SIEMON™

PowerMax™

Intelligent Power Distribution Unit (PDU) User Manual

V1.4.0

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1 PowerMax Introduction

The PowerMax PDU (Intelligent Power Distribution Unit) is a network manageable device that provides power monitoring, control and management to equipment mounted in racks within a data center through LAN or WAN. Siemon PowerMax PDUs offer many connection methods including Web interface (HTTP or HTTPS), Serial connection, Telnet or SNMP.

1.1 Functions

1.1.1 Monitoring function

Monitor the current, voltage, power (kW) and energy consumption (kWh) and environmental status (e.g. temperature, humidity and water sensors) via IP and local LCD screen.

1.1.2 Controlling function

Switch on/off individual outlets; sequential power on/off

1.1.3 Maintaining outlet state

Keep the on/off condition of each outlet after resetting.

1.1.4 User-defined alarms

Set the threshold of current, temperature and humidity alarms.

1.1.5 System default alarms

Send a warning when the total PDU current or individual current (Smart and Managed only) are exceeded; also for sensors

1.1.5.1 Alarm methods

- Alarm information shown on LCD screen
- Audible buzzer
- Alarm parameter value highlighted in red on web interface
- E-mail can be sent to a system administrator
- SNMP sends trap alerts.

1.1.6 Daisy-chain

Up to 5 units can be connected using one IP address

1.1.7 User management

Individually configurable user rights. Users can be assigned to different user groups with different rights. User group rights are managed by Administrator

1.1.8 Remote access

- Web interface
- HTTP
- HTTPS
- SNMP (v1 / v2c / v3)
- Telnet
- Serial console
- Multi-user operation and software update through web interface

1.2 Function comparison table

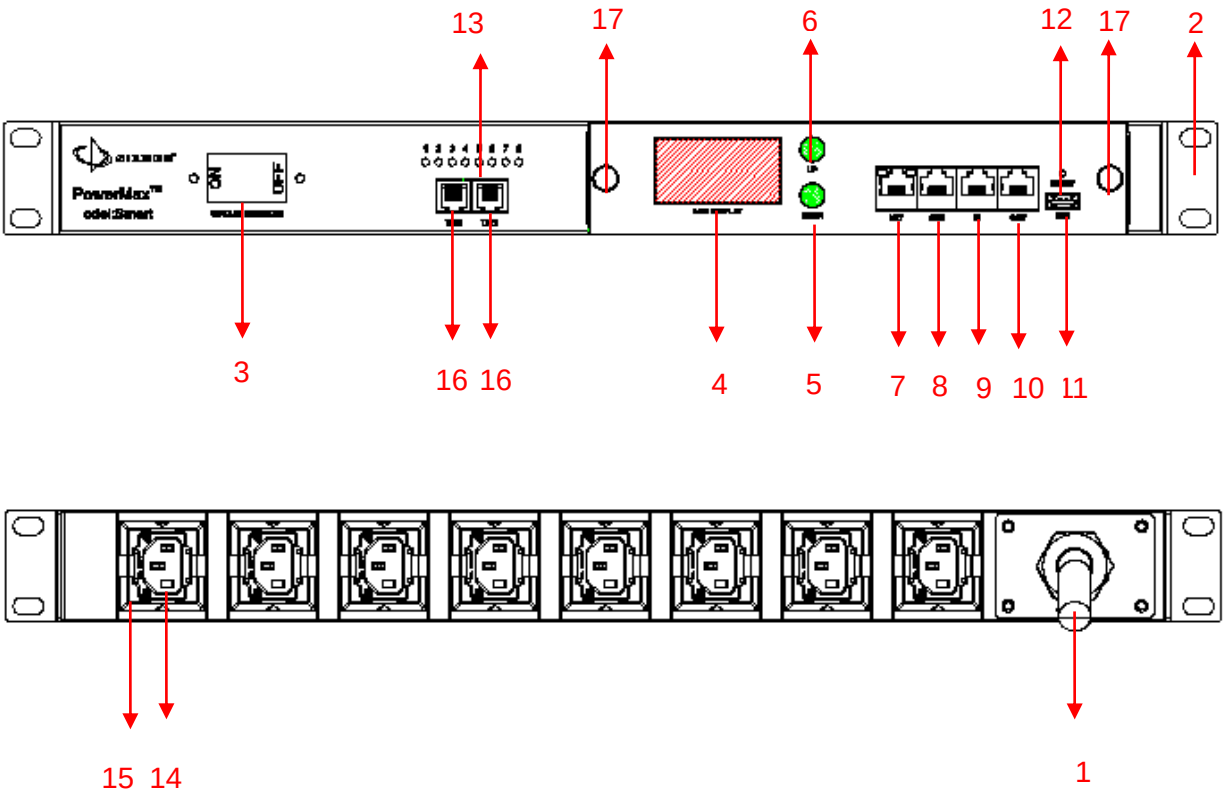
Function	Description & Range
Monitoring	Monitoring function: Through the local LCD screen users can view the total current and the current of each individual outlet (Smart and Managed), the on/off status of each individual outlet (Smart and Managed), sensor status
Controlling	Controlling function (Switched and Managed): Switching On/Off each individual outlet, power on/off delay, Return-to-zero for total or individual power consumption, configure scheduled events, overload power cut-off settings, quick mass-setup of PDUs, back-up, WIFI settings.
Outlet state settings	Outlet on/off state maintained after restart (Switched and Managed)
User-defined alarm	User-defined alarms: total current, individual current (Smart and Managed), sensors
System default alarm	System default alarm: total PDU current; individual outlet current (Smart and Managed); sensors

1.3 Product Picture and Description

1.3.1 Vertical PDU Description

1. Input power cord
2. Brackets
3. Hydraulic circuit breaker
4. LCD screen
5. DOWN button: scroll down to the next page
6. UP button: scroll up to the previous page
7. ENTER button: select
8. RUN indicator
9. 1600imp/kWh Energy pulse indicator
10. RESET button
11. USB port for WIFI access or software upgrade
12. NET: 10/100M Ethernet communication port
13. SER: Serial communication port (supporting MODBUS)
14. IN: for daisy-chain
15. OUT: for daisy-chain
16. T/H1: temperature and humidity sensor port 1
17. T/H1: temperature and humidity sensor port 2
18. SENSOR: extend sensor hub communication port
19. LED outlet indicator
20. Outlets

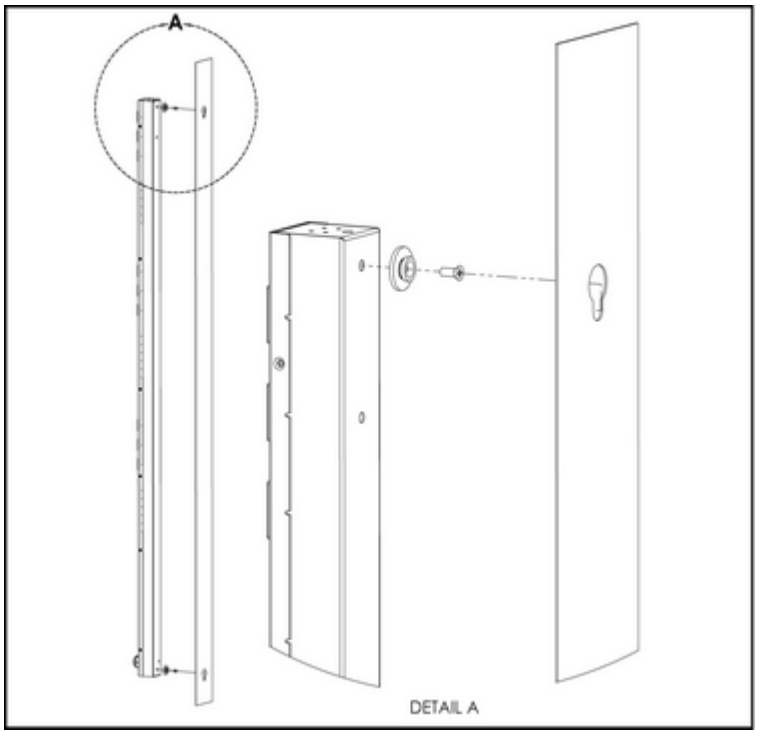
1.3.2 Horizontal PDU Description



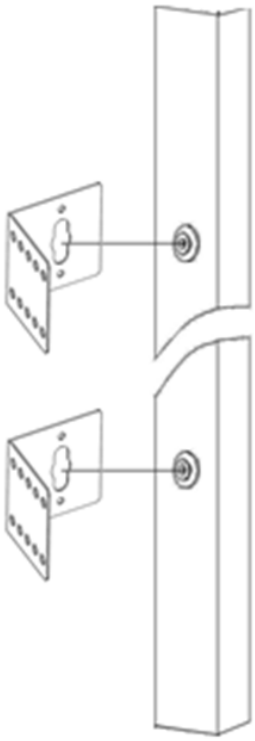
1. Input power cord;
2. Brackets;
3. Hydraulic circuit breaker;
4. LCD screen;
5. DOWN key: scroll down to the next page;
6. UP key: scroll up to the previous page;
7. NET: 10/100M Ethernet communication port
8. SER: Serial communication port(support MODBUS) ;
9. IN: for daisy-chain
10. OUT: for daisy-chain
11. USB port for WIFI access or software upgrade;
12. RESET button;
13. LED indicator;
14. Outlets
15. Anti-trip
16. T/H1,T/H2: temperature and humidity sensor port1 and port 2
17. Fixed screw

1.4 Installation

1.4.1 Vertical mounting (0U)

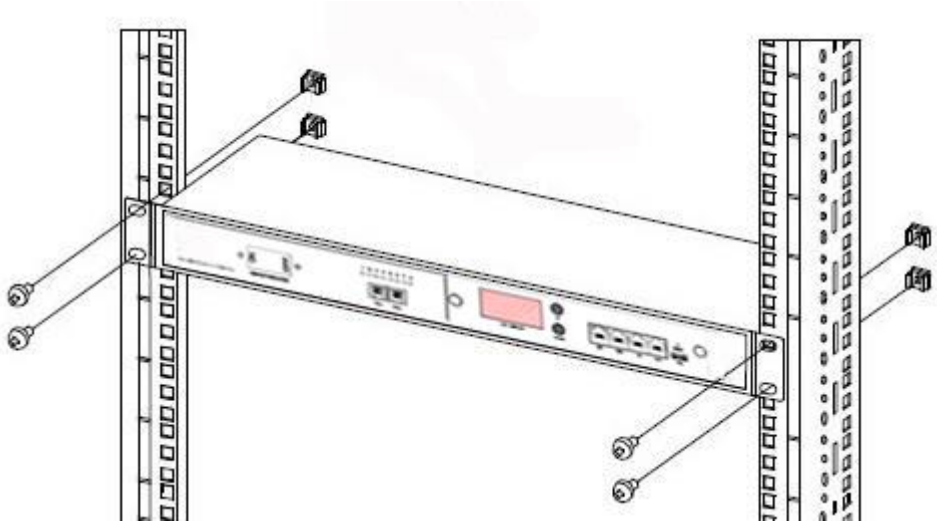


L shape brackets



1.4.2 Horizontal mounting (1U)

Horizontally mountable PDUs mount according to EIA/ECA-310-E standards and are compatible with any equivalent 19” rack or cabinet utilizing standard hardware.



2 Hardware Introduction

2.1 System initialization

The buzzer sounds when the PowerMax PDU is switched on and stops after 3 seconds. The LCD screen is illuminated after 6 seconds with the following information displayed:

15:53:58	Device time
2016-01-20	Date
192.168.1.163	IP address

Note: 192.168.1.163 is the default IP address.

2.2 View system information

2.2.1 Vertical PDU

Press ENTER to go to the main menu
(the first page of the menu）

Information	Device information
Total	Total power data
Tem/Hum	Temperature / Humidity
Sensors	Door / Water sensors

(the second page of the menu）

Output	Outlet socket
Group	Outlet group

Use the DOWN or UP button to scroll down or up to the next/previous page, return to the main menu and select the first item Information, then press ENTER to go to the Information menu. The displayed information is as follows:

CPU: ####	CPU Model
Version: #.#.#	Software version
M/S: ####	Master / Slave unit
Type: ####	Device series

Use the DOWN or UP buttons to scroll down or up to the next/previous page, return to the main menu and select the second item Total, then press ENTER to go to the Total menu. The displayed information is as follows:

A:230V 00.0A
P: 0.000kW
E: 000012.4kWh
PF:0.00

Note: the above information is from a single-phase device. If it is a 3 phase one, the power of each phase will be displayed as well. A:230V means the input voltage, 00.0A means the total input current, P:0.000KW means the total power, E:000012.4kWh means the total power consumption, PF:0.00 means the power factor.

Press ENTER to return to the main menu, then press DOWN key to select Temp/Hum to view the temperature/humidity as below:

T1: ---	H1: ---
T2: ---	H2: ---
T3: ---	H3: ---
T4: ---	H4: ---

Press ENTER to return to the main menu, then press DOWN key to select Sensors to view the door, water, smoke sensor status as below:

Door1: None
Door2: None
Smoke: None
Water: None

Press ENTER to return to the main menu, then press DOWN key to select Output to view each individual outlet current as below:

Output01: 00.0A
Output02: 00.0A
Output03: 00.0A
Output04: 00.0A

Press DOWN or UP button to view the current of other outputs.

Note: Press UP button to view the previous page of device information.

Press ENTER to return to the main menu, then press DOWN button to select Group to view each group outlet current as below:

Group1: 00.0A	Group5: 00.0A
Group2: 00.0A	Group6: 00.0A
Group3: 00.0A	
Group4: 00.0A	

2.2.2 Horizontal PDU

Use the DOWN or UP key to scroll down or up to the next/previous page, turn to the main menu and select the first item Information, then press DOWN or UP to go to the displayed information. Example shown below:

15:53:58	Device Time
2016-01-20	Device Date

Press DOWN key to go to the displayed information as shown below:

Type: Managed	Device series
192.168.1.163	IP address
Verison:1.3.0	Software version
M/S:Master	Master/Slave unit

Note: the displayed information may differ from device part number. Type: Managed means the device is a managed series PDU; 192.168.1.163 is the IP address, Version; 1.0.0 is the software version number; M/S: Master means the Master Unit and Slave 1 means the Slave unit 1(1-4 means the order of Slave unit).

Use the DOWN or UP key to scroll down or up to the next/previous page, turn to the main menu and select the second item Total, then press DOWM to go to the Total menu and the displayed information is shown as below:

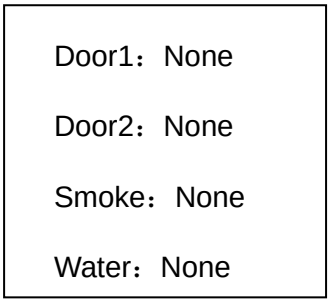
```
U:214V   I:00.0A
P:0.000kW
E:000013.1kWh
PF:0.00
```

Note: the above information is for a single-phase device. If it is a 3 phase one, the power date of each phase will be displayed as well. U:214V means the input voltage, I:00.0A means the total input current, P:0.000KW means the total power, E:000013.1kWh means the total power consumption, PF:0.00 means the power factor

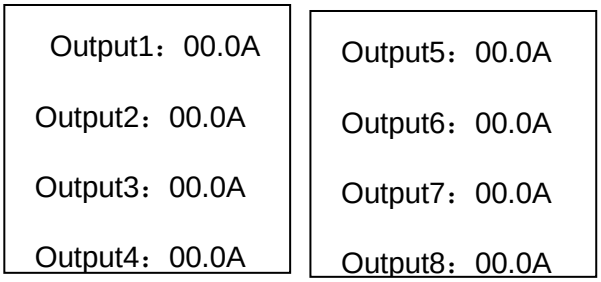
Press DOWN key to select Temp/Hum to view the temperature/humidity as below:

```
T1：  ---   H1：  ---
T2：  ---   H2：  ---
T3：  ---   H3：  ---
T4：  ---   H4 ：---
```

Press DOWN key to select Sensors to view the door, water logging, smoke sensor status as below:



Press DOWN key to select Output to view each individual outlet current as below:



Note: Press UP button to view the previous page of device information.

