KEHUA TECH

Network Adapter (V3.0)

User Manual

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KEHUA DATA CO.,LTD.

Address:	No.457,MalongRoad,TorchHigh-TechIndustrialZone,Xiamen,Fujian,China
Manufacturer:	ZHANGZHOU KEHUA TECHNOLOGYCO.,LTD.
Postal Code:	361000(XIAMEN), 363000(ZHANGZHOU)
Website:	www.kehua.com
E-mail:	service@kehua.com
Customer Service Telephone:	400-808-9986
Tel:	0592-5160516
Fax:	0592-5162166

Foreword

Summaries

Thank you for choosing the Kehua's network adapter product!

This document gives a description of the network adapter, including the operation and troubleshooting, etc.

Please save the manual after reading, in order to consult in the future.

Symbol Conventions

The manual quotes the safety symbols, these symbols used to prompt users to comply with safety matters during installation, operation and maintenance. Safety symbol meaning as follows.

Symbol	Description
DANGER	Alerts you to a high risk hazard that could, if not avoided, result in serious injury or death.
WARNING	Alerts you to a medium or low risk hazard that could, if not avoided, result in moderate or minor injury.
CAUTION	Alerts you to a potentially hazardous situation that could, if not avoided, result in equipment damage, data loss, performance deterioration, or unanticipated results.
	Anti-static prompting.
	Be care electric shock prompting.
TIP	Provides a tip that may help you solve a problem or save time.
NOTE	Provides additional information to emphasize or supplement important points in the main text.

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Change History

Changes between document issues are cumulative. The latest document issue contains all the changes made in earlier issues.

Issue 002 (2021-01-12)

Modify password.

Issue 001 (2020-10-23)

First issue.

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1 Overview

1.1 System Intro

Network adapter V3.0 is the small type power environment monitoring system that matches the UPS/HVDC etc power products of Kehua Company. It makes the omnibearing monitoring for UPS/HVDC, battery group, distribution switch, environment parameter etc come true. It realizes the configuration of southbound protocol and data sampling on site, also, the data can be edited and configured to picture and finally showed on screen, which achieves real-time monitoring. Besides, it can connect with SNMP server and integrated by third-party system.

The main features of network adapter are as follows.

- Key data, such as history data, history event, alarm record, operation log, user log, etc, can be stored.
- Can be compatible with main browser, with strong expansibility.
- Support three-level authority of management, controlling and general user.
- With high safety and reliability, and meet the identification requirement of military project.
- Function configurable, which satisfy the custom needs.

1.2 Software Application

Network adapter can monitor and manage the UPS/HVDC, battery group, distribution switch, environment parameter etc, which realize the real-time data monitoring for each device and remote control for UPS, air conditioner. The typical applications are as shown in Figure2-1, Figure2-2.

The main functions of network adapter are as follows.

- Support the monitoring for at most 1 set UPS/HVDC, and also, it can realize the remote control for discharge, ON/OFF of the UPS.
- Support at most Kehua's 8 battery acquisition modules and 2 current acquisition modules to monitor 32 pieces of battery at most.

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- Support the monitoring for at most 1 common air conditioner and remote control for ON/OFF, temperature adjusting.
- Support the monitoring for multiple environment monitoring device, including at most Kehua's 4 temperature & humidity module (with 2 dry contact expansion), 1 piece of 8 routes dry contact sampling module, and it can realize the I/O signal collecting of smog, water leakage, door magnetism, etc.
- Support short message alarm, e-mail alarm, sound & light alarm.
- Support the individual setting for alarm method, alarm event and alarm time.
- Support multiple language, such as Chinese, English. Also, main browsers are all can be used.
- Configured with WiseInsight PC software, it can realize the centralized monitoring for the UPS and environment parameters of 20 branches.

Figure1-1 Monitoring topology of single UPS/HVDC

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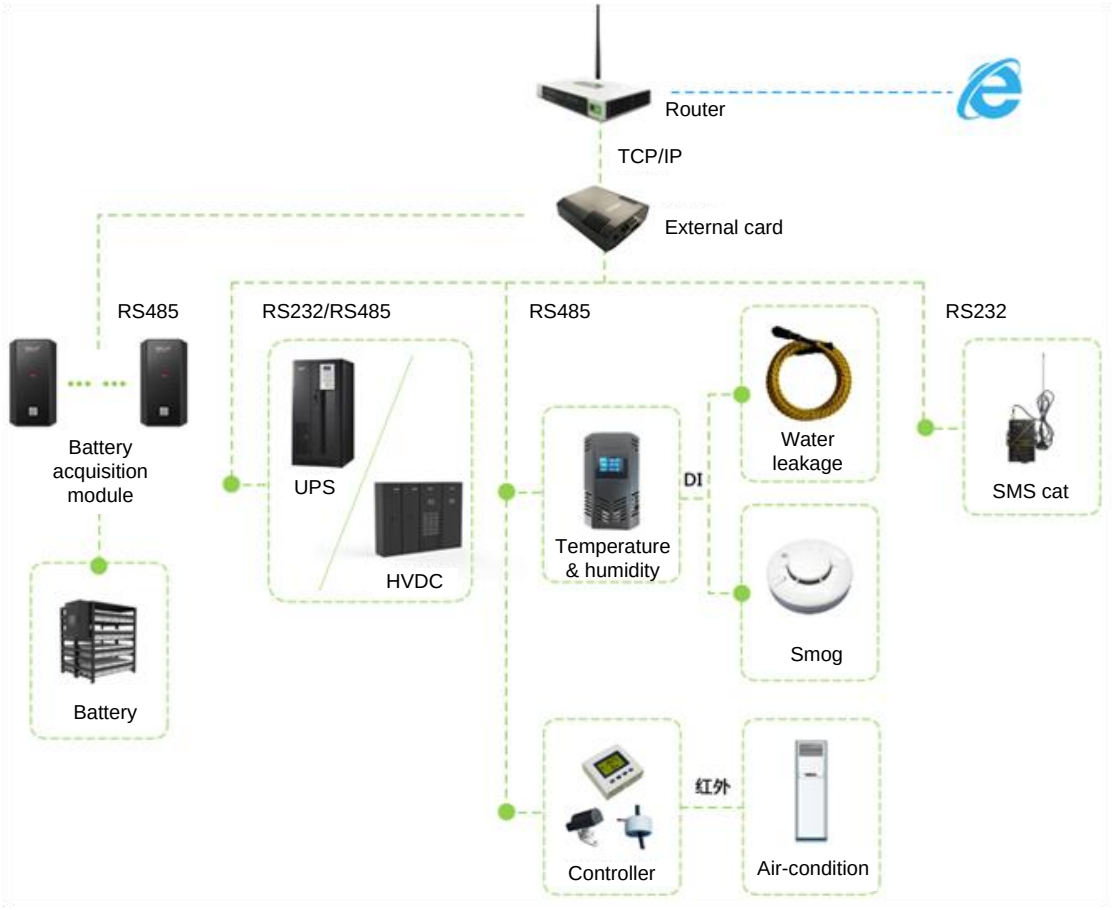

Figure1-2 Monitoring topology of single small power environment

1.3 Software Environment

The web of the system is suitable but not only for following browsers:

- IE11+ browser
- Chrome 56+ browser

CAUTION

The browser with old version may have compatibility issues. In order to achieve the best display results, it is recommended to use the latest version of each browser. If any doubt, please consult supplier.

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2 First Login and Configuration

2.1 First Login on Web

NOTE

The login interface may be different on different browser, in this document, we take Chrome browser as an example to illustrate.

CAUTION

Please ensure that the IP address of network adapter and visited host are at the same segment.

Open the browser, enter the default IP address of network adapter, and then enter user name and password (as shown in Figure2-1), click "Login" button to enter the monitor page (as shown in Figure3-1).

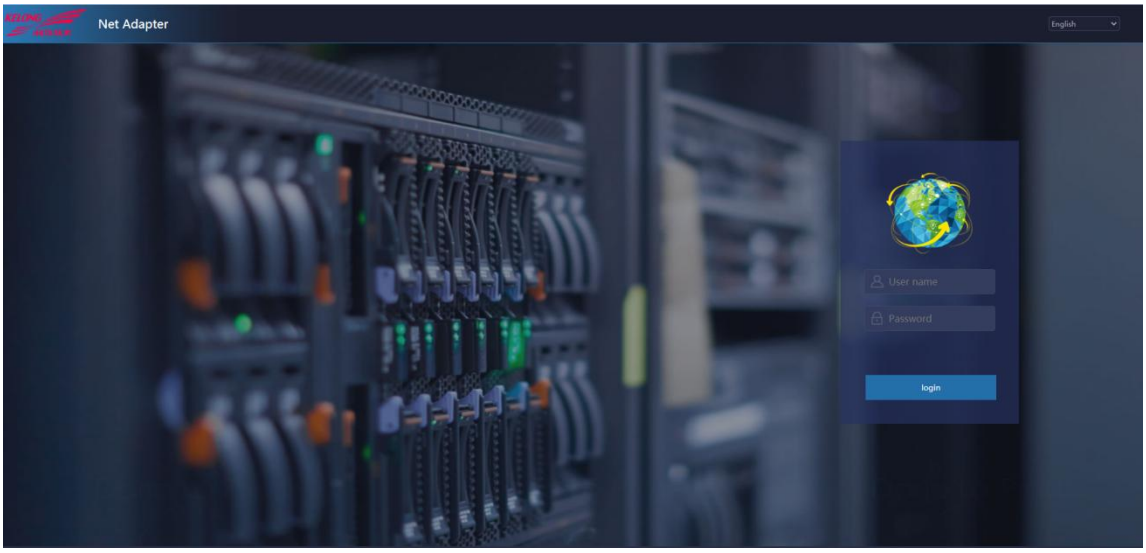

Figure2-1 Login page (Chrome browser)

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NOTE

- The default IP address of network adapter is 192.168.0.100.
- Administrator's default user name is admin, default password is KHadmin0592.

After login, the related function of network adapter can be used.

2.2 Language Setting

On the login page, click the pull-down box at the top right corner, the language can be changed. The actual supported language may be different according to version configuration.

2.3 Account Setting

After login, user can set the account in **System management** - **User management** page. In the user management page, you can modify the password, add new user and modify user's info, etc.

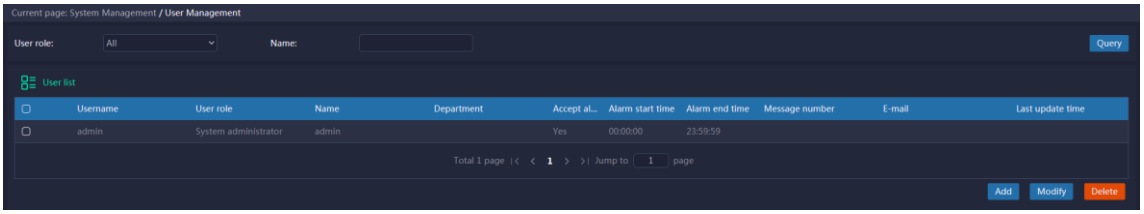

Figure2-2 User management page

CAUTION

Considering the safety of system, we suggest you modifying the password after first login. Details please see **3.5.3 User Management**.

2.4 System Configuration Procedure

After the administrator first login, we suggest setting the system as follows.

- System configuration: configure the system name, network IP, default gateway, time and date.
- Device management: configure the serial port, add the device that needs to be managed.
- Serial port configuration: modify the communication method and baud rate according to actual device.
- Device info: after adding device, the related info can be viewed on device info page.

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- Alarm management: you can view the configuration info, such as alarm event, alarm way, user alarm, alarm linkage, alarm grade etc, on setting page.
- Record query: on record query page, you can query the device alarm event record, data record, system log, etc.
- Other auxiliary function: user management, software upgrade, etc.

Detailed configuration please see **3Web Monitor Illustration**.

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3 Web Monitor Illustration

3.1 Home Page

After login, it shows the default monitor page, as shown in Figure3-1. The monitor page shows the current user name and authority, system function menu, key info and flow chart of main monitored device, auxiliary display sub-module, current alarm statistics, sign in button, system time, etc.

Figure3-1 Home page

System function menu includes system home, equipment monitoring, report management, operation and maintenance, system management, system settings, auxiliary function, configuration mange, other info.

3.1.1 Main Monitor Area

At the left of home page, it is the main monitor area. It shows the key parameter and work flow diagram of single-phase-in single-phase-out UPS, as shown in Figure3-2. The main monitor area can be set to three-phase-in single-phase-out UPS, three-phase-in three-phase-out UPS, modular UPS, HVDC, HVDC (with no battery) according to **Configuration management - Layout configuration**.

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Figure3-2 Main monitor device page

3.1.2 Auxiliary Display Sub-module

At the right of home page, it is the auxiliary display area. It supports the info display for the sub-module of at most 3 monitored device, as shown in Figure3-3. Defined sub-module includes but not only for alarm statistics, environment temperature and humidity, environment I/O, common air conditioner's temperature, UPS load rate, etc. It can be changed on needs according to **Configuration manage** - **Layout configuration**.

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Figure3-3 Auxiliary display sub-module

3.1.3 Current Alarm

The alarm icon, at the top right corner of home page, prompts the alarm quantity of current monitor system, as shown in Figure3-4. Click "Alarm" icon, it will pop up the pull-down list to show current alarm details, and the alarm can be sorted by alarm grade and type, as shown in Figure3-5.

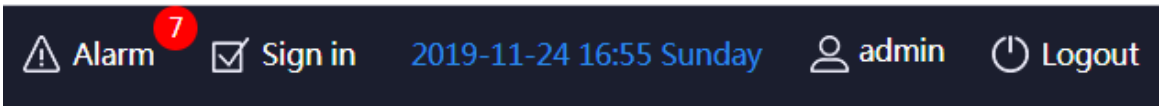

Figure3-4 Current alarm prompting

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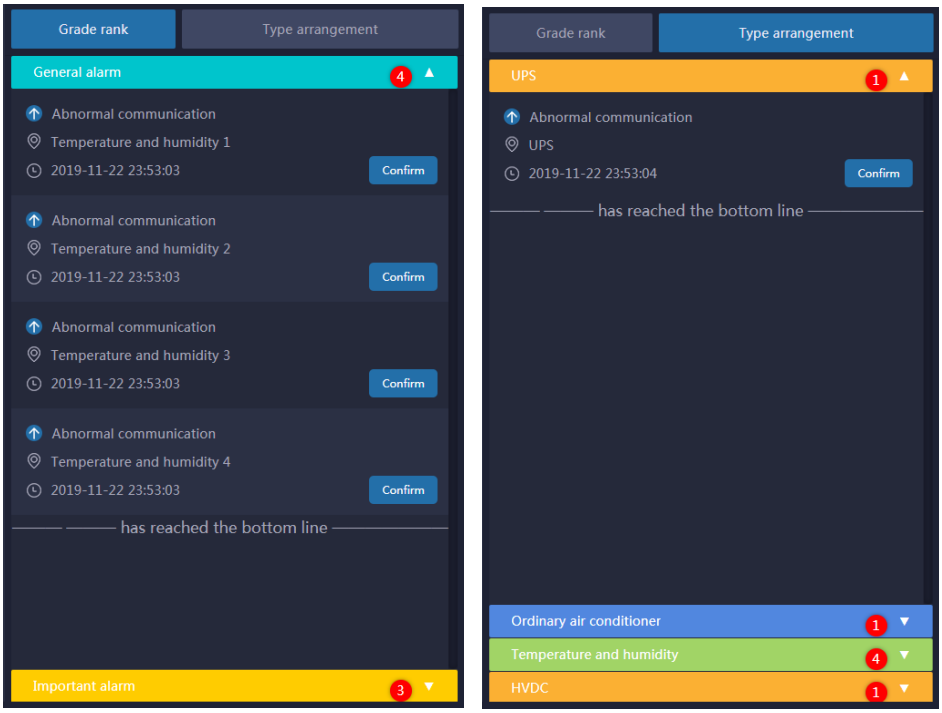

Figure3-5 Current alarm list

3.1.4 System Sign In

Click the "Sign In" button at the top right corner of home page, it will pop up the window to confirm whether the current system is normal, and add remarks, as shown in Figure3-6.

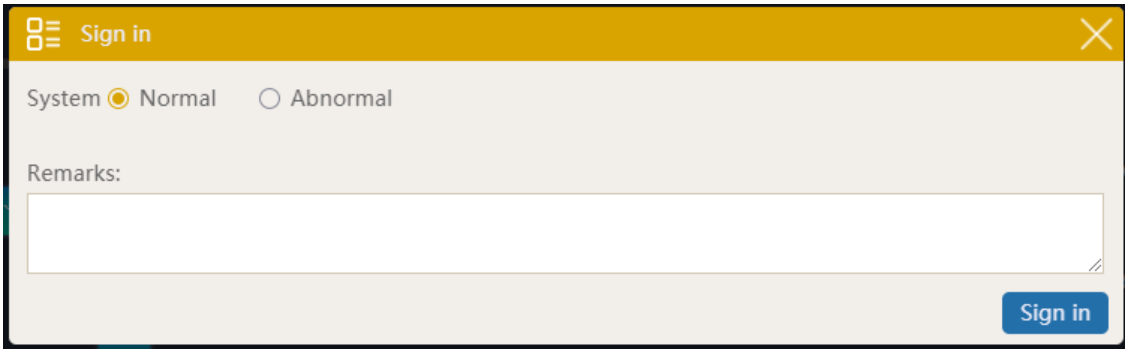

Figure3-6 System sign in

3.2 Device Monitor

User can view the running status and real-time data of UPS/HVDC, battery group, device of environment module in device monitor module. It shows the first configured monitor device in default, as shown in Figure3-7.

