



SMART PDU · USER MANUAL

USER MANUAL.

Intelligent Power Distribution Unit

Installation, operation and network-management guide for
SMART PDU IM / OM / SI / SO series.

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USER MANUAL & OPERATION GUIDE · EN · 2026

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1 Smart PDU Overview

The Smart PDU (Smart Power Distribution Unit) is a network-security-hardened remote monitoring and management power distribution system. It employs a new type of hydraulic circuit breaker with dual overload and over-current protection, features an integrated sheet-metal and low-energy-consumption structural design, and supports remote upgrades, multiple global network protocols, multi-unit cascading, and centralized control. It accurately and effectively monitors real-time status changes — such as current, voltage, power and energy consumption — of electrical equipment in data-center server rooms.

2 Applicability

- The Smart PDU is suitable for use in server cabinets, network cabinets, and similar applications.
- The output quantity can be configured with a selectable number of outlets (24, 36, or 42 positions) and various outlet types, including IEC320 C13, IEC320 C19, and C39 standards, according to specific requirements.
- The product complies with the RoHS directive. It is applicable for 100-250 V single-phase AC and 380 V three-phase AC supplies, with input options of 32 A, 63 A, 3×16 A, and 3×32 A — meeting the diverse needs of customers across different countries and regions worldwide.

3 Terms & Definitions

Parameters and Units

Parameter	Definition	Unit
U	Output Voltage	V
I	Load Current	A
S	Apparent Power	kVA
P	Active Power	kW
PF	Power Factor	—
E	Total Energy	kWh
T1/T2	Temperature	°C
H1/H2	Humidity	%RH

Smart PDU Series & Features

IM Input-level Monitored	OM Outlet-level Monitored	SI Switched + Input-level Monitored	SO Switched + Outlet-level Monitored
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Key Feature	IM	OM	SI	SO
Monitoring of total voltage per phase	●	●	●	●
Monitoring of total load current per phase / branch	●	●	●	●
Monitoring of total load power	●	●	●	●
Monitoring of the total power factor per phase	●	●	●	●
Monitoring of total energy metering per branch	●	●	●	●
Monitoring of temperature / humidity, door access, water leakage & smoke	●	●	●	●
Monitoring of load current per outlet		●		●
Monitoring of the power factor per outlet		●		●
Monitoring of energy per outlet		●		●
Monitoring of On/Off status per outlet			●	●
High/Low threshold setting for total voltage per phase	●	●	●	●
High/Low threshold setting for load current per phase / branch	●	●	●	●
High/Low threshold setting for temperature and humidity	●	●	●	●
High/Low threshold setting for load current per outlet		●		●
Remote On/Off power control per outlet			●	●
Schedule an outlet event			●	●
Overload power-off per outlet				●
Power On/Off delay setting			●	●

● Indicates that the function is available in this product series.

4 Product Diagram & Installation Guide

Product Diagram

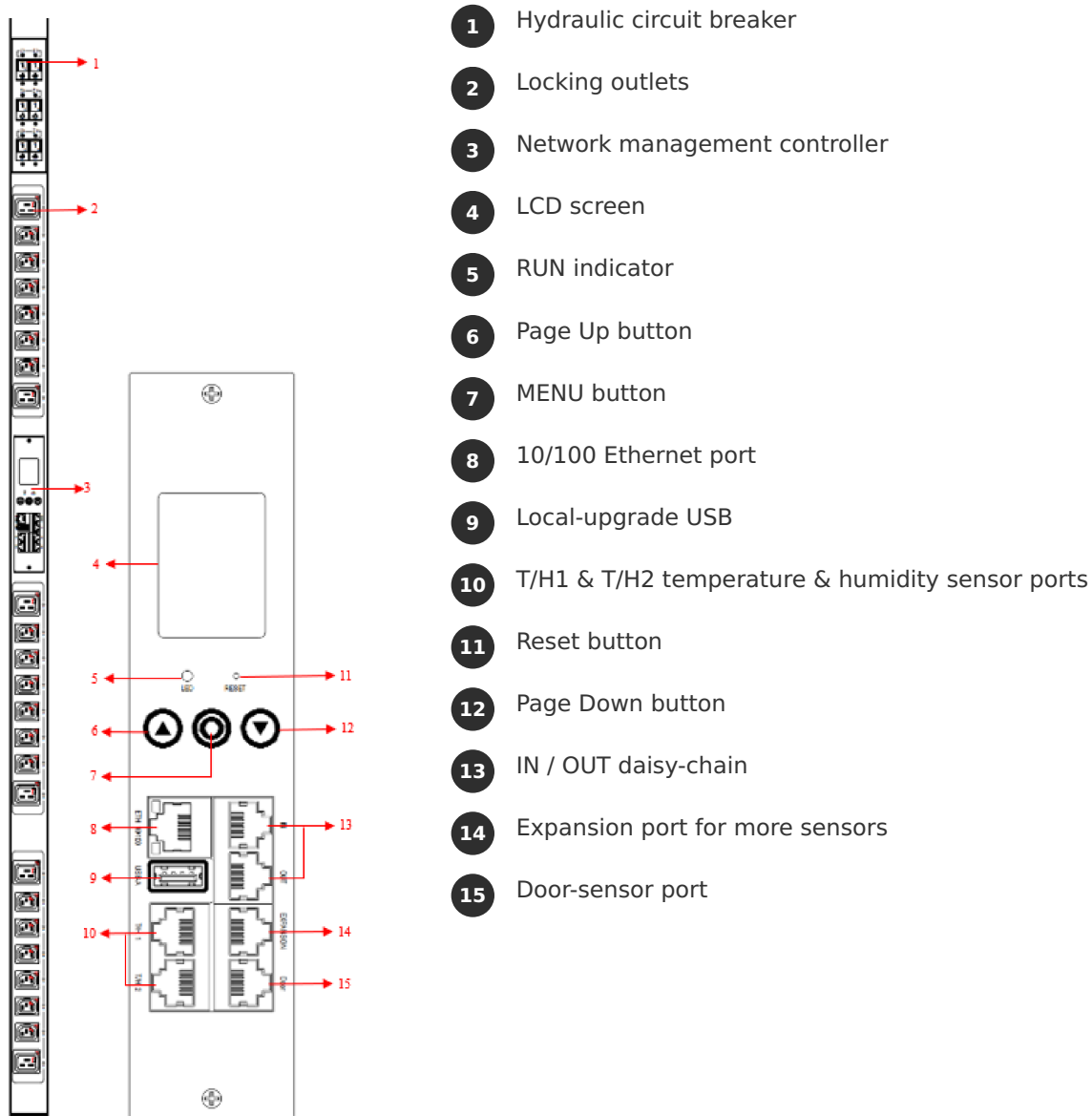


Figure 1 · Product diagram

Installation Guide

Vertical Installation (0U)

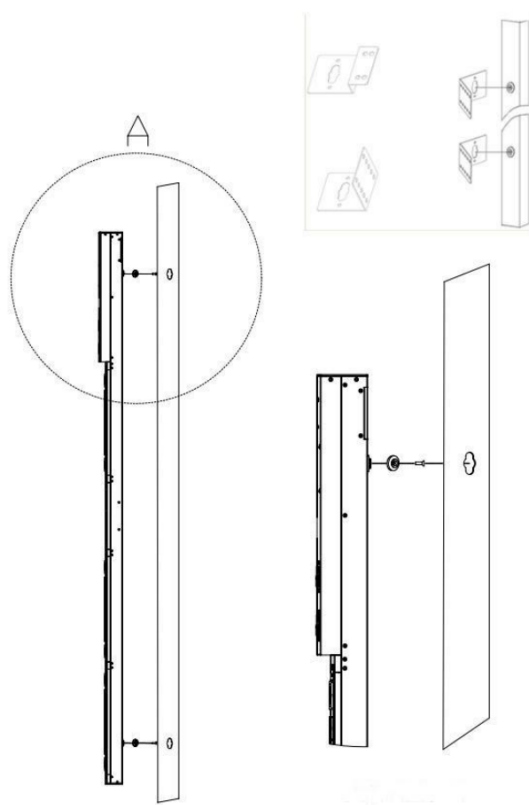


Figure 2 · Installation Diagram

5 Instructions For Hardware Use

Network Management Controller

	Function	Description
RUN	RUN Indicator	Flashes with 1-second intervals (on/off)
ETH10/100	Ethernet port	Network Port WAN/LAN communication interface
EXPANSION	Serial port	RS-485 serial communication interface
IN/OUT	Daisy-Chain Port	Smart PDU cascading
UP	Page UP Button	Scroll up
DOWN	Page UP Button	Scroll down
MENU	Menu Button	Menu select
RESET	Reset Button	Firmware reset
LCD Screen	Data display	Displays monitored data and alarm status of the unit
T/H	Sensor port	Interface for connecting the temperature & humidity sensor
DOOR	Sensor port	Interface for connecting the door access sensor

Energizing the PDU

- Attach the input power cord to a matching power source. Upon power-on, the panel LED indicators light up (dimly). After approximately 15 seconds, the buzzer emits a long beep, the RUN indicator starts flashing, the screen lights up, and the product enters normal operation mode.
- Use the UP and DOWN buttons to page through and view electrical parameters such as voltage, current, apparent power, active power, power factor, and energy consumption for each phase/circuit/outlet; view sensor status and device information such as series, baud rate, version number, IPv6 address, master/slave mode, buzzer on/off status, DHCP on/off status, etc.

Hardware Setting

Reset Setting

Press the RESET button to reset, the LCD display restarts and functions normally **Restore to factory settings:** Press the MENU button, then use the UP/DOWN button to select "Factory Mode," press MENU to confirm. The PDU will begin restarting until the RUN indicator flashes.

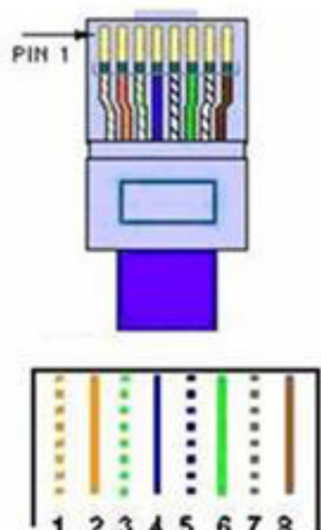
Daisy-Chain setting

Daisy-chaining via Ethernet protocol

The devices can be accessed via web through daisy-chaining of Ethernet ports. Connect the OUT port of one device to the IN port of the next device to form a daisy-chain connection. A single master unit can support up to 9 slave units, allowing a total of 10 devices to be connected in one chain.

Daisy-chaining via serial protocol

Serial port cascading primarily uses the Modbus RTU protocol to access devices. A MODBUS serial server connects to the IN port, and the OUT interface of the previous unit connects to the IN interface of the next unit, forming a daisy-chain cascade. The maximum number of cascaded units is 32. RS485 Interface RJ45 Terminal Pinout Description



Pin #	Color	Description
1	Orange & white	RS485-B
2	Orange	RS485-A
3	Green & white	-
4	Blue	RS485-B
5	Blue & white	RS485-A
6	Green	-
7	Brown & white	-
8	Brown	-

6 Smart PDU Software User Guide

Software Overview The system runs on a real-time operating system and provides various network services such as a web server, SNMP, TELNET/SSH, SMTP/SMTPS, MODBUS, and NTP. Users can access the device through a browser or other access methods. It also offers extensive secondary development and integration interfaces, making it easier for users to monitor and manage the device.

Access methods

Users can monitor and control the device through various access methods, including Web (compatible with major browsers such as Microsoft Edge and Google Chrome), SNMP (V1/V2c/V3), Telnet/SSH (network command-line monitoring), and MODBUS RTU/TCP (serial interface). **Web Interface** Open a browser and enter the correct device IP address in the address bar (default factory IP: <https://192.168.1.158>). A user registration window will pop up. After completing the registration, log in to access the main interface.

- On first login, user registration is required.
- Account rules: The account can only contain uppercase letters, lowercase letters, and numbers, and must be at least 5 characters and at most 16 characters.
- Password rules: The password must contain uppercase letters, lowercase letters, and numbers, and must be at least 8 characters and at most 16 characters.

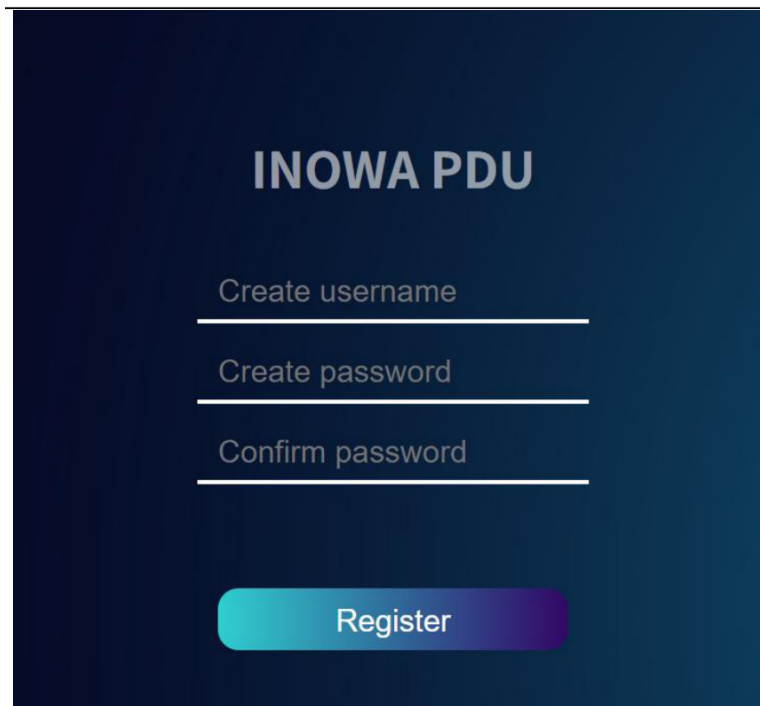
The image shows a registration window for INOWA PDU. It has a dark blue background. At the top, the text "INOWA PDU" is displayed in a light blue, sans-serif font. Below this, there are three input fields, each with a light blue label and a white underline: "Create username", "Create password", and "Confirm password". At the bottom of the window, there is a large, rounded rectangular button with a blue-to-purple gradient and the word "Register" in white text.

