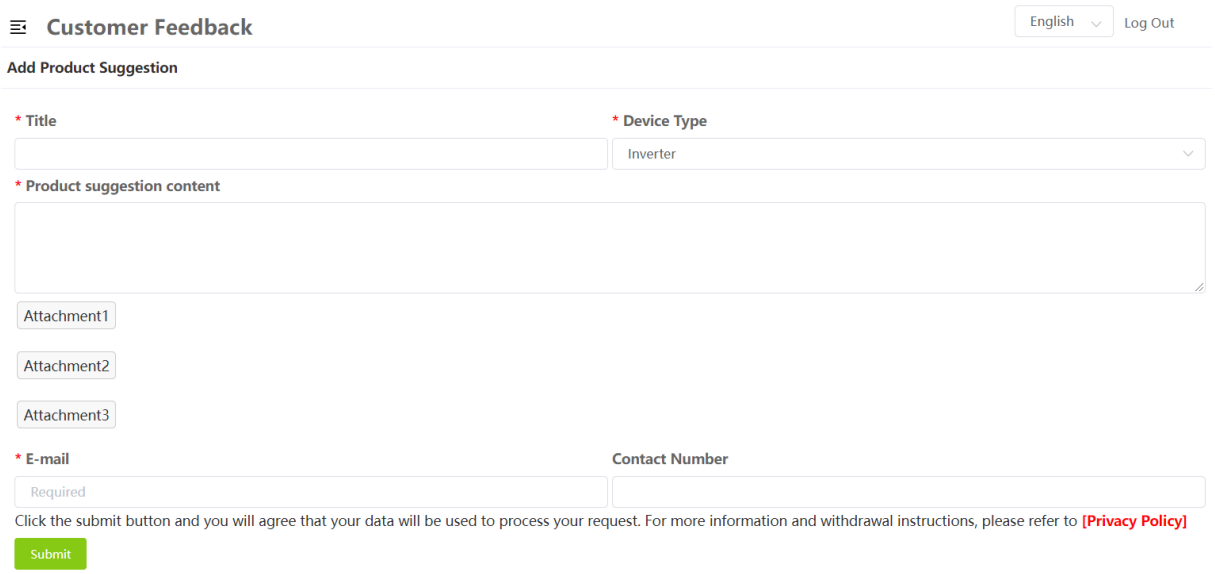
This is the complaint status.

Evaluation：you can evaluate the ticket in advance.

Operate：There are two type of operation, "Comment" and "Remind". "Comment" is used to submit a message and the Alpha after-sales team will be the first to receive your message and reply to it, "Remind" is used to push the after-sales team to deal with it, when you click "Remind" the Alpha after-sales team will be the first to receive your reminder and give priority to your customer complaint.

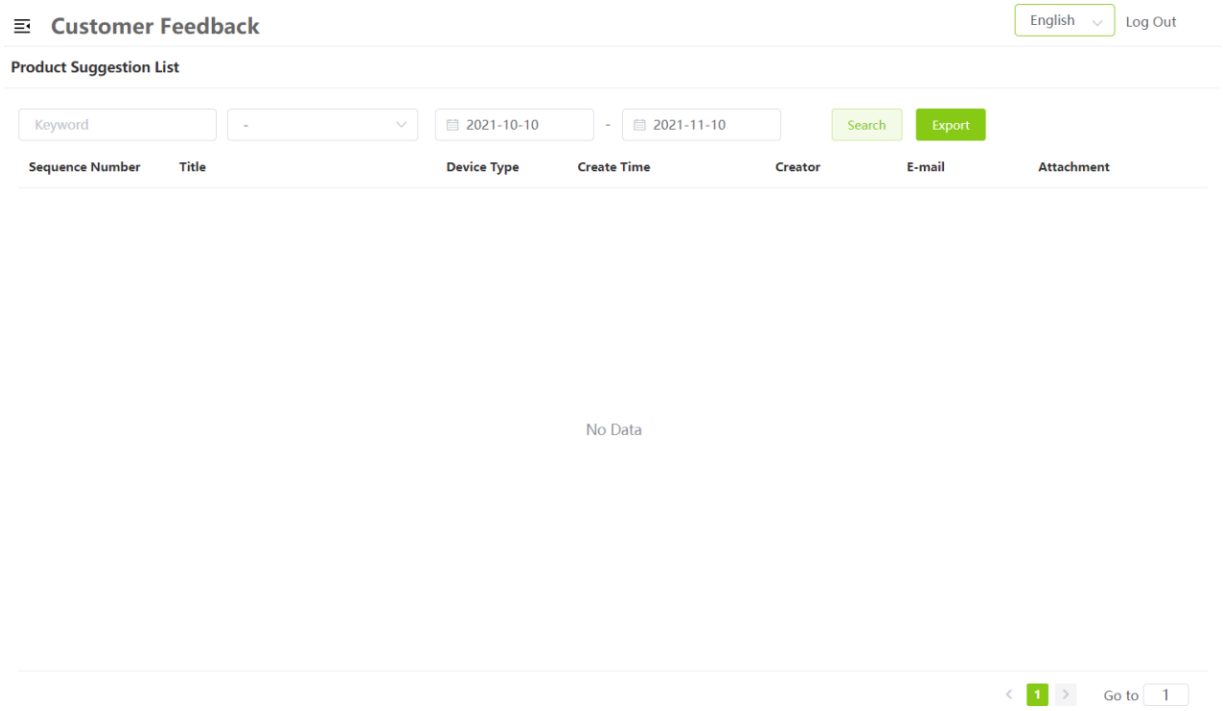
9.2. Product Suggestion

9.2.1. Add Product Suggestion



Click Add Product Suggestion, *Required fields, the Alpha product team will receive your suggestion when you click 'Submit'.

9.2.2. Product Suggestion List



Click "Product Suggestion List" to find out the record of your suggestions.

10. Imprint

Click “Imprint” to find out "Imprint".

11. Privacy Policy

Click “Privacy Policy” to check out Alpha ESS's “Privacy Policy”.

12. Select Language and Logout

Click the drop-down list in the red box to select the language including Chinese, English, Deutsch, Japanese, Italiano.

Click on the mailbox to see the current unread system messages.

Click the button in the blue box to logout.

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