2.3 Overload Monitoring

2.3.1 Outlet level

When the current of an individual outlet exceeds the user-defined value, the PowerMax PDU buzzer sounds, LCD screen lights up and switches automatically to the alarming page. The current value flashes.

2.3.2 PDU level

When the total PDU current exceeds the user-defined value, the PowerMax PDU buzzer sounds, LCD screen will light up and switches automatically to the alarming page. The current value flashes.

2.4 Environmental monitoring

When the temperature or humidity threshold is exceeded, the PowerMax PDU buzzer sounds, LCD screen lights up and switches automatically to the alarming page. The temperature or humidity value flashes.

2.5 PDU reboot

Press and hold the UP key for 6 seconds to Reboot the PDU controller and firmware.

Note: Configuration of the power on/off delay will be required again after reset.

2.6 Display backlight always-on configuration

Press and hold the DOWN key for approximately 2 seconds, the buzzer will sound, and the display screen will remain on. Press and hold the DOWN key for another 2 seconds, the display screen will back to normal mode.

2.7 Invert the display

Press the UP button, quickly followed by the DOWN button (within 0.2 seconds) to invert the text displayed (only for Vertical-PDUs).

2.8 Restore to factory settings

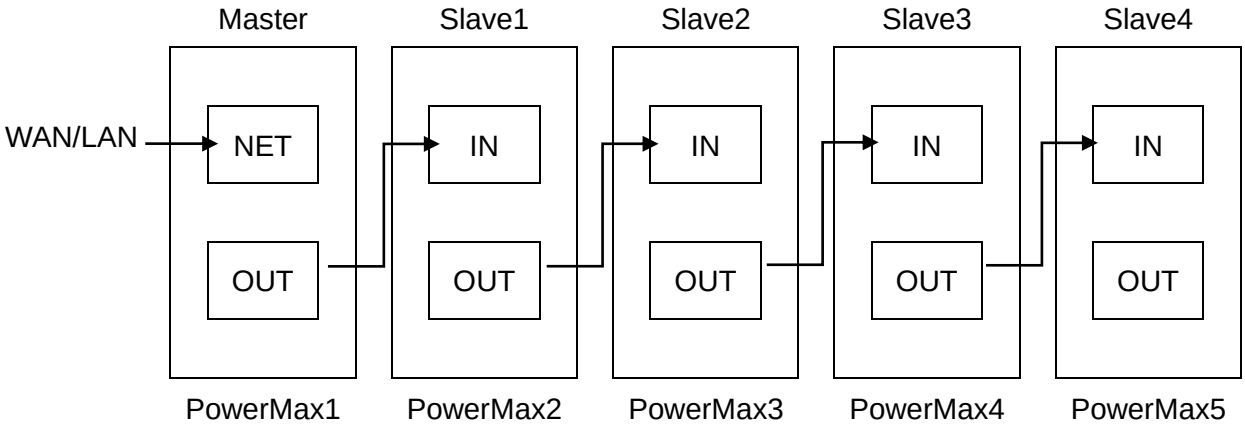
Press and hold the Reset button for 6 seconds and release it. The buzzer sounds to indicate that the PDU is restored to factory settings.

2.9 Master or Slave configuration

Configure the PowerMax PDU to be either Master or Slave in the Web interface. The current Master or Slave status will be displayed on the LCD home page. “M/S: Master” means Master, and “M/S: Slave1” means Slave 1, etc.

2.10 Daisy-Chain

Daisy-chain schematic:



Daisy-chain connection setting

- Log on to each PowerMax PDU, configure the work mode on Device Manage page.
- Daisy-chain all devices as the above schematic shows, from OUT to IN. Maximum 5 units including Master.
- Access the Master and check the status of all Slaves. If all are readable, daisy-chain is successful.
- MODBUS Connections. Use the SER port on the Master PDU for MODBUS connection. Slave PDUs may be connected using the OUT port on the Master to the IN port on the Slave. This daisy chain configuration can be repeated for up to 4 Slaves connected to a Master PDU.

Note that the daisy chain connection supports both TCP/IP and MODBUS communication through the Master unit to all connected Slave units.

3 PowerMax Software Introduction

3.1 Software overview

Siemon PowerMax PDUs are equipped with an embedded software system which provides network services such as WEB server, SNMP, Telnet, SMTP and NTP to integrate with third party software.

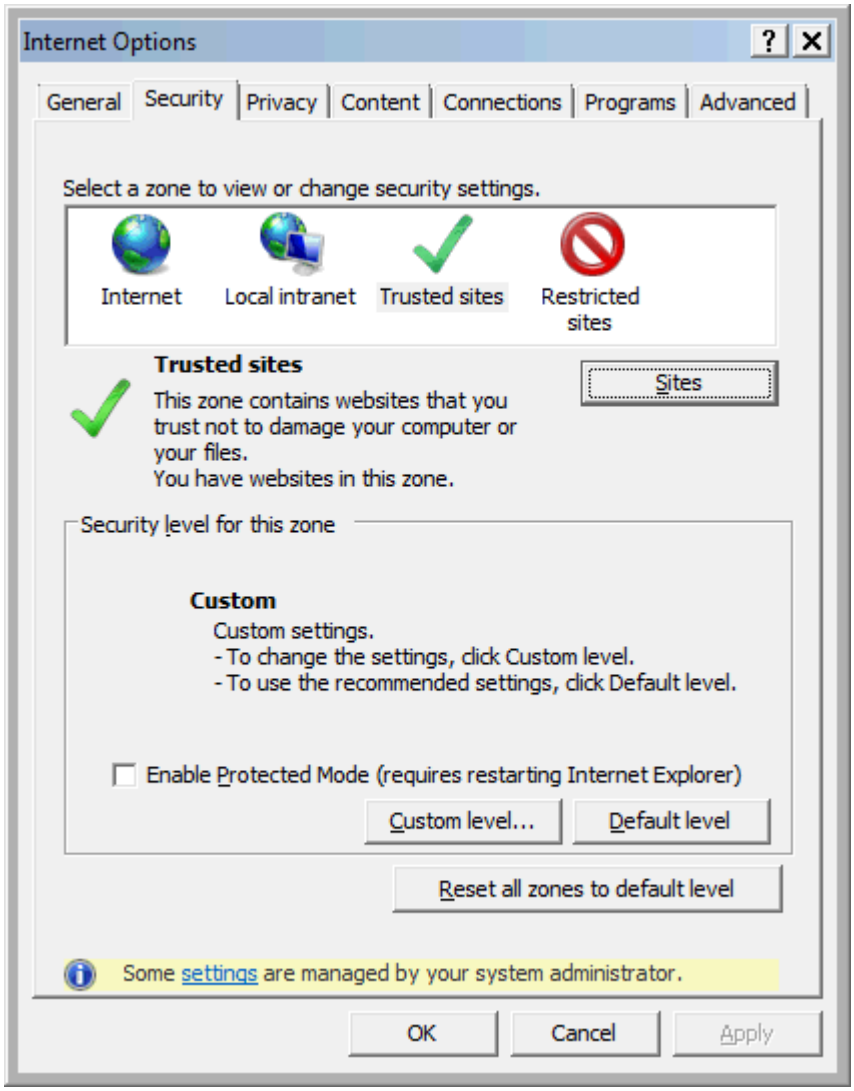
3.2 Access method

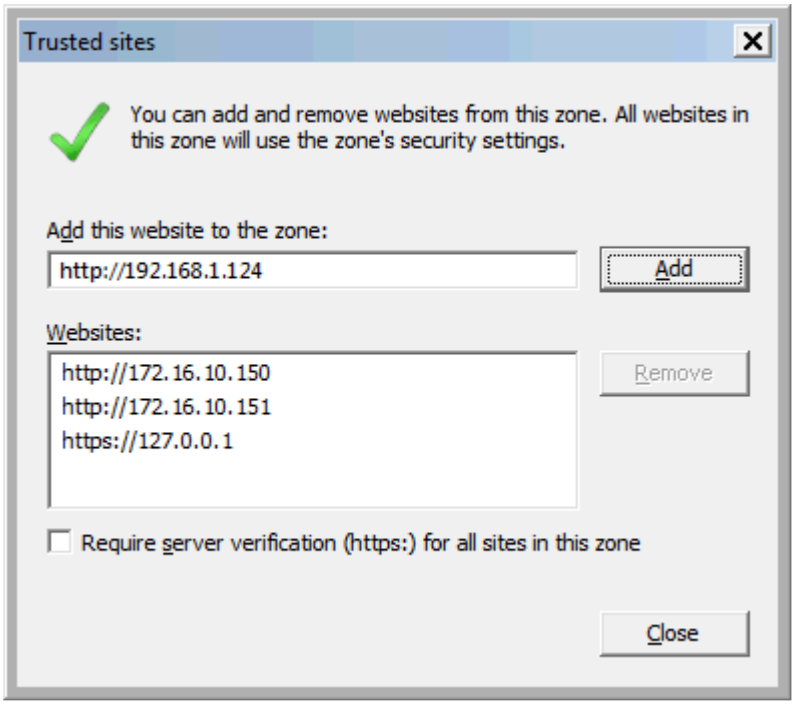
PowerMax PDUs can be accessed via browsers including Internet Explorer, Google Chrome and Firefox. Additionally, the PDUs may be accessed via SNMP (v1 / v2c / v3), Telnet and Serial console like MODBUS.

The PDU requires ActiveX to be able to download the log files. This needs to be addressed in your browser's settings:

Internet Explorer

Tools > Internet Options > Security > Trusted sites > Sites > Add





This will allow ActiveX to run

Google Chrome

Click on Settings > Show Advanced Settings > Change proxy settings > Security > Trusted Sites > Sites.

Enter the URL of your Trusted Site, then click Add.

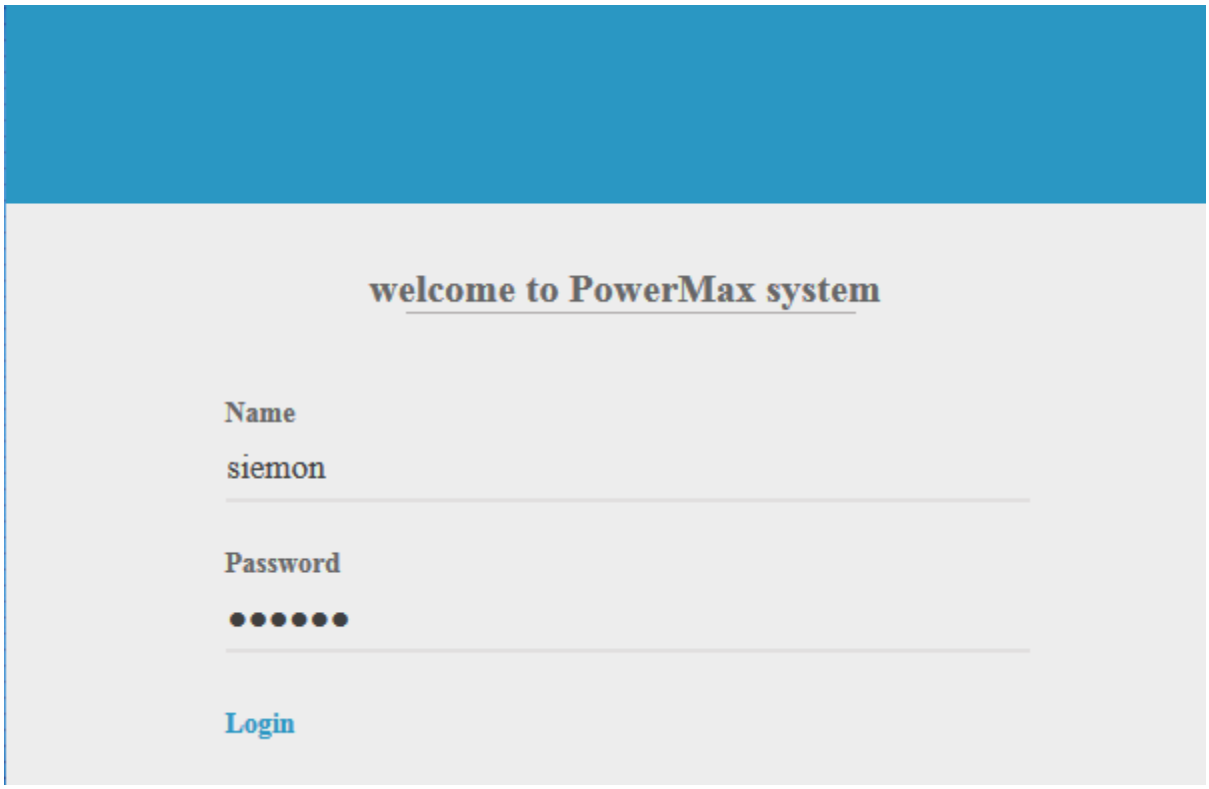
Firefox

Firefox doesn't allow ActiveX, if you are using Firefox, you may want to use an Internet Explorer rendering plugin.

3.3 Web access

Open your browser and enter the default IP address, the login window will pop up.