Figure 3 · Registration Window

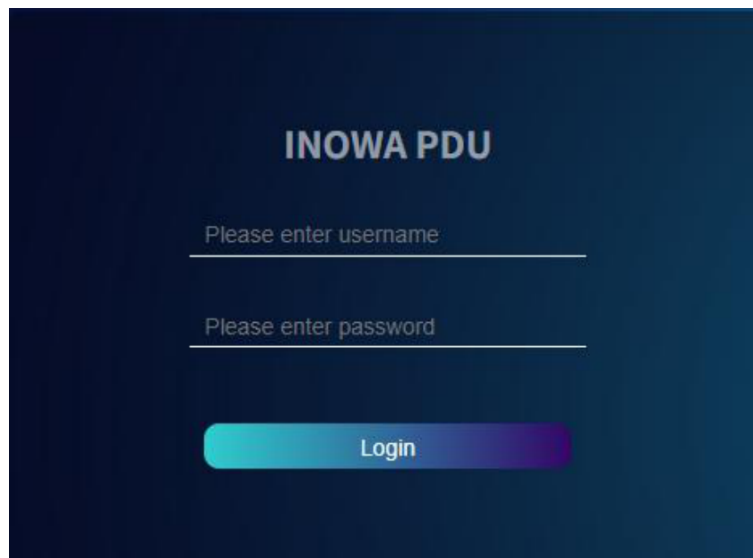


Figure 4 · Login Window

Device Interface Overview

The main interface of the system consists of three parts: Device Information, Navigation Menu, and Interface Status Information.

- **Navigation Menu** : Provides access to all functions.
- **Interface Status Information** : Displays the status corresponding to the selected navigation menu item.
- **Device Information** : Includes operating status, PDU location, operation time, product name and series, and product version number.
- The interface supports switching between Chinese and English, as well as logout functionality.

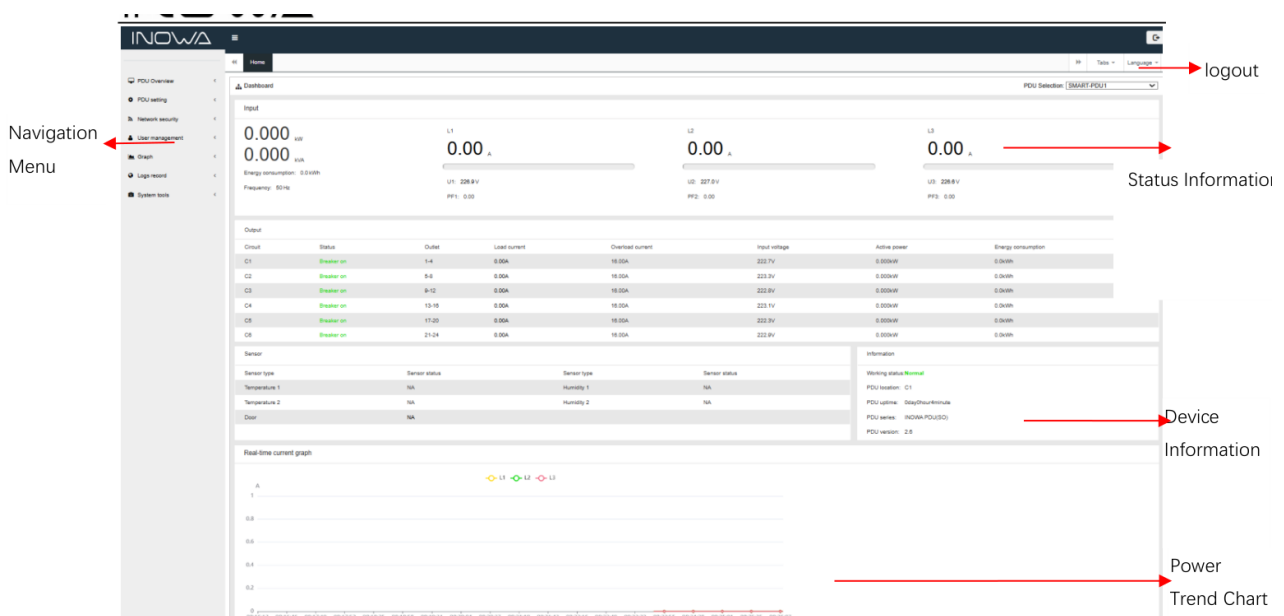


Figure 5 · Main Software Interface

Device Monitoring

PDU Overview

Path: PDU Overview > Dashboard This screen provides access to basic monitoring information for the equipment.

- **Overall Status Monitoring**: Displays the total load current (single-phase L1 or three-phase L1/L2/L3), input voltage, total load power, total energy consumption, and frequency.

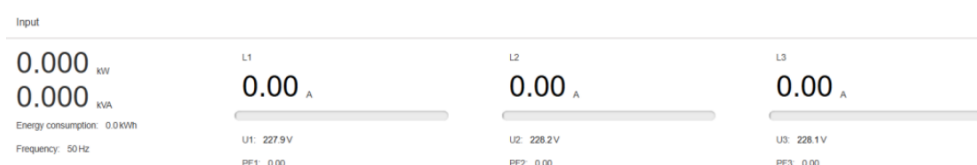


Figure 6 · Overall Status

- Branch Circuit Status Monitoring: Displays the On/Off status of each circuit breaker, the outlet numbers for each branch circuit, real-time load current, overload current, real-time voltage, active power, and energy consumption.

Output

Circuit	Status	Outlet	Load current	Overload current	Input voltage	Active power	Energy consumption
C1	Breaker on	1-4	0.00A	16.00A	226.9V	0.000kW	0.0kWh
C2	Breaker on	5-8	0.00A	16.00A	226.1V	0.000kW	0.0kWh
C3	Breaker on	9-12	0.00A	16.00A	226.3V	0.000kW	0.0kWh
C4	Breaker on	13-16	0.00A	16.00A	226.6V	0.000kW	0.0kWh
C5	Breaker on	17-20	0.00A	16.00A	225.7V	0.000kW	0.0kWh
C6	Breaker on	21-24	0.00A	16.00A	226.6V	0.000kW	0.0kWh

Figure 7 · Branch Circuit Status

- Environmental Sensor Status Monitoring: Displays status information for Temperature/Humidity Sensors 1 and 2, and the Door Access Sensor.

Sensor

Sensor type	Sensor status	Sensor type	Sensor status
Temperature 1	NA	Humidity 1	NA
Temperature 2	NA	Humidity 2	NA
Door	NA		

Figure 8 · Environmental Sensor Status

- Real-time Current Trend Chart



Figure 9 · Real-time Current Trend Chart

Outlet Monitoring

Path: PDU Overview> Outlet

This interface allows users to view the name of each outlet, the On/Off status of each outlet, real-time load current, power factor, active power, energy consumption per outlet, and current load status (Normal, Warning, Alarm).

The screenshot shows the INOWA PDU Overview interface. The left sidebar contains navigation links: Dashboard, Outlet, PDU setting, Network security, User management, Graph, Logs record, and System tools. The main area displays a table titled 'Outlet' with columns: No., Name, On/off, A, PF, kW, kWh, and Load status. The table lists 24 outlets, all with 'ON' status and 'Normal' load status. The PDU selection dropdown is set to 'SMART-PDU1'.

No.	Name	On/off	A	PF	kW	kWh	Load status
1	Output1	ON	0.00	0.00	0.000	0.0	Normal
2	Output2	ON	0.00	0.00	0.000	0.0	Normal
3	Output3	ON	0.00	0.00	0.000	0.0	Normal
4	Output4	ON	0.00	0.00	0.000	0.0	Normal
5	Output5	ON	0.00	0.00	0.000	0.0	Normal
6	Output6	ON	0.00	0.00	0.000	0.0	Normal
7	Output7	ON	0.00	0.00	0.000	0.0	Normal
8	Output8	ON	0.00	0.00	0.000	0.0	Normal
9	Output9	ON	0.00	0.00	0.000	0.0	Normal
10	Output10	ON	0.00	0.00	0.000	0.0	Normal
11	Output11	ON	0.00	0.00	0.000	0.0	Normal
12	Output12	ON	0.00	0.00	0.000	0.0	Normal
13	Output13	ON	0.00	0.00	0.000	0.0	Normal
14	Output14	ON	0.00	0.00	0.000	0.0	Normal
15	Output15	ON	0.00	0.00	0.000	0.0	Normal
16	Output16	ON	0.00	0.00	0.000	0.0	Normal
17	Output17	ON	0.00	0.00	0.000	0.0	Normal
18	Output18	ON	0.00	0.00	0.000	0.0	Normal
19	Output19	ON	0.00	0.00	0.000	0.0	Normal
20	Output20	ON	0.00	0.00	0.000	0.0	Normal
21	Output21	ON	0.00	0.00	0.000	0.0	Normal
22	Output22	ON	0.00	0.00	0.000	0.0	Normal
23	Output23	ON	0.00	0.00	0.000	0.0	Normal
24	Output24	ON	0.00	0.00	0.000	0.0	Normal

Figure 10 · Outlet Status

PDU Setting

Mode Settings

Path: PDU Settings > Daisy-Chain Setting

This interface allows users to configure the connection method based on actual usage requirements.

- **Daisy-Chain Setting** : Choose between TCP/IP network cascade and Modbus RTU serial cascade (factory default is Modbus RTU cascade). The system must be restarted after saving for the configuration to take effect.

The screenshot shows the 'Daisy-chain setting' interface. It features a dropdown menu labeled 'Daisy-chain setting:' with the current selection 'Network One belt nine'. Below the dropdown is a 'Submit' button. The dropdown menu is open, showing the following options: 'Network One belt nine' (highlighted) and 'Modbus RTU'.

Figure 11 · Daisy-Chain Mode

- **Master/Slave Mode Setting** : One master unit can Daisy chain up to 9 slave units. Select the dropdown menu options to modify the master/slave status of the cascaded devices. Click the Save button, and the configuration will take effect after a restart

The screenshot shows the 'Master/Slave Mode Setting' interface. It includes four input fields: 'M/S setting:' with a dropdown menu set to 'Master unit', 'PDU name:' with the text 'SMART-PDU1', 'PDU location:' with the text 'C1', and 'Slave Number:' with the text '0'. A 'Submit' button is located at the bottom left of the form.

Figure 12 · Master/Slave Mode

- **Modbus-RTU setting**: configure Modbus-RTU address (1-255), baud rate (9600, 19200, 38400, 57600, 115200), data bits (6, 7, 8), parity (None, Even, Odd) and stop bits (1, 2).

Modbus RTU setting

Modbus address:	1
Baud rate	9600
Data bits	8
Parity	None
Stop bit	1

Figure 13 · Modbus-RTU Configuration

- Modbus TCP setting: configure the port and click the Save button.

Modbus TCP setting

Modbus port:	502
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Figure 14 · Modbus TCP Configuration

- Buzzer Mode: Select "On" from the dropdown menu to enable the buzzer when device exceeds the threshold; select "Off" to mute the buzzer.

Buzzer switch:	Enable
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Enable

Disable

Figure 15 · Buzzer Mode

- Outlet Restart Delay Setting: The restart delay time can be set in the input field (setting range: 5–3600 seconds).

Delay range 5-3600 seconds

Reboot Delay	5
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Figure 16 · Reboot Delay

- Detect USB Drive Status

USB disk status:  Not inserted

Figure 17 · USB Port Status

Configure Outlet Groups

Path: PDU Setting > Outlet Grouping This interface allows users to configure outlet groups according to actual usage requirements.

- Based on specific needs, each output unit can be individually selected and assigned to any of the 8 groups. Enable the grouping function by selecting the option in the lower-left corner and click Submit to activate grouping successfully.

No.	Name	Group1	Group2	Group3	Group4	Group5	Group6	Group7	Group8
1	Output1	☒	☐	☐	☐	☐	☐	☐	☐
2	Output2	☐	☐	☐	☐	☐	☐	☐	☐
3	Output3	☐	☒	☐	☐	☐	☐	☐	☐
4	Output4	☒	☐	☐	☐	☐	☐	☐	☐
5	Output5	☐	☐	☐	☐	☐	☐	☐	☐
6	Output6	☐	☒	☐	☐	☐	☐	☐	☐
7	Output7	☐	☐	☐	☐	☐	☐	☐	☐
8	Output8	☐	☐	☐	☐	☐	☐	☐	☐
9	Output9	☐	☐	☐	☐	☐	☐	☐	☐
10	Output10	☐	☐	☐	☐	☐	☐	☐	☐
11	Output11	☐	☐	☐	☐	☐	☐	☐	☐
12	Output12	☐	☐	☐	☐	☐	☐	☐	☐
13	Output13	☐	☐	☐	☐	☐	☐	☐	☐
14	Output14	☐	☐	☐	☐	☐	☐	☐	☐
15	Output15	☐	☐	☐	☐	☐	☐	☐	☐
16	Output16	☐	☐	☐	☐	☐	☐	☐	☐
17	Output17	☐	☐	☐	☐	☐	☐	☐	☐
18	Output18	☐	☐	☐	☐	☐	☐	☐	☐
19	Output19	☐	☐	☐	☐	☐	☐	☐	☐
20	Output20	☐	☐	☐	☐	☐	☐	☐	☐
21	Output21	☐	☐	☐	☐	☐	☐	☐	☐
22	Output22	☐	☐	☐	☐	☐	☐	☐	☐
23	Output23	☐	☐	☐	☐	☐	☐	☐	☐
24	Output24	☐	☐	☐	☐	☐	☐	☐	☐

Outlet grouping: Disable Enable Submit

Figure 18 · Configure Outlet Groups

Outlet Settings

Path: PDU Settings > Threshold setting This interface allows users to customize the parameters of individual outlet based on actual usage requirements.