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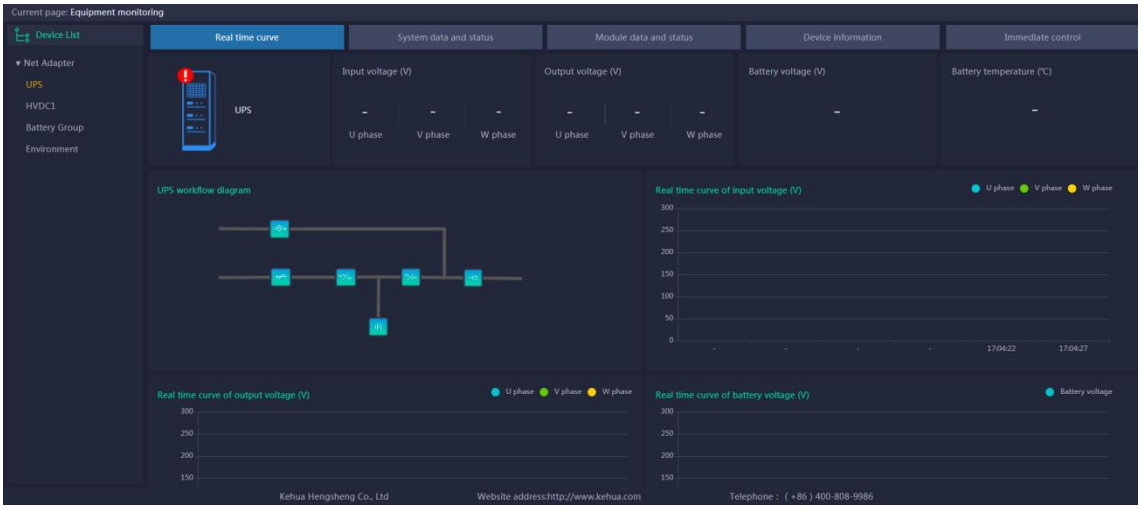

Figure3-7 Device monitor page

3.2.1 UPS

After configuring the UPS (details please see **3.5.2 Device Management**), user can view the running status and real-time data of UPS by clicking the name of UPS device.

Real-time curve

It shows the current communication status and input voltage, output voltage, battery voltage, UPS temperature, UPS current workflow diagram and the curve of input voltage, output voltage battery voltage, as shown in Figure3-8.

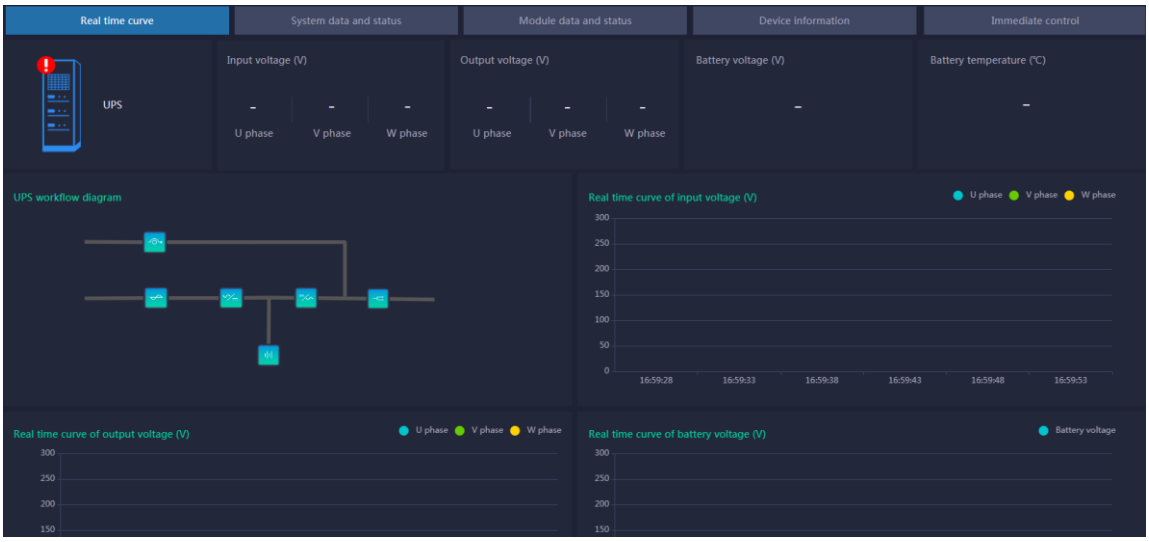

Figure3-8 UPS real time curve

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NOTE

When the communication of UPS is normal, the icon at top left corner shows green, when the communication is abnormal, the icon shows red.

The indication for the communication status of other device is the same as that of UPS.

System data and status

It includes the running status, input, output, battery and battery info, as shown in Figure3-9.

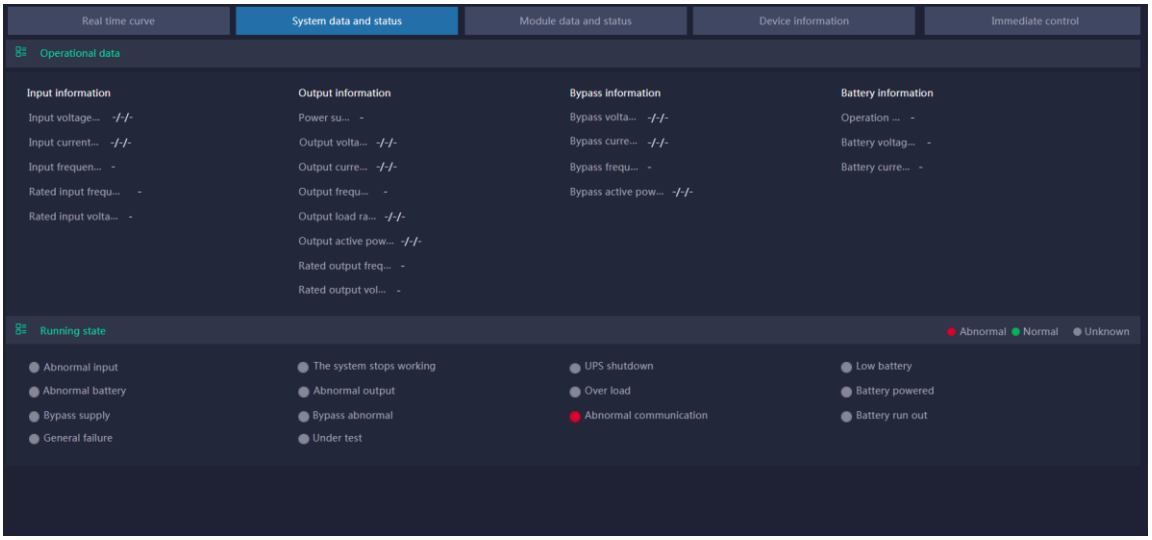

Figure3-9 System data and status

The running status of UPS includes abnormal input, abnormal output, overload, bypass supply, bypass abnormal, general failure, abnormal communication, testing, abnormal battery, battery supply, low battery, battery run out, system stops working and UPS shutdown, etc.

NOTE

Green dot means that the UPS supports the current status and without abnormal, red dot means abnormal, gray dot means that the UPS does not support the status.

The running status of different brand's UPS may be different.

- Input information includes voltage, current, frequency.
- Output information includes power supply mode, voltage, current, frequency, load and active power.
- Bypass information includes voltage, current, frequency and active power.
- Battery information includes running status, voltage and current.

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Module data and status

It shows the module data and status of modular UPS, as shown in Figure3-10, including module's status, input voltage, input current, input frequency, output voltage, output current, output frequency, output active power, output load rate.

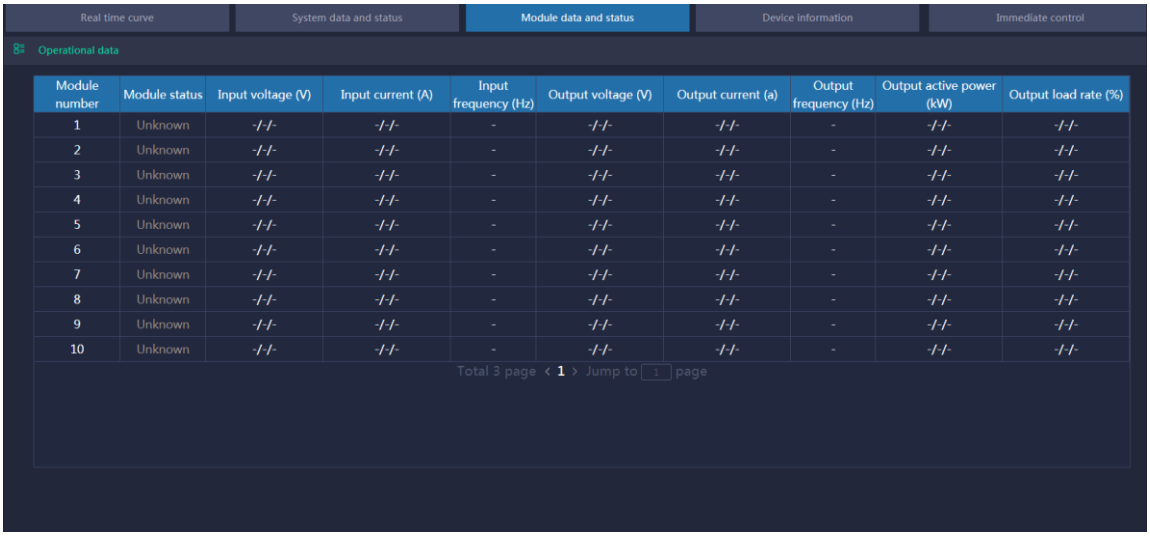

Figure3-10 Module data and status

Device info

It shows the rated info and parameters of UPS device, as shown in Figure3-11, including device name, brand, device type, device serial number, installed date, installed position, maintenance expired time, battery rated capacity, battery type, battery group number, battery number of single group's.

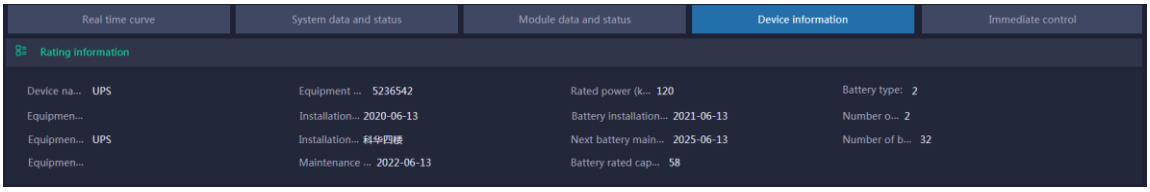

Figure3-11 UPS device info

Immediate control

Click **Immediate Control** tab, it will turn to corresponding control page, as shown in Figure3-12.

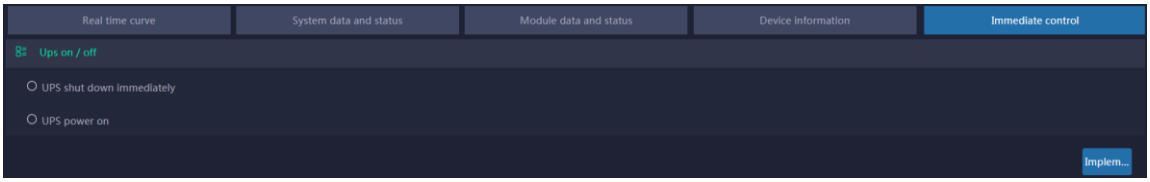

Figure3-12 UPS immediate control

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CAUTION

The immediate control function requires that the UPS has the function module. The UPS of different UPS may support different control command.

3.2.2 HVDC

After configuring the HVDC, user can click the device name of HVDC to view the status and real time data.

Real time curve

It shows the current communication status, bus voltage, module output total current, battery total current, ambient temperature, and the real time curve of bus voltage, module output total current, battery total current, ambient temperature, as shown in Figure3-12.

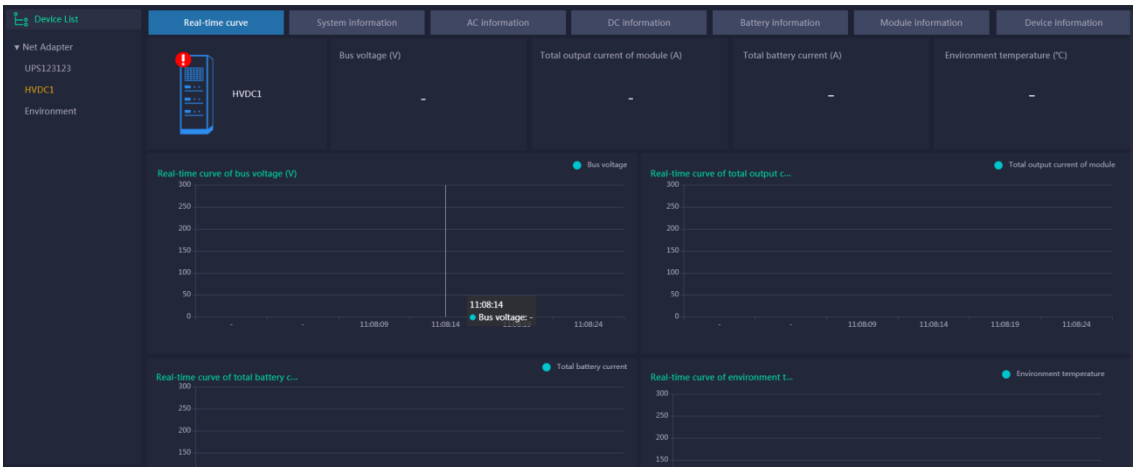

Figure3-13 Real time curve

System info

It shows the operational data and running data of HVDC. The operational data includes system status, bus voltage, bus positive to grounding voltage, bus negative to grounding voltage, module output current, total output power, module quantity, ambient temperature, DC cabinet temperature, temperature of rectifier cabinet 1, temperature of rectifier cabinet 2, etc. Running status includes bus over-voltage, bus under-voltage, DC total output over-current, abnormal environment temperature, CAN communication abnormal, HMI communication abnormal, primary power down, secondary power down, etc, as shown in Figure3-14.

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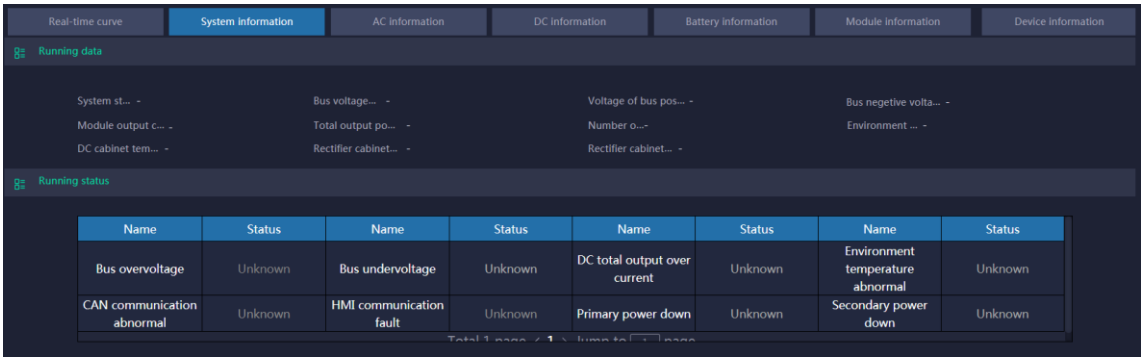

Figure3-14 System info

AC info

It shows the operational data and input, output running status of HVDC. Operational data includes input voltage, input current, input frequency, input active power, input reactive power, input apparent power, cumulative electricity consumption, etc. Running status includes SPD status, switch status, over-voltage alarm, abnormal frequency, phase loss alarm and output switch status, as shown in Figure3-15.

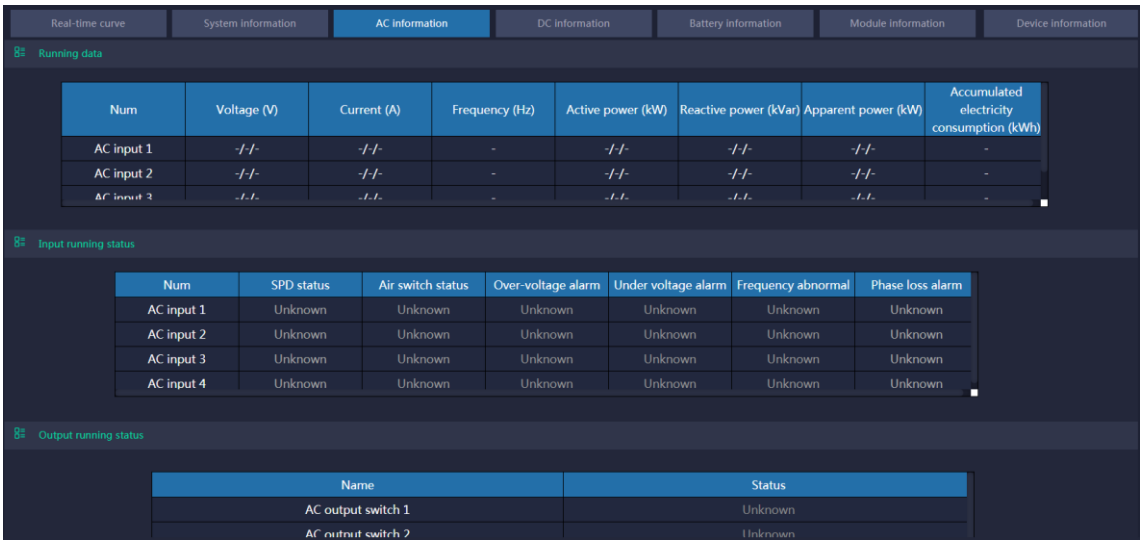

Figure3-15 AC info

DC info

It shows the DC operational data and running status of HVDC. Operational data includes total load current, positive insulation impedance of DC bus, negative insulation impedance of DC bus, branch's positive insulation impedance and negative insulation impedance, as shown in Figure3-16. Running status includes the status of DC SPD, DC bus switch, R+ and R- insulation impedance of DC bus, R- insulation impedance of DC bus, branch's positive and negative fuse, branch's R+ and R- insulation impedance, branch's over-current status, as shown in Figure3-17.