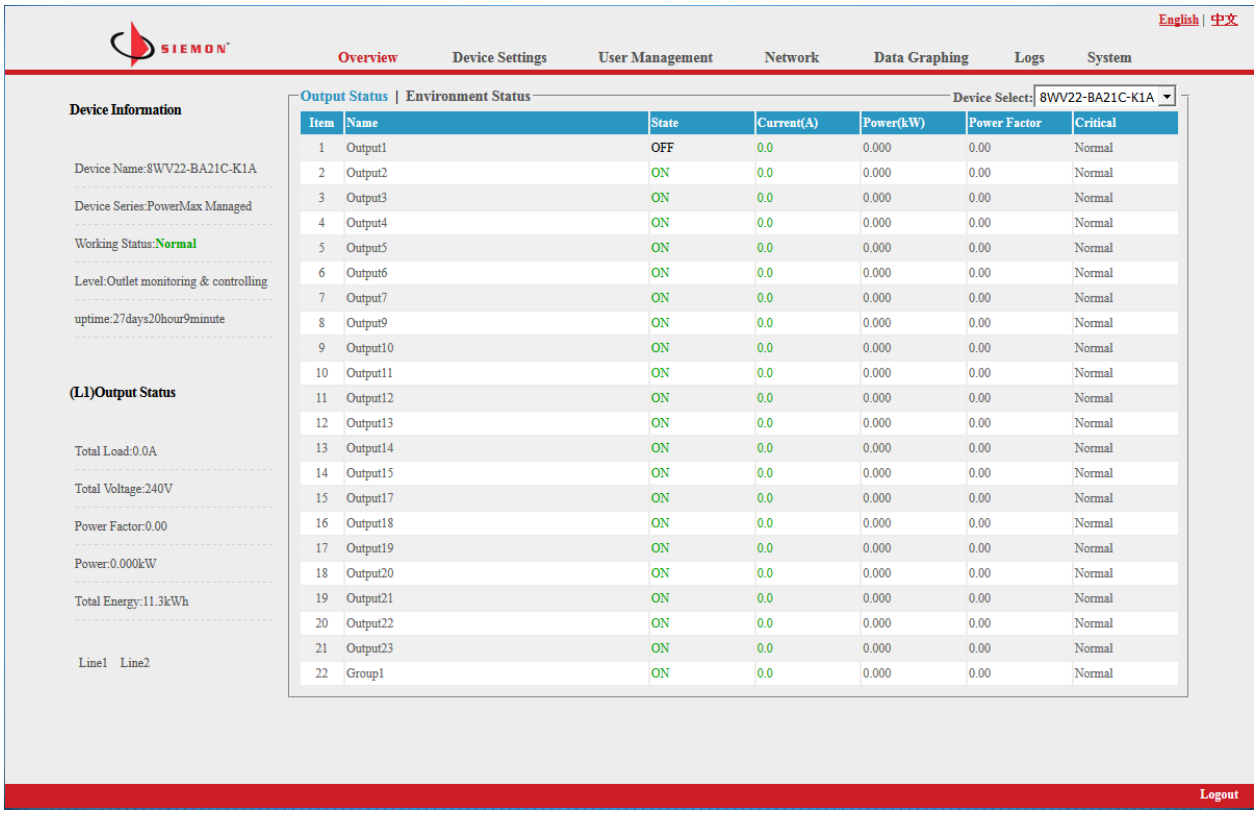
Figure 3-1



Fill in the correct user-name and password (Factory default login name is siemon, password is siemon) to log in to the main interface.

3.3.1 Overview

Figure 3-2



There are three sections on the main interface: Navigation menu, Device information and Output status.

Navigation menu: shows company logo, function menus and language selector.

Device information: displays device name, device series, device status and function level.

Output status: displays output name, on/off state, individual current, individual power, power factor and environmental status. To access Slave devices, use the drop-down menu: Device Select

Overview

Device information includes device name, device series, device status and function level. Output status includes total load, voltage, power factor, total power (kW) and total energy consumption (kWh).

3.3.2 Device Settings

Click Device Settings from menu to perform basic configuration of the device. See Figure 3.3

3.3.2.1 Basic settings

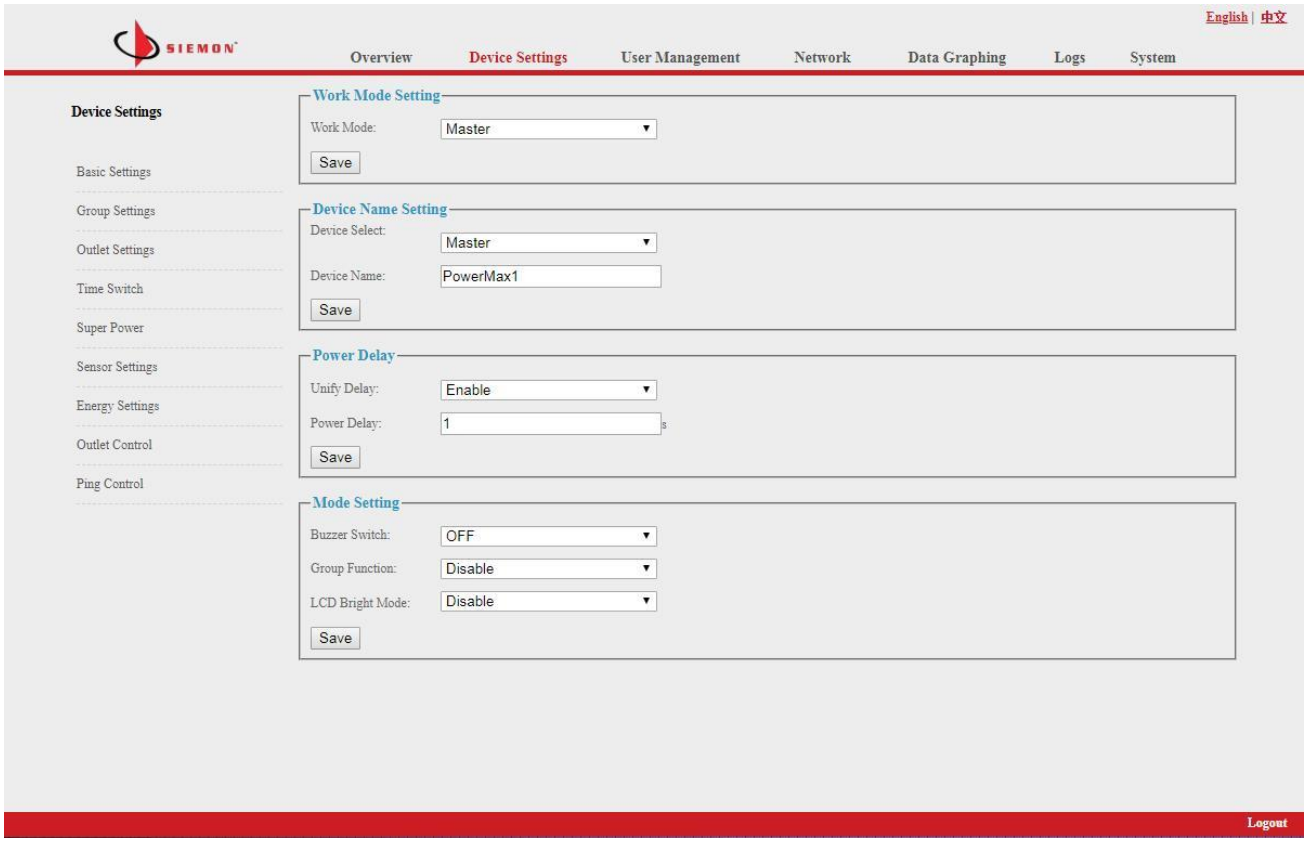
a. Work mode setting: set the device as Master or Slave (1-4) from the drop-down menu and save.

b. Device name setting: Apply user-friendly name to each device and save.

c. Unitive Power delay: enable or disable the unitive power delay. When enabled, outlets will power on or off sequentially according to the unitive interval set (range from 0 to 15). When the unitive power on/off delay is disabled, the output will power on/off sequentially according to the individual interval, please refer to the outlet settings function on page 21 (Figure 3-5). Note - Unitive power delay function does not apply to circuit breaker operation.

d. Mode setting: configure the buzzer status, enable or disable outlet groups, enable or disable ‘always on’ of LCD screen.

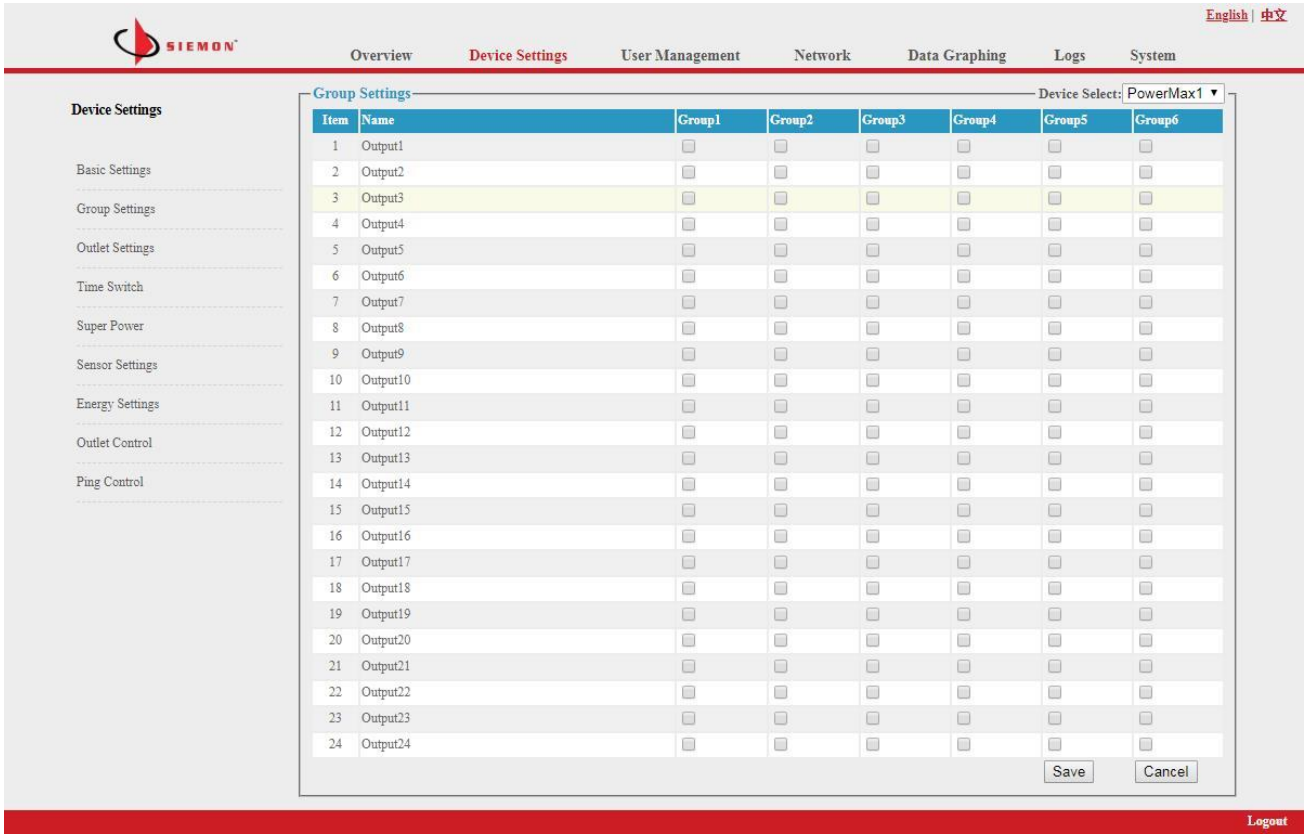
Figure 3-3



3.3.2.2 Group settings

When enabled, users can assign any outlet to 6 different groups. Save the selection after configuration

Figure 3-4



3.3.2.3 Outlet settings

Click Outlet setting from Device management.

Outlet name: Rename each individual outlet. Click save to complete after each name change.

a. Individual outlet threshold setting: enter the value at which to trigger an alarm
b. Individual outlet near-threshold setting: enter the value at which to trigger a warning
c. Individual power delay setting: when unitive power delay is disabled, outputs will power on/off sequentially according to the individual interval set (range from 0 to 15 seconds)

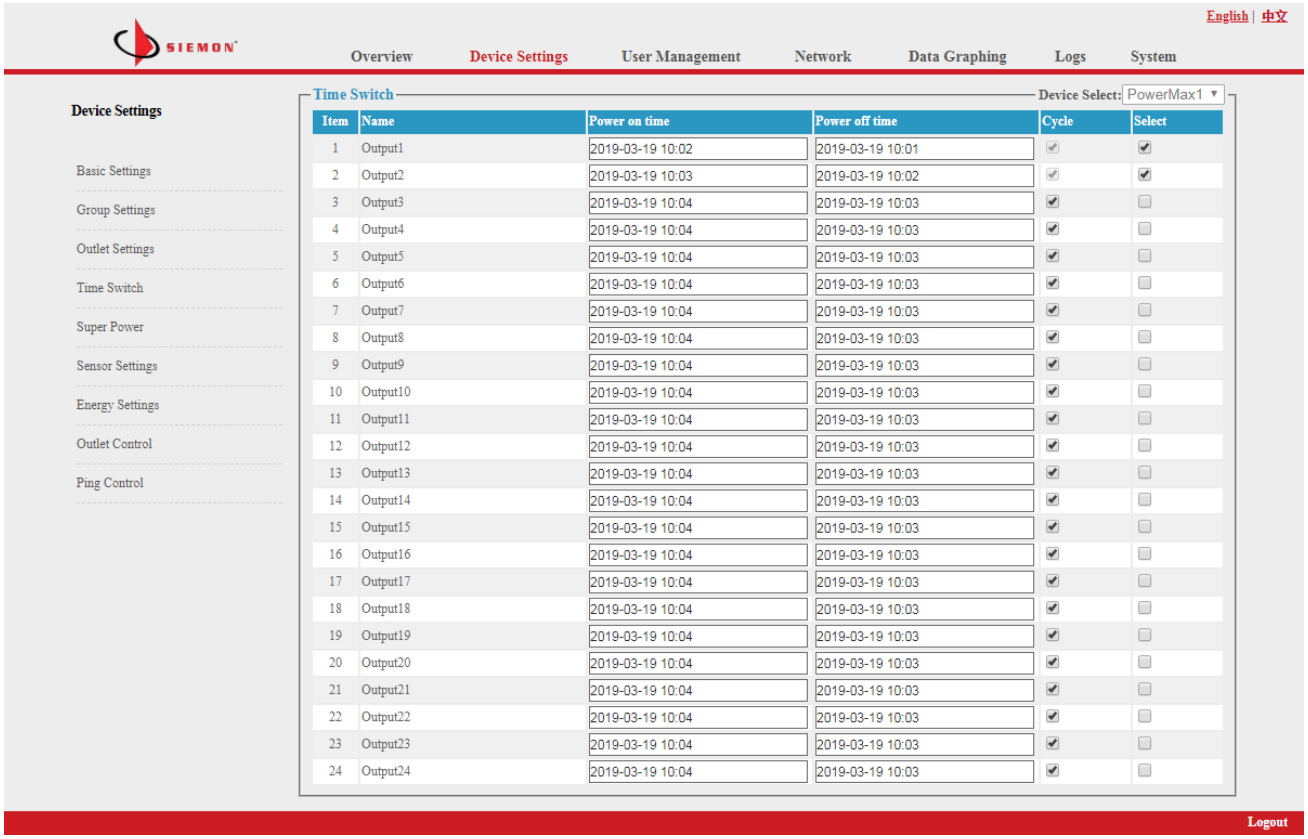
Figure 3-5

3.3.2.4 Schedule Outlet

Schedule a specific time that each individual outlet will power on/off automatically. The time format is year-month-day hour:minutes, for example: 2015-05-27 13:52. To activate, select the check box. Note: Please calibrate the device time before scheduling an outlet action.

If the Cycle check box is enabled, then the actions defined by the set times will be repeated every 24 hours from the day specified in the time fields.