- Outlet Name:** Users can customize the name of each output unit (names may include letters, numbers, characters, spaces, or combinations thereof; maximum length of 30 characters).
- Power On/Off Delay:** Users can define the power-on or power-off delay time, either unified or time-segmented sequential (setting range: 0–15 seconds, values must be integers).
- Near-overload Warning Threshold:** Users can set a Near-overload warning threshold for each output unit (setting range: 0–16A; the set value must be less than the overcurrent threshold).
- Overload Alarm Threshold:** Users can set a custom Overload warning threshold for each individual outlet (setting range: 0–16A; the set value must be greater than the warning threshold). After configuring the parameters, click the checkbox on the far right for the corresponding unit and then click the Submit button at the bottom right for the settings to take effect.

No.	Name	A	Delay(s)	Forewarning	Overcurrent	Select
1	Output1	0.00	0	8.00	10.00	☐
2	Output2	0.00	0	8.00	10.00	☐
3	Output3	0.00	0	8.00	10.00	☐
4	Output4	0.00	0	8.00	10.00	☐
5	Output5	0.00	0	8.00	10.00	☐
6	Output6	0.00	0	8.00	10.00	☐
7	Output7	0.00	0	8.00	10.00	☐
8	Output8	0.00	0	8.00	10.00	☐
9	Output9	0.00	0	8.00	10.00	☐
10	Output10	0.00	0	8.00	10.00	☐
11	Output11	0.00	0	8.00	10.00	☐
12	Output12	0.00	0	8.00	10.00	☐
13	Output13	0.00	0	8.00	10.00	☐
14	Output14	0.00	0	8.00	10.00	☐
15	Output15	0.00	0	8.00	10.00	☐
16	Output16	0.00	0	8.00	10.00	☐
17	Output17	0.00	0	8.00	10.00	☐
18	Output18	0.00	0	8.00	10.00	☐
19	Output19	0.00	0	8.00	10.00	☐
20	Output20	0.00	0	8.00	10.00	☐
21	Output21	0.00	0	8.00	10.00	☐
22	Output22	0.00	0	8.00	10.00	☐
23	Output23	0.00	0	8.00	10.00	☐
24	Output24	0.00	0	8.00	10.00	☐

Figure 19 · Outlet Setting

Environmental Setting

Path: PDU Setting > Environmental Setting

This interface allows users to customize the environmental parameters based on actual usage requirements.

- Temperature/Humidity Maximum and Minimum Thresholds: After setting the desired parameters, check the box on the right and click the Submit button for the settings to take effect (recommended temperature range: 0-90°C, humidity range: 0-99%, with the minimum value needing to be less than the maximum).

No.	Name	Real time value	Min	Max	Select
1	Temperature 1	0	0	40	☐
2	Temperature 2	0	0	40	☐
3	Humidity 1	0	0	99	☐
4	Humidity 2	0	0	99	☐

Figure 20 · Maximum or Minimum T/H Threshold

- Near-overload Warning Threshold and Overload Threshold for per branch circuit/per phase: After setting the desired parameters in the corresponding fields, check the box on the right and click the Submit button for the settings to take effect (Circuit current setting range: 0-16A; Total current setting range: 0-32A or 0-63A; The warning value must be less than the overload value).

No.	Name	Real time value	Forewarning	Overcurrent	Select
1	Circuit current(C1)	0.00	12.80	16.00	☐
2	Circuit current(C2)	0.00	12.80	16.00	☐
3	Circuit current(C3)	0.00	12.80	16.00	☐
4	Circuit current(C4)	0.00	12.80	16.00	☐
5	Circuit current(C5)	0.00	12.80	16.00	☐
6	Circuit current(C6)	0.00	12.80	16.00	☐
7	Phase current(L1)	0.00	25.60	32.00	☐
8	Phase current(L2)	0.00	25.60	32.00	☐
9	Phase current(L3)	0.00	25.60	32.00	☐

Figure 21 · Configuring Branch Circuit Load Thresholds

- Input Voltage Thresholds per Phase (Minimum/Under/Over) : After setting the parameters in the corresponding fields, check the box on the right and click the Submit button for the settings to take effect (Voltage setting range: 0-276V; Minimum voltage value < Undervoltage value < Overvoltage value).

No.	Name	Real time value	Low pressure value	Undervoltage value	Overpressure value	Select
10	Phase voltage(L1)	232.5	80.0	170.0	276.0	☐
11	Phase voltage(L2)	232.8	80.0	170.0	276.0	☐
12	Phase voltage(L3)	232.6	80.0	170.0	276.0	☐

Figure 22 Voltage Thresholds

Energy Reset

Path: PDU Settings > Energy Reset

This interface allows users to view the energy consumption of each outlet as well as the total energy consumption. It also enables users to reset the energy consumption of individual outlet or clear the total energy consumption (Series A/C only displays the total energy consumption per circuit).

- To view the energy consumption of each outlet, click the reset button to the right of the desired output unit. This will initialize the energy consumption value for that specific outlet and restart its energy metering (the total energy consumption will be reduced by the energy value cleared from that output unit).
- Clicking the reset button in the bottom-right corner of the bottom bar on the page will clear the energy consumption values of all outlet at one time and restart energy metering for all of them.

No.	Name	kWh	Energy zero reset
1	Output1	0.0	Reset
2	Output2	0.0	Reset
3	Output3	0.0	Reset
4	Output4	0.0	Reset
5	Output5	0.0	Reset
6	Output6	0.0	Reset
7	Output7	0.0	Reset
8	Output8	0.0	Reset
9	Output9	0.0	Reset
10	Output10	0.0	Reset
11	Output11	0.0	Reset
12	Output12	0.0	Reset
13	Output13	0.0	Reset
14	Output14	0.0	Reset
15	Output15	0.0	Reset
16	Output16	0.0	Reset
17	Output17	0.0	Reset
18	Output18	0.0	Reset
19	Output19	0.0	Reset
20	Output20	0.0	Reset
21	Output21	0.0	Reset
22	Output22	0.0	Reset
23	Output23	0.0	Reset
24	Output24	0.0	Reset
25	All		Reset

Figure 23 · Energy Reset

Outlet Shut-off Protection

Path: PDU Settings > Outlet Overload Protection

This interface allows users to select the checkbox on the far right of the desired outlet(s) based on actual needs, choose "Enable" at the bottom of the page, and then click Submit to activate the over-limit power-off function (When it is enabled, the outlet will automatically shut off power if the set current threshold is exceeded. Note: A/B/C Series do not support this function).

No.	Name	Output current(A)	Forewarning(A)	Overcurrent(A)	Select
1	Output1	0.00	8.00	10.00	☐
2	Output2	0.00	8.00	10.00	☐
3	Output3	0.00	8.00	10.00	☐
4	Output4	0.00	8.00	10.00	☐
5	Output5	0.00	8.00	10.00	☐
6	Output6	0.00	8.00	10.00	☐
7	Output7	0.00	8.00	10.00	☐
8	Output8	0.00	8.00	10.00	☐
9	Output9	0.00	8.00	10.00	☐
10	Output10	0.00	8.00	10.00	☐
11	Output11	0.00	8.00	10.00	☐
12	Output12	0.00	8.00	10.00	☐
13	Output13	0.00	8.00	10.00	☐
14	Output14	0.00	8.00	10.00	☐
15	Output15	0.00	8.00	10.00	☐
16	Output16	0.00	8.00	10.00	☐
17	Output17	0.00	8.00	10.00	☐
18	Output18	0.00	8.00	10.00	☐
19	Output19	0.00	8.00	10.00	☐
20	Output20	0.00	8.00	10.00	☐
21	Output21	0.00	8.00	10.00	☐
22	Output22	0.00	8.00	10.00	☐
23	Output23	0.00	8.00	10.00	☐
24	Output24	0.00	8.00	10.00	☐

Disable
Enable

Outlet overload protection Disable

Figure 24 Outlet Shut-off Protection

Scheduling Outlet Actions

Path: PDU Settings > Outlet Timing Switch

On this interface, users can schedule power-on or power-off actions for each outlet.

- Set the power-on delay or power-off delay for the outlet. Select the checkbox on the far right of the outlet unit, then choose Enable at the bottom of the settings interface and click Submit. The outlet unit will then power on or off exactly at the scheduled time.
 - Select the Cycle checkbox, and the outlet unit will power on or off at the same time every day.
 - Choose Disable at the bottom of the settings interface and click Submit to cancel the scheduled outlet actions.
- Note: The device time must be calibrated before scheduling any outlet event.

Timing switch
PDU selection: SMART-PDU1

No.	Name	Power on time	Power off time	Cycle	Select
1	Output1	1970-01-01 00:00	1970-01-01 00:00	☐	☐
2	Output2	1970-01-01 00:00	1970-01-01 00:00	☐	☐
3	Output3	1970-01-01 00:00	1970-01-01 00:00	☐	☐
4	Output4	1970-01-01 00:00	1970-01-01 00:00	☐	☐
5	Output5	1970-01-01 00:00	1970-01-01 00:00	☐	☐
6	Output6	1970-01-01 00:00	1970-01-01 00:00	☐	☐
7	Output7	1970-01-01 00:00	1970-01-01 00:00	☐	☐
8	Output8	1970-01-01 00:00	1970-01-01 00:00	☐	☐
9	Output9	1970-01-01 00:00	1970-01-01 00:00	☐	☐
10	Output10	1970-01-01 00:00	1970-01-01 00:00	☐	☐
11	Output11	1970-01-01 00:00	1970-01-01 00:00	☐	☐
12	Output12	1970-01-01 00:00	1970-01-01 00:00	☐	☐
13	Output13	1970-01-01 00:00	1970-01-01 00:00	☐	☐
14	Output14	1970-01-01 00:00	1970-01-01 00:00	☐	☐
15	Output15	1970-01-01 00:00	1970-01-01 00:00	☐	☐
16	Output16	1970-01-01 00:00	1970-01-01 00:00	☐	☐
17	Output17	1970-01-01 00:00	1970-01-01 00:00	☐	☐
18	Output18	1970-01-01 00:00	1970-01-01 00:00	☐	☐
19	Output19	1970-01-01 00:00	1970-01-01 00:00	☐	☐
20	Output20	1970-01-01 00:00	1970-01-01 00:00	☐	☐
21	Output21	1970-01-01 00:00	1970-01-01 00:00	☐	☐
22	Output22	1970-01-01 00:00	1970-01-01 00:00	☐	☐
23	Output23	1970-01-01 00:00	1970-01-01 00:00	☐	☐
24	Output24	1970-01-01 00:00	1970-01-01 00:00	☐	☐

Disable
Enable

Timing switch: Disable

Correct date format(2017-07-08 18:30) / Correct time format (18:30)

Figure 25 Scheduling Outlet Actions

Outlet Control

Path: PDU Settings > Outlet Control

This interface allows users to configure and control the individual outlet

- View the On/off status of each outlet
- Click the On, Off, or Reboot button for the individual outlet to control its operation.
- Click the All On or All Off button to simultaneously turn on or off all outlet units (a power-up/off delay applies with a configured interval).

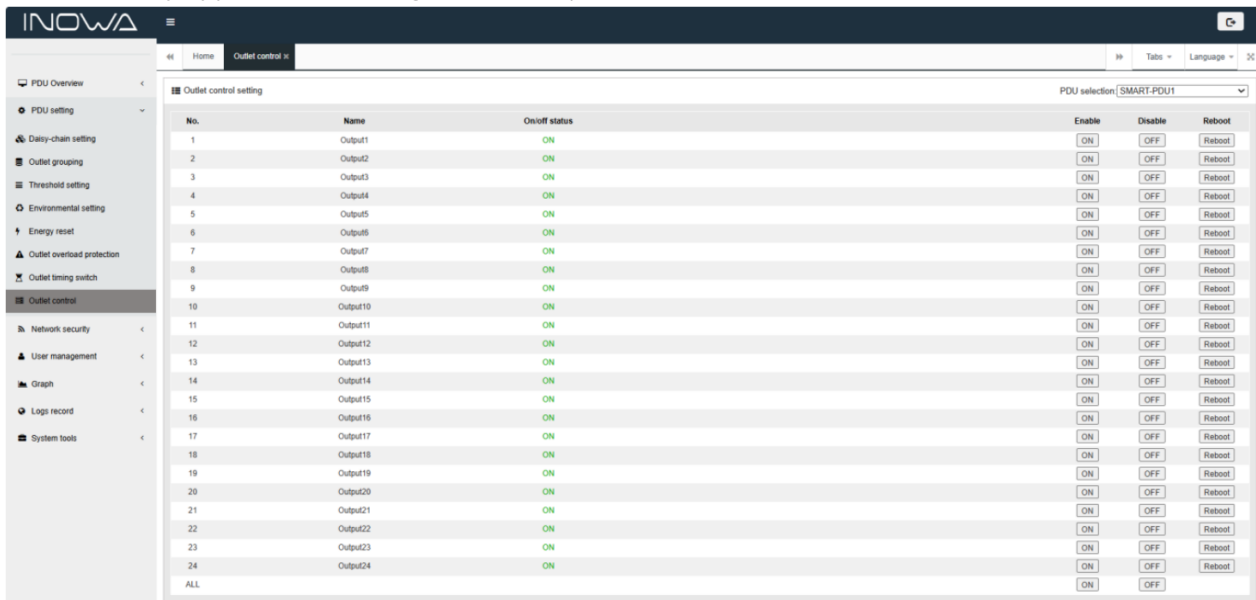


Figure 26 · Outlet Control

Network Security

Local Connectivity

Path: Network Security > Local Connectivity This interface allows users to configure manual or automatic modes for IPv4 and IPv6.