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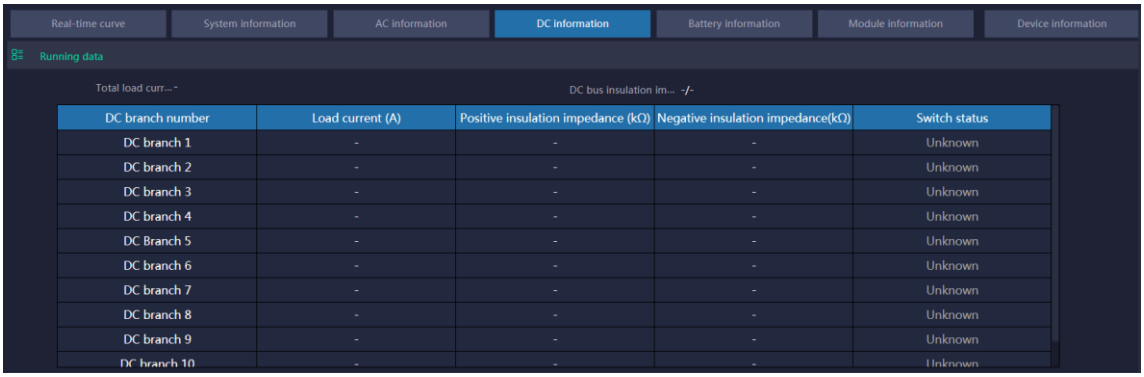

Figure3-16 DC info

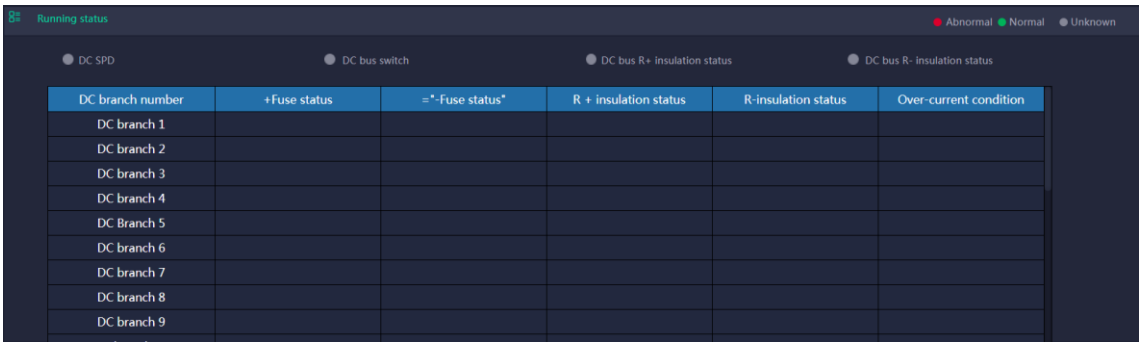

Figure3-17 DC running status

Battery info

It shows the operational data and running status of HVDC. Operational data includes battery operational status, total battery current, battery remaining time, battery remaining capacity and current, temperature and switch status of each battery group, as shown in Figure3-18. Running status includes battery under-voltage alarm, battery under-voltage protection, battery over-voltage alarm, battery over-voltage protection, battery over-temperature alarm, battery discharge over-current alarm, battery hall abnormal, battery's output fuse status, as shown in Figure3-19.

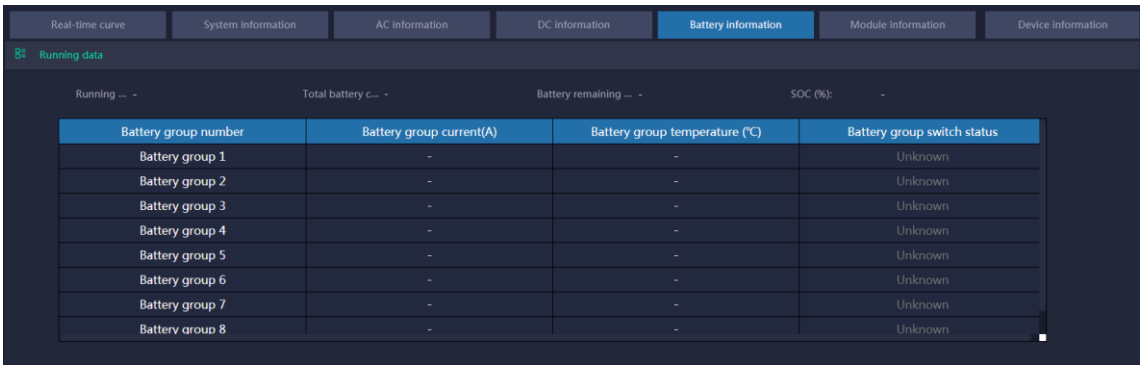

Figure3-18 Battery info

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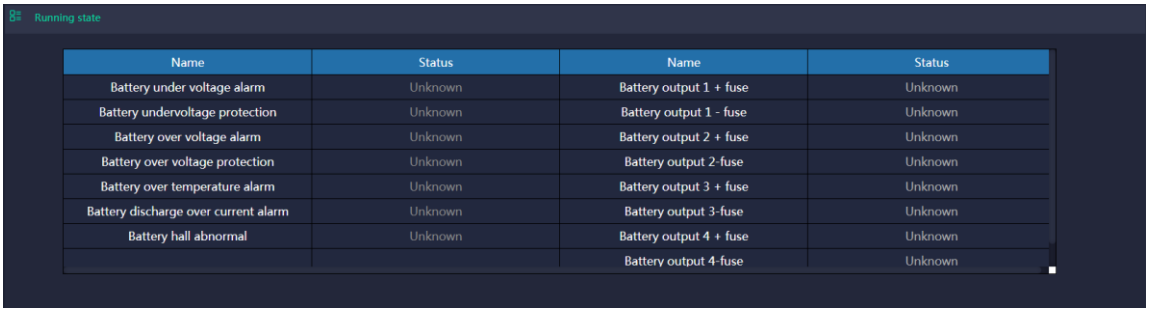

Figure3-19 Battery running status

Rectifier module info

It shows the No., voltage, current, power, temperature, running status and input switch status of rectifier module, as shown in Figure3-20.

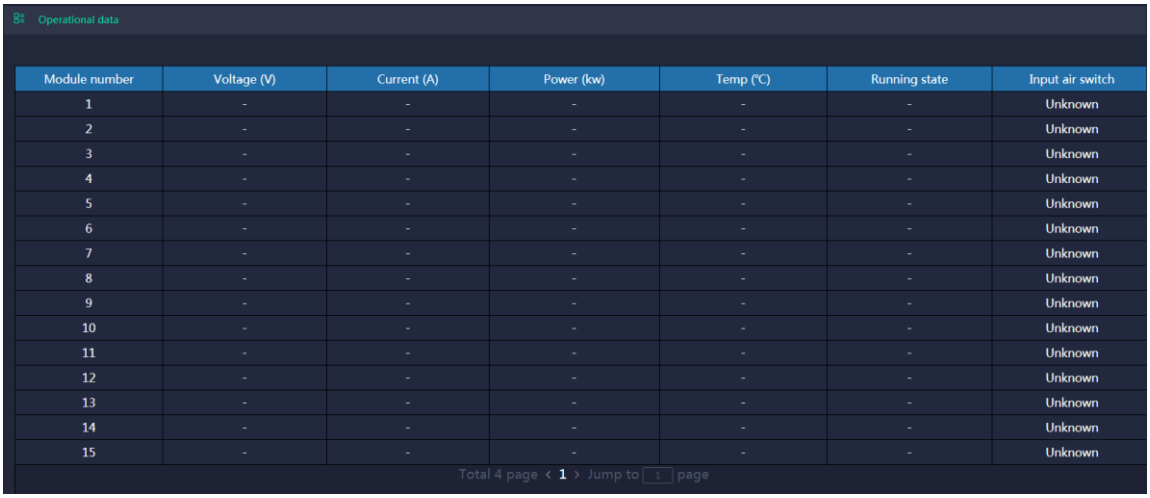

Figure3-20 Rectifier module info

Device info

It shows the rated info and parameters of HVDC, as shown in Figure3-21. It includes device name, device brand, device serial number, installation time, installation position, maintenance expiration time, rated power, battery installation / replacement time, next battery maintenance time, battery rated capacity, battery type, number of battery group, number of batteries in a single group.

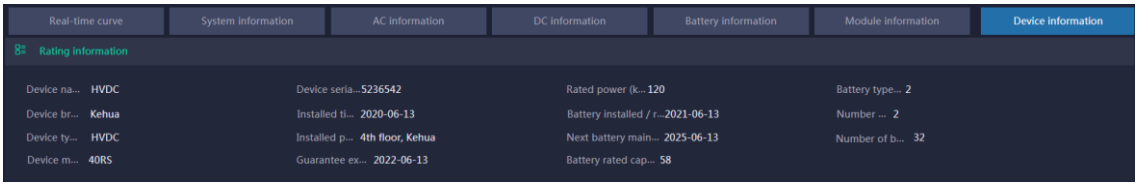

Figure3-21 Device info

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3.2.3 Battery Group

After configuring the battery group, user can click the name of battery group in "Device Monitor" page to view the status and real time data, as shown in Figure3-22.

Real-time data

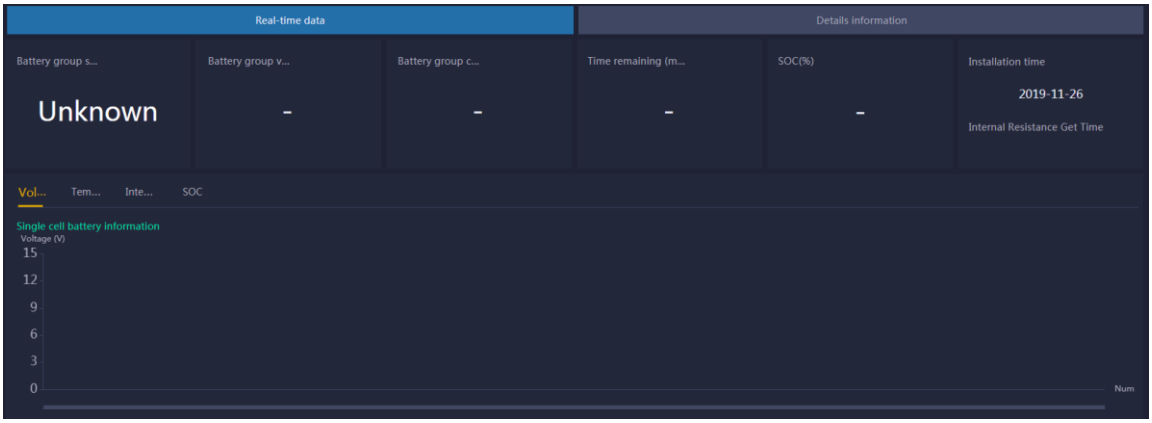

Figure3-22 Real time data of battery group

- Battery group info: it shows the current communication status and battery group's status, battery group's voltage, current, time remaining, SOC, installation time, as shown in Figure3-23.

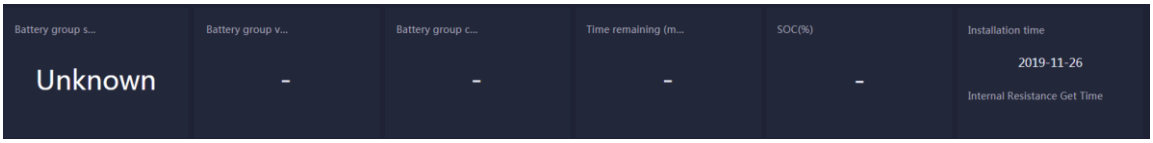

Figure3-23 Battery group info

- Battery info: the histogram shows the voltage, temperature, internal resistance and SOC of each battery in real time, once the data abnormal, it will show red to alarm, as shown in Figure3-24.

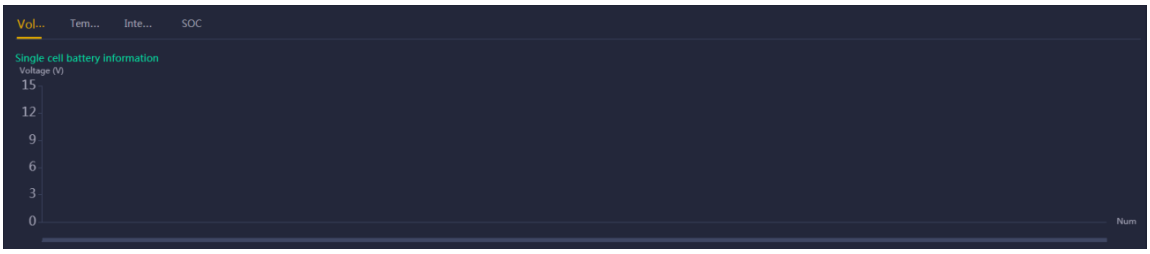

Figure3-24 Battery info

Details

It shows the battery voltage, internal resistance, temperature, SOC of each battery in list, as shown in Figure3-25.

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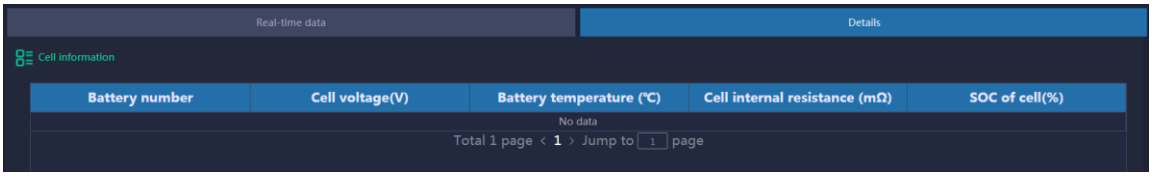

Figure3-25 Battery info (list)

3.2.4 Environment

Click "**Environment**", user can view the running status and real time data of temperature & humidity module, dry contact module, distribution switch monitoring module, common air conditioner, as shown in Figure3-26.

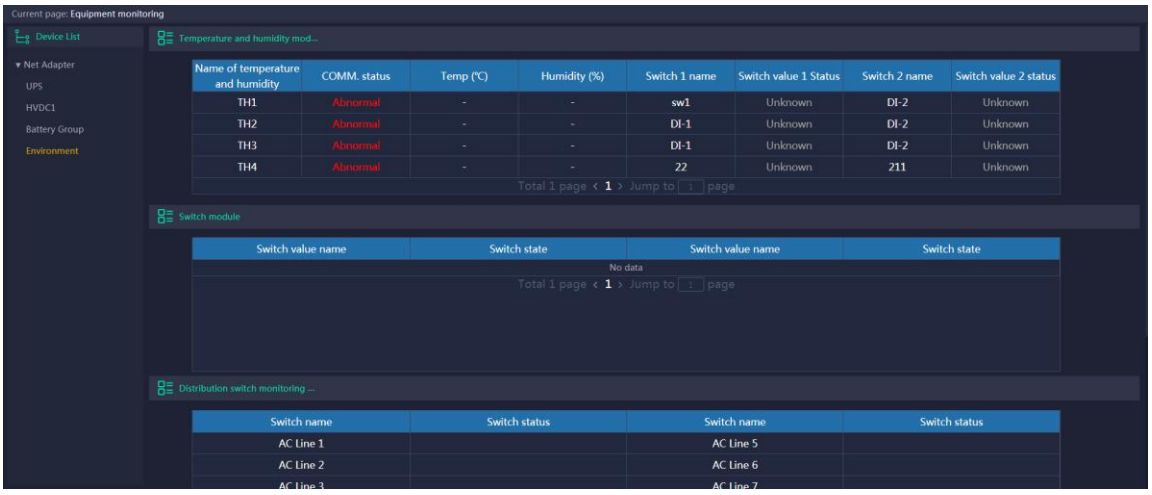

Figure3-26 Environment

Temperature and humidity module

After configuring the temperature and humidity device, user can view the running status and real time data of temperature and humidity device, including the communication status, temperature, humidity, name and status of each switch value, as shown in Figure3-27.

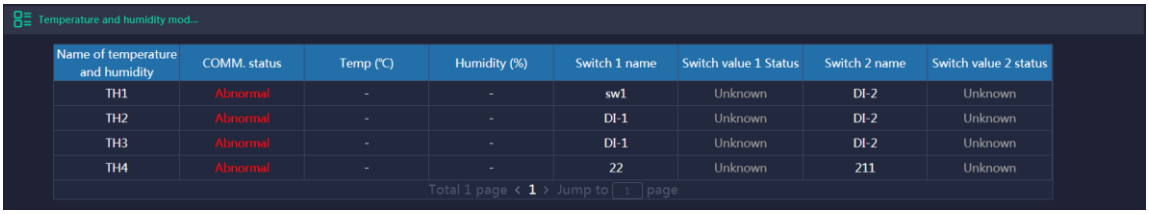

Figure3-27 Temperature and humidity device

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Switch module

After configuring the input switch value module, user can view the switch value's name and status of switch value module Figure3-28.

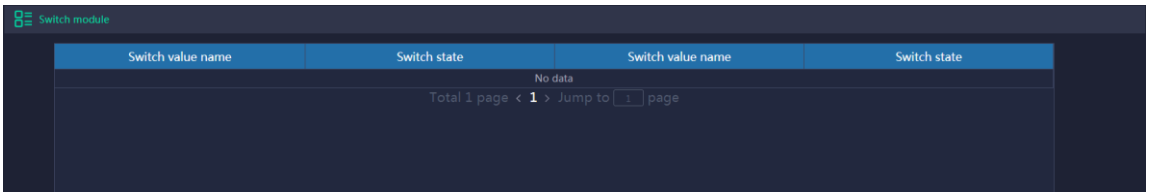

Figure3-28 Input switch

Distribution switch monitoring module

After configuring the distribution switch monitoring module, user can view the switch status of 8 routes distribution switch monitoring module, as shown in Figure3-29.