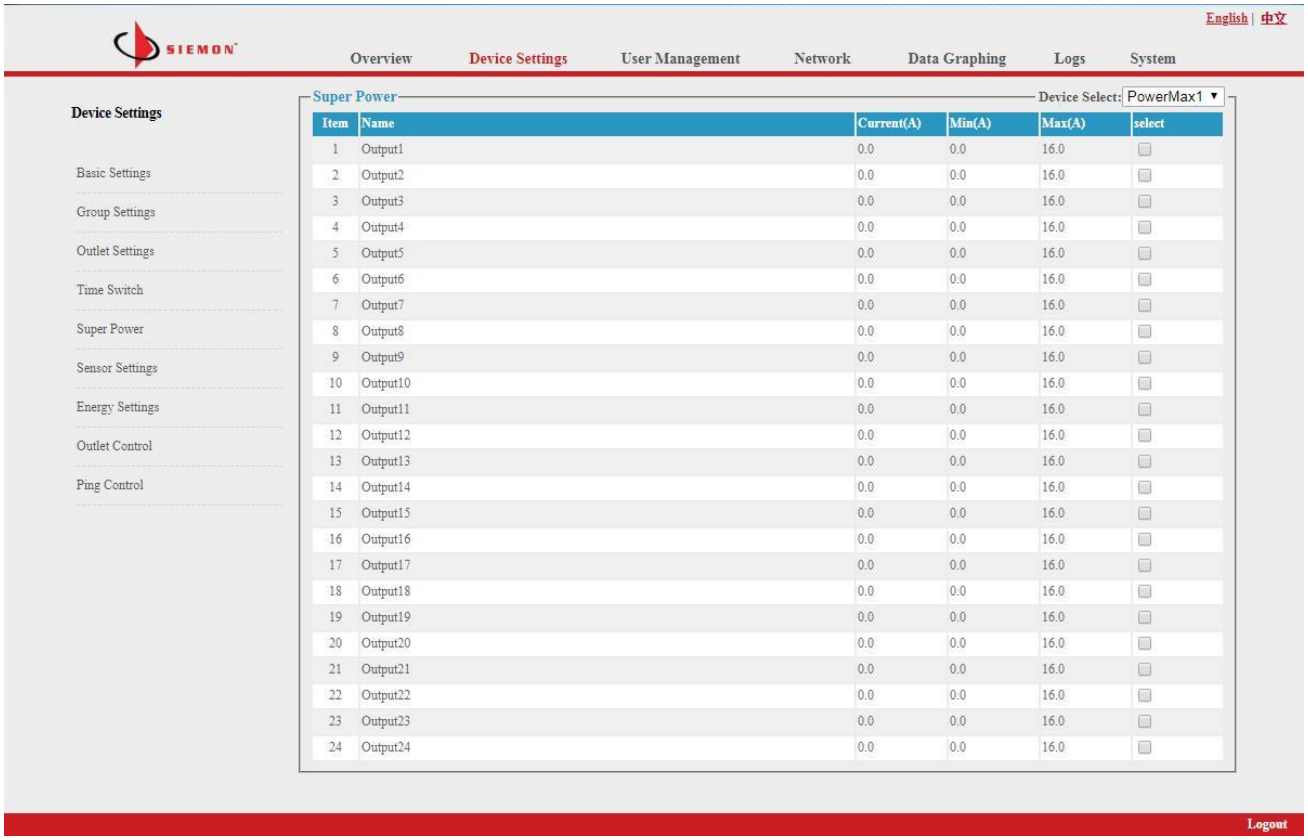
Figure 3-6



3.3.2.5 Overload power cut-off

Users can set automatic power cut-off on each outlet if the current exceeds the Max value set.

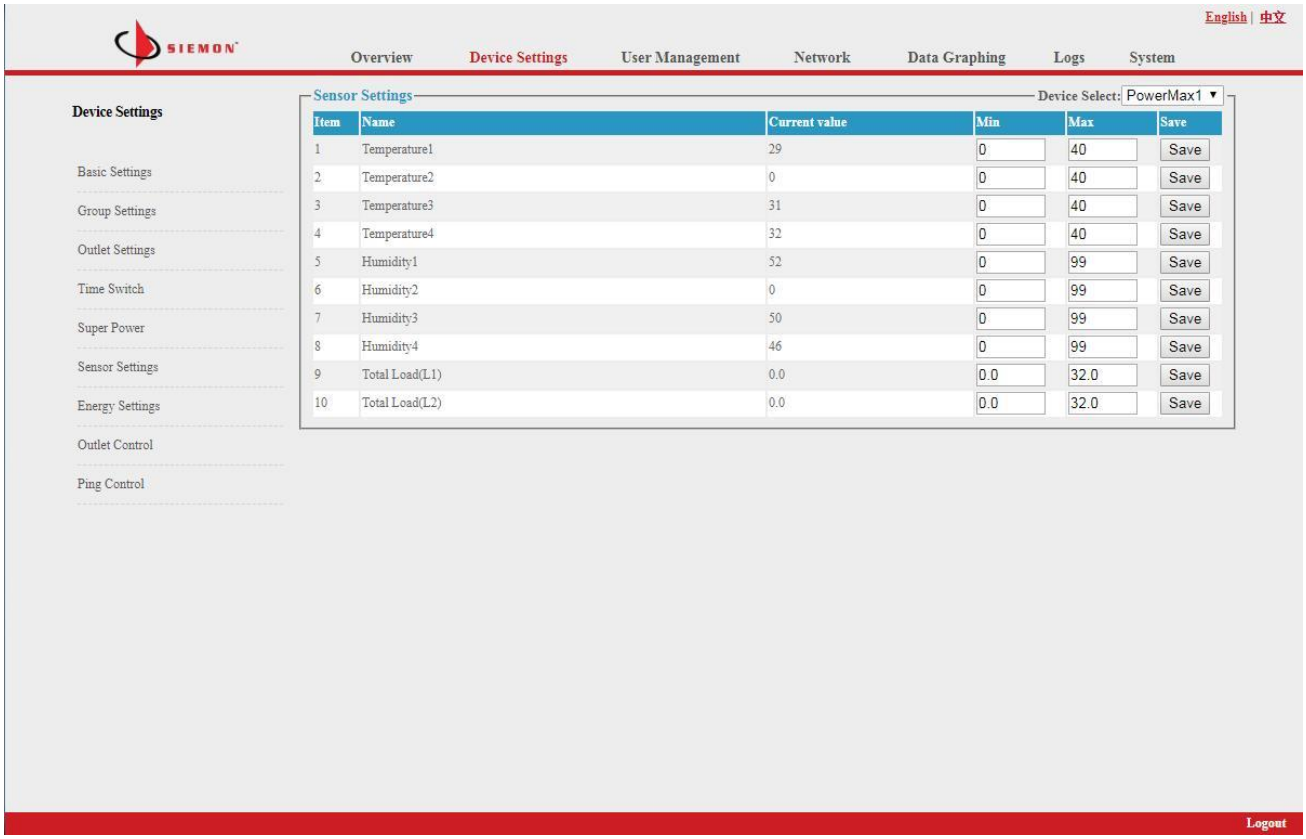
Figure 3-7



3.3.2.6 Sensor settings

Set temperature and humidity thresholds. Note – Total Load for 30/32A units split into two circuits (Line 1, Line 2) with each circuit limited to 15/16A

Figure 3-8

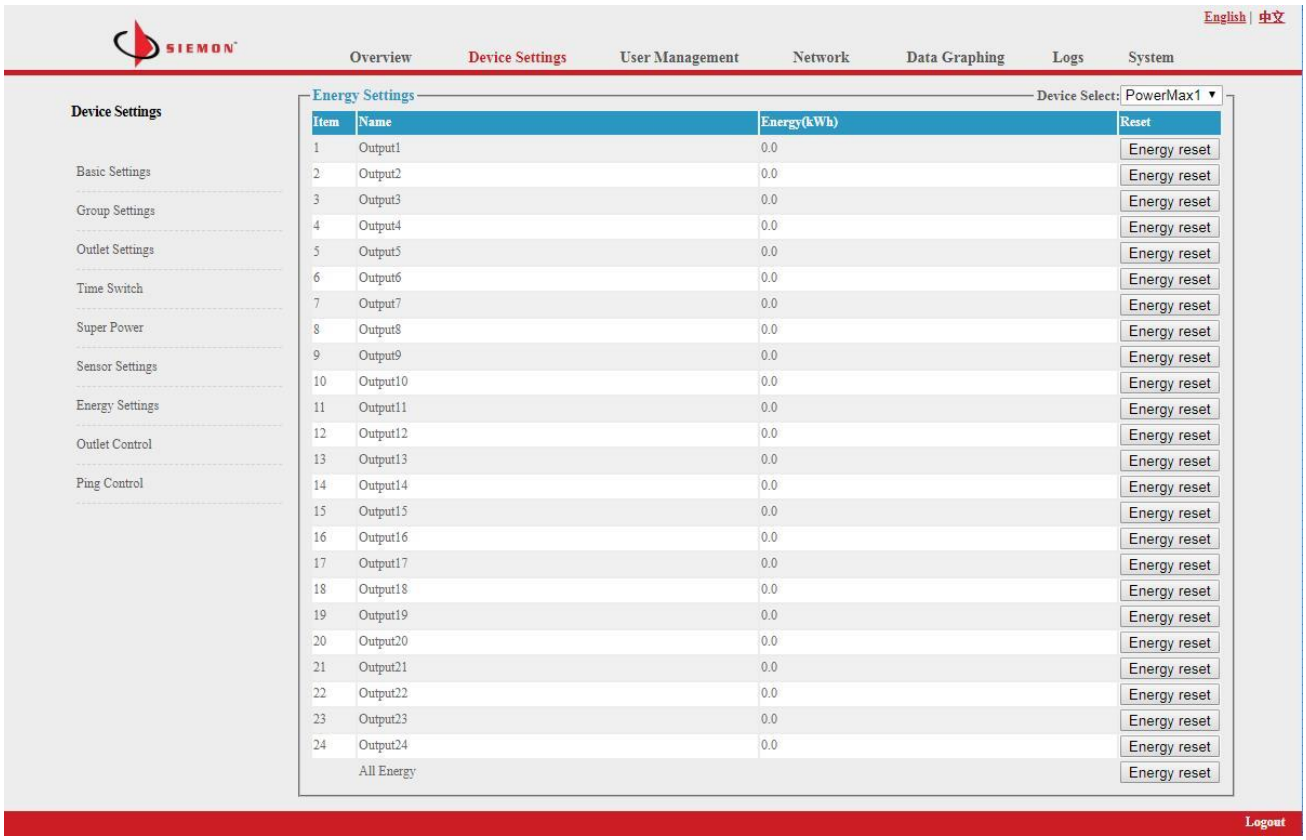


3.3.2.7 Energy setting

Click Energy setting form the Device Management menu.

Users can view the power consumption of each individual outlet (Smart and Managed) and click the Energy Reset button to return the kWh to zero.

Figure 3-9

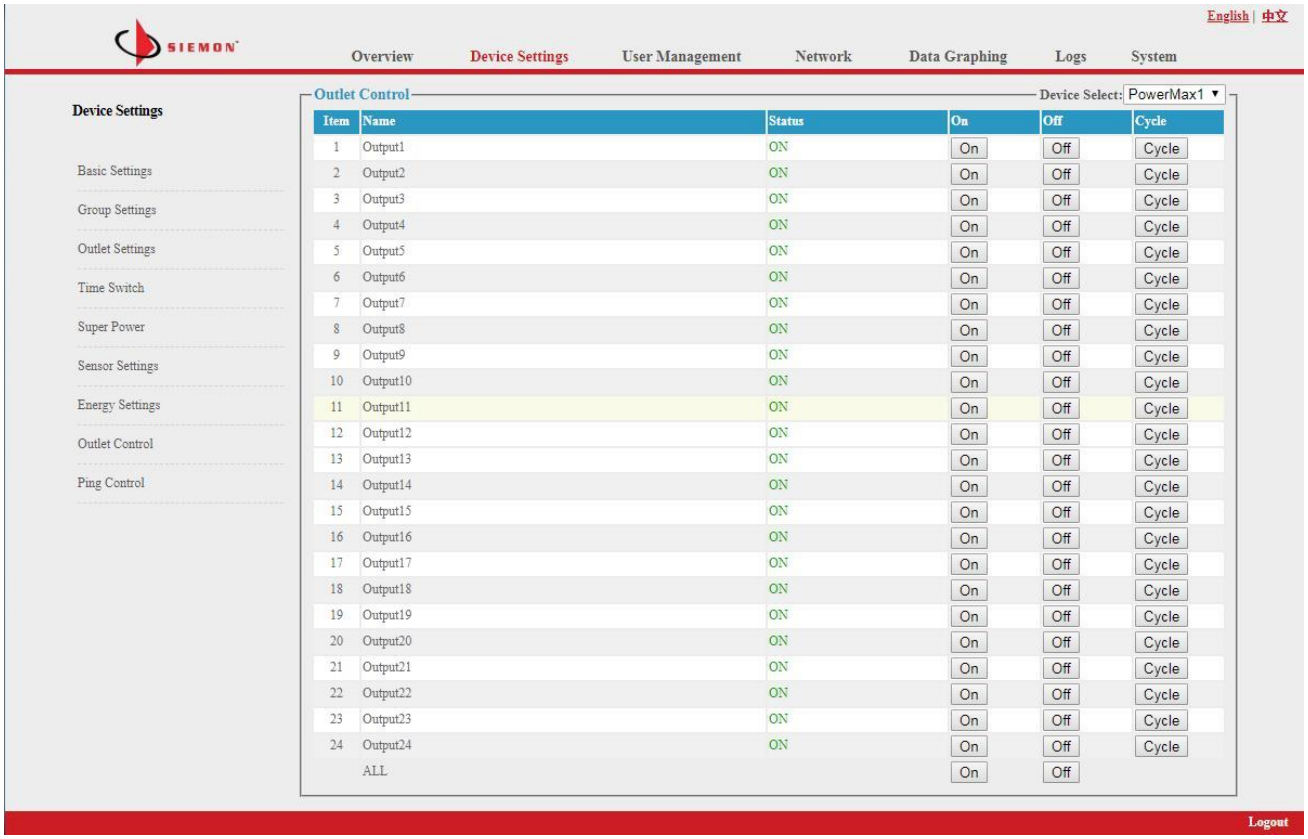


3.3.2.8 Outlet control

Click Outlet control form the Device Management menu.

Users can switch on/off/reboot each individual outlet by clicking the corresponding on/off/reboot buttons. Users can also switch on or off all socket together by clicking the ALL on/off button

Figure 3-10



3.3.2.9 Ping Control

Ping Control can be used to check the status of network devices connected to PDU power ports and automatically perform an action if a device cannot be pinged.