- IPv4 Settings: IP Address: 192.168.1.158 (factory default IP address) Subnet Mask: 255.255.255.0 Gateway: 192.168.1.1 DNS Server: Default is 202.96.128.86. Enter the correct DNS server address to ensure proper email functionality.
- **Mode Settings:** When **Automatic Mode** is selected, click the **Submit** button and restart the device. The device will then automatically obtain an IP address based on the router settings in the same local area network. The assigned IP address can be viewed on the device's LCD screen. Select **Static** to manually configure an IPv6 address. Select **DHCP** to automatically obtain an IPv6 address. IPv6 Access Format https://[fd00:f46d:2f75:e612:1010] (Note: The IPv6 address must be enclosed in square brackets "[]" when entering it in a browser.)

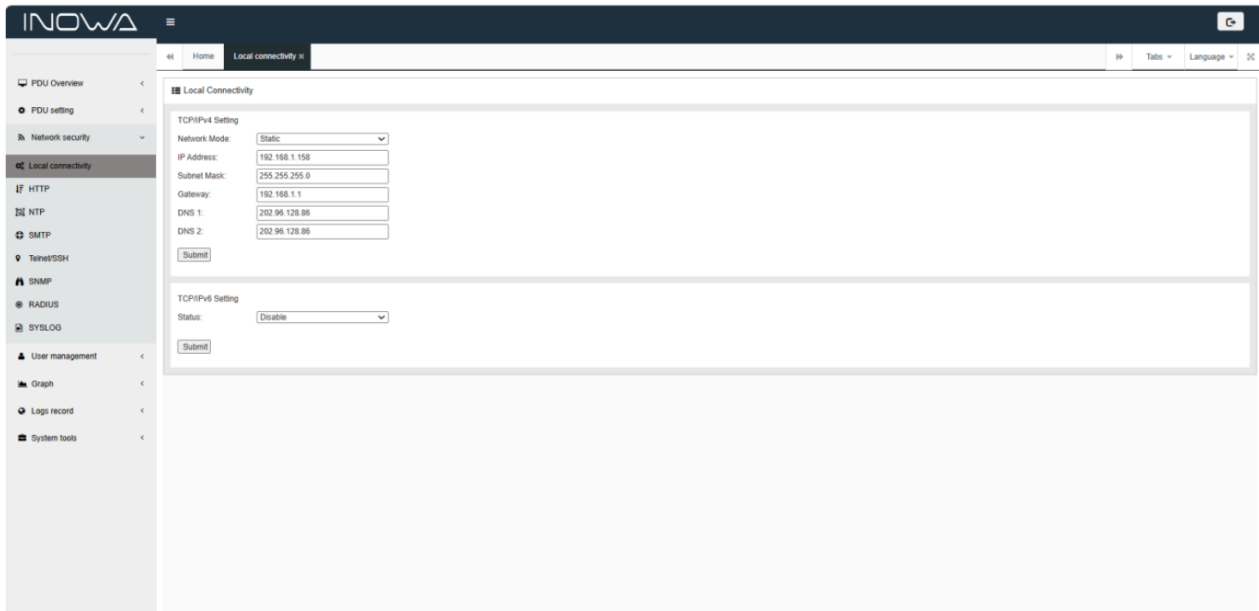


Figure 27 · Local Connectivity

HTTP Service

Path: Network Security > HTTP

This interface allows users to select the appropriate operating mode based on actual requirements.

- Set the device to **Normal Mode** or **SSL Mode** and save the settings
- Modify the port number as needed
- Click **Choose File**, select the SSL certificate, and then click **Submit** to upload the certificate
- Click the **Submit** button and restart the system for the changes to take effect

HTTP Setting

HTTP Access Mode:

SSL Mode Port:

Upload SSL certificate: No file chosen

Certificate upload time:2023-08-04 11:17

Figure 28 · HTTP Configuration

NTP Service

Path: Network Security > NTP

This interface allows users to calibrate the device time, ensuring the device displays the correct current time (all device log records are based on this system time).

- Local Time Calibration: Disable NTP settings, manually set the desired time, and click "Get Local Time". The device system time will be updated according to your computer's local time.
- **Network Time Calibration:** Enable NTP settings, click "**Save**", and then click "**Sync**". The device will automatically obtain the current date and time for the selected time zone from the network based on the configured NTP server address and time zone, and update the system time accordingly (this requires the product to be connected to a WAN).

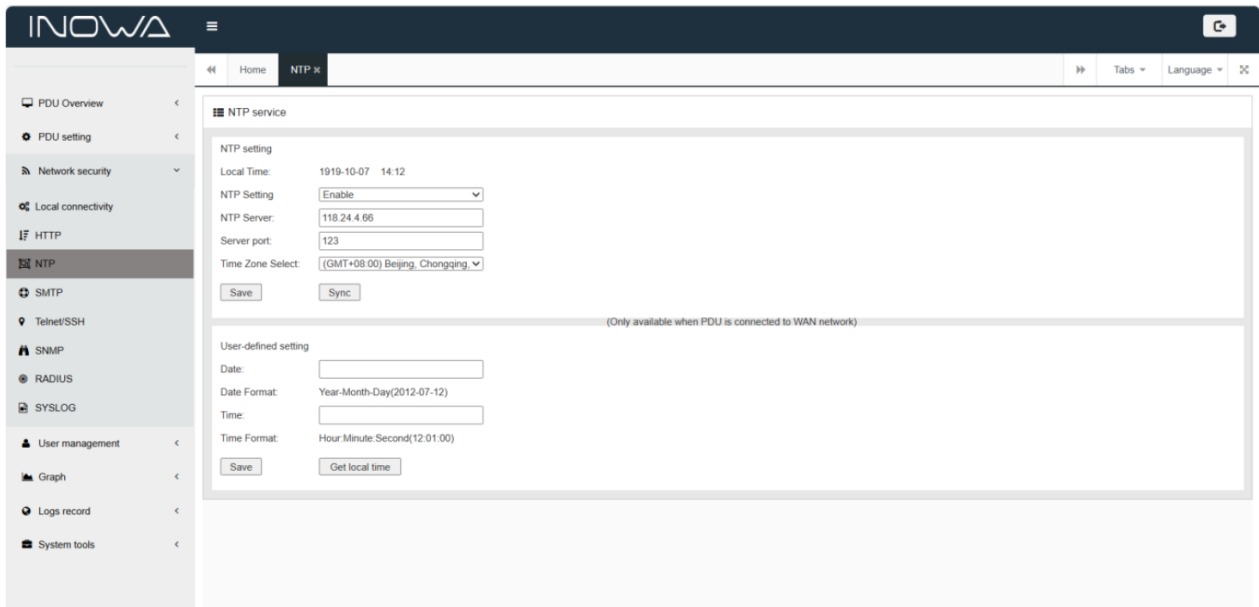


Figure 29 · NTP Configuration

SMTP Service

Path: Network Security > SMTP

This interface allows users to configure SMTP service parameters.

- Enter the correct SMTP account, password, SMTP server address, port, and authentication method. Click the **Save** button and restart the device for the settings to take effect
- To test the SMTP configuration, enter a test email address in the "Recipient Email" input field under the SMTP test section. Click the **Test** button and check the test email inbox. If a test email is received, the SMTP settings are successful. Otherwise, please reconfigure the settings

SMTP Setting

SMTP account:

Password:

Only numbers and letters are supported

SMTP Server:

Port:

Authenticate Mode:

SMTP Test

Receiver Account:

Figure 30 · SMTP Configuration

TELNET/SSH Service

Path: Network Security > TELNET/SSH

This interface allows users to enable or disable TELNET/SSH services and configure related parameters.

- TELNET/SSH Service: Select Enable or Disable, click the Save button, and restart the device to activate or deactivate the TELNET/SSH service
- Configure the TELNET account and password, and set the TELNET port number to 23
- Configure the SSH login account and password, and set the SSH port number to 22

The screenshot displays two configuration sections: 'Telnet Setting' and 'SSH Setting'. Each section contains a dropdown menu for the service status, text input fields for the user and password, and a text input field for the port number. A 'Save' button is located at the bottom of each section. The 'Telnet Setting' section shows 'Telnet Service' set to 'Disable', 'Telnet user' and 'Telnet password' as empty fields, and 'Telnet port' set to '23'. The 'SSH Setting' section shows 'SSH Service' set to 'Enable', 'SSH user' and 'SSH password' as empty fields, and 'SSH port' set to '22'.

Telnet Setting	
Telnet Service:	Disable
Telnet user:	
Telnet password:	
Telnet port:	23
Save	

SSH Setting	
SSH Service:	Enable
SSH user:	
SSH password:	
SSH port:	22
Save	

Figure 31 · Telnet/SSH Configuration

SNMP Service

Path: Network Security> SNMP

This interface allows users to enable or disable SNMP and configure related parameters 1. SNMP V1/V2c Configuration:

- Select Enable SNMP agent v1/v2c.
- Set the **Write community** (default: private); this can be modified by the user
- Set the **Read community** (default: public); this can be modified by the user
- Enter the target addresses of the SNMP management platform in the **Trap 1 and Trap 2** input fields. Trap information will then be automatically sent to the corresponding addresses
- Click **Save** , restart the device, and the settings will take effect

SNMP v1/v2c Setting

SNMP agent:	Disable
Write community:	private
Read community:	public
Trap1 address:	
Trap2 address:	
System location:	location
System contact:	contact

Save

Figure 32 · SNMP V1/V2c Configuration

2. SNMP v3 Configuration:

- Select Enable SNMP agent v3
- Set the Username, Authentication Password, and Privacy Password
- Click **Save** , restart the device, and the settings will take effect

SNMP v3 Setting

SNMP agent:	Enable
Authentication:	MD5
Encryption:	DES
Account:	test1234
Password:	12345678
Private Key:	test1234

Save

Figure 33 · SNMP V3 Configuration

RADIUS Service

Path: Network Security > RADIUS

- Enable RADIUS Authentication
- Enable Local Authentication if RADIUS Server Does Not Respond (When the RADIUS server is unavailable, log in using the PDU's local account and password. After one minute, the system verifies the credentials, and following an additional 50-second wait, access to the web interface is granted).
- Enter the **Remote RADIUS Server Authentication Key**
- Enter the **Authentication Port**
- Enter the **Accounting Port**

Note: The device must be restarted for the RADIUS authentication configuration to take effect. Once successfully configured, log in using the RADIUS server account and password on the login screen. Access to the device is granted only after successful authentication via the remote RADIUS server.

Basic authentication settings

Basic settings:



Radius settings

Radius authentication



Enable local authentication when the RADIUS server is not responding



Authentication Server:

192.168.1.191

Public key:

admin

Authentication port:

1812

Account port

1813

Save

Figure 34 · Radius Configuration

SYSLOG Service

Path: Network Security> SYSLOG

On this interface, users can set SYSLOG related parameters

- Fill in the local IP address
- Select the reception type
- Open the SYSLOG software to receive PDU alarm information

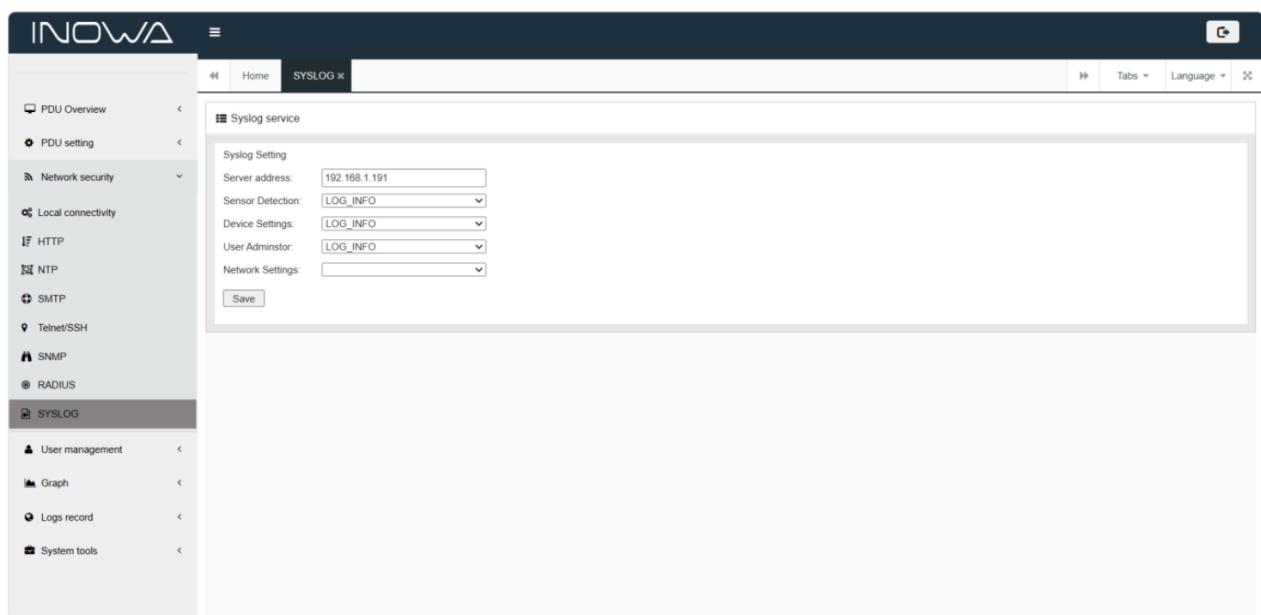


Figure 35 · SYSLOG Configuration

User Management

User Settings

Path: User Management> User Settings

- **Add User** : Enter a username and password, confirm the password, and click **Add** to complete the addition.
- **Modify User**: Enter the new username and password in the corresponding fields next to "Username" and "Password," confirm the password, and click **Modify** to update the information

- **Delete User:** Select the username to be deleted from the dropdown menu next to "Select User," and click **Delete** to remove it
- **Email Alerts:** Enter a valid email address in the **Email Address** field and click **Add** to receive alarm notifications when product alerts occur (up to 3 addresses can be added)
- **User Grouping :** In the **User Group** section, select a group and click Add to assign the user to the corresponding group