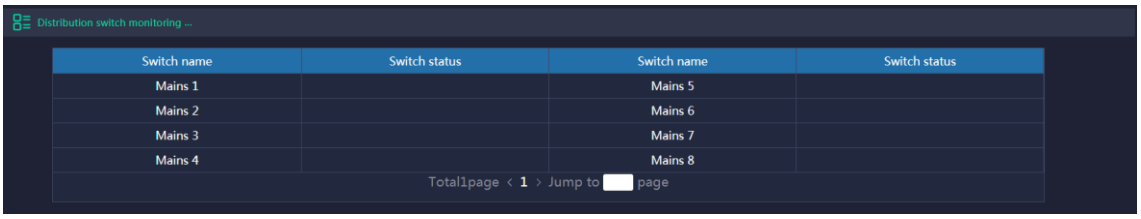

Figure3-29 Distribution switch

Common air conditioner

After configuring the air conditioner, user can view the communication status, temperature, running status of the common air conditioner, also, it can perform the command of ON/OFF, temperature +/- for the air conditioner, as shown in Figure3-30.

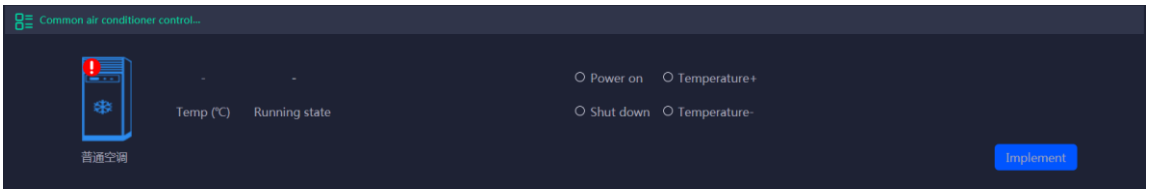

Figure3-30 Common air conditioner

3.3 Report Management

Report management can query the event record, data record, alarm notification record, system log.

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3.3.1 Event Log

Click the submenu "Event record" of "Report management", user can view the recorded event. The event record includes event chart and event details, as shown in Figure3-31, Figure3-32.

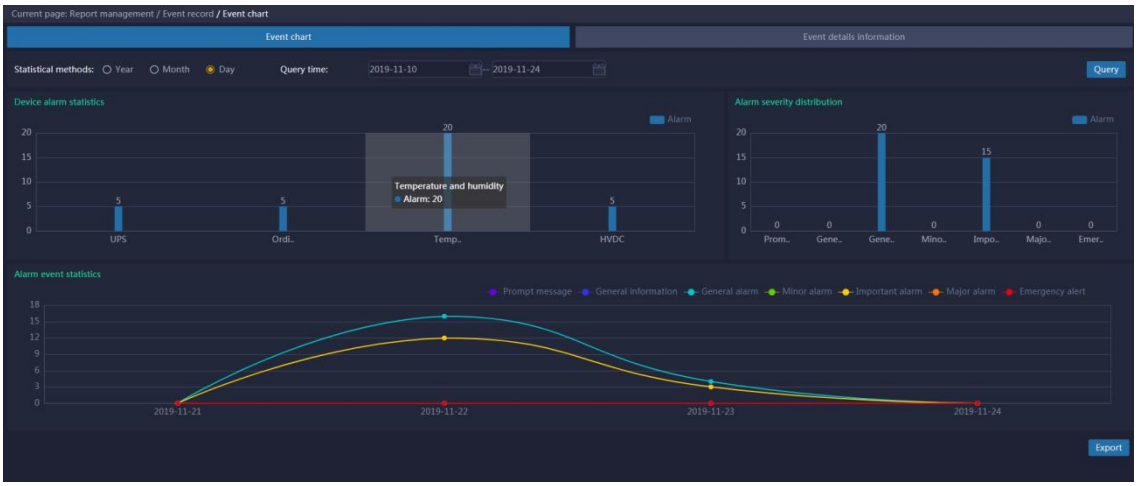

Figure3-31 Event chart

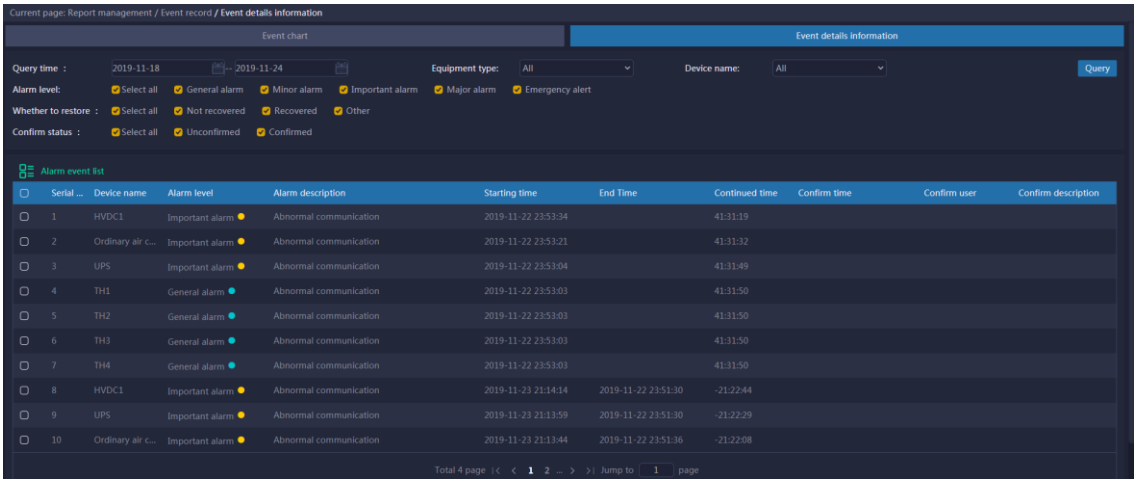

Figure3-32 Event details

3.3.2 Data Record

Click the submenu "Data record" of "Report management", user can view the data chart and history data details of each device, as shown in Figure3-33, Figure3-34.

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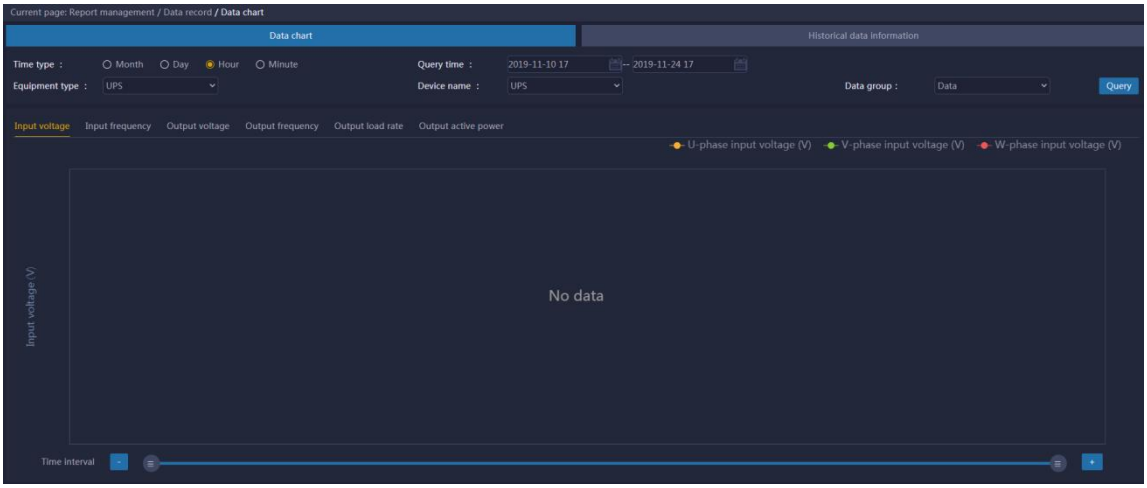

Figure3-33 Data chart

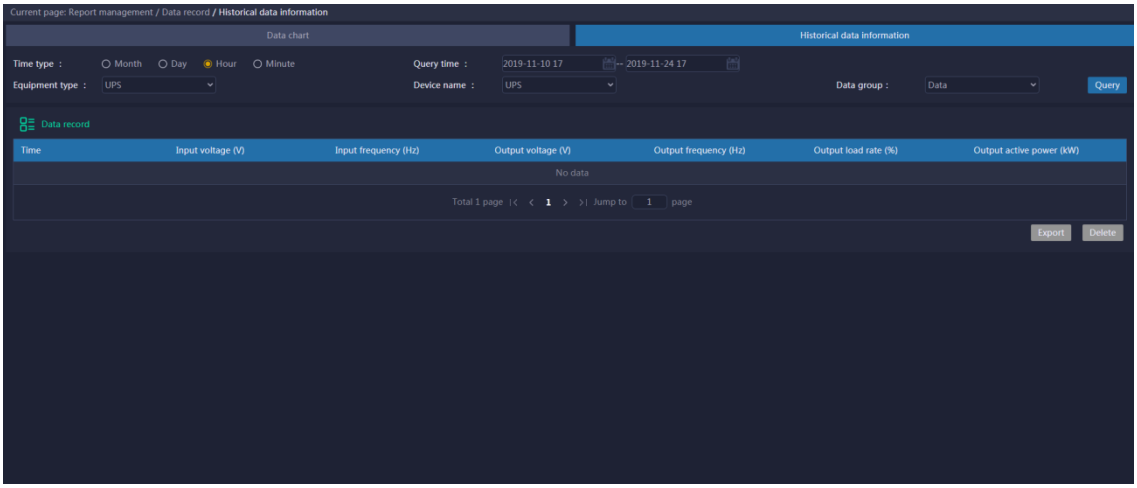

Figure3-34 History data details

3.3.3 Alarm Notification Record

Click the submenu "Alarm notification record" of "Report management", user can view the sent alarm records, including short message, e-mail, voice, linkage alarm, as shown in Figure3-35.

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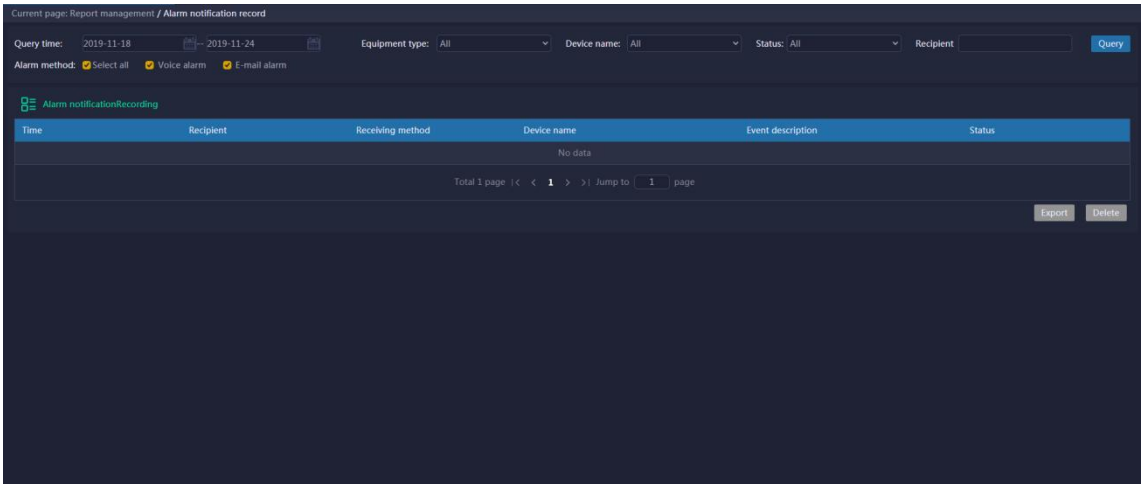

Figure3-35 Alarm notification record

3.3.4 Alarm Linkage Record

Click the submenu "Alarm linkage record" of "Report management", user can view the linkage alarm, including sound & light alarm, device control linkage, etc, as shown in Figure3-36.

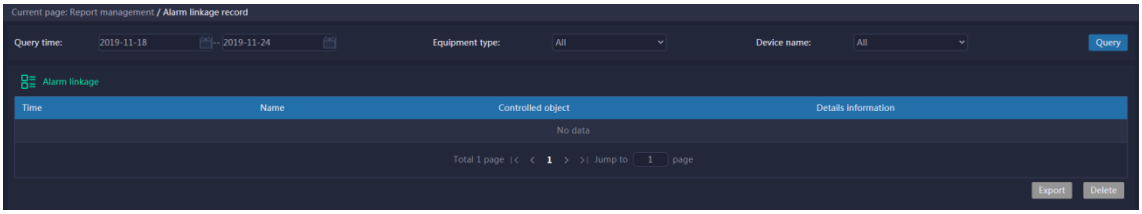

Figure3-36 Alarm linkage record

3.3.5 System Log

Click the submenu "System log" of "Report management", it will enter the system log page, the page includes login log, operation log, device control log, as shown in Figure3-37, Figure3-38, Figure3-39.

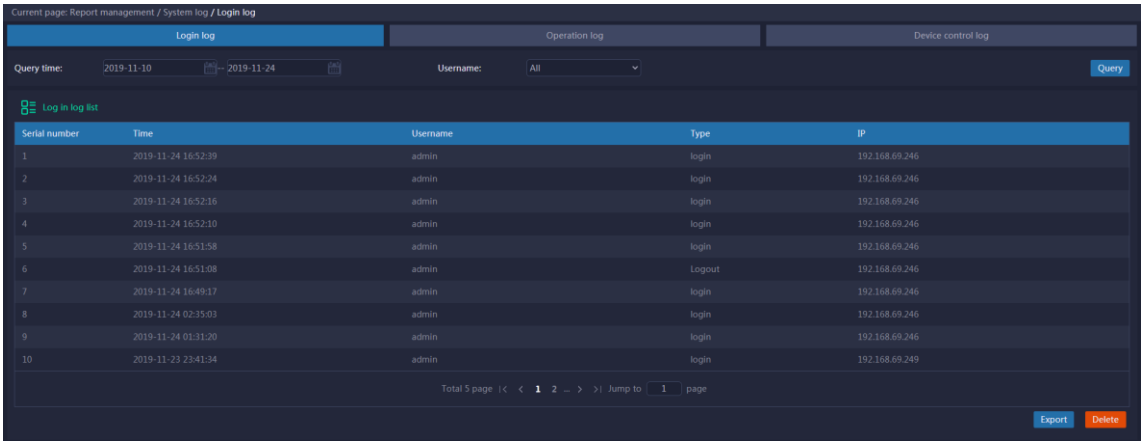

Figure3-37 Login log

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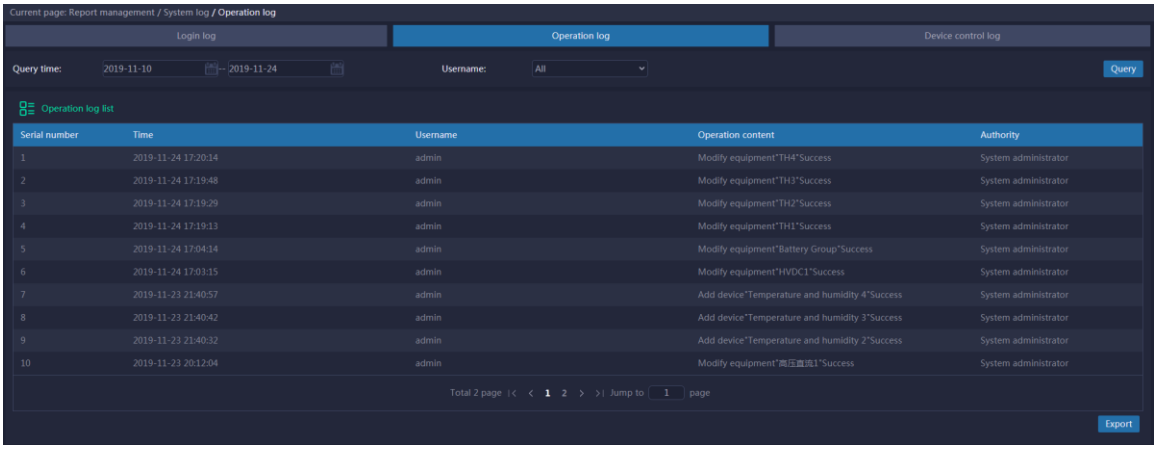

Figure3-38 Operation log

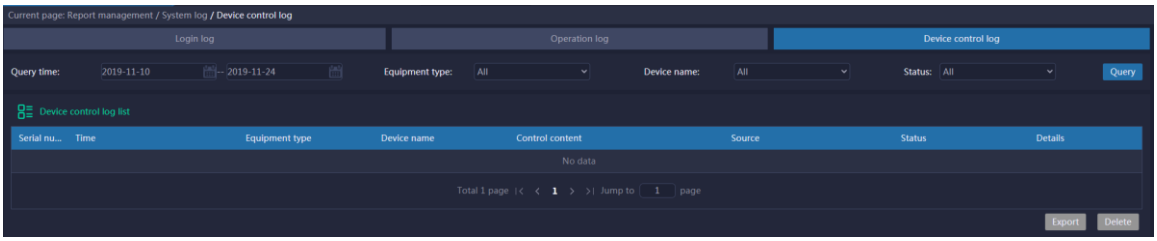

Figure3-39 Device control log

3.4 Operation and Maintenance Management

Click "Operation and maintenance management", it will enter the inspection record page, and the record can be exported and deleted, as shown in Figure3-40.