Ping Status may be:

Not Connected – Device is not connected and PDU will take selected action on the PDU port

Connected – Device is connected and PDU will take no action

The available Actions are:

None – Takes no action

OFF – Will turn the PDU port off

ON – Will turn the PDU port on

Once – Will power cycle the PDU port one time

Cycle – Will continue to cycle the PDU port until ping is successful

Examples:

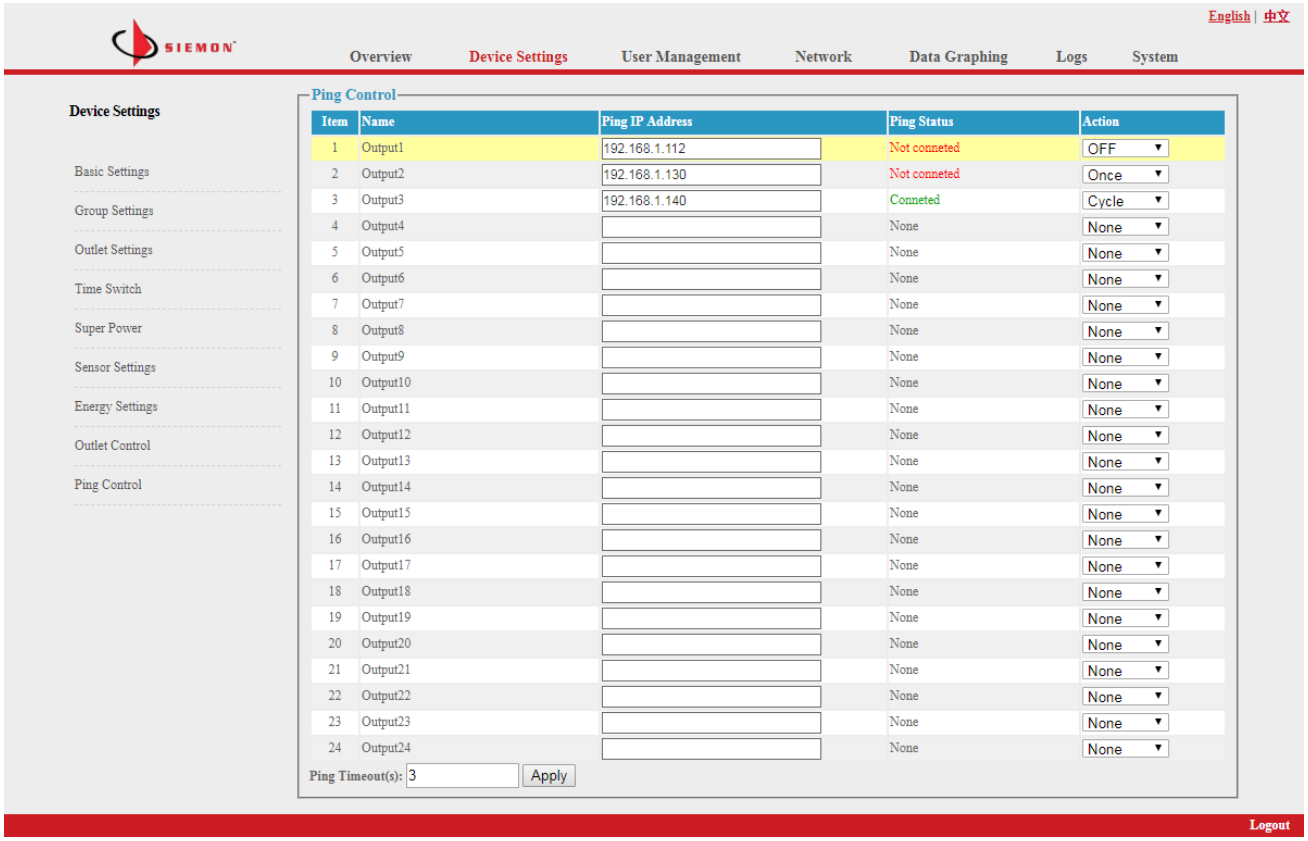
1. Ping Status is Connected, and Action is set to Cycle. Since ping is successful, the PDU will take no action

2. Ping Status is Not Connected, and Action is set to Cycle. Since device cannot be pinged, the PDU will continue to power cycle the PDU port until the device can be successfully pinged

Configure IP Addresses and Actions

a. Fill in the corresponding network device IP address in the Ping IP Address box
b. Select an Action from the drop-down box
c. Set the interval time (used for the Cycle action). Note that the interval time should not be set to less than 3s
d. Click on the Apply button. All settings are saved, and selected Ping Control options will take effect

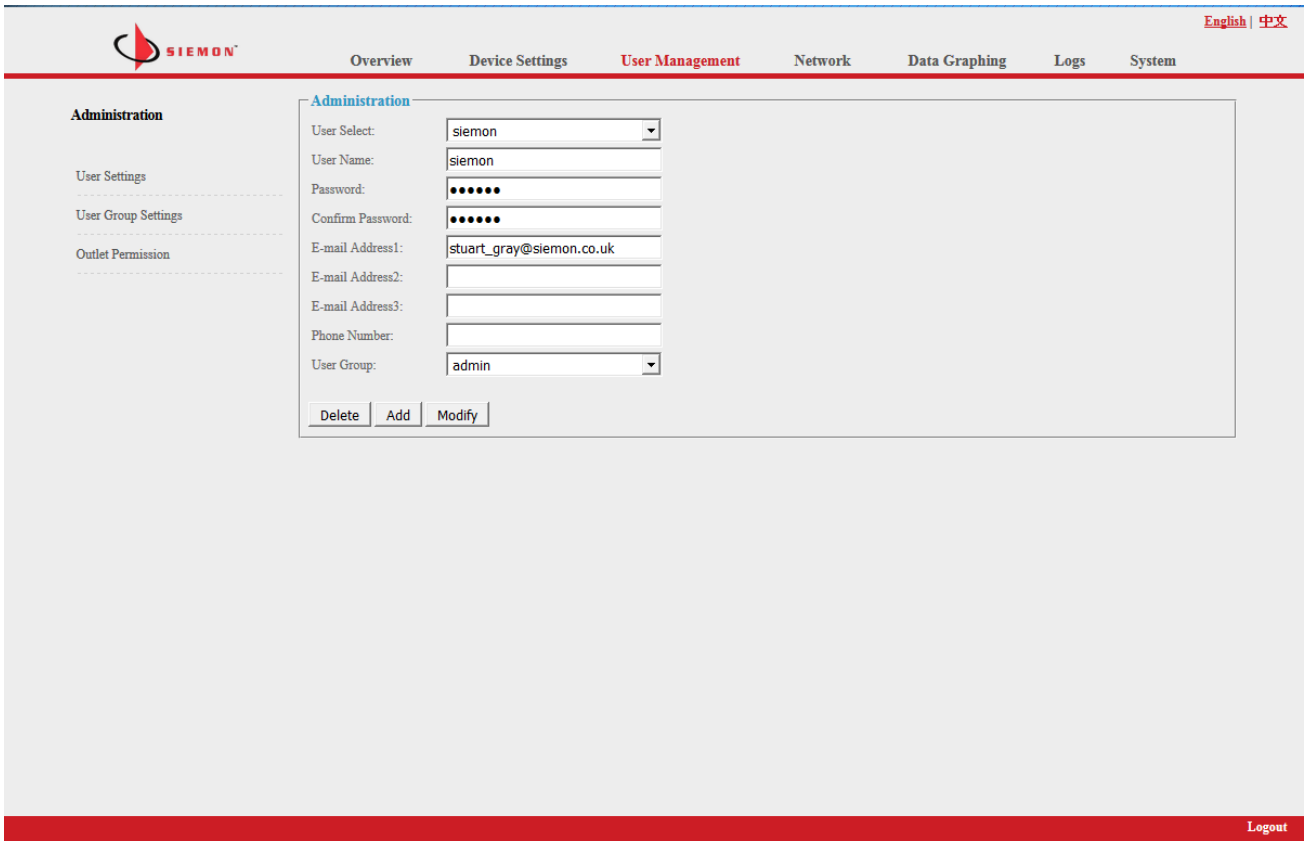
Figure 3-11


English | 中文
SIEMON
Overview
Device Settings
User Management
Network
Data Graphing
Logs
System
Device Settings
Basic Settings
Group Settings
Outlet Settings
Time Switch
Super Power
Sensor Settings
Energy Settings
Outlet Control
Ping Control
Ping Control
Item
Name
Ping IP Address
Ping Status
Action
1 Output1 192.168.1.112 Not conneted OFF
2 Output2 192.168.1.130 Not conneted Once
3 Output3 192.168.1.140 Conneted Cycle
4 Output4 None None
5 Output5 None None
6 Output6 None None
7 Output7 None None
8 Output8 None None
9 Output9 None None
10 Output10 None None
11 Output11 None None
12 Output12 None None
13 Output13 None None
14 Output14 None None
15 Output15 None None
16 Output16 None None
17 Output17 None None
18 Output18 None None
19 Output19 None None
20 Output20 None None
21 Output21 None None
22 Output22 None None
23 Output23 None None
24 Output24 None None
Ping Timeout(s): 3
Apply
Logout

3.3.3 User Management

Click User Management form the navigation bar to manage users, user group and user access rights.

Figure 3-12



3.3.3.1.1 User Settings

Click User settings from the User Management menu.

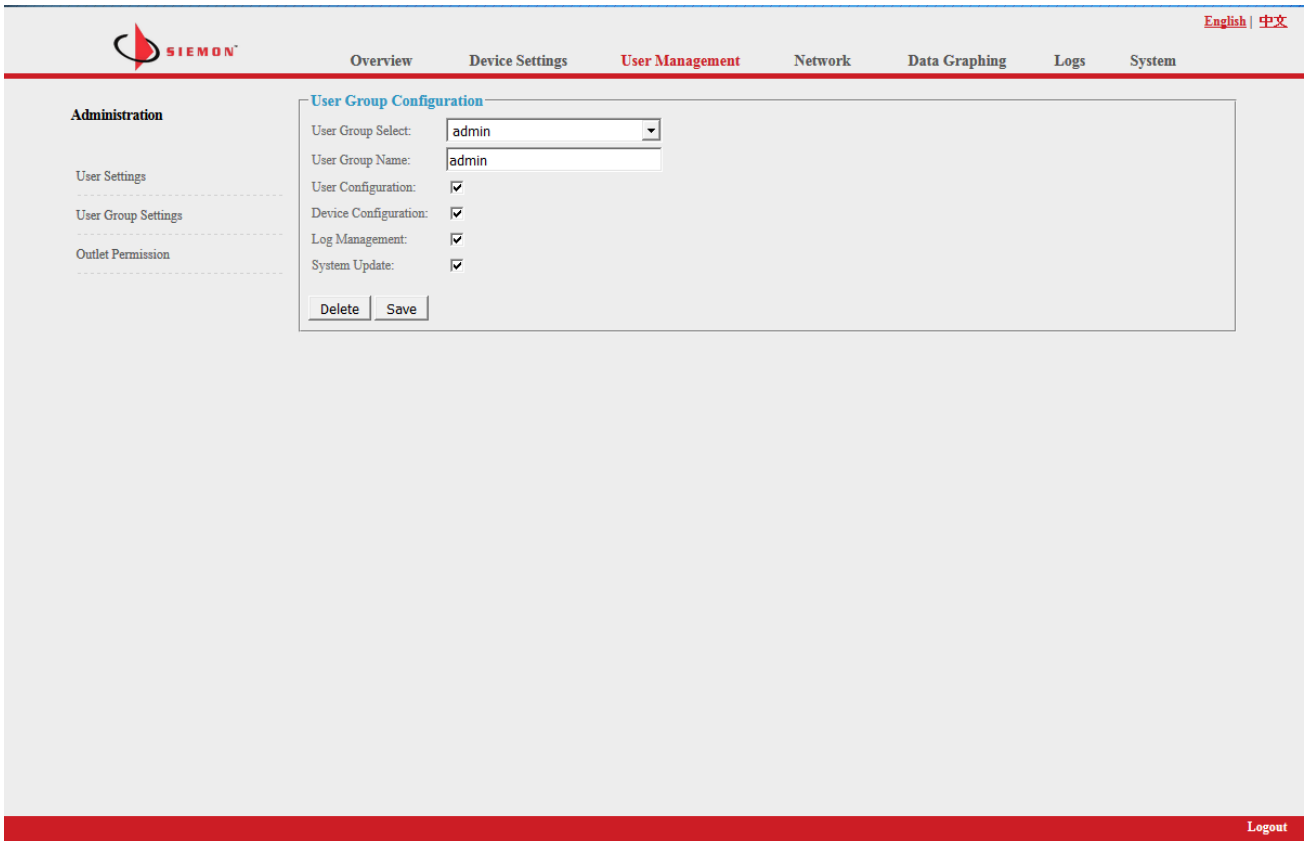
a. Create new user account: Click user settings and fill in the new user-name and password. Click Add to save.

b. Edit account: Click User settings, enter modified user-name and password in the right-hand side. Click Modify to save.

c. Delete account: Click User settings and select the account from the drop-down list, then click Delete to save.

d. Create new user group: Click User Group Settings, fill in the new user group name, configure the corresponding rights, then click Save to finish, see figure 3-13

Figure 3-13



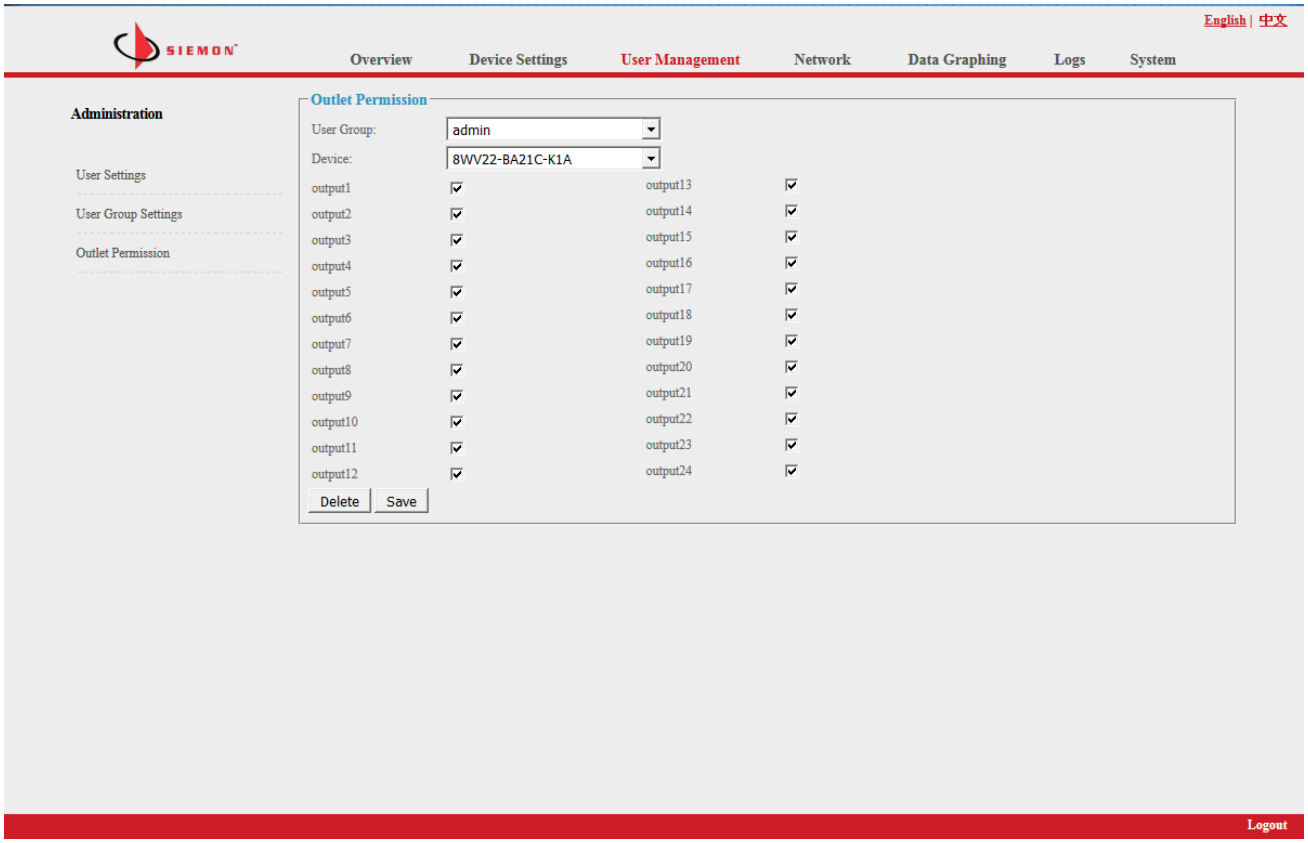
e. Edit User Group: Click User Group settings, then fill in the changed user group name and click Save to finish

f. Delete user group: Click User Group settings, select the user group from the drop-down list and click Delete button to save.

g. Edit User Group rights: Select User Group from the drop-down list and select user rights accordingly. Click Save.