User setting

Select a user:	Admin123	▼
User name	Admin123	
Password		👁
Confirm password		👁
Email address 1:		
Email address 2:		
Email address 3		
User group:	admin	▼

36:

User Group Settings

Path: User Manager> User Group Settings

- **Add User Group:** Click **User Group Settings** , enter the user group name in the corresponding input field next to "User Group Name," set the group permissions, and click **Save** to successfully add a new user group
- **Modify User Group:** Enter the user group name to be modified in the corresponding input field next to "User Group Name," and click **Save** to successfully update the user group
- **Delete User Group:** Select the user group name to be deleted from the dropdown menu next to "Select User Group," and click **Delete** to successfully remove it
- **Set Group Permissions:** Select a user group, check the permission options under "User Group Name" to configure group permissions, and click **Save** to apply the settings successfully

User permission setting

Select user group:	admin	▼
User group name	admin	
User setting	☒	
PDU setting	☒	
Log management:	☒	
Firmware upgrading	☒	

Figure 37 · User Group Settings

Outlet Permission Settings

Path: User Management> Outlet Permission Settings

- Select a user group to configure permissions for users, user groups, and the outlet units of each device associated with the group.
- Based on different user groups and device selections, user can edit the outlet permissions for multiple daisy-chained devices. Click **Save** or **Delete** to apply the changes

User permission setting

User group:

PDU:

Outlet1	☒	Outlet13	☒
Outlet2	☒	Outlet14	☒
Outlet3	☒	Outlet15	☒
Outlet4	☒	Outlet16	☒
Outlet5	☒	Outlet17	☒
Outlet6	☒	Outlet18	☒
Outlet7	☒	Outlet19	☒
Outlet8	☒	Outlet20	☒
Outlet9	☒	Outlet21	☒
Outlet10	☒	Outlet22	☒
Outlet11	☒	Outlet23	☒
Outlet12	☒	Outlet24	☒

Figure 38 · Outlet Permission Settings

Graph Information

Temperature Curve

Path: Graph Information > Temperature Curve

On this interface, users can view the temperature variation curve for the past 24 hours

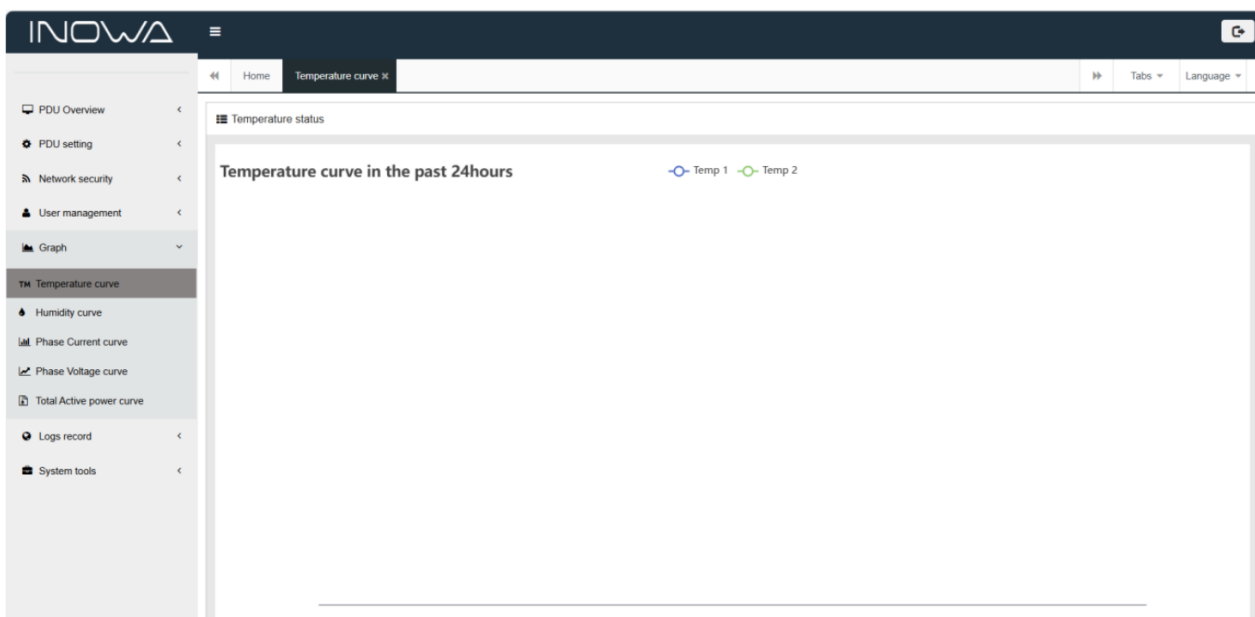


Figure 39 · Temperature Curve

Humidity Curve

Path: Graph Information > Humidity Curve

On this interface, users can view the humidity variation curve for the past 24 hours

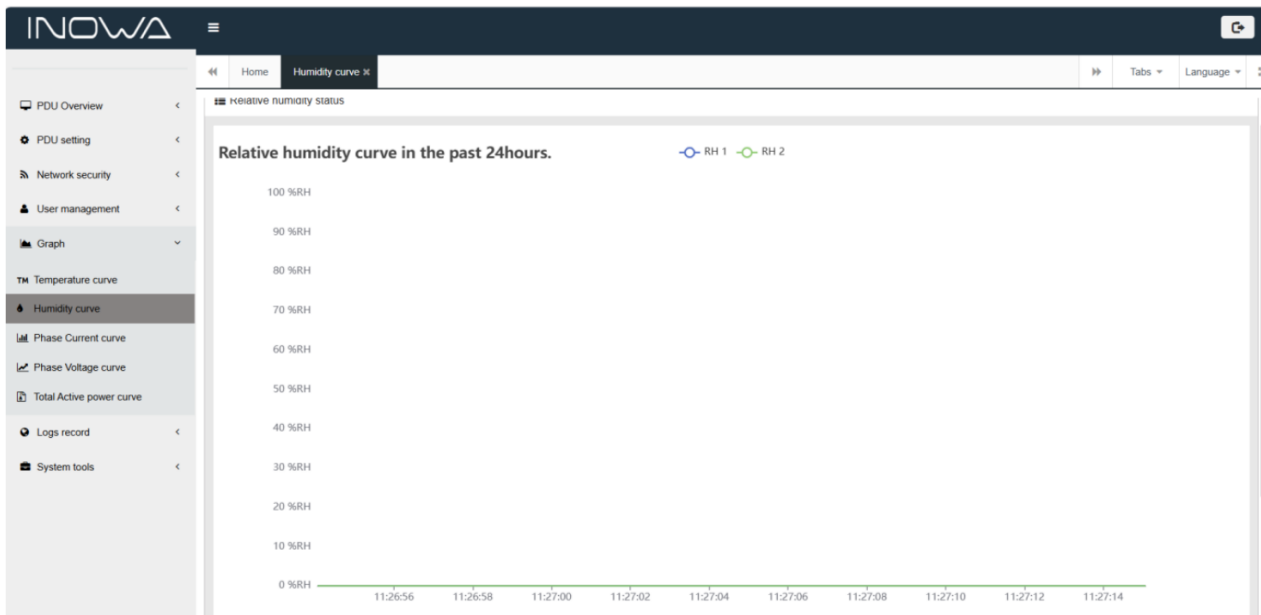


Figure 40 · Humidity Curve

Phase Current Curve

Path: Graph Information> Phase Current Curve

On this interface, users can view the phase current variation curve for the past 24 hours.

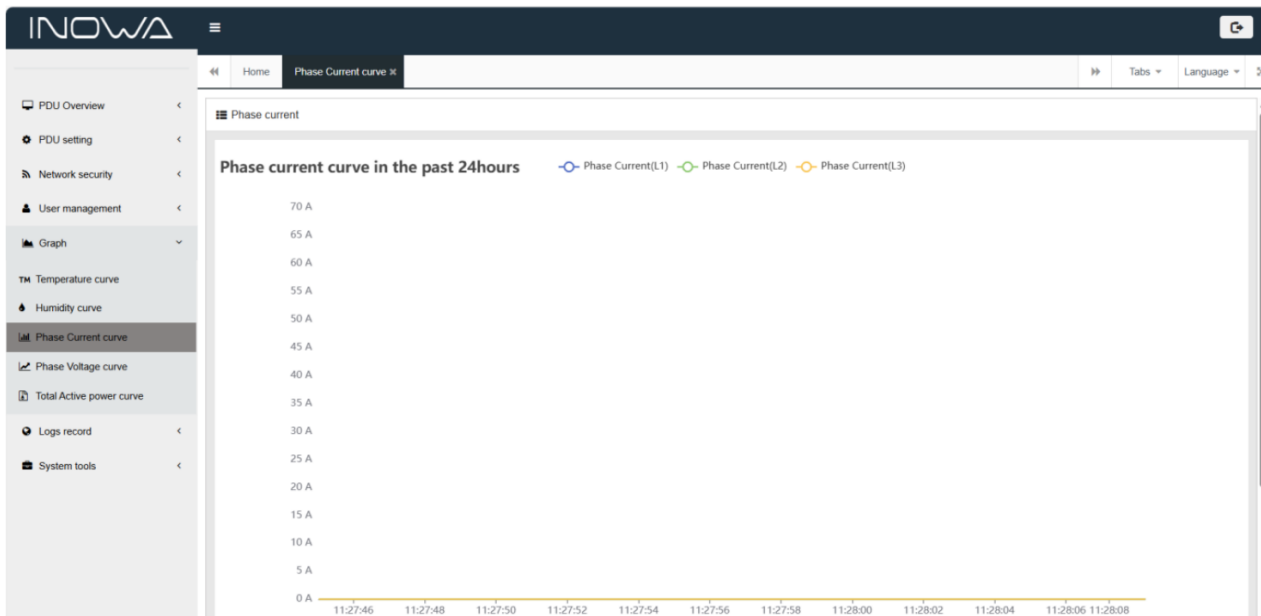


Figure 41 · Phase Current Curve

Phase Voltage Curve

Path: Graph Information> Phase Voltage Curve

On this interface, users can view the phase voltage variation curve for the past 24 hours.

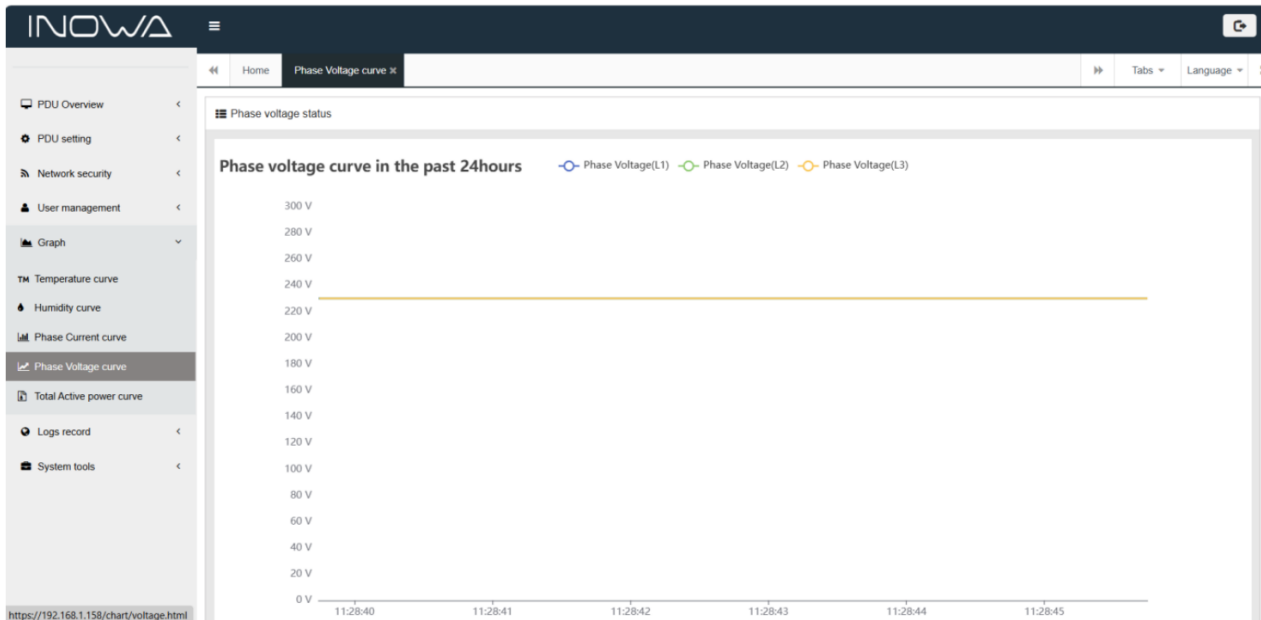


Figure 42 · Phase Voltage Curve

Total Active Power Curve

Path: Graph Information> Total Active Power Curve

On this interface, users can view the total active power variation curve for the past 24 hours



Figure 43 · Total Active Power Curve

Logs

Operation Log

Path: Logs Record> Operation Logs

On this interface, users can view log information including operation time, username, operation type, and details. They can also delete or export logs (Log capacity: up to 100 MB).

- **View Logs:** Click **Previous** or **Next** to navigate through pages, or enter a page number directly and click **Go**.
- **Delete Logs:** Click the **Delete** button and follow the prompts to remove logs.
- **Export Logs:** Click the **Export** button to save logs locally.