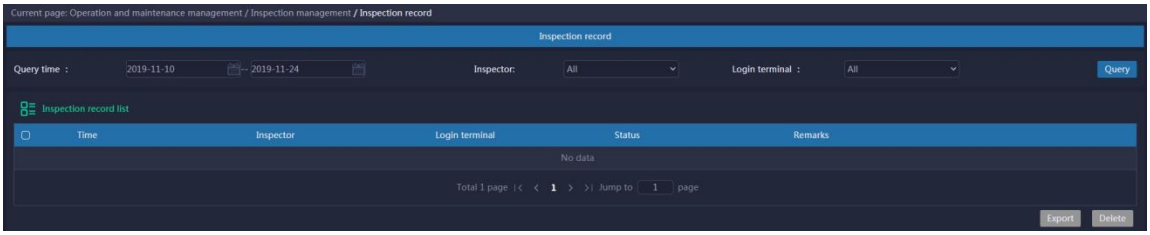

Figure3-40 Inspection management

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3.5 System Management

3.5.1 Alarm Management

Alarm event management

User can configure the enable status, handling suggestions, alarm level, alarm times, time interval, alarm delay, cancel alarm delay, whether to update the alarm, and update time, and the setting can be synchronized to other device, as shown in Figure3-41.

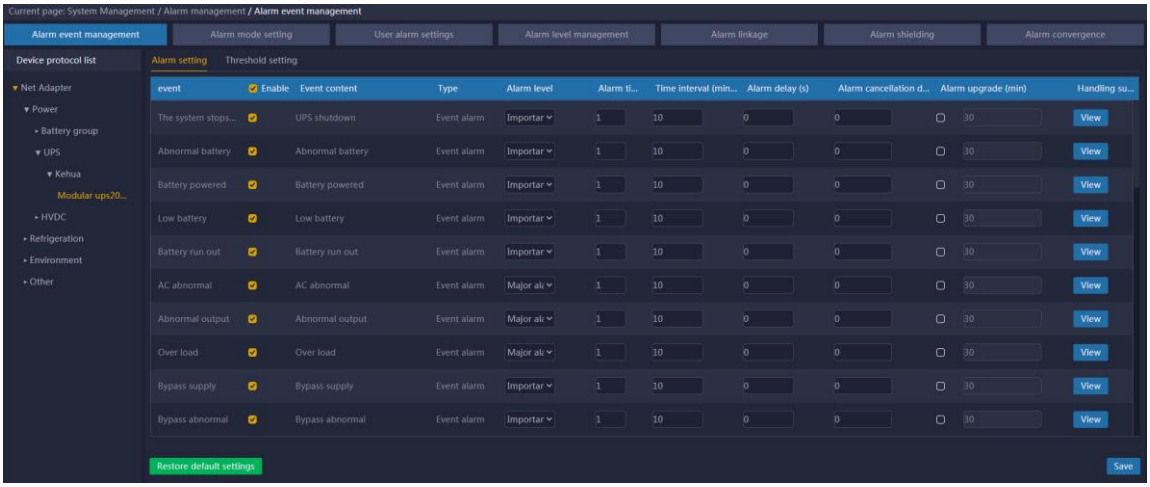

Figure3-41 Alarm event management

Alarm mode setting

Alarm mode setting is mainly used to configure the short message, e-mail, voice of webpage, as shown in Figure3-42.

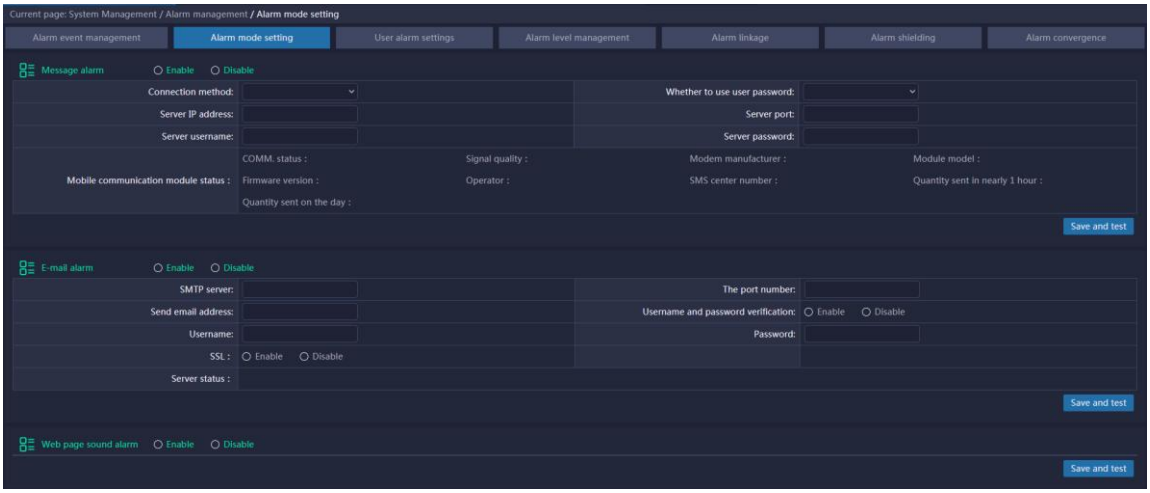

Figure3-42 Alarm mode setting

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User alarm setting

User alarm setting is used to configure the received alarm method of user.

User list shows all user of system, select corresponding user, and then, you can configure the user's event alarm method, as shown in Figure3-43.

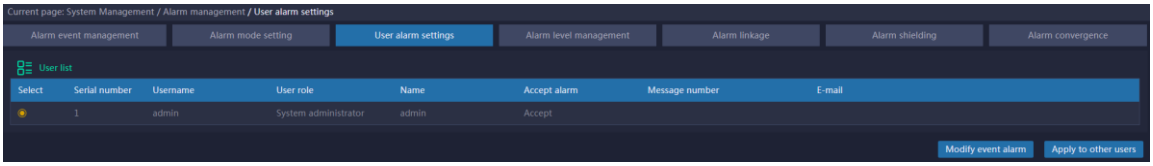

Figure3-43 User list

The event alarm method classifies the different type's device and alarm method, user can configure the alarm method of a alarm level of a type's device, as shown in Figure3-44. Select means accept, don't select means not accept, and the configuration can be used to other user.

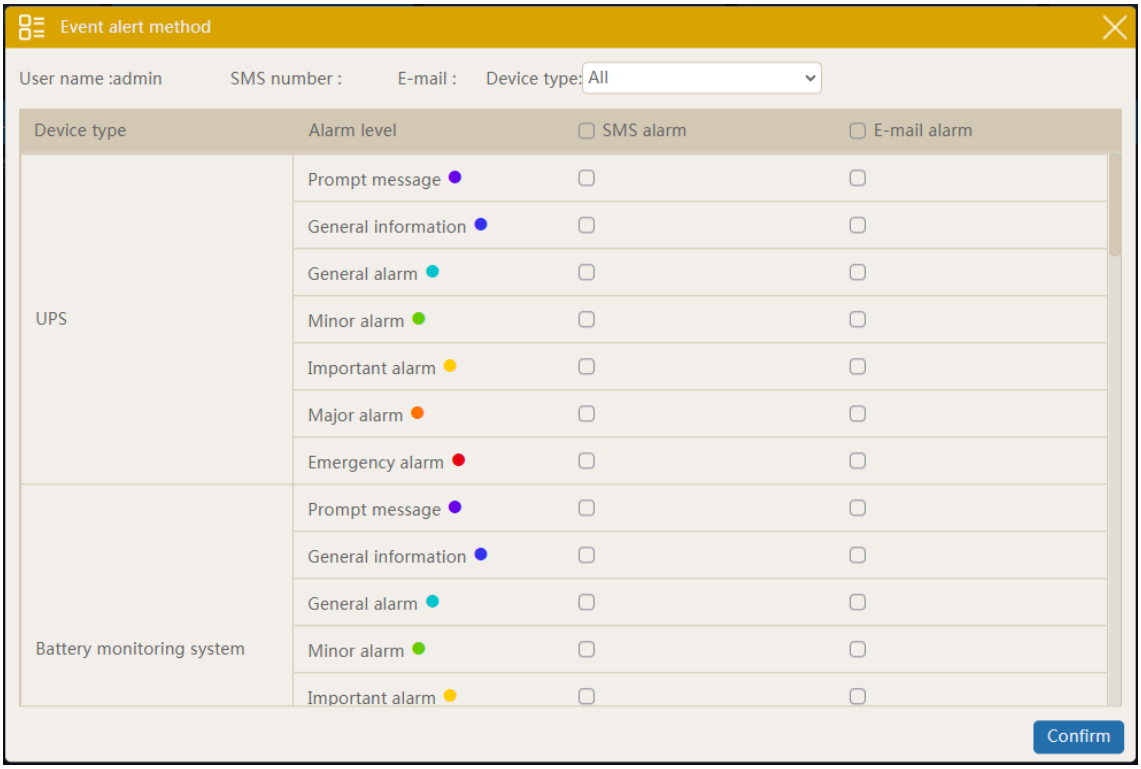

Figure3-44 Event alarm method setting

Alarm level management

Alarm level management page is used to configure the system's alarm level, there are 5 levels in default, and it can configure 7 level at most and 3 level at least, as shown in Figure3-45.

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Figure3-45 Alarm level management

Alarm linkage

Alarm linkage is used to configure the triggered output switch value or monitored device when alarm, as shown in Figure3-46. Alarm linkage list shows the configured alarm linkage strategy list. User can view the triggered condition and modify, delete the linkage strategy.

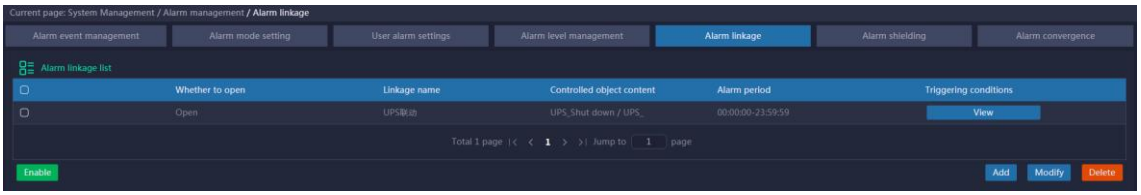

Figure3-46 Alarm linkage list

Click **Add** button, it will enter the new alarm linkage setting page, as shown in Figure3-47.

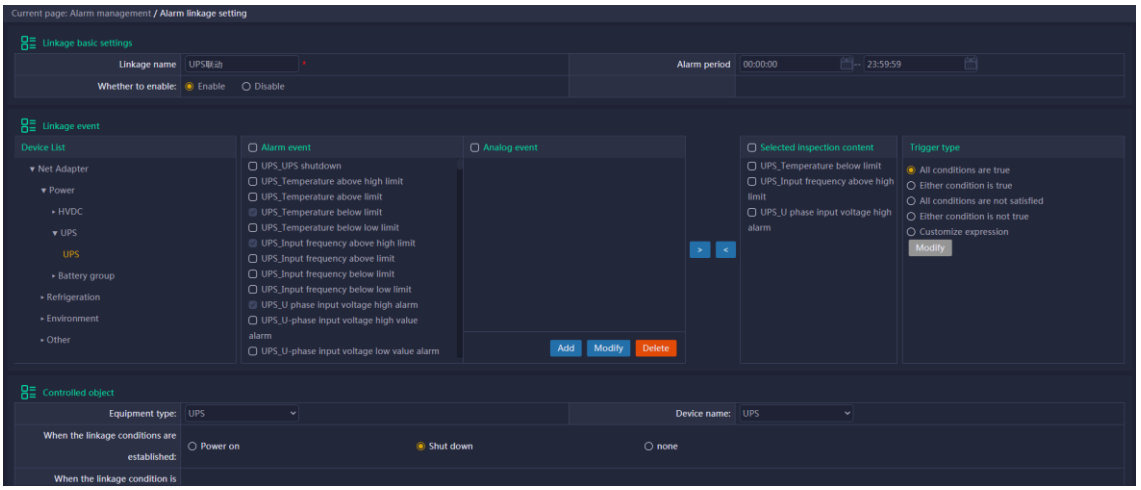

Figure3-47 Add alarm linkage

- Linkage name: it is used to set the name of alarm linkage.
- Control object: shows the current enabled and not configured output switch value.
- Continuous open time: it is the enable time of the output switch value after the alarm happen. It can be set to 10s, 30s, 1min, 30min, 60min.

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- Alarm period: only when the alarm that happens in the setting period, the linkage is valid.
- Trigger type: supports trigger by any event and event happens at the same time.
- Alarm event: select the device and device event of alarm linkage.

Alarm shielding

User can set up the shield strategy according to the shield time and alarm event, as shown in Figure3-48.

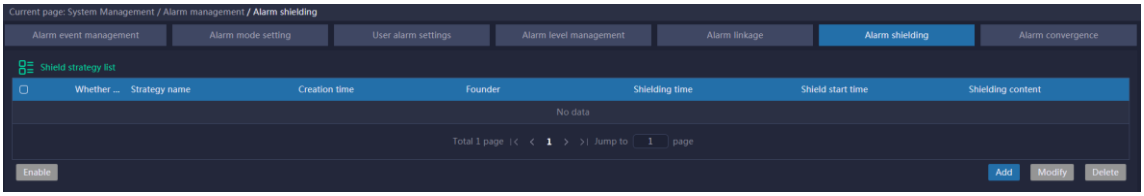

Figure3-48 Alarm shielding list

The alarm can be shielded according to the set shielding period and alarm event, as shown in Figure3-49.

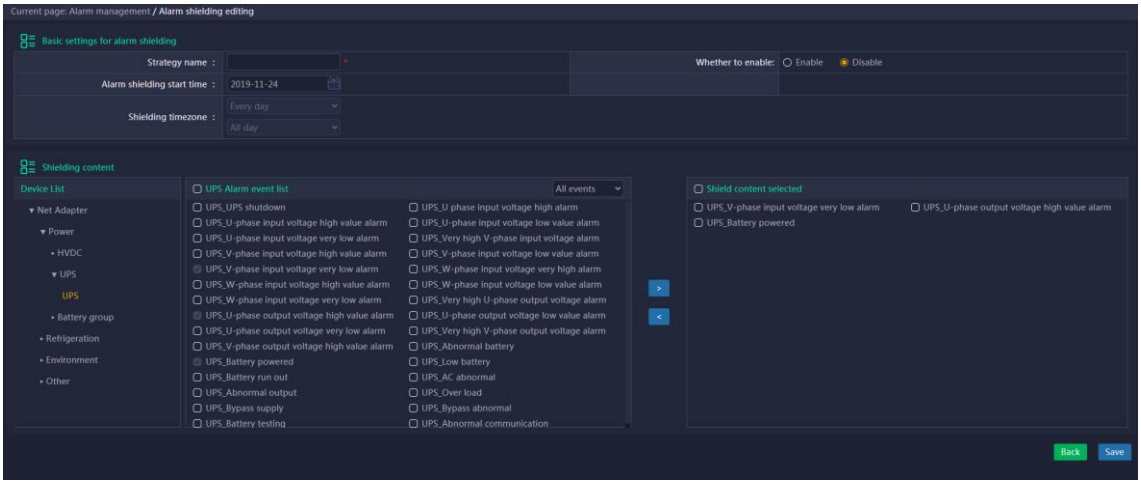

Figure3-49 Add new alarm shielding

Alarm convergence

Alarm convergence is used to configure several alarms into assigned alarm, as shown in Figure3-46. User can add, modify, delete the alarm convergence strategy, as shown in Figure3-50.

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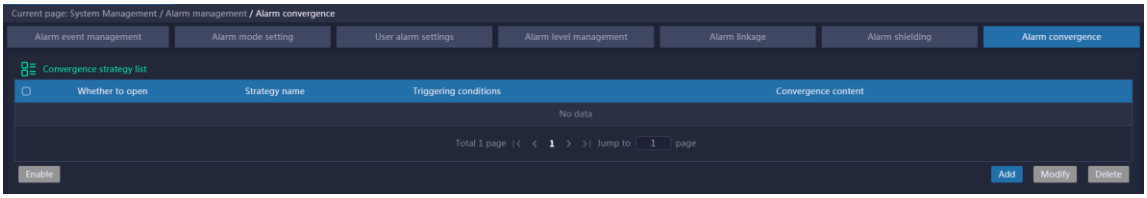

Figure3-50 Alarm convergence list

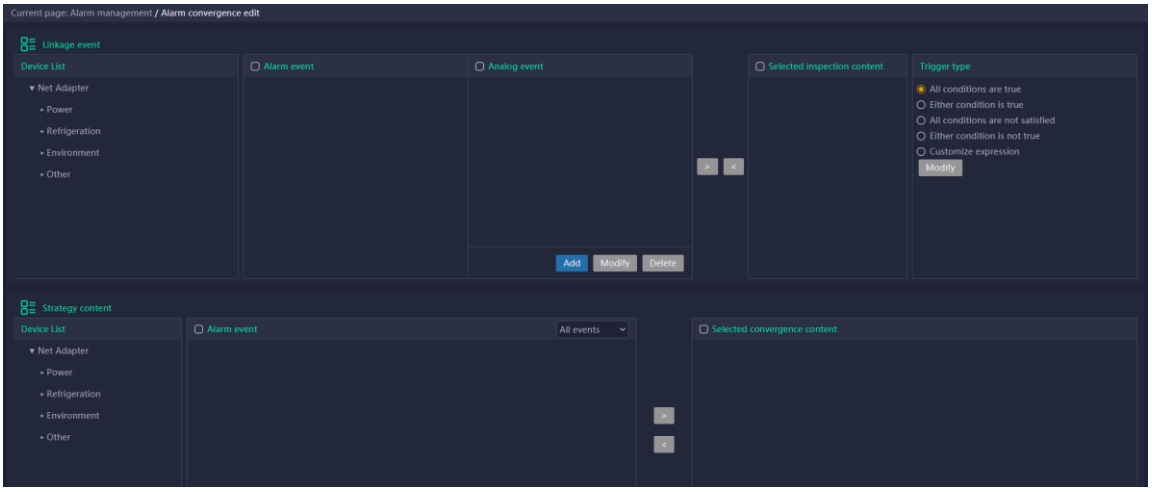

Figure3-51 Add new alarm convergence strategy

3.5.2 Device Management

Power

- UPS

Click the **UPS** at the left device list, it will enter the UPS device list. Click **Add**, **Modify** button, it will turn to the UPS management configuration page, as shown in Figure3-52. Select the UPS's basic info, such as manufacturer, communication protocol, serial port or network configuration, and feature parameter, such as device brand, model, S/N, installation time, installation position, number of battery group, number of cell, etc according to device.