Administrators can assign different outlet access rights to different user groups, click Save to finish.

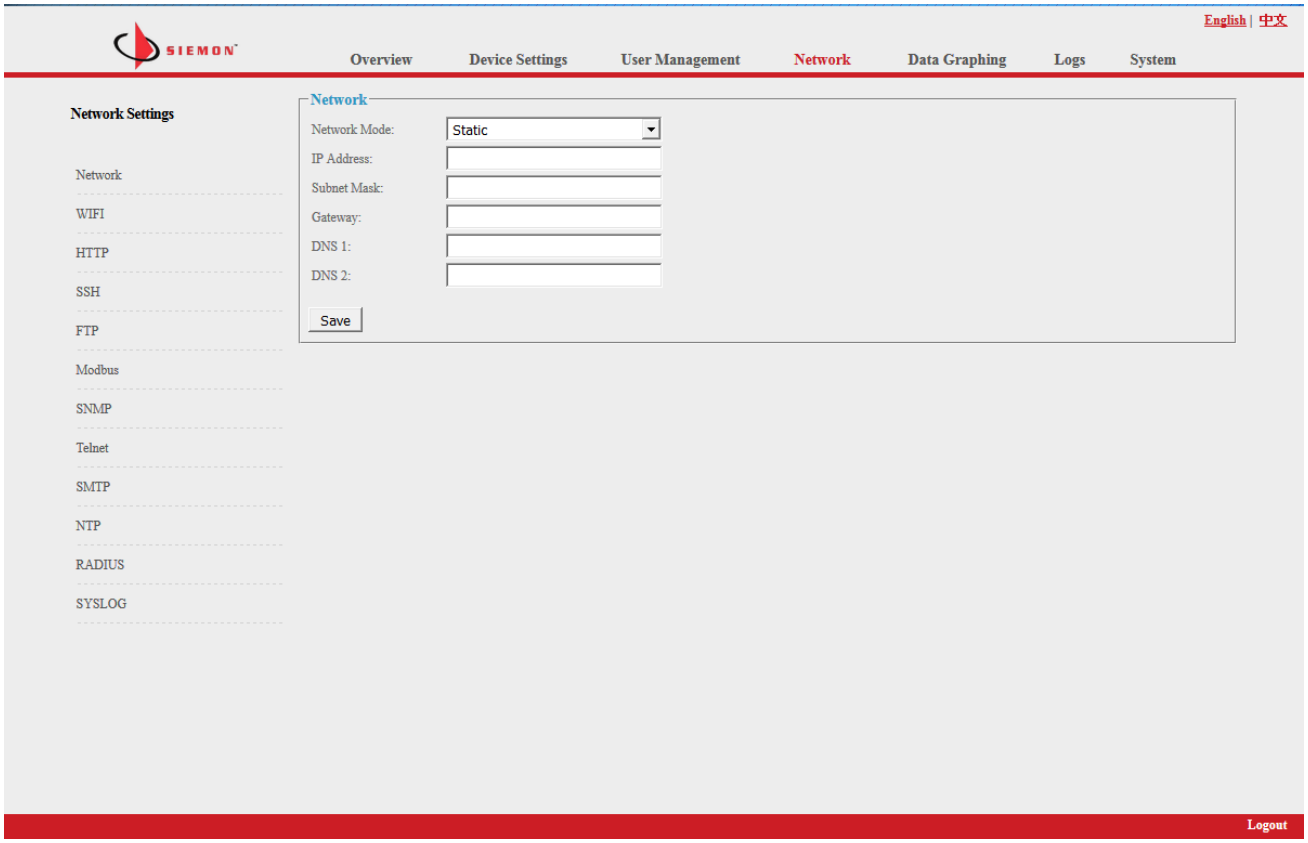
Figure 3-13



3.3.4 Network Settings

Click Network Settings from the navigation bar.

Figure 3-14



Note: network settings include Network, WIFI, HTTP, SSH, FTP, Modbus, SNMP, Telnet, SMTP, NTP, Radius and Syslog.

3.3.4.1 Network

Users can configure the network settings for Static or DHCP.

1. Static settings

IP:192.168.1.163（factory default IP）

Subnet mask:255.255.255.0

Gateway:192.168.1.1

DNS: default as 0.0.0.0. Fill in correct DNS to enable email notifications.

Note: please restart the software after modifications to network settings.

2. DHCP

Select DHCP and click “Save”, then restart the PDU. The PDU will acquire an IP address automatically. The device IP address can be viewed on the LCD display.

3.3.4.2 WIFI

Insert a wireless network card into the USB port.

(ii) WIFI Connection Setting

Click “Search Network” to find all wireless networks nearby.

Enable WIFI: select enable, fill in SSID and password and save.

(iii) WIFI Network Setting

Network mode can be Static or DHCP.

1. Static settings

IP Address: Set the WIFI IP in the LAN e.g. 192.168.1.191

Subnet Mask: e.g. 255.255.255.0

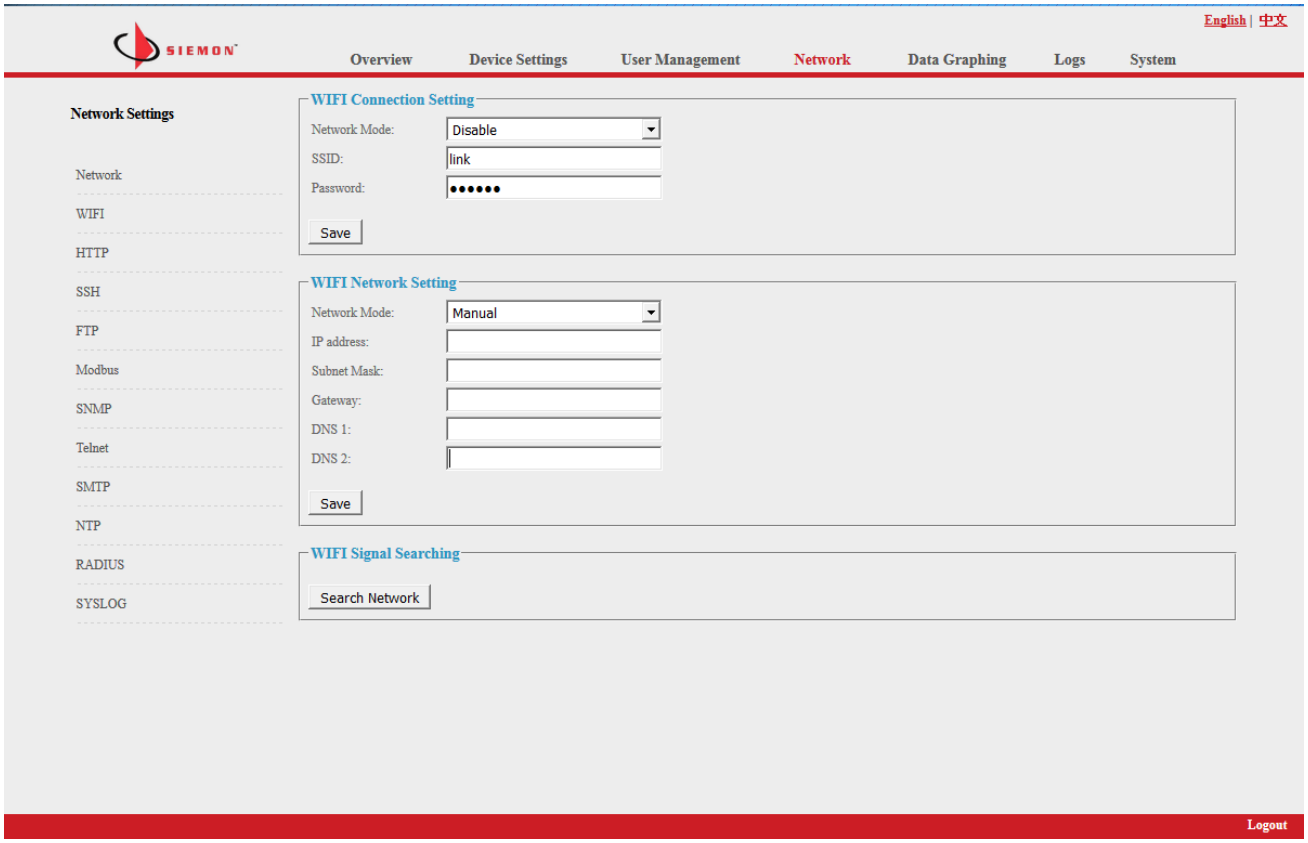
Gateway: e.g. 192.168.1.1

DNS: default DNS is 0.0.0.0

2. DHCP settings

Fill out the WIFI connection settings and save, select automatic acquisition from the drop-down list of WIFI network settings and save. Then restart the device and system will acquire the IP address within the LAN. The address can be viewed on the LCD display.

Figure 3-156

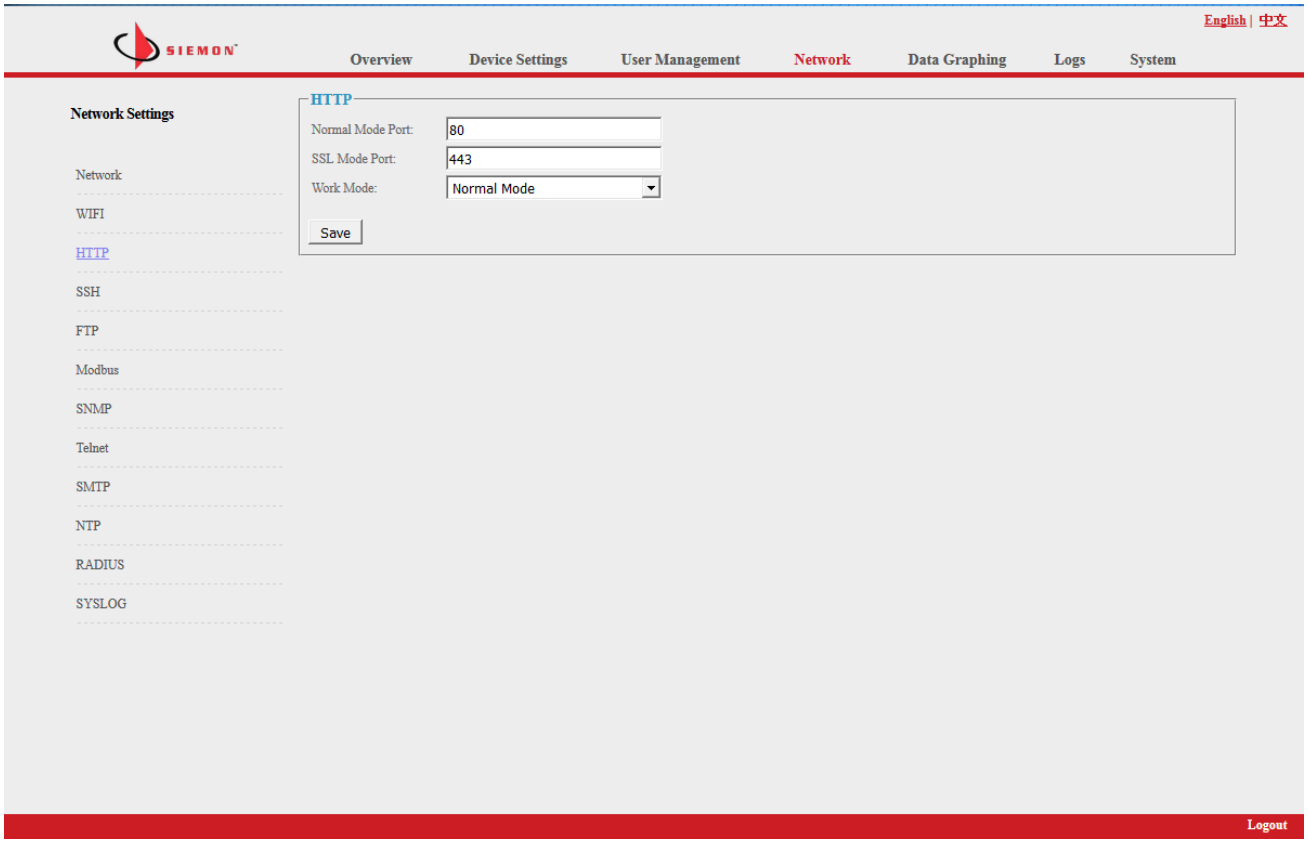


3.3.4.3 HTTP

Fill in the correct HTTP port and save. The default HTTP port setting is 80. For HTTPS(SSL), the default port is 443.

Note: please restart the PDU after modification of HTTP settings.

Figure 3-17

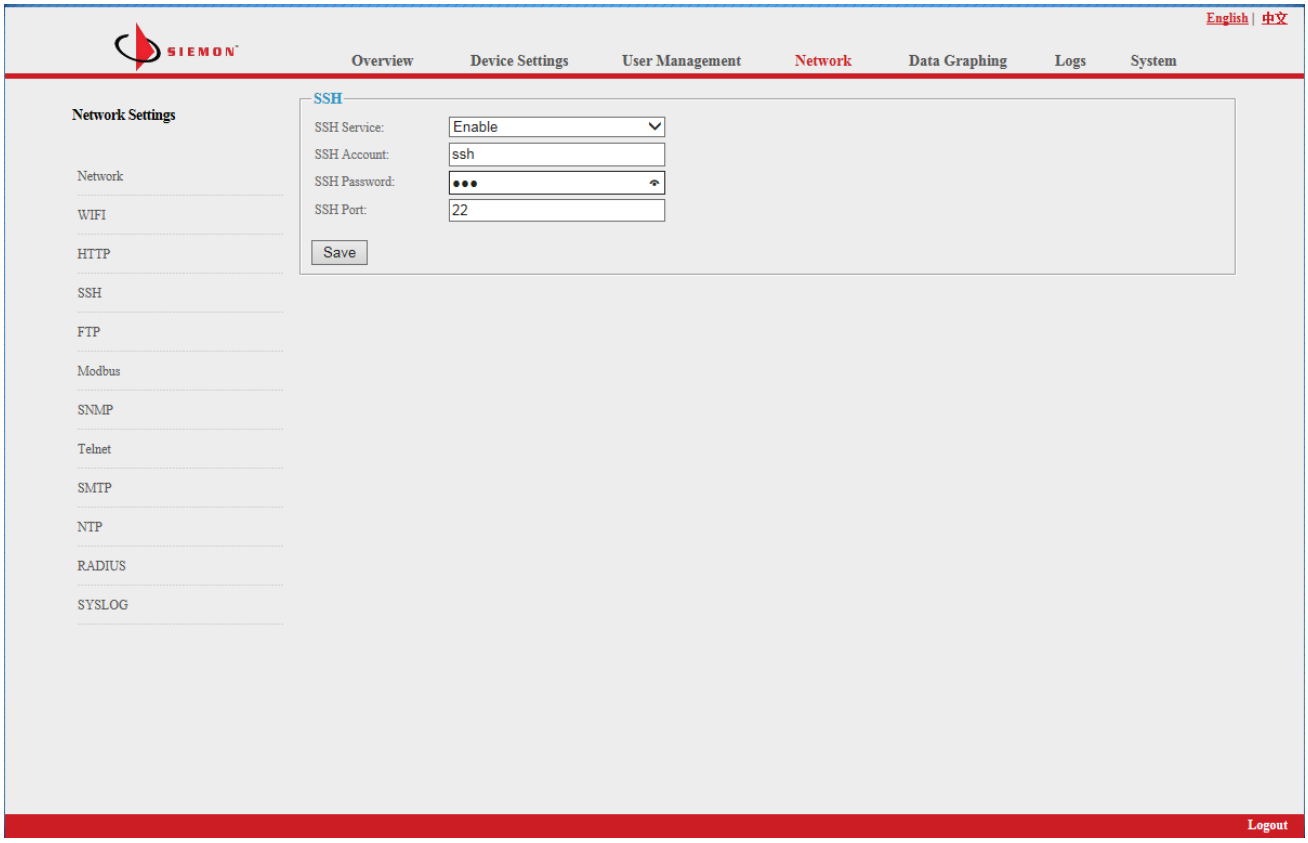


3.3.4.4 SSH

Users can enable or disable SSH. This requires a restart of the device after saving the configuration. The default SSH port is 22.