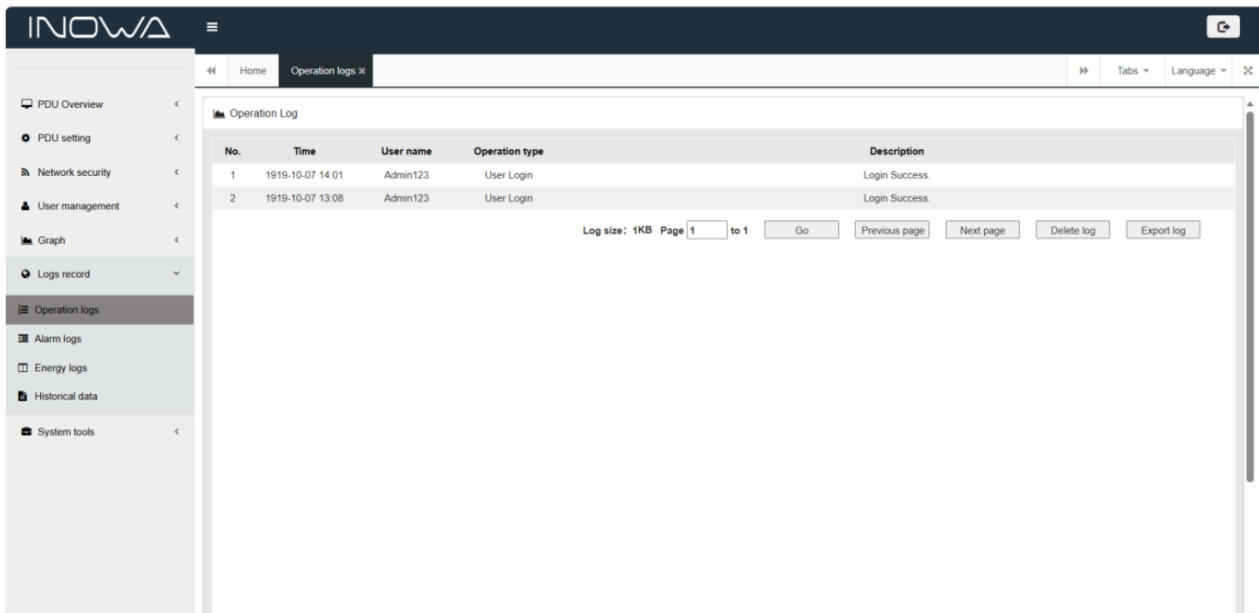


Figure 44 Logs Record

Alarm Logs

Path: Logs Record > Alarm Logs

On this interface, users can view log information including alarm time, alarm type, name/category, and details. They can also delete or export logs (Log capacity: up to 100 MB)

- **View Logs:** Click **Previous** or **Next** to navigate through pages, or enter a page number directly and click **Go**
- **Delete Logs:** Click the **Delete** button and follow the prompts to remove logs
- **Export Logs:** Click the **Export** button to save logs locally

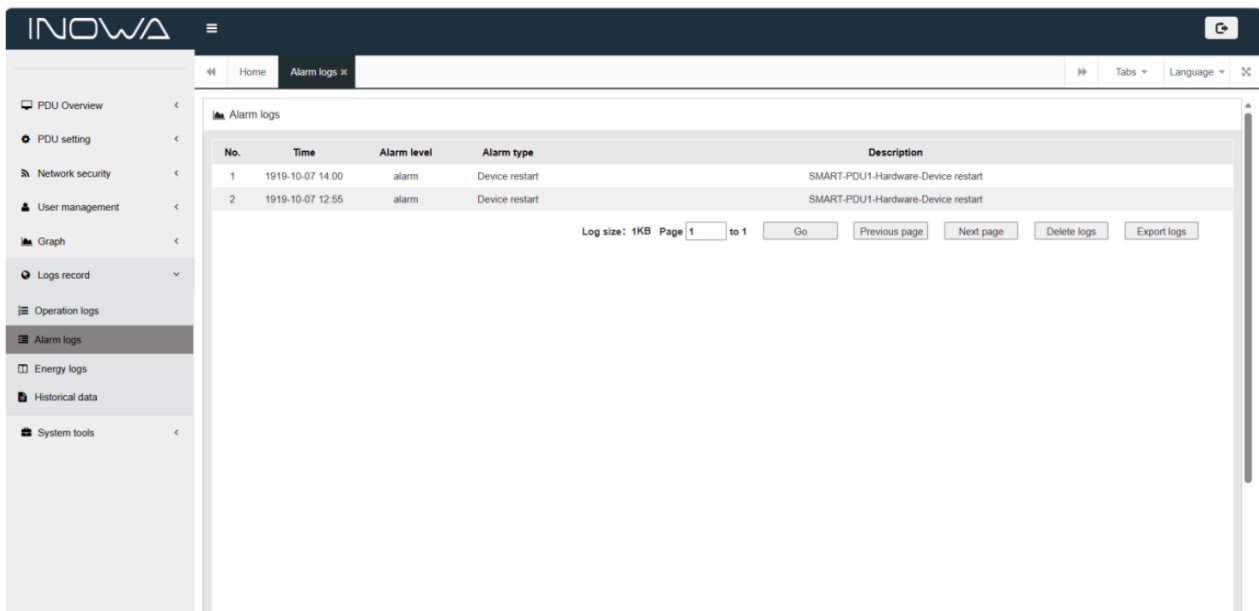


Figure 45 · Alarm Logs

Energy Logs

Path: Logs Record > Energy Logs

On this interface, users can view energy records for a selected past period and save the records locally.

- Select a start time and end time, then click **View**. The device will display the energy reading at the start of the period, the energy reading at the end of the period, and calculate the energy consumption during the selected period

- **Export Records:** Click the **Export** button to save the records locally

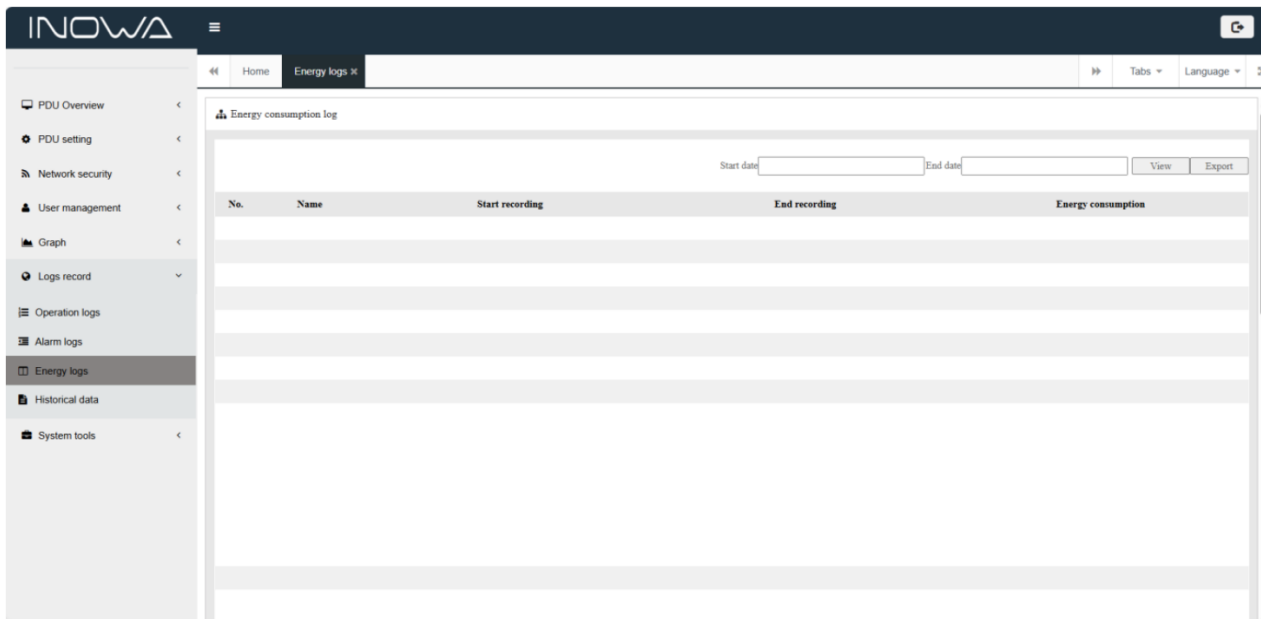


Figure 46 · Energy Logs

Historical Data

Path: Logs Record > Historical Data

On this interface, users can view records of current, voltage, energy, temperature, and humidity for a selected past day

- Select a date, choose the query type, and click **View** . The device will display the requested records

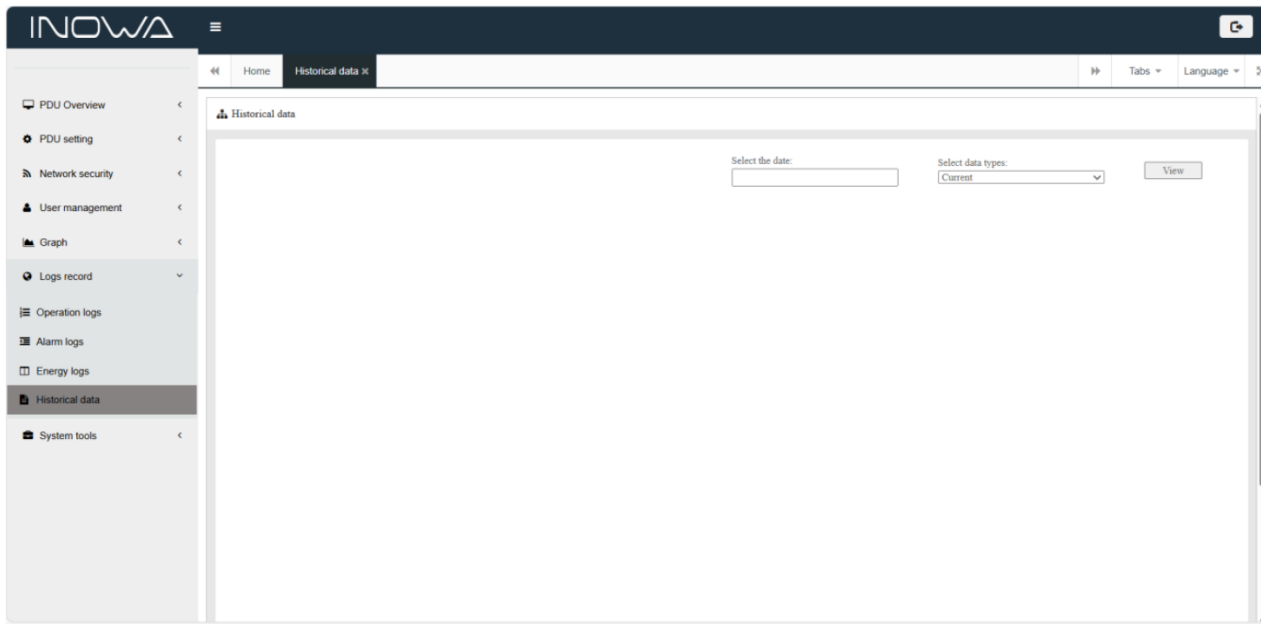


Figure 47 · Historical Data

Note: If the dialog box "Server cannot create object!" pops up when exporting logs, please follow the steps below to resolve the issue and successfully export the logs: Click **Tools** in the IE menu → Select **Internet Options** → Click the **Security** tab → Click the **Custom Level** button → Locate the setting **Initialize and script ActiveX controls not marked as safe for scripting** and select **Enable (Not Safe)** → Click **OK** → Click **OK** again

System Tools

System Information

Path: System Tools > System Information

On this interface, users can view device system information including processor, memory, system version, last system update time, MAC address, etc. The following operations can also be performed on the system:

- Download the upgrade tool and use it along with the upgrade software provided to perform remote device upgrades
- Click the **MIB File** button to download and view the MIB file
- Click the **Settings File** button to download the configuration file
- Click the Choose File button to upload files in batches **Note:** Before upgrading, connect the device and PC via an Ethernet cable (direct network connection) During the system upgrade process, ensure that the device remains powered on and connected to the network. Do not perform any operations on any pages

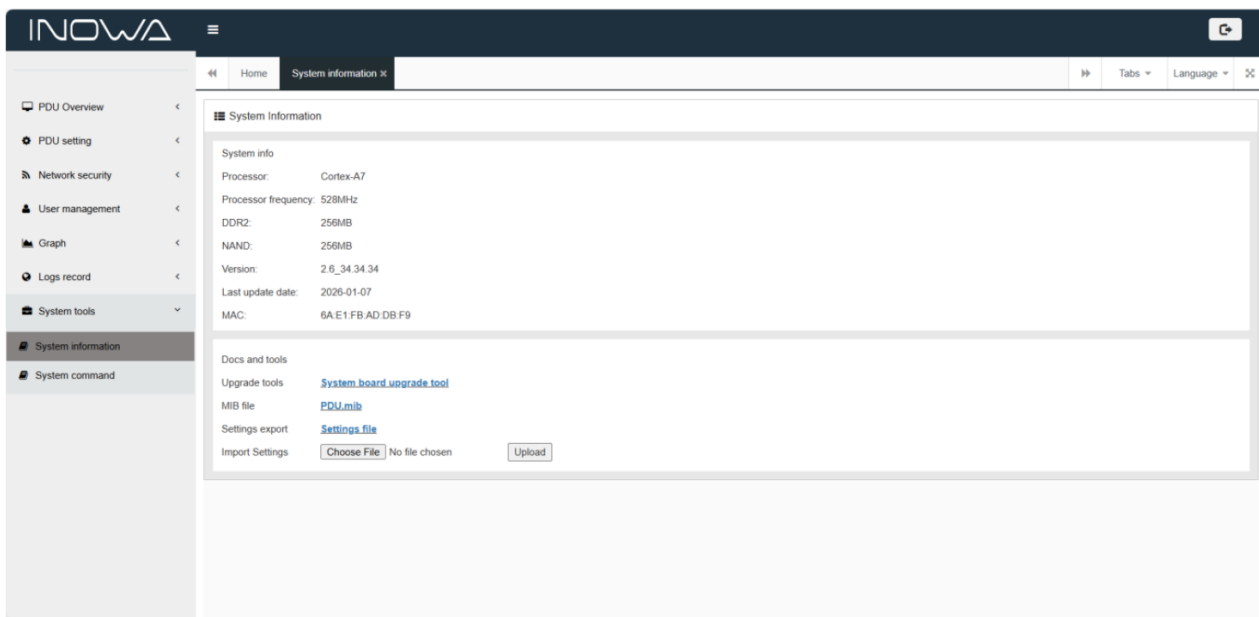


Figure 48 · System Information

System Commands

Path: System Tools > System Commands

On this interface, users can restart the device or restore it to factory default settings