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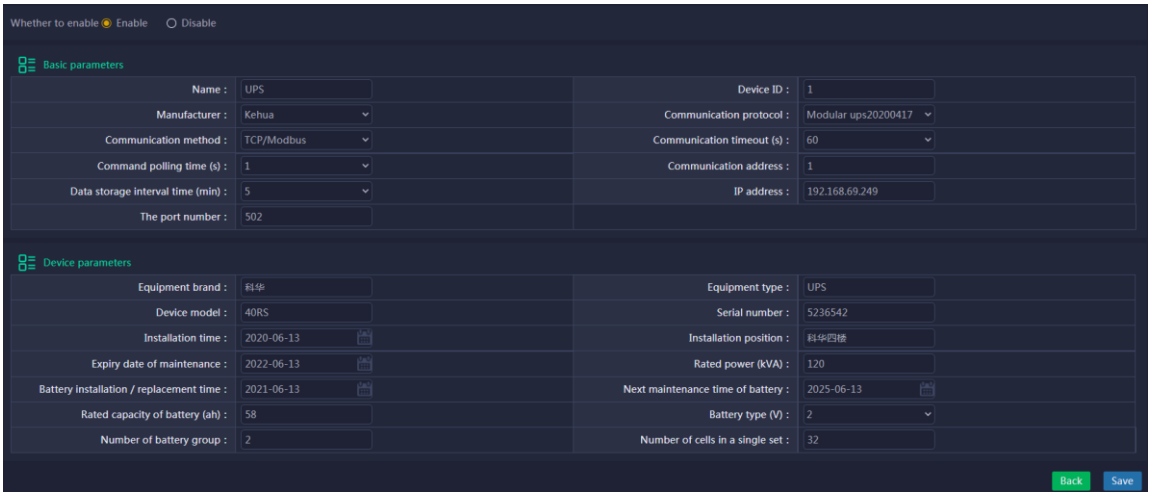

Figure3-52 UPS parameter setting page

- Distribution cabinet

Click the **Distribution cabinet** at the left device list, it will enter the distribution cabinet device list. Click **Add**, **Modify** button, it will turn to the distribution configuration page, as shown in Figure3-53. Select the distribution detection module's basic info, such as manufacturer, communication protocol, communication method, serial port or network configuration parameters according to device.

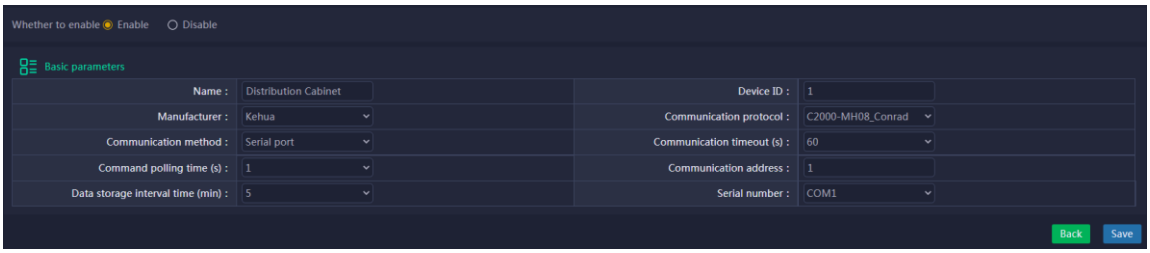

Figure3-53 Distribution cabinet parameter setting page

- HVDC

Click the **HVDC** at the left device list, it will enter the HVDC device list. Click **Add**, **Modify** button, it will turn to the HVDC device management configuration page, as shown in Figure3-54. Select the HVDC device's basic info, such as manufacturer, communication protocol, communication method, serial port or network configuration parameters and feature parameter, such as device brand, model, S/N, installation time, installation position, number of battery group, number of single cell, etc according to device.

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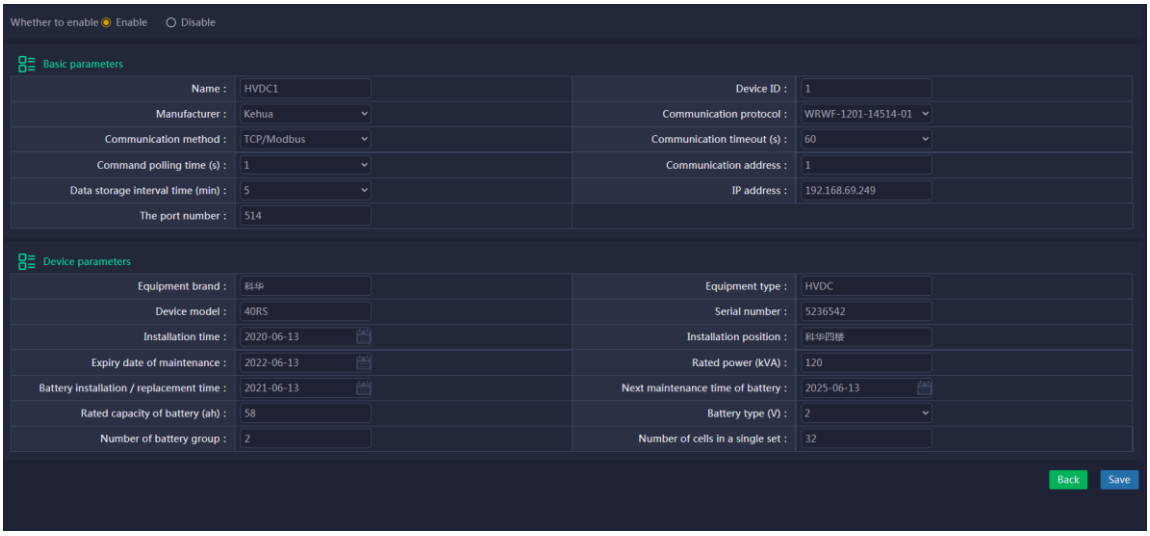

Figure3-54 HVDC parameter setting page

- Battery group

Click the **Battery group** at the left device list, it will enter the battery group device list. Click **Add**, **Modify** button, it will turn to the battery group device management configuration page, as shown in Figure3-52. Select the battery group's basic info, such as manufacture, communication protocol, communication method, serial port or network configuration parameters, and battery parameter, such as battery installation time, cell capacity, cell depletion voltage, cell floating charge voltage, cell voltage, cell inter resistance, battery group voltage acquisition method, etc according to device.

Figure3-55 Battery group parameter setting page

Click **WiseBMS setting** at the top right corner of battery group's device list, it will enter the internal resistance manual detection page. You can test the internal resistance and the test result will be showed in the page, as shown in Figure3-56.

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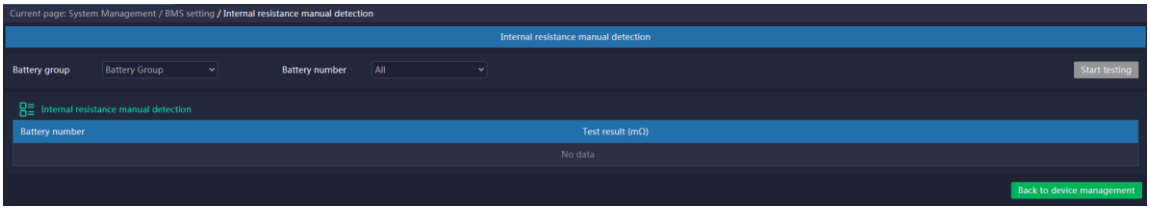

Figure3-56 Internal resistance manual detection page

- Battery acquisition module

Click **Battery acquisition module** at the left device list, it will enter the battery acquisition module device list. You can screen by battery group and it also supports import the battery acquisition module in batch, as shown in Figure3-57. Click **Add**, **Modify** button, it will turn to the battery acquisition module device management configuration page, as shown in Figure3-58. Select the basic info, such as manufacture, communication protocol, communication method, serial port, and feature parameter, such as module ID, module S/N, belonged battery group, etc according to device.

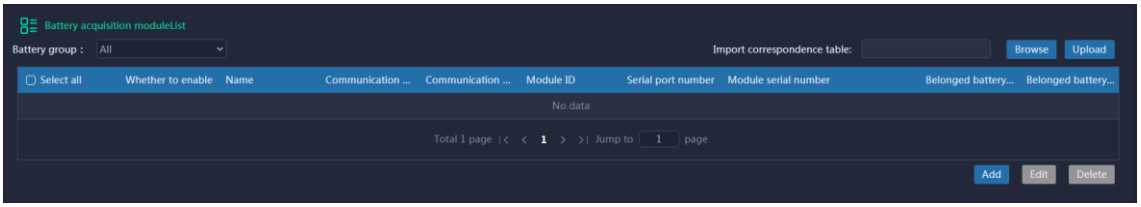

Figure3-57 Battery acquisition module list

Figure3-58 Parameter setting of battery acquisition module

- Current acquisition module

Click **Current acquisition module** at the left device list, it will enter the current acquisition module device list. You can screen by battery group and it also supports import the current acquisition module in batch, as shown in Figure3-59. Click **Add**, **Modify** button, it will turn to the current acquisition module device management configuration page, as shown in Figure3-60. Select the basic info, such as manufacture, communication protocol, communication method, serial port, and feature

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parameter, such as hall sensor, module ID, module S/N, belonged battery group, etc according to device.

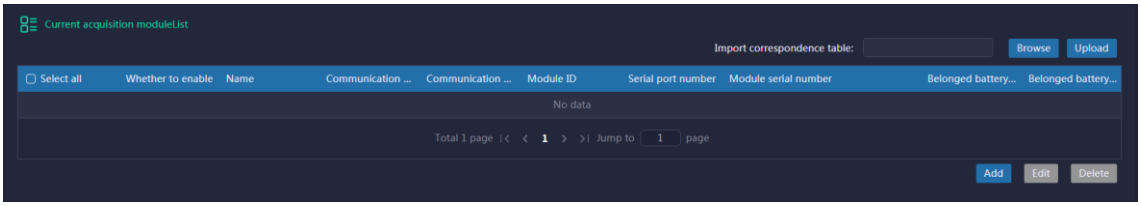

Figure3-59 Current acquisition module list

Figure3-60 Parameter setting of current acquisition module

Refrigeration

- Common air conditioner

Click **Common air conditioner** at the left device list, it will enter the common air conditioner device list. Click **Add**, **Modify** button, it will turn to the common air conditioner device management configuration page, as shown in Figure3-52. Select the basic info, such as manufacture, communication protocol, communication method, serial port, etc according to device.

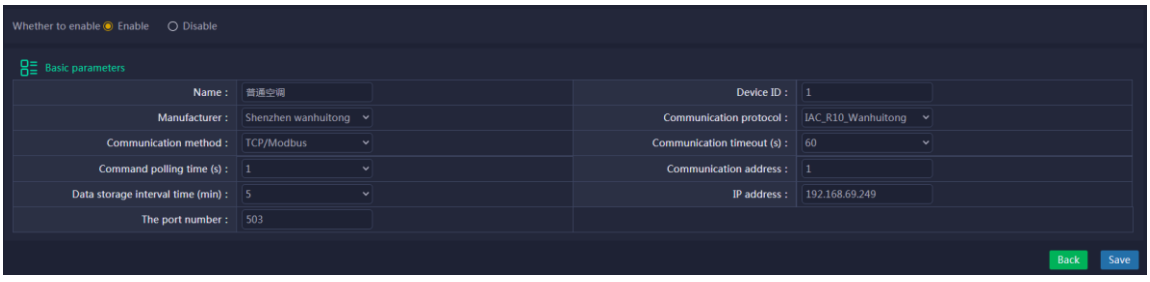

Figure3-61 Parameter setting of common air conditioner

Environment

- Temperature and humidity

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Click **Temperature and humidity** at the left device list, it will enter the temperature and humidity device list, as shown in Figure3-62. Click **Add**, **Modify** button, it will turn to the temperature and humidity device management configuration page, as shown in Figure3-63. Select the basic info, such as manufacture, communication protocol, communication method, serial port, network configuration parameter, etc, and feature parameters, such as enable status, device name, device type, abnormal level, etc according to device.

Figure3-62 Temperature and humidity device list

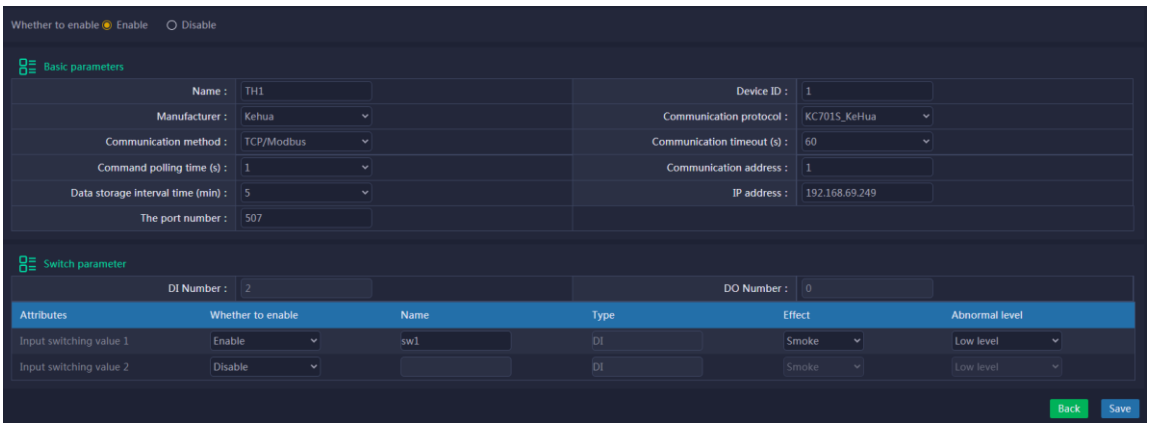

Figure3-63 Parameter setting of temperature and humidity

Security

- Remote switch value module

Click **Remote switch value module** at the left device list, it will enter the remote switch value module list. Click **Add**, **Modify** button, it will turn to the remote switch value module configuration page, as shown in Figure3-64. Select the basic info, such as manufacture, communication protocol, communication method, serial port, network configuration parameter, etc, and feature parameters, such as enable status, device name, effect, abnormal level, etc according to device.

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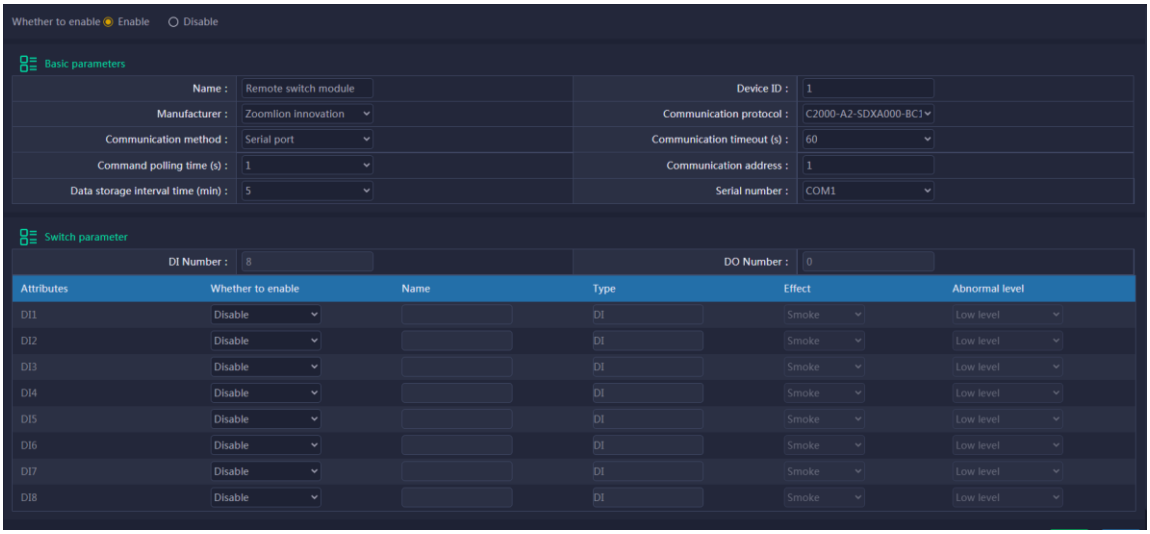

Figure3-64 Parameter setting of switch value module

3.5.3 User Management

Click **User Management** to enter user list. The user can be screened by user name and role, as shown in Figure3-65. Click **Add**, **Modify** button, it will turn to user info configuration page, as shown in Figure3-63. In the page, the user name, user role, name, department, message number, e-mail, whether to accept alarm and alarm period can be set. User role includes system administrator, system operator and general user. The system administrator can manage the configuration of system, and remote control the device. The operator cannot manage the configuration of system, but they can remote control the device. The general user only can view the data of each page.