Note: For SSH command line access, please refer to Telnet access instructions.

Figure 3-18

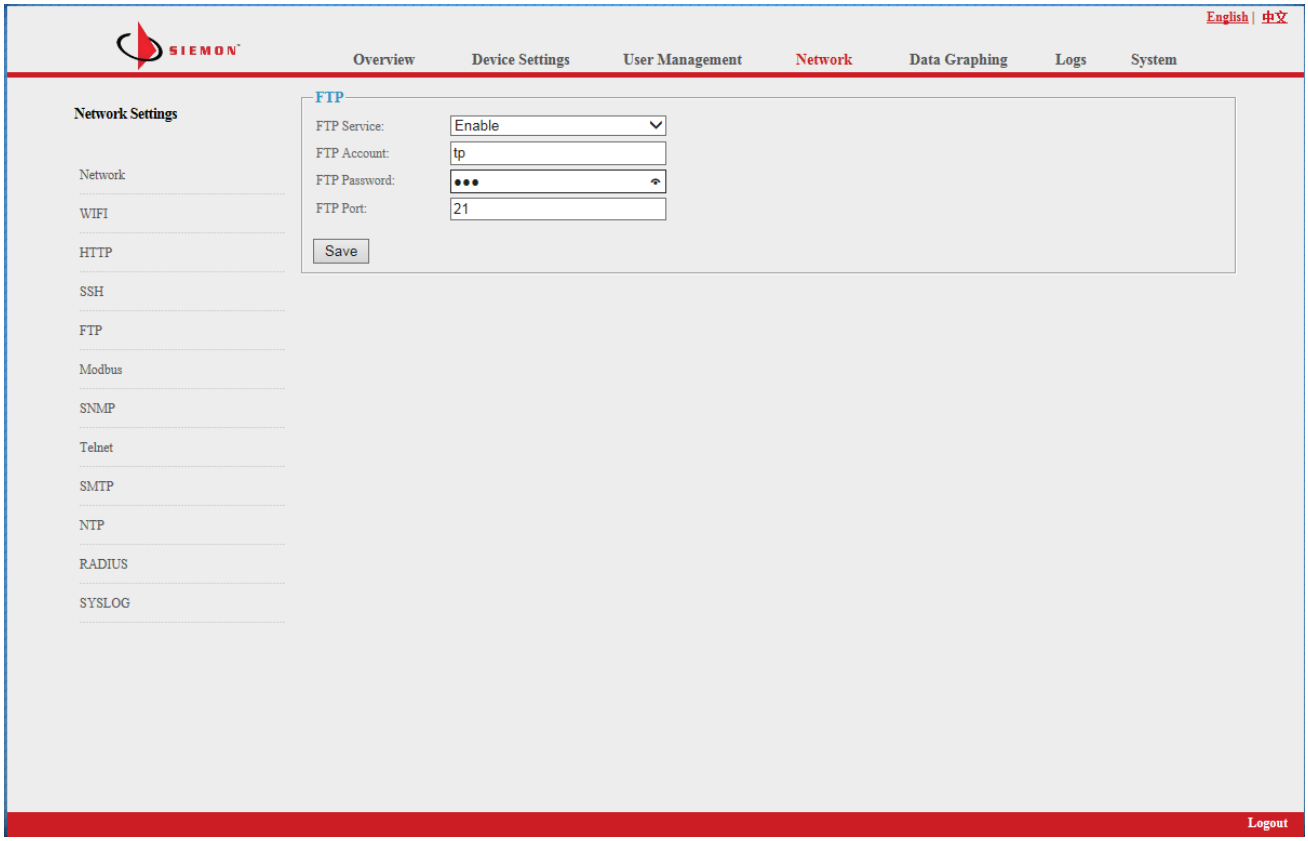


3.3.4.5 FTP

Users can enable or disable FTP access. This requires a restart of the device after saving the configuration. The default FTP port is 21.

Note: Users can upgrade remotely by enabling the FTP service.

Figure 3-19



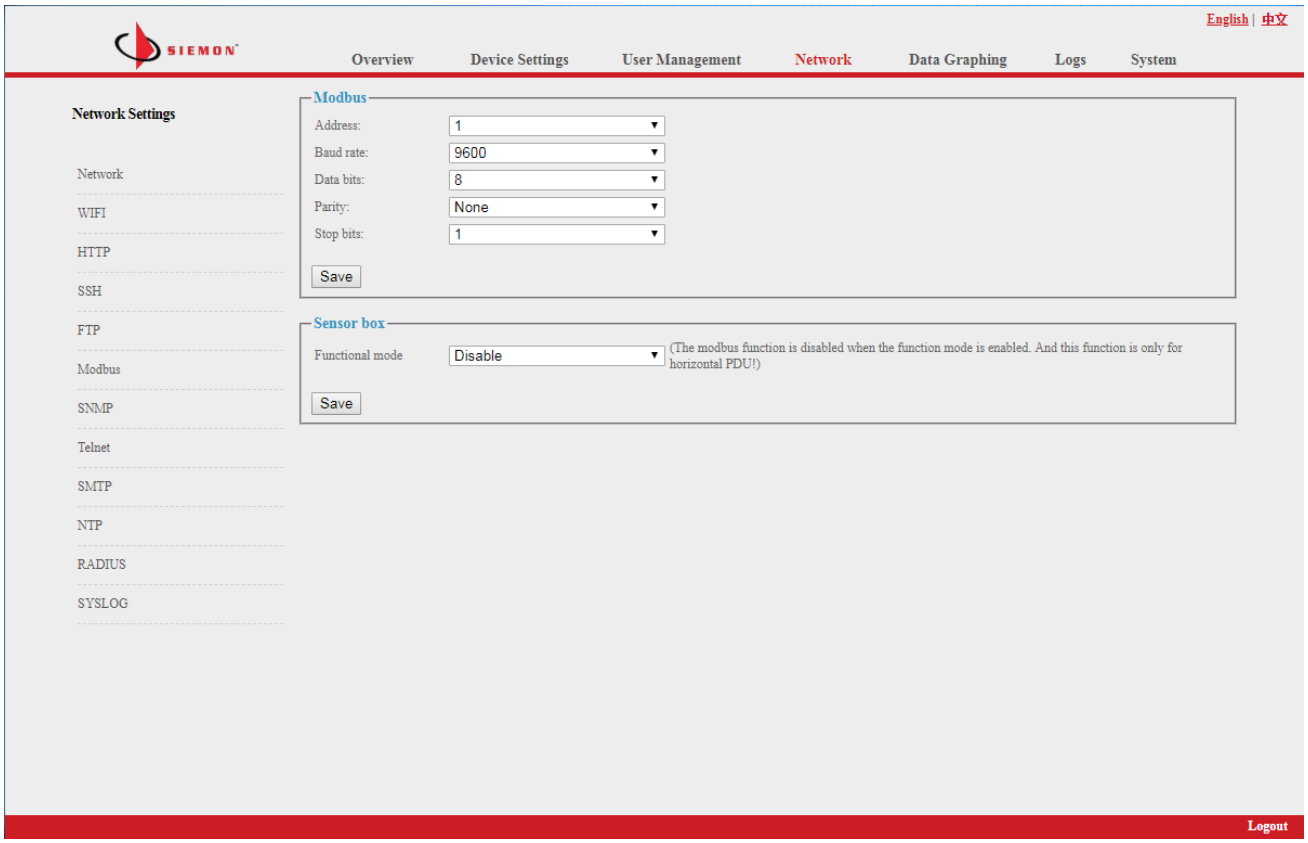
3.3.4.6 MODBUS

MODBUS protocol configuration options include MODBUS communication address (1-255), baud rate (9600,19200,38400,57600,115200), data bit (6,7,8), parity (N/A, even number, odd number), stop bit (1,2).
For further details on PowerMax PDU MODBUS, please request our MODBUS support document from Siemon Technical Support.

3.3.4.7 Sensor box

The Modbus function is disabled when the sensor box functional mode is enabled. This function is only for horizontal PDUs.

Figure 3-20



3.3.4.8 SNMP

SNMP V1/V2c:

Users can Enable or Disable SNMP access from the Web interface.

Enabling SNMP V1 and V2C requires configuration of read community and write community. The default “Read community” and “Write community” is public and private. Both strings can be changed if required.

Trap address: Two trap addresses can be set. Fill in the trap address of SNMP management platform, Trap information will be sent directly to the addresses.

SNMP server position records the server position information.

SNMP v3 settings:

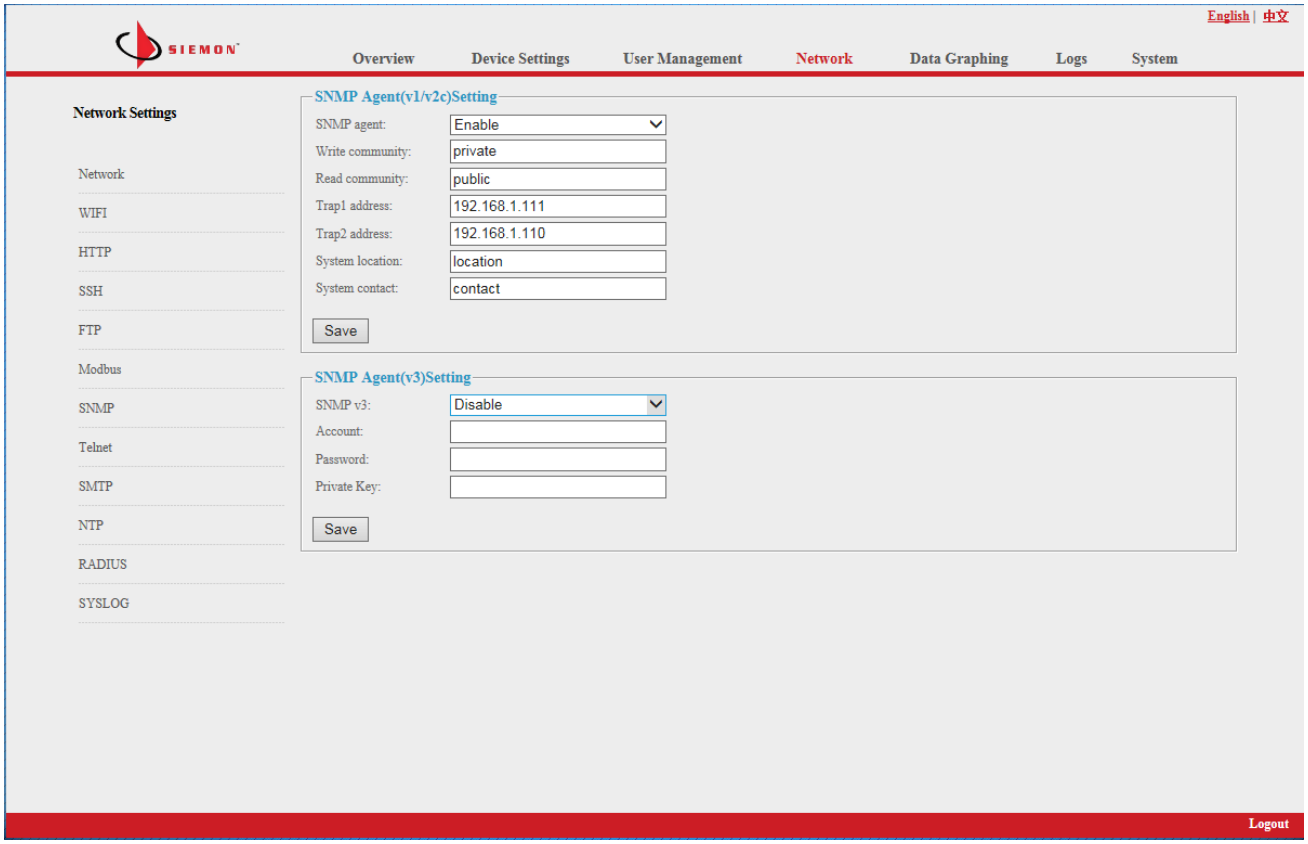
Select “Enable” and fill in account, password, private key.

Note: After configuring SNMP settings, the PDU must be restarted.

Notice: 1. When PowerMax PDU is integrated with third-party DCIM software, drive program is needed from the DCIM platform.

2.The Write/Read community setting should be the same in PowerMax PDU webpage and DCIM software.