- Select **Restart Device** and click the **Submit** button to automatically restart the device
- Select **Restore To Factory Settings** and click the **Submit** button. The device will automatically restart and restore all settings to their factory defaults

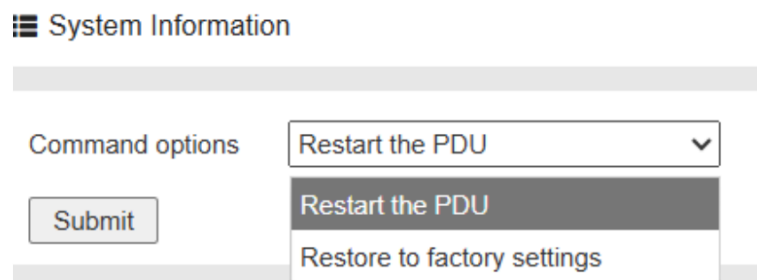


Figure 49 · System Commands

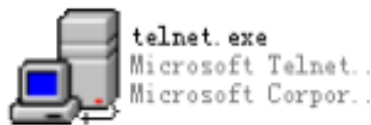
SNMP Access

SNMP (Simple Network Management Protocol) This software supports SNMP versions V1, V2c, and V3. The attached MIB file contains a private enterprise ID, enabling network management systems to manage the device via SNMP protocol. Users can view device and sensor status information and receive alarm notifications After enabling SNMP, please install the corresponding SNMP management software For the OIDs corresponding to device information managed via SNMP protocol, please refer to the relevant protocol documentation

Telnet Command Line Console Access

Telnet facilitates remote login, providing users with the capability to remotely control the device. End users can enter command lines in the Telnet program to control the device, offering better responsiveness. By entering a username and password via the Telnet command line console, users can remotely monitor and control the device status The Telnet command line access method does not support device daisy-chaining; users can only manage and monitor the master device

- On a PC, click **Start > Run** , enter **Telnet** in the Run dialog box, and click **OK** to open the Telnet client



- Enter the device's IP address, then provide the correct username and password to log in



Figure 50 · Telenet Login Interface

- "STATUS"Command 1.View outlet information and PDU summary information 2.Device summary information: Total current per phase/circuit, total voltage per phase, total power, total energy, circuit breaker status, circuit current, voltage, and energy 3. Outlet unit viewable information: Current, on/off status, minimum current, maximum current, power, and energy 4. Sensor status view: Temperature/humidity, smoke, water leakage, and door access sensor status
- **Command line input format:** STATUS [index] [operation]

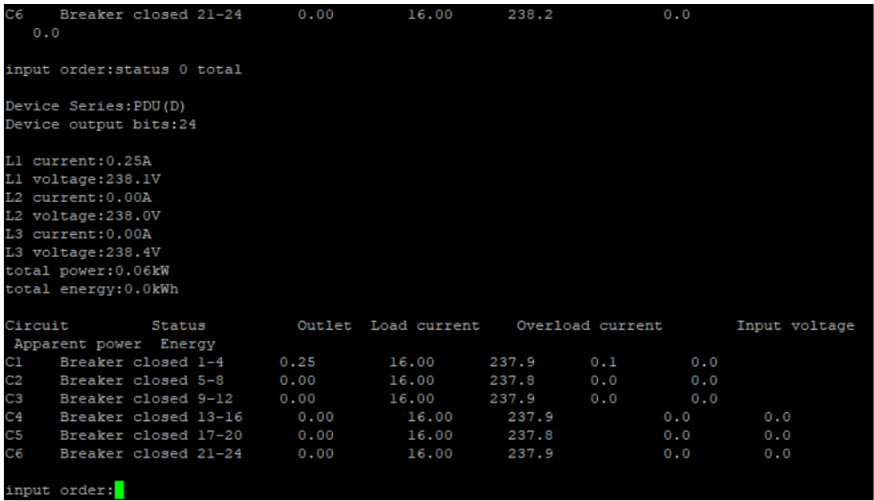
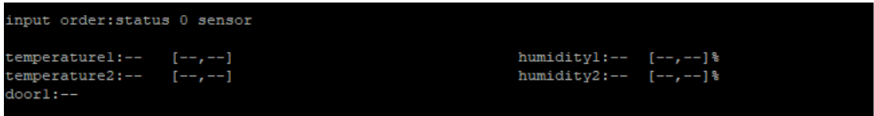
```
192.168.1.158 - PuTTY

Welcome to SMART-PDU telnetcmd!
login:admin
password:
-----
order list: status  on  off set  network  reboot  reset  quit
-----
input order:status
status [index] [operation]
index:PDU slave number, '0' is the master, '1' is the slave one...
operation:'total' is the total status
operation:'sensor' is the sensor status
operation:'output' To view all the output state

input order:█
```

Figure 51 · CLI STATUSIndexoperation

- **index:** Device role/index (0-9, where 0 represents the master unit and 1-9 represent slave units)
- **operation:** Select the device information to view based on the option, as detailed below

【operation】	Description
Total	Example: status 0 total  <pre> C6 Breaker closed 21-24 0.00 16.00 238.2 0.0 0.0 input order:status 0 total Device Series:PDU(D) Device output bits:24 L1 current:0.25A L1 voltage:238.1V L2 current:0.00A L2 voltage:238.0V L3 current:0.00A L3 voltage:238.4V total power:0.06kW total energy:0.0kWh Circuit Status Outlet Load current Overload current Input voltage Apparent power Energy C1 Breaker closed 1-4 0.25 16.00 237.9 0.1 0.0 C2 Breaker closed 5-8 0.00 16.00 237.8 0.0 0.0 C3 Breaker closed 9-12 0.00 16.00 237.9 0.0 0.0 C4 Breaker closed 13-16 0.00 16.00 237.9 0.0 0.0 C5 Breaker closed 17-20 0.00 16.00 237.8 0.0 0.0 C6 Breaker closed 21-24 0.00 16.00 237.9 0.0 0.0 input order: </pre> Enter status followed by the device index (0 for master, 1-9 for slave). Then type total and press Enter. The information shown in the figure above will be displayed
sensor	status 0 sensor  <pre> input order:status 0 sensor temperature1:-- [--,--] humidity1:-- [--,--]% temperature2:-- [--,--] humidity2:-- [--,--]% door1:-- </pre> Type status followed by the device index (0 for master, 1-9 for slave). Then enter sensor and press Enter. The current sensor status of the

	master device will be displayed as shown in the figure above																																																																																																																																																																															
Output	Example: status 0 output <pre>input order:status 0 output</pre> <table><thead><tr><th>Item</th><th>Name</th><th>State</th><th>Current (A)</th><th>PrewarningValue (A)</th><th>Overcurrent (A)</th><th>Powerfactor</th></tr></thead><tbody><tr><td>1</td><td>Output1</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>2</td><td>Output2</td><td>ON</td><td>0.25</td><td>8.00</td><td>10.00</td><td>0.750</td></tr><tr><td>3</td><td>Output3</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>4</td><td>Output4</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>5</td><td>Output5</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>6</td><td>Output6</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>7</td><td>Output7</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>8</td><td>Output8</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>9</td><td>Output9</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>10</td><td>Output10</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>11</td><td>Output11</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>12</td><td>Output12</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>13</td><td>Output13</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>14</td><td>Output14</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>15</td><td>Output15</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>16</td><td>Output16</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>17</td><td>Output17</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>18</td><td>Output18</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>19</td><td>Output19</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>20</td><td>Output20</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>21</td><td>Output21</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>22</td><td>Output22</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>23</td><td>Output23</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr><tr><td>24</td><td>Output24</td><td>ON</td><td>0.00</td><td>8.00</td><td>10.00</td><td>0.000</td></tr></tbody></table> <pre>input order:</pre> Enter status followed by the device index (0 for master, 1-9 for slave). Then type output and press Enter. The status information of all outlets will be displayed as shown in the figure above	Item	Name	State	Current (A)	PrewarningValue (A)	Overcurrent (A)	Powerfactor	1	Output1	ON	0.00	8.00	10.00	0.000	2	Output2	ON	0.25	8.00	10.00	0.750	3	Output3	ON	0.00	8.00	10.00	0.000	4	Output4	ON	0.00	8.00	10.00	0.000	5	Output5	ON	0.00	8.00	10.00	0.000	6	Output6	ON	0.00	8.00	10.00	0.000	7	Output7	ON	0.00	8.00	10.00	0.000	8	Output8	ON	0.00	8.00	10.00	0.000	9	Output9	ON	0.00	8.00	10.00	0.000	10	Output10	ON	0.00	8.00	10.00	0.000	11	Output11	ON	0.00	8.00	10.00	0.000	12	Output12	ON	0.00	8.00	10.00	0.000	13	Output13	ON	0.00	8.00	10.00	0.000	14	Output14	ON	0.00	8.00	10.00	0.000	15	Output15	ON	0.00	8.00	10.00	0.000	16	Output16	ON	0.00	8.00	10.00	0.000	17	Output17	ON	0.00	8.00	10.00	0.000	18	Output18	ON	0.00	8.00	10.00	0.000	19	Output19	ON	0.00	8.00	10.00	0.000	20	Output20	ON	0.00	8.00	10.00	0.000	21	Output21	ON	0.00	8.00	10.00	0.000	22	Output22	ON	0.00	8.00	10.00	0.000	23	Output23	ON	0.00	8.00	10.00	0.000	24	Output24	ON	0.00	8.00	10.00	0.000
Item	Name	State	Current (A)	PrewarningValue (A)	Overcurrent (A)	Powerfactor																																																																																																																																																																										
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- "ON/OFF/CYCLE" "**ON/OFF/CYCLE**" **Commands** The ON/OFF commands control individual outlet units or all outlet units simultaneously. **Command line input format** OFF/NO [index] output/group[number] CYCLE [index] output/group[number]

```

input order:off
off [index] output[number]
index:PDU slave number,'0' is the master, '1' is the slave one...
number:'1' is the output1 switch ...
input order:

```

Figure 51 · Command Line Format

- **index:** Device role/index (0-9, where 0 represents the master unit and 1-9 represent slave units)
- **operation:** Select the device information to view based on the option, as detailed below

【operation】	Description
Output	<pre> input order:on 0 output 1 the order is done. input order: </pre> For this option, simply enter the serial number of the outlet. Each command controls only one outlet at a time
Group	<pre> input order:off 0 group1 the order is done. input order: </pre> This option requires entering the group number and controls the on/off status of an entire group with each command.

Cycle	<pre>input order:cycle 0 group1 the order is done. input order:</pre> This option accepts an outlet number or group number and controls the restart of the specified outlet or group with each command
-------	--

- SET Command** The SET command modifies outlet unit names, sets current thresholds for outlet units, configures temperature/humidity upper/lower limits, and changes IP address, subnet mask, gateway, DNS, and secondary DNS settings **Command format:** set <index> <operation>

```
input order:set
set [index] [operation]...
index:PDU slave number,'0' is the master, '1' is the slave one...
set 0 output1 xx
operation:'output1' is a name you want to change the output ...
set 0 temp1 xx xx
operation:'temp1' is the temperaturel threshold settings ...
set 0 hum1 xx xx
operation:'hum1' is the humidityl threshold settings ...
set 0 current1 xx xx
operation:'current1' is the output1 current threshold setting ...
set 0 Lcurrent1 xx xx
operation:'Lcurrent1' is the phase Load(L1) threshold setting ...
set 0 Ccurrent1 xx xx
operation:'Ccurrent1' is the Loop Load(C1) threshold setting ...
set ip=xxx.xxx.xxx.xxx
set ipv6=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx
set mask=xxx.xxx.xxx.xxx
set gateway=xxx.xxx.xxx.xxx
set dns1=xxx.xxx.xxx.xxx
set dns2=xxx.xxx.xxx.xxx

input order:
```

Figure 52 · Set Command

index: Device role/index (0-9, where 0 represents the master unit and 1-9 represent slave units) **operation:** Select the device information to set based on the option, as detailed below