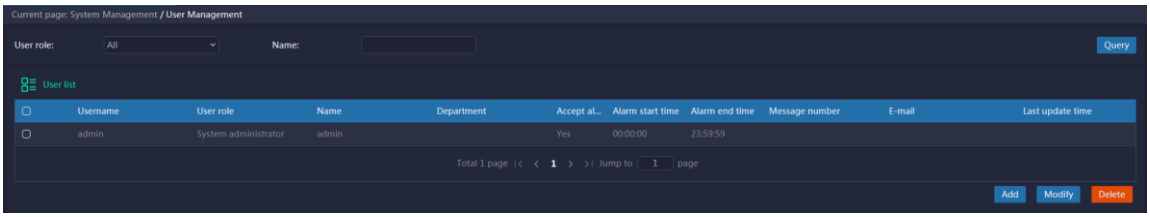

Figure3-65 User list

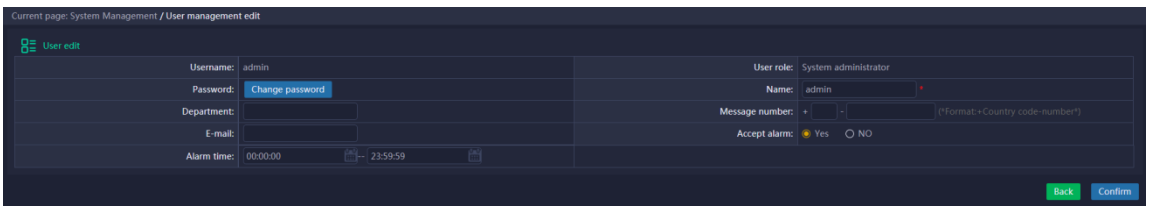

Figure3-66 User info configuration page

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3.5.4 Scheduled Task

Scheduled task can achieve regular operation for device according to setting time, and send reminder in advance, at the same time, the reminder record of task can be queried, as shown in Figure3-67, Figure3-68, Figure3-69.

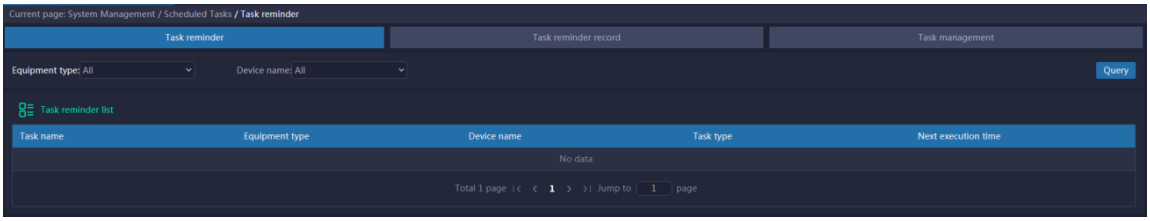

Figure3-67 Task reminder list

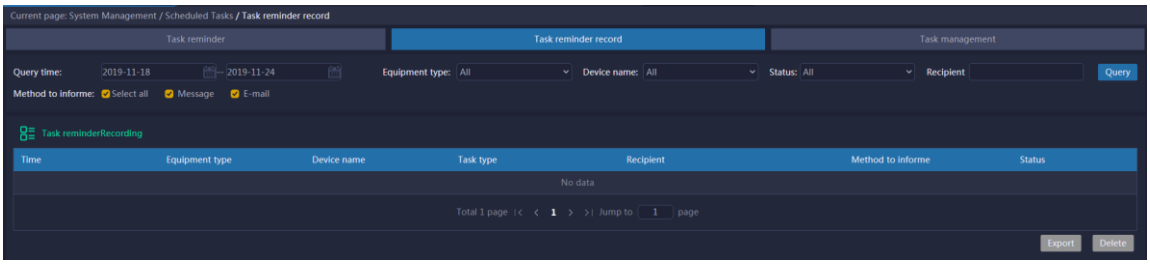

Figure3-68 Task reminder record

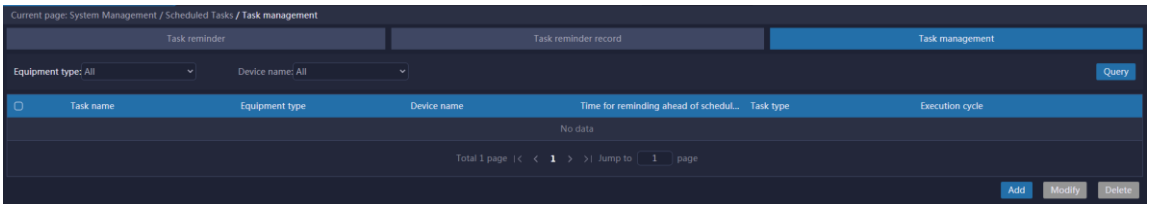

Figure3-69 Task management

3.6 System Setting

3.6.1 Parameter Setting

Figure3-70 Parameter setting

- The general info page shows system name, system administrator and system installation location.
- Administrator phone: used to store the phone info of administrator.
- Soft restart: it supports restart the software system of network adapter according to command.

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3.6.2 Network Setting

Wired network port setting

Wired network port setting page is as shown in Figure3-71. The system supports DNS server setting, user can set the IP obtained method by manual or auto. When obtain the IP manually, user needs to enter the IP address, subnet mask and gateway.

Figure3-71 Network port setting

Web setting

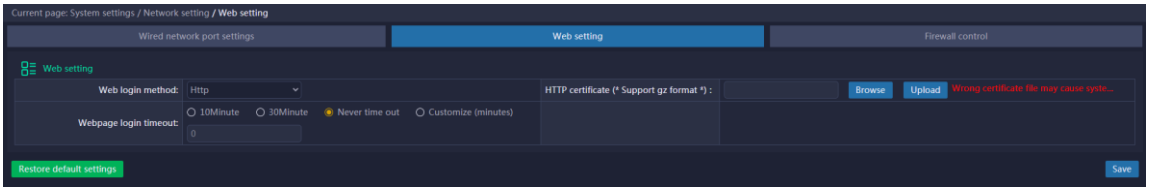

Figure3-72 Web setting

- Web login method: it is used to assign the visit method of system, default is http, and also, it can be set to https, http and https.
- Http certificate: it supports the http certificate files of gz format.
- Webpage login timeout: it supports the timeout setting for webpage and LCD, there are 4 optional: 10 minutes, 30 minutes, never timeout and customize.

Firewall control

Click **firewall control** to enter the control strategy list of firewall control, as shown in Figure3-71. In the page, you can set the function of whether to enable the whole network filtering strategy, and also, you can customize the filtering strategy. Click **Add**, **Modify** button, it will turn to the configuration page of firewall control strategy. You can select the protocol type, port, whether to allow filtering, IP address, etc, as shown in Figure3-73.

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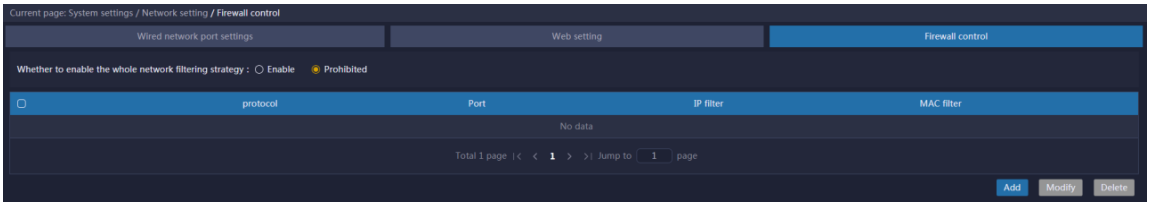

Figure3-73 Firewall control list

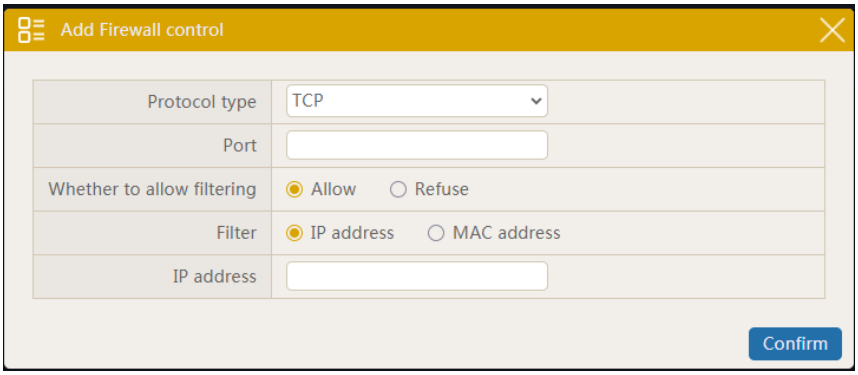

Figure3-74 Firewall control strategy

3.6.3 Serial Port Setting

Serial port setting is as shown in Figure3-75. User can configure the port standard, baud rate, data bit, stop bit, and verification method of each serial port and view the device that has connected with the serial port.

Figure3-75 Serial port setting

3.7 Auxiliary Function

3.7.1 System Upgrade

System upgrade includes software upgrade and device upgrade. The software upgrade page shows current software and firmware version, local upgrade, FTP upgrade, as shown in Figure3-76.

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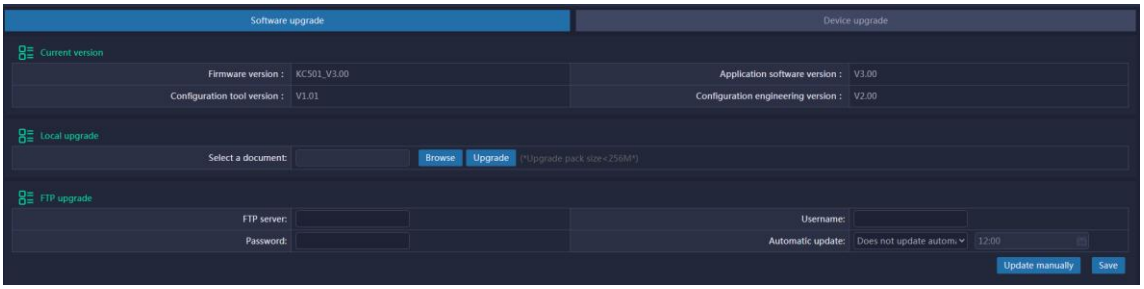

Figure3-76 Software upgrade

Device upgrade is mainly used to upgrade the monitored battery acquisition module and current acquisition module, and also, you can view the upgrade status of module, as shown in Figure3-77.

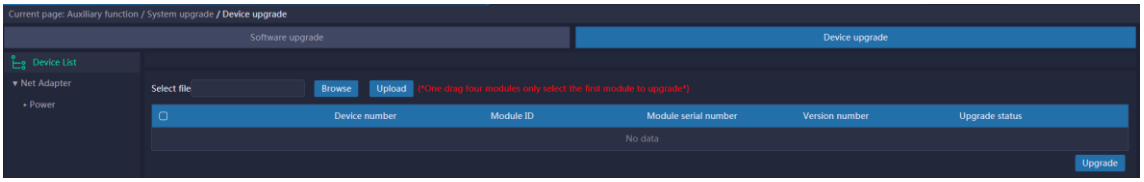

Figure3-77 Device upgrade

3.7.2 Date and Time

The data and time of system can be set manually or according to network.

- Time setting according to network

Set the function of Use network data and time to "Yes", the time will be in accordance with that of network.

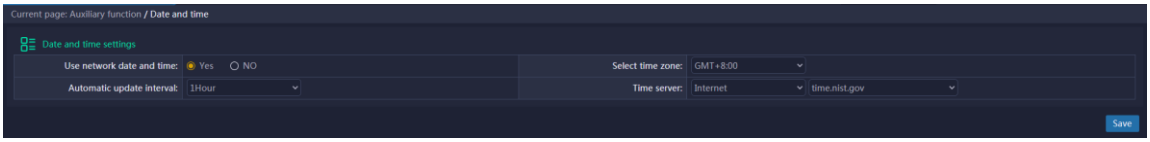

Figure3-78 Time setting according to network

NOTE

Set the auto update interval, and then select custom server, it will automatically update the system time according to setting.

- Manual time setting

Set the function of Use network data and time to "No", and then you can set the time manually.

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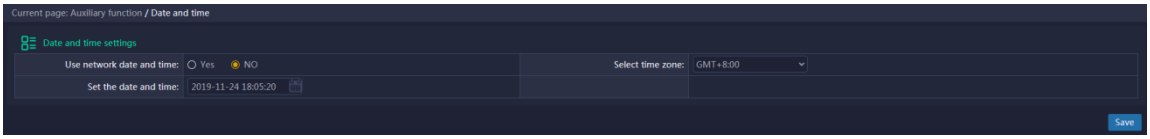

Figure3-79 Manual time setting

3.7.3 Authorization Setting

In the authorization setting page, the authorized files can be imported and the page shows the info of current authorized files, including authorized MAC info, authorized time, order info, project code, project info, device S/N, max. device number of each type, and whether to enable each alarm function, as shown in Figure3-80.

Figure3-80 Authorization setting page

3.8 Configuration Management

3.8.1 General Configuration

System Configuration

In the system configuration page, user can import or export the configuration files of system project, as shown in Figure3-81.

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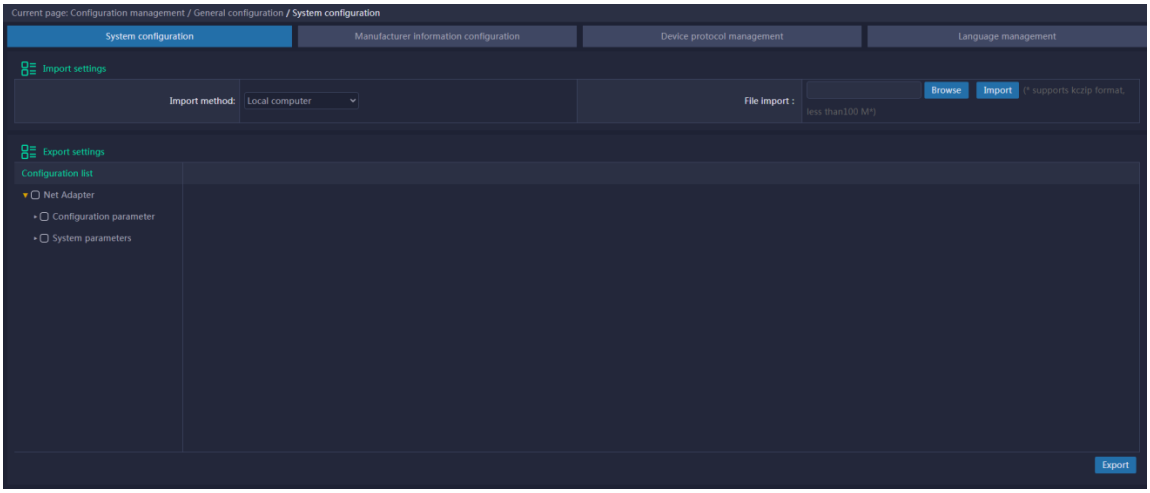

Figure3-81 System configuration

Manufacturer info configuration

In the manufacturer info configuration page, you can set the manufacturer info, as shown in Figure3-82.

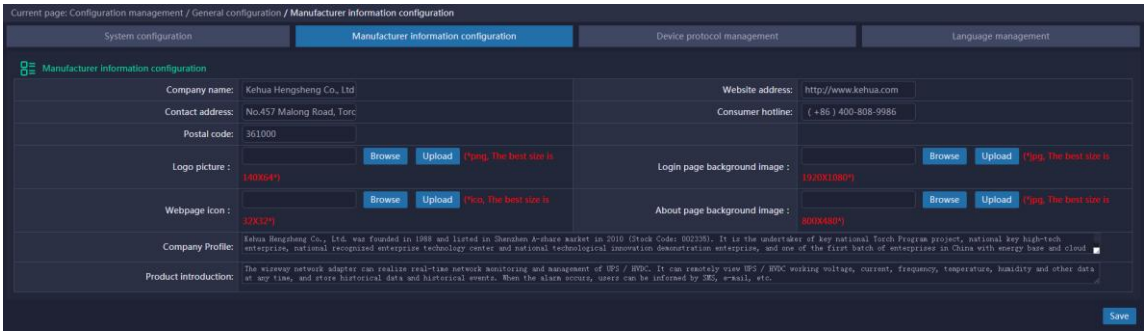

Figure3-82 Manufacturer info configuration

Device protocol management

In the device protocol management page, you can import new device protocol, and also, you can export or delete the existing southbound device protocol, as shown in Figure3-83.

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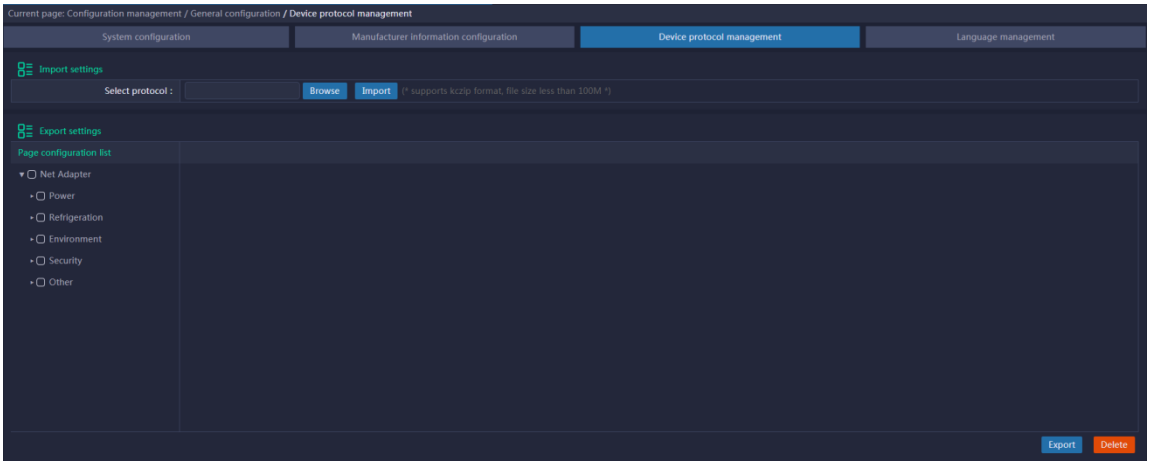

Figure3-83 Device protocol management

Language management

In the language management page, you can import new language files, and also, you can export or delete the existing language files, as shown in Figure3-84.

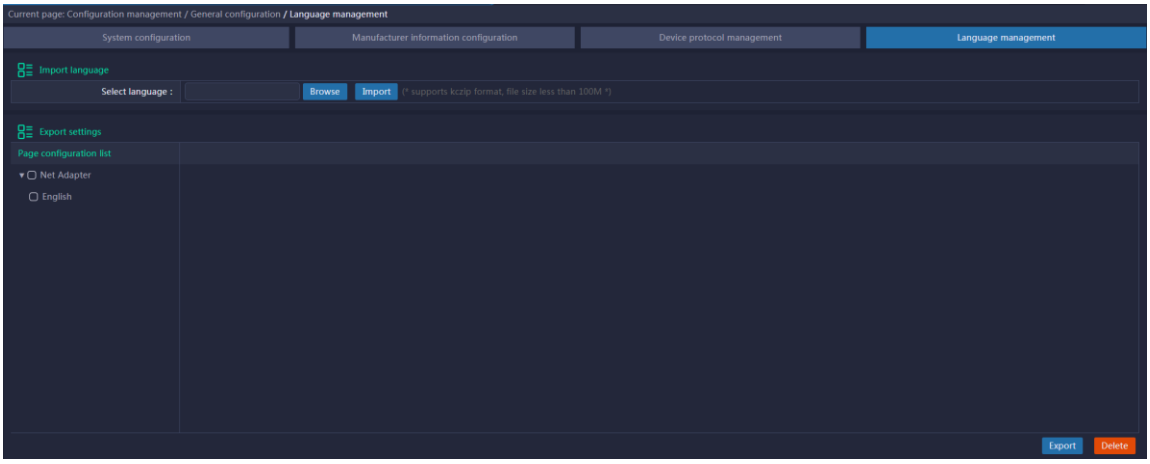

Figure3-84 Language management

3.8.2 Northbound Configuration

Northbound configuration includes the setting for SNMP, MODBUS.

SNMP setting

SNMP setting includes SNMP function, Trap notification setting, northbound test point, Mib setting.

- SNMP function

In the page, the version, port, etc of SNMP can be set. SNMP version has two optional: V1/V2, V3, if select V1/V2 version, it needs to set the community authority of client-side, as shown in Figure3-85.

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Community configuration includes authorized IP, community and authorization. The authorization can be no authorization, readable/ writable and readable.

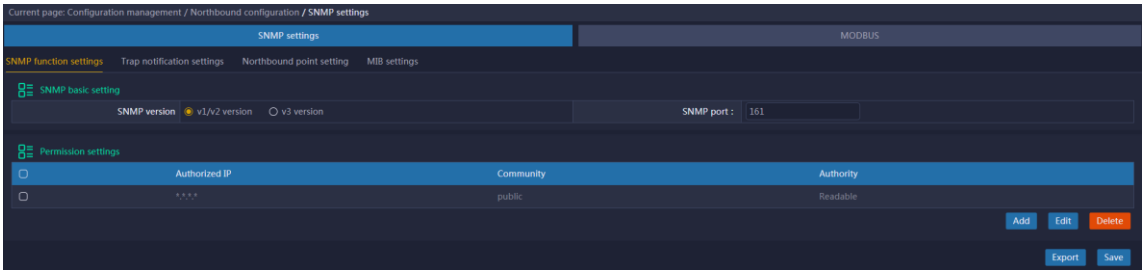

Figure3-85 SNMP function (V1/V2)

Figure3-86 Community configuration setting

When the SNMP version selects V3, it needs to configure the user and context.

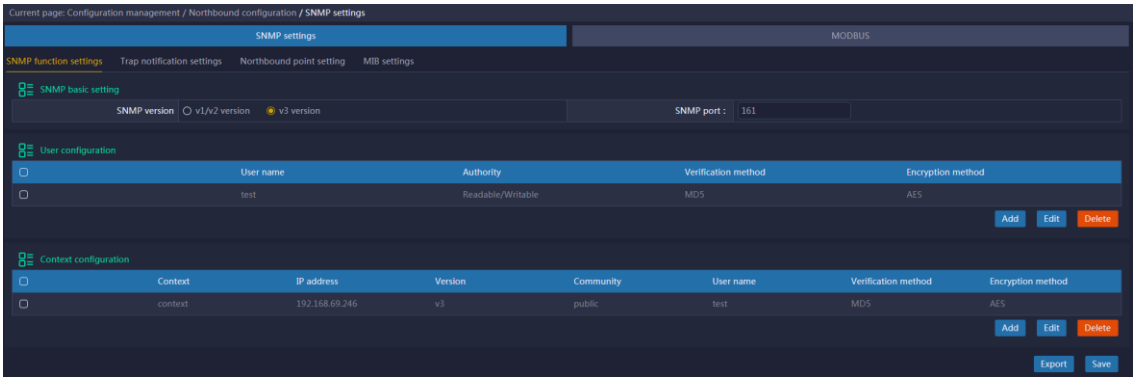

Figure3-87 SNMP (V3)

User configuration includes user name, authorization, verification method, verification password, encryption password, as shown in Figure3-88.

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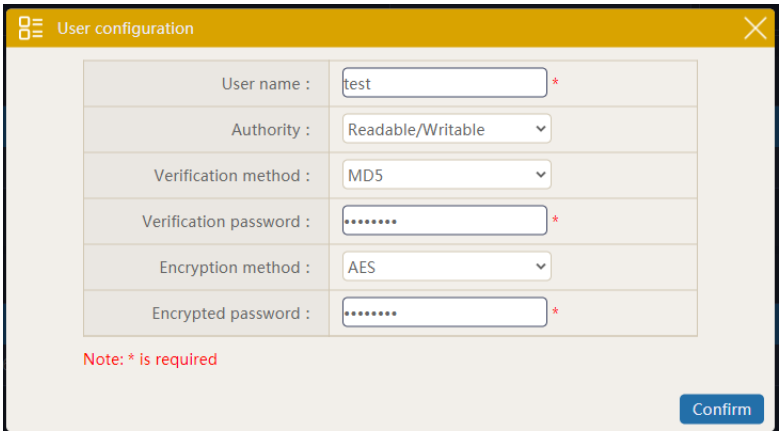

Figure3-88 User configuration

1. Authorization can be no authorization, readable/ writable and readable.
2. Verification method supports MD5 and SHA.
3. Encryption way supports no encryption, DES and AES.

Context configuration include context, IP, version, user name, verification method, verification password, encryption way, encryption password, as shown in Figure3-89.

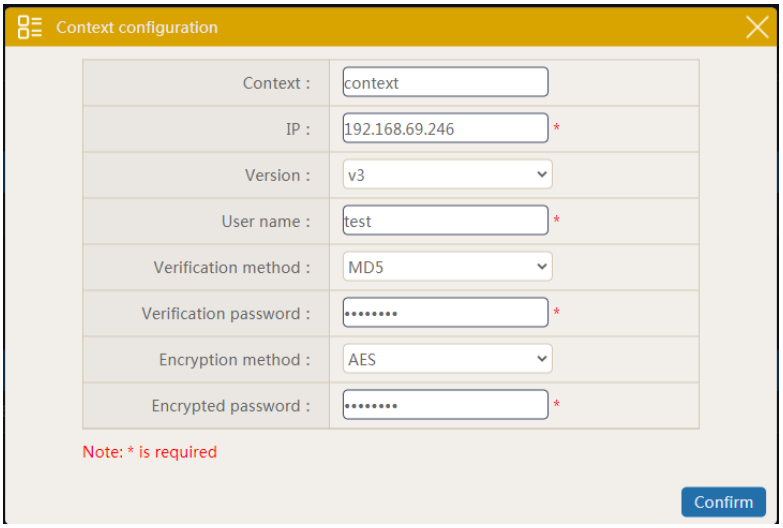

Figure3-89 Context configuration

1. Authorization can be no authorization, readable/ writable and readable.
2. Verification method supports MD5 and SHA.
3. Encryption method supports no encryption, DES and AES.

- Trap notification setting

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Click **Trap notification setting**, it will enter trap notification list. The trap notification strategy can be added, modified, deleted, and the configured trap notification can be tested, as shown in Figure3-90.

Figure3-90 Trap notification list

Click **Add** or **Modify** button, it will enter the trap setting page, as shown in Figure3-91. In the page, you can set whether to enable the trap strategy, receiving IP, receiving port, trap version, trap community, alarm event that triggered by trap, as shown in Figure3-91. Trap version can be V1, V2 and V3.

CAUTION

The trap notification standard supports the UPS trap alarm of RFC1628, other trap notification needs to customize to develop.

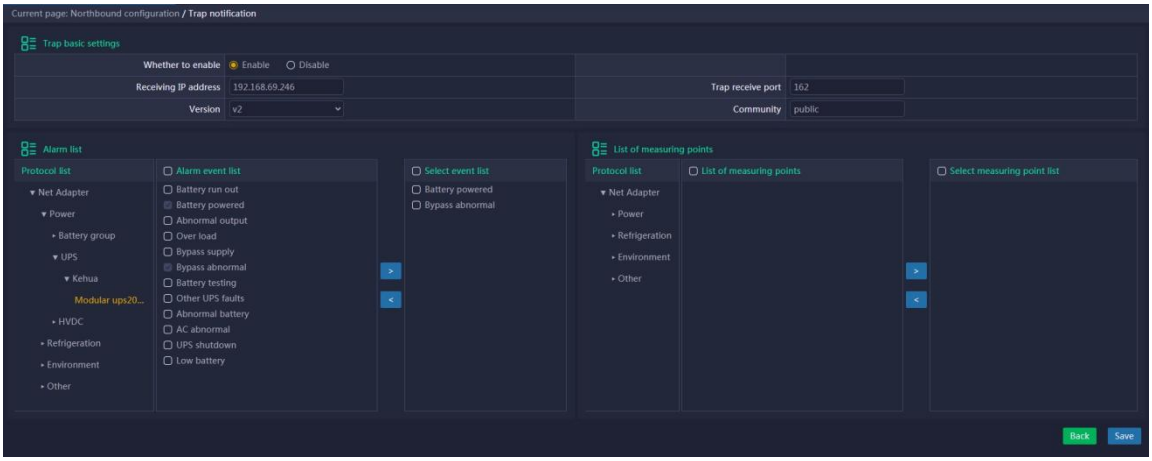

Figure3-91 Trap setting

- Northbound point setting

In the page, UPS manufacturer, SNMP system name, UPS power supply description can be set, which meet the northbound read needs for OID point in RFC1628 MIB, as shown in Figure3-92.

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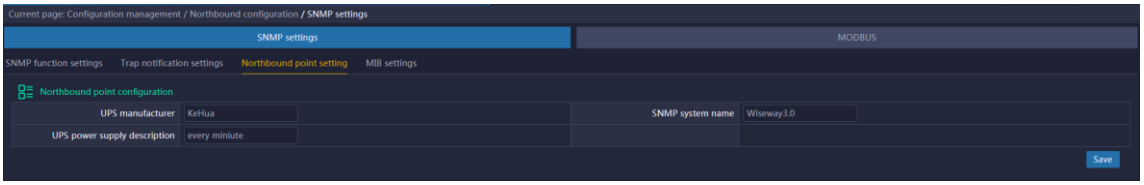

Figure3-92 Northbound point setting

- Mib setting

User can visit the mib files of network adapter by third party, as shown in Figure3-93.

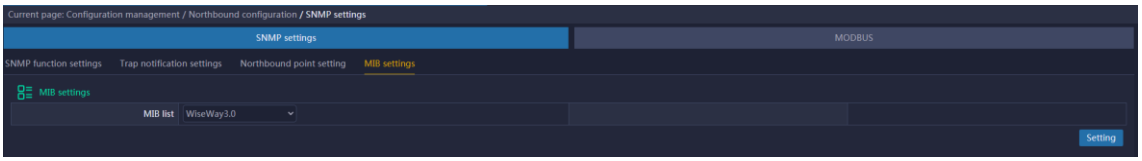

Figure3-93 Mib setting

MODBUS setting

In MODBUS setting page, the TCP port of Modbus-TCP can be modified, and also, the Modbus-TCP protocol can be exported and deleted, as shown in Figure3-94.

Figure3-94 MODBUS setting

3.8.3 Layout Configuration

Home module configuration is used to configure the chart of main monitor module and auxiliary sub-module that showed in homepage, as shown in Figure3-95. The main monitor module supports 1 item at most, the auxiliary module supports 3 items at most.

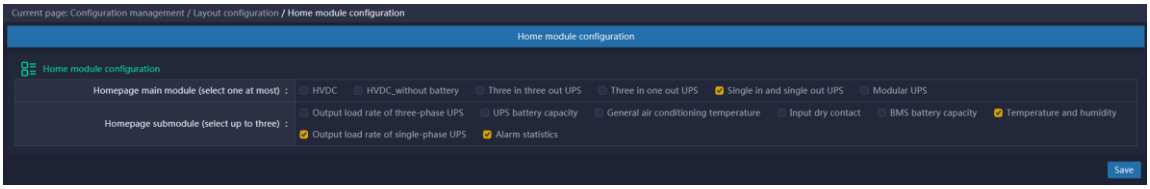

Figure3-95 Homepage module configuration

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3.9 Others

3.9.1 Other Info

Other info page includes basic info and device status, as shwon in Figure3-96.

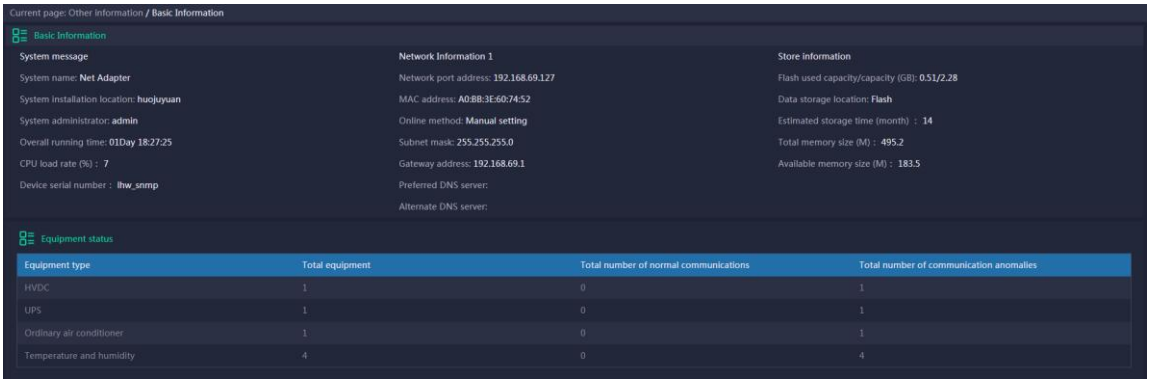

Figure3-96 Other info page

Basic info

- System info: it shows the system name, system installed position, system administrator according to the setting of system configuration. Total running time shows the total running time of the device after latest power outage.
- Network info: it shows the actual connection info of system's network port.
- Storage info: includes the use condition of FLASH, SD card and hard disk, and it also gives estimated storage time.

Device status

Device status list shows the total device number, quantity of normal communication device and abnormal communication device.

3.9.2 About

About page introduces the manufacturer info, including stock code, contact address, customer service telephone, postal code and website, as shown in Figure3-97.

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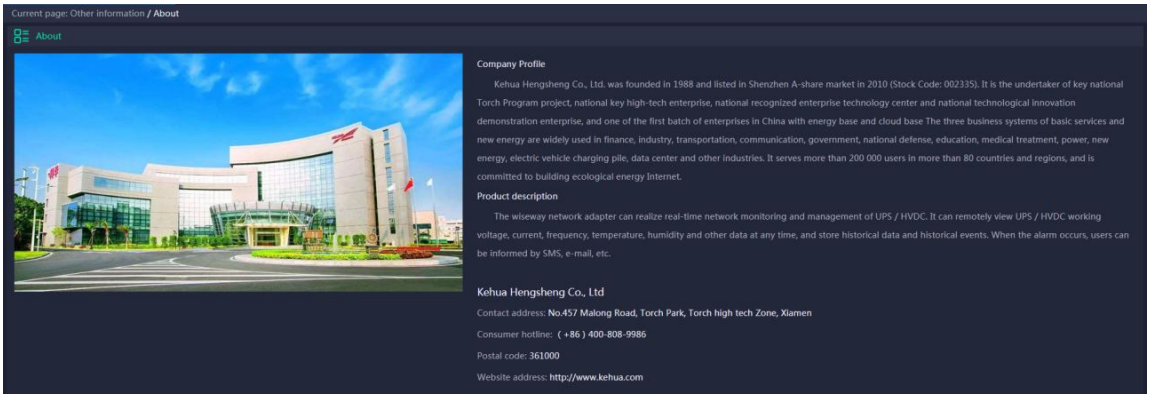

Figure3-97 About

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4 Maintenance

4.1 Troubleshooting

After starting, if the system cannot work normally, please solve the problem according Table4-1.

Table4-1 Troubleshooting

No.	Abnormal phenomenon	Possible reason
1	After the monitor system sends discharge command, the network adapter has no respond.	1. Please check if the RS485 communication wire of monitoring system and network adapter is not in good connection or properly connected. 2. Please check if the communication configuration of network adapter in monitor system is proper, including the setting of baud rate, address bit, check bit, etc.
2	After the monitor system sends discharge command, the network adapter switches to discharge mode, but UPS does not perform the discharge operation.	1. Please check if the wiring of output port in network adapter is right. 2. Please check if the output of network adapter and input of UPS is connected properly.

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ADD: No. 457, Malong Road, Torch High-Tech Industrial Zone, Xiamen, Fujian, China(361000)
TEL: 0592-5160516(8 lines) FAX: 0592-5162166
Http: //www.kehua.com

Manufacturer: Zhangzhou Kehua Technology Co., Ltd.
ADD: Beidou Industrial Zone, Jinfeng Industrial District, Zhangzhou, Fujian, China(363000)
TEL: 0596-2600000 2600886 FAX: 0596-2895827