【operation】	Description
output	<pre>input order:set set [index] [operation]... index:PDU slave number,'0' is the master, '1' is the slave one... set 0 output1 xx operation:'output1' is a name you want to change the output ... set 0 temp1 xx xx xx xx operation:'temp1' is the temperaturel threshold settings ... set 0 hum1 xx xx xx xx operation:'hum1' is the humidityl threshold settings ... set 0 current1 xx xx xx xx operation:'current1' is the output1 current threshold setting ... set 0 Lcurrent1 xx xx xx xx operation:'Lcurrent1' is the phase Load(L1) threshold setting ... set 0 Ccurrent1 xx xx xx xx operation:'Ccurrent1' is the Loop Load(C1) threshold setting ... set ip=xxx.xxx.xxx.xxx set mask=xxx.xxx.xxx.xxx set gateway=xxx.xxx.xxx.xxx set dns1=xxx.xxx.xxx.xxx set dns2=xxx.xxx.xxx.xxx input order:set 0 output1 ee input order:</pre> Command: set 0 output1 ee – Sets the name of outlet 1 on the master device to "ee"

current	<pre> input order:set set [index] [operation]... index:RPDU slave number,'0' is the master, '1' is the slave one... set 0 output1 xx operation:'output1' is a name you want to change the output ... set 0 temp1 min=xx max=xx operation:'temp1' is the temperature1 threshold settings ... set 0 hum1 min=xx max=xx operation:'hum1' is the humidity1 threshold settings ... set 0 current1 min=xx max=xx operation:'current1' is the output1 current threshold setting ... set 0 Tcurrent1 Tmin=xx Tmax=xx operation:'Tcurrent1' is the Total Load(L1) threshold setting ... set ip=xxx.xxx.xxx.xxx set mask=xxx.xxx.xxx.xxx set gateway=xxx.xxx.xxx.xxx set dns=xxx.xxx.xxx.xxx set dns1=xxx.xxx.xxx.xxx input order:set 0 output1 a1 input order:set 0 current1 min=0 max=12 input order: </pre> Command: set 0 current1 min=0 max=12 – Sets the Min threshold to 0 and Max threshold to 12 for the current of outlet unit 1 on the master device
temperature	<pre> index:PDU slave number,'0' is the master, '1' is the slave one... set 0 output1 xx operation:'output1' is a name you want to change the output ... set 0 temp1 xx xx xx xx operation:'temp1' is the temperature1 threshold settings ... set 0 hum1 xx xx xx xx operation:'hum1' is the humidity1 threshold settings ... set 0 current1 xx xx xx xx operation:'current1' is the output1 current threshold setting ... set 0 Lcurrent1 xx xx xx xx operation:'Lcurrent1' is the phase Load(L1) threshold setting ... set 0 Ccurrent1 xx xx xx xx operation:'Ccurrent1' is the Loop Load(C1) threshold setting ... set ip=xxx.xxx.xxx.xxx set mask=xxx.xxx.xxx.xxx set gateway=xxx.xxx.xxx.xxx set dns1=xxx.xxx.xxx.xxx set dns2=xxx.xxx.xxx.xxx input order:set 0 output1 ee input order:set 0 temp1 1 2 9 10 input order: </pre> Command: set 0 temp1 1 2 9 10 – Sets the temperature thresholds for sensor 1 on the master device: minimum=1, lower critical=2, upper critical=9, maximum=10
humidity	<pre> input order:set set [index] [operation]... index:PDU slave number,'0' is the master, '1' is the slave one... set 0 output1 xx operation:'output1' is a name you want to change the output ... set 0 temp1 xx xx xx xx operation:'temp1' is the temperature1 threshold settings ... set 0 hum1 xx xx xx xx operation:'hum1' is the humidity1 threshold settings ... set 0 current1 xx xx xx xx operation:'current1' is the output1 current threshold setting ... set 0 Lcurrent1 xx xx xx xx operation:'Lcurrent1' is the phase Load(L1) threshold setting ... set 0 Ccurrent1 xx xx xx xx operation:'Ccurrent1' is the Loop Load(C1) threshold setting ... set ip=xxx.xxx.xxx.xxx set mask=xxx.xxx.xxx.xxx set gateway=xxx.xxx.xxx.xxx set dns1=xxx.xxx.xxx.xxx set dns2=xxx.xxx.xxx.xxx input order:set 0 output1 ee input order:set 0 temp1 1 2 9 10 input order:set 0 temp1 0 0 40 40 input order:set 0 hum2 3 5 80 98 input order: </pre> Command: set 0 hum2 3 5 80 98 – Sets the humidity thresholds for sensor

	2 on the master device: minimum=3, lower critical=5, upper critical=80, maximum=98
Current	<pre> set [index] [operation]... index:PDU slave number,'0' is the master, '1' is the slave one... set 0 output1 xx operation:'output1' is a name you want to change the output ... set 0 temp1 xx xx xx xx operation:'temp1' is the temperature1 threshold settings ... set 0 hum1 xx xx xx xx operation:'hum1' is the humidity1 threshold settings ... set 0 current1 xx xx xx xx operation:'current1' is the output1 current threshold setting ... set 0 Lcurrent1 xx xx xx xx operation:'Lcurrent1' is the phase Load(L1) threshold setting ... set 0 Lcurrent1 xx xx xx xx operation:'Ccurrent1' is the Loop Load(C1) threshold setting ... set ip=xxx.xxx.xxx.xxx set mask=xxx.xxx.xxx.xxx set gateway=xxx.xxx.xxx.xxx set dns1=xxx.xxx.xxx.xxx set dns2=xxx.xxx.xxx.xxx input order:set 0 output1 ee input order:set 0 temp1 1 2 9 10 input order:set 0 temp1 0 0 40 40 input order:set 0 hum2 3 5 80 98 input order:set 0 current1 1 2 9 16 input order: </pre> Command: set 0 current1 1 2 9 16 – Sets the current thresholds for outlet unit 1 on the master device: minimum=1, lower critical=2, upper critical=9, maximum=16
Lcurrent	<pre> set 0 output1 xx operation:'output1' is a name you want to change the output ... set 0 temp1 xx xx xx xx operation:'temp1' is the temperature1 threshold settings ... set 0 hum1 xx xx xx xx operation:'hum1' is the humidity1 threshold settings ... set 0 current1 xx xx xx xx operation:'current1' is the output1 current threshold setting ... set 0 Lcurrent1 xx xx xx xx operation:'Lcurrent1' is the phase Load(L1) threshold setting ... set 0 Lcurrent1 xx xx xx xx operation:'Ccurrent1' is the Loop Load(C1) threshold setting ... set ip=xxx.xxx.xxx.xxx set mask=xxx.xxx.xxx.xxx set gateway=xxx.xxx.xxx.xxx set dns1=xxx.xxx.xxx.xxx set dns2=xxx.xxx.xxx.xxx input order:set 0 output1 ee input order:set 0 temp1 1 2 9 10 input order:set 0 temp1 0 0 40 40 input order:set 0 hum2 3 5 80 98 input order:set 0 current1 1 2 9 16 input order:set 0 Lcurrent1 1 2 10 15 input order: </pre> Command: set 0 Lcurrent1 1 2 10 15 – Sets the total current thresholds for phase A on the master device: minimum=1, lower critical=2, upper critical=10, maximum=15

Ccurrent	<pre> set 0 temp1 xx xx xx xx operation:'temp1' is the temperature1 threshold settings ... set 0 hum1 xx xx xx xx operation:'hum1' is the humidity1 threshold settings ... set 0 current1 xx xx xx xx operation:'current1' is the output1 current threshold setting ... set 0 Lcurrent1 xx xx xx xx operation:'Lcurrent1' is the phase Load(L1) threshold setting ... set 0 Lcurrent1 xx xx xx xx operation:'Ccurrent1' is the Loop Load(C1) threshold setting ... set ip=xxx.xxx.xxx.xxx set mask=xxx.xxx.xxx.xxx set gateway=xxx.xxx.xxx.xxx set dns1=xxx.xxx.xxx.xxx set dns2=xxx.xxx.xxx.xxx input order:set 0 output1 ee input order:set 0 temp1 1 2 9 10 input order:set 0 temp1 0 0 40 40 input order:set 0 hum2 3 5 80 98 input order:set 0 current1 1 2 9 16 input order:set 0 Lcurrent1 1 2 10 15 input order:set 0 Ccurrent1 1 3 9 10 input order: </pre> Command: set 0 Ccurrent1 1 3 9 10 – Sets the total current thresholds for branch circuit 1 on the master device: minimum=1, lower critical=3, upper critical=9, maximum=10
network	<pre> input order:set ip=192.168.1.163 Need to reboot the device! input order:set mask=255.255.0.0 Need to reboot the device! input order:set gateway=192.168.1.1 Need to reboot the device! input order:set dns1=202.96.134.133 Need to reboot the device! input order: </pre> Command: set ip=192.168.1.163 – Configures the master device IP address to 192.168.1.223. Command: set mask=255.255.0.0 – Configures the master device subnet mask to 255.255.0.0. Command: set gateway=192.168.1.1 – Configures the master device gateway to 192.168.1.1. Command: set dns1=202.96.134.133 – Configures the master device's primary DNS server to 202.96.134.133

- **REBOOT Command:** Restarts the device

```

input order:reboot

Are you sure? (y/n)

```

Figure 53 · Reboot Command

- **RESET Command:** Restores the device to its factory default settings

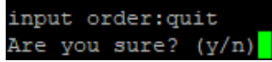
```

input order:reset
Restore to default setting !
Are you sure? (y/n)

```

Figure 54 · Reset Command

- **QUIT Command:** Log out the Telnet command console

A terminal window with a black background. The text 'input order:quit' is displayed on the first line. The second line shows 'Are you sure? (y/n)' followed by a green cursor.

```
input order:quit
Are you sure? (y/n)
```

Figure 55 · Quit Command

SSH

SSH (Secure Shell) is a protocol that provides remote login and other secure network services over an insecure network. In addition to enabling secure network terminal sessions for configuration and power management, SSH sessions can be used to manage devices connected in a pass-through configuration. SSH requires configuration and a client on the PC. Many free sharewares or commercial SSH clients are available, such as the free client software **PUTTY**. The operation method for the SSH command-line console is the same as that for the Telnet command-line console. For detailed instructions, please refer to **Section 6.2.3 Telnet User Guide**.

MODBUS RTU Access

MODBUS RTU access is achieved via a 2-wire RS-485 serial communication port. For the access protocol, please refer to the Smart PDU MODBUS RTU Protocol and User Guide **Modbus-RTU Protocol Settings**: Includes Modbus-RTU communication address (1-99), baud rate (4800, 9200, 19200, 38400, 115200), data bits (8), parity (None), and stop bits (1) **Note:** For data collection via the RS-485 port, refer to the Modbus-RTU protocol for details.

7 Frequently Asked Questions

1 How to Check the Device IP Address

SOLUTION

Navigate through the pages; the device IP address will be displayed on the screen.

2 Unable to Log In to the Device

SOLUTION

- Connect the master device directly to the PC. Modify the PC's network configuration so that it is on the same subnet as the master device's IP address. The factory default settings for the master device are: IP address 192.168.1.158, Subnet Mask 255.255.255.0, Default Gateway 192.168.1.1. For example, set the PC's network IP to 192.168.1.2, Subnet Mask to 255.255.255.0, and Default Gateway to 192.168.1.1.
- Open a browser and enter the default device IP address. Log in to the user management interface by entering the default username and password.
- Once logged in, navigate to the **Network Settings** menu and modify the device's IP address to be on the same subnet as the PC's IP address.
- Restore the PC's original network configuration, then log in to the user management interface using the modified device IP address.

3 Email Notification Sending Failure

SOLUTION

- Check and ensure the device is connected to the network and the network is functioning properly.
- Verify that the DNS settings are correct.
- Check and ensure the SMTP server is correctly configured and matches the sender's email server, and that the SMTP port is entered correctly.
- Ensure that the recipient's email address is correctly entered in the user settings.

4 Restore Factory Settings

SOLUTION

Press and hold the **UP** and **DOWN** buttons for 6 seconds. After the device restarts and the **RUN** indicator starts flashing, release the buttons. The factory reset is now complete.

8 Technical Parameters

No.	Specifications	Technical Data	
1	Input	Input Voltage Range	Single phase: 100 VAC-250 VAC, 50-60 Hz; Three phase: 200 VAC-430 VAC, 50-60 Hz
		Input Terminal Type	Standard: IEC 60309 industrial plug
		Power Cord Specification	32 A: 3×6 mm ² ; 63 A: 3×16 mm ² ; 3×16 A: 5×2.5 mm ² ; 3×32 A: 5×6.0 mm ²
		Power Cord Length	Standard: 3 m
		Maximum Load Current	Single phase: 32 A, 63 A; Three phase: 3×16 A, 3×32 A
		Overload Protection	16 A / 32 A hydraulic circuit breaker
2	Output	Outlet types	Standard configuration: IEC320 C13, C19, C39
		Outlet quantity	24, 36, 42 outlets
		Output Voltage Range	Single phase: 100 VAC-240 VAC, 50-60 Hz
		Maximum Total Load Current	Single phase: 32 A, 63 A
		Maximum Load Current per Phase	16 A / 32 A
3	Ports	Network Port	1 × RJ45 port
		Daisy-Chain Port	2 × RJ45 port
		Expansion Port	1 × RJ45 port
		Temperature / Humidity Sensor Port	2 × RJ45 port
		Door Sensor Port	1 × RJ45 port
		Upgrade Port	1 × USB port
4	Display	IP address, monitoring parameters, alarm status	2.0-inch LCD display
		RUN LED indicator	Green flashing LED
5	Load Current Display	Total Load Current	Full scale: 32 A / 16 A; Resolution: 0.01 A; Accuracy: ±1% rdg. ±10 dgt; Response time: 500 ms
		Branch Circuit Current	Full scale: 10 A / 16 A; Resolution: 0.01 A; Accuracy: ±1% rdg. ±10 dgt; Response time: 500 ms
6	T/H Sensor Monitoring Accuracy	Temperature	Operating range: 0-60 °C; Accuracy: ±1 °C; Response time: 400 ms
		Humidity	Operating range: 10-90% RH; Accuracy: ±5% RH; Response time: 400 ms
7	Dimensions	Product size (H × W × D)	0U: 1830 × 56 × 52 mm (24 outlets); 1830 × 60 × 60 mm (36, 42 outlets)
		Mounting distance	Toolless mounting pegs: 1244 mm
8	Chassis Colour	Colour	Black
9	Optional Accessories	Sensors	T/H sensor and door sensor

No.	Specifications		Technical Data
10	Environmental	Working environment	Temperature: 0-60 °C; Humidity: 5-95%
		Storage environment	Temperature: -20-70 °C; Humidity: 5-95%
11	RoHS	Directive compliance	Yes

9 Quality Assurance

This product is warranted against defects in materials and workmanship for a period of two years from the date of purchase by the customer. During the warranty period, the company's obligation is limited to replacement, repair, or return of the product for repair. Warranty service is generally provided free of charge during this period. If the product is beyond the warranty period, or if the company determines that the issue resulted from improper operation, appropriate fees will be charged.

The above warranty does not apply to problems caused by the following:

1. Failures resulting from incorrect or improper maintenance by the customer.
2. Failures caused by unauthorized modifications, alterations, or misuse.
3. Failures due to operating the product outside the specified physical environmental conditions.

Repair Notes

1. If the product needs to be returned for repair, please ensure it is packed in protective rigid packaging. Damage incurred during transit is not covered under this warranty.
2. Provide a brief description of the product issue and the operational steps leading to it.
3. The customer must prepay shipping costs for returning the product to the company and is responsible for all applicable duties and taxes.
4. Please include your name, address, and a contact telephone number where you can be reached.