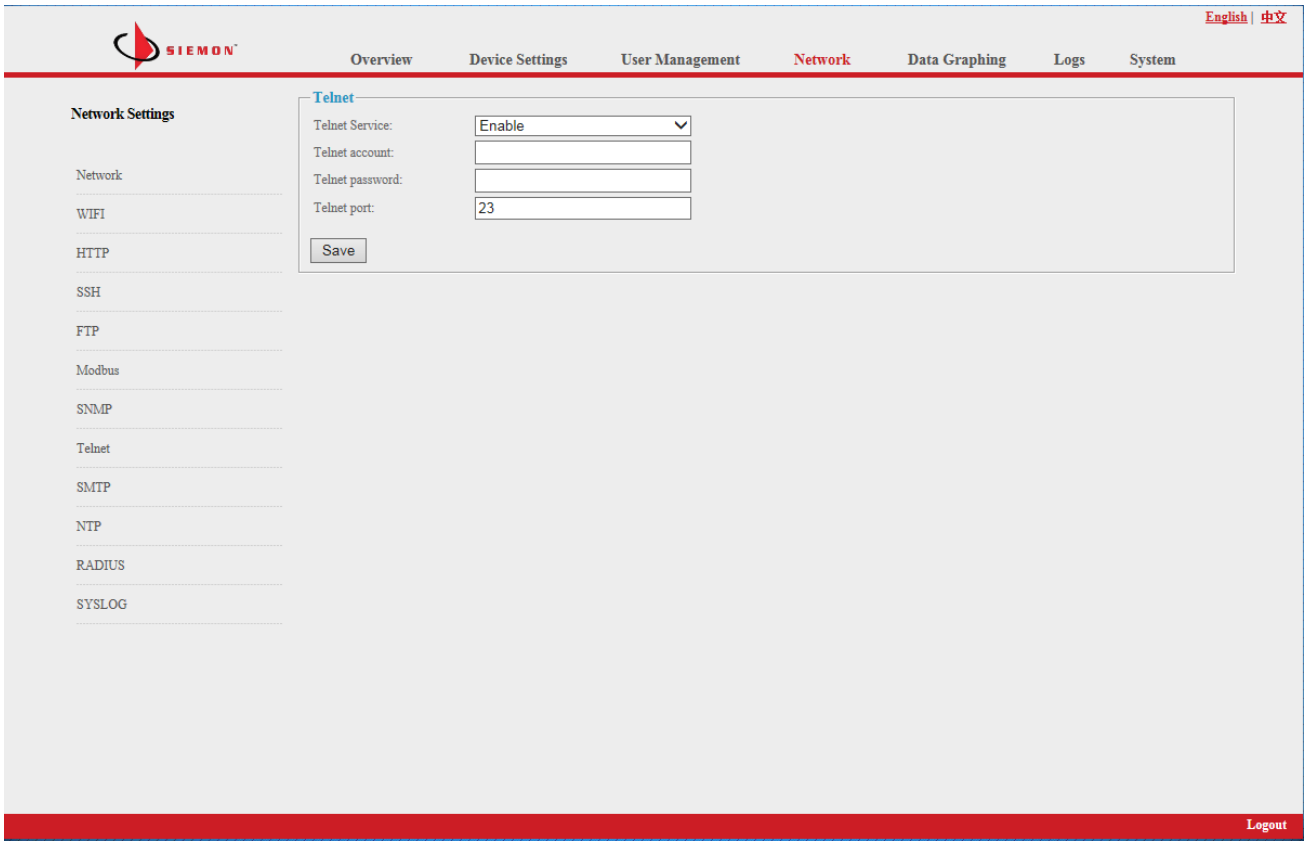
Figure 3-21



3.3.4.9 Telnet

Telnet: select “Enable” or “Disable”. Fill in Telnet account and password. Default telnet port is 23. Click Save. Restart the PDU for changes to take effect.

Figure 3-22



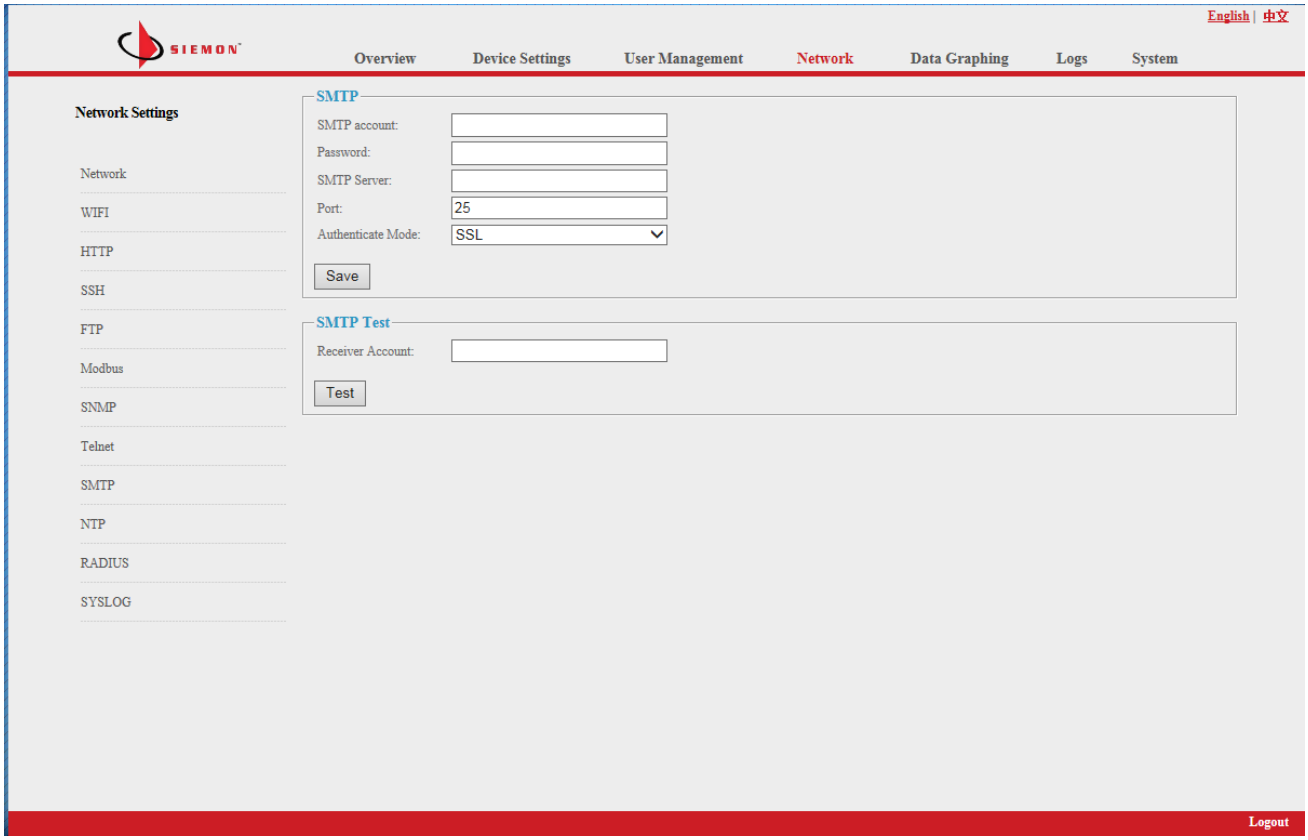
3.3.4.10 SMTP

Click SMTP from network setting to configure SMTP.

Fill in the SMTP service parameters, including SMTP account, password, SMTP server, port and authentication mode. After saving, restart the PDU for changes to take effect.

SMTP test: fill in the receiver account, click “Test” and then check the test receiver account. If test email is received, SMTP setting is successful; if not, check and change SMTP settings.

Figure 3-23



3.3.4.11 NTP

The NTP screen allows you to set the PDU time either using NTP or manually. To access this screen click NTP from network settings.Local time displays the current time of the PDU.

To enable automatic NTP time:

- Select Enable NTP from the pulldown box
- Fill in the NTP server and port fields
- Select time zone
- Click on Save
- Click “Synchronization”, then the PDU will automatically update the local system time and date according to the NTP server from the internet.

Notice: NTP service is only available when PDU is connected to the internet.

To disable NTP time:

- Select Disable from the pulldown box
- Click on Save

Summertime Setting: You can use this feature to adjust your NTP time 1 hour ahead. Users should only select this option if NTP is not adjusting time automatically. To enable the summertime setting, click the check box and save. Do not click on synchronize. The system will update the time automatically on the next time update. You may have to refresh the screen to see the updated time.

Set time manually using User Defined Settings.There are two methods to set time manually:

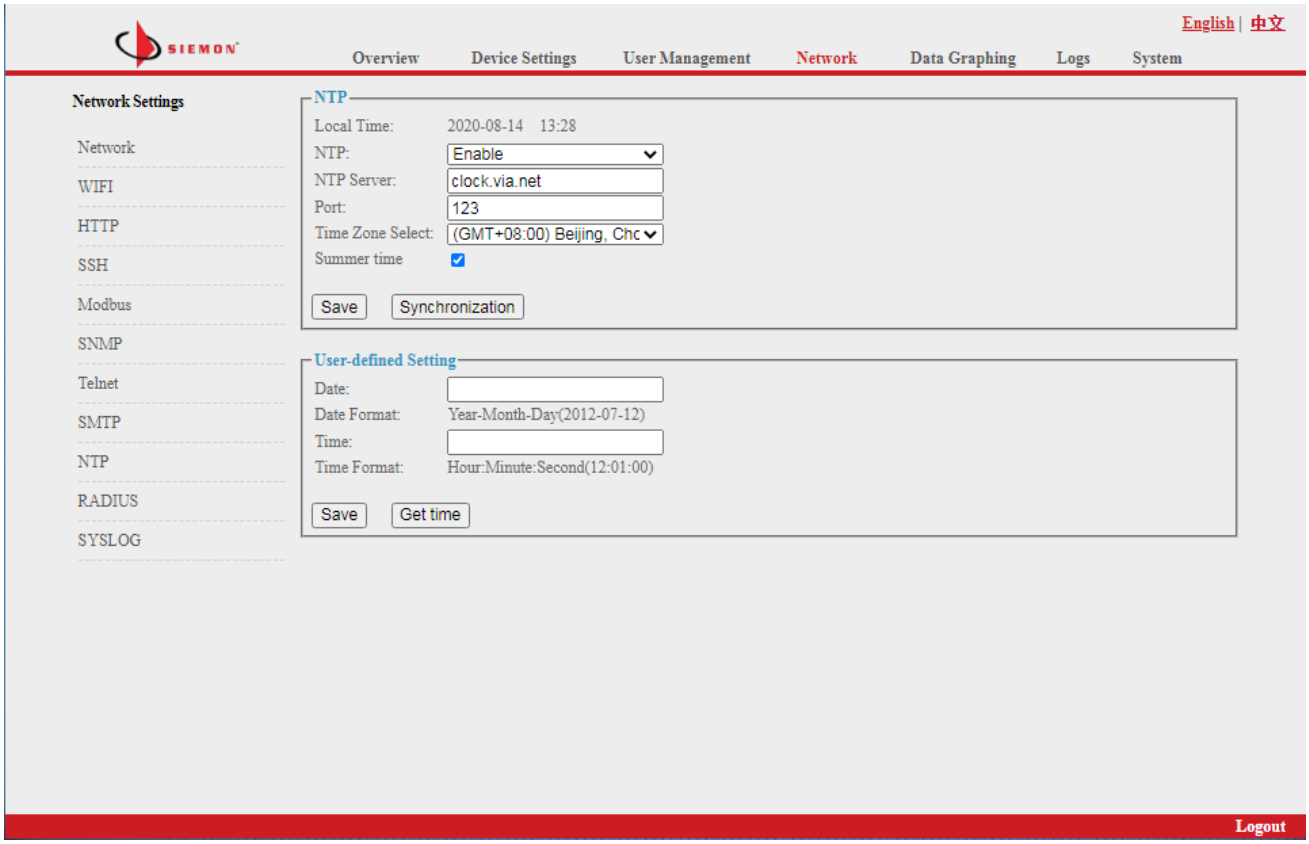
First Method – Enter time manually

- Choose Disable NTP from the NTP pulldown box and save
- Fill in the date and time in the User-defined section
- Click on Save
- You may have to refresh the screen to see the time change

Second Method – Get time from local machine

- Choose Disable NTP from the NTP pulldown box and save
- Click on Get Time in the User-defined section
- Click on Save
    - You may have to refresh the screen to see the time change

Figure 3-24



Notice: NTP service is only available when PDU is connected to the internet.

3.3.4.12 RADIUS

Users can choose basic authentication or Radius authentication.

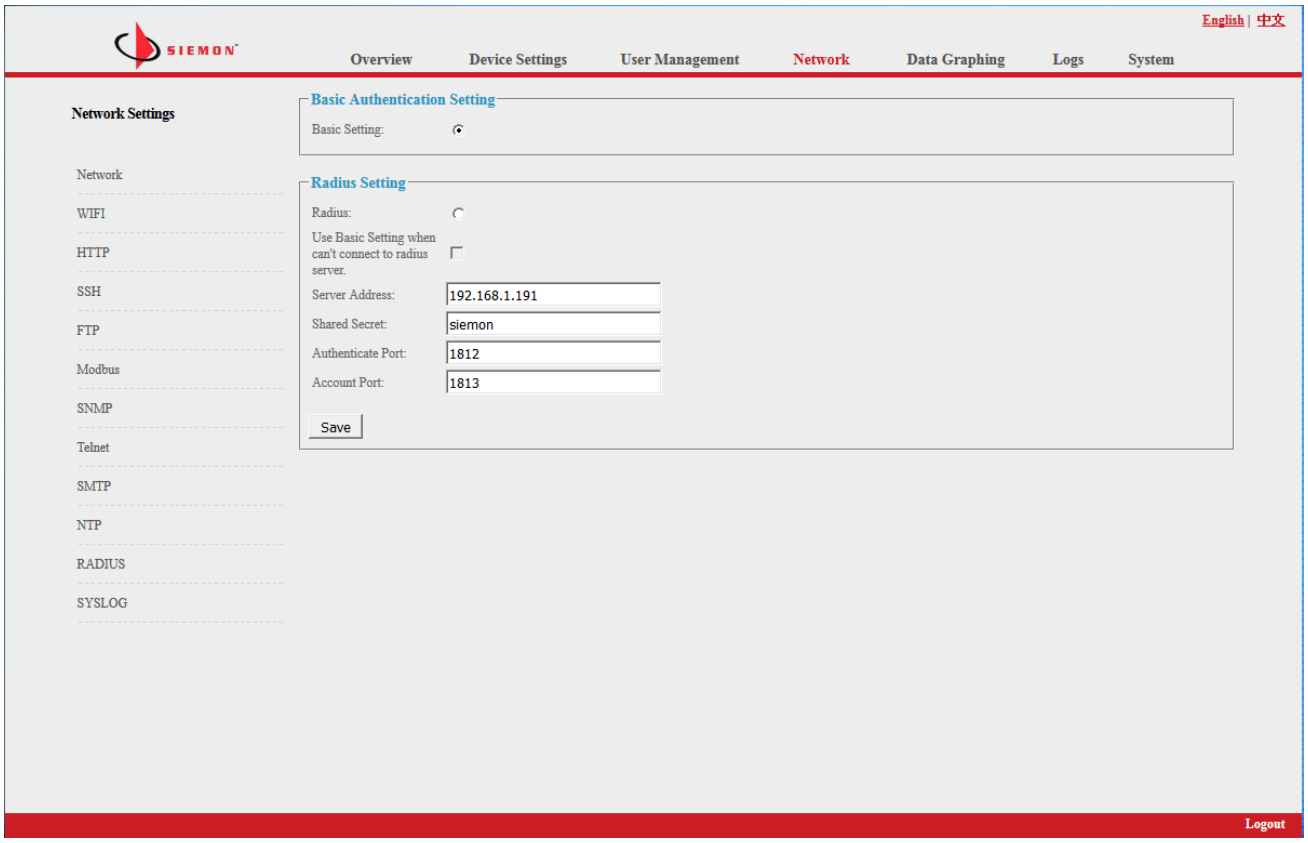
Select Radius authentication, device will authenticate a user account from the Radius server.

Server address: fill in the Radius server address.

Shared secret: fill in the required public key of the Radius server.

Note: please restart the PDU after configuration. Then fill in the requested account and password of Radius server. After authentication, users can access the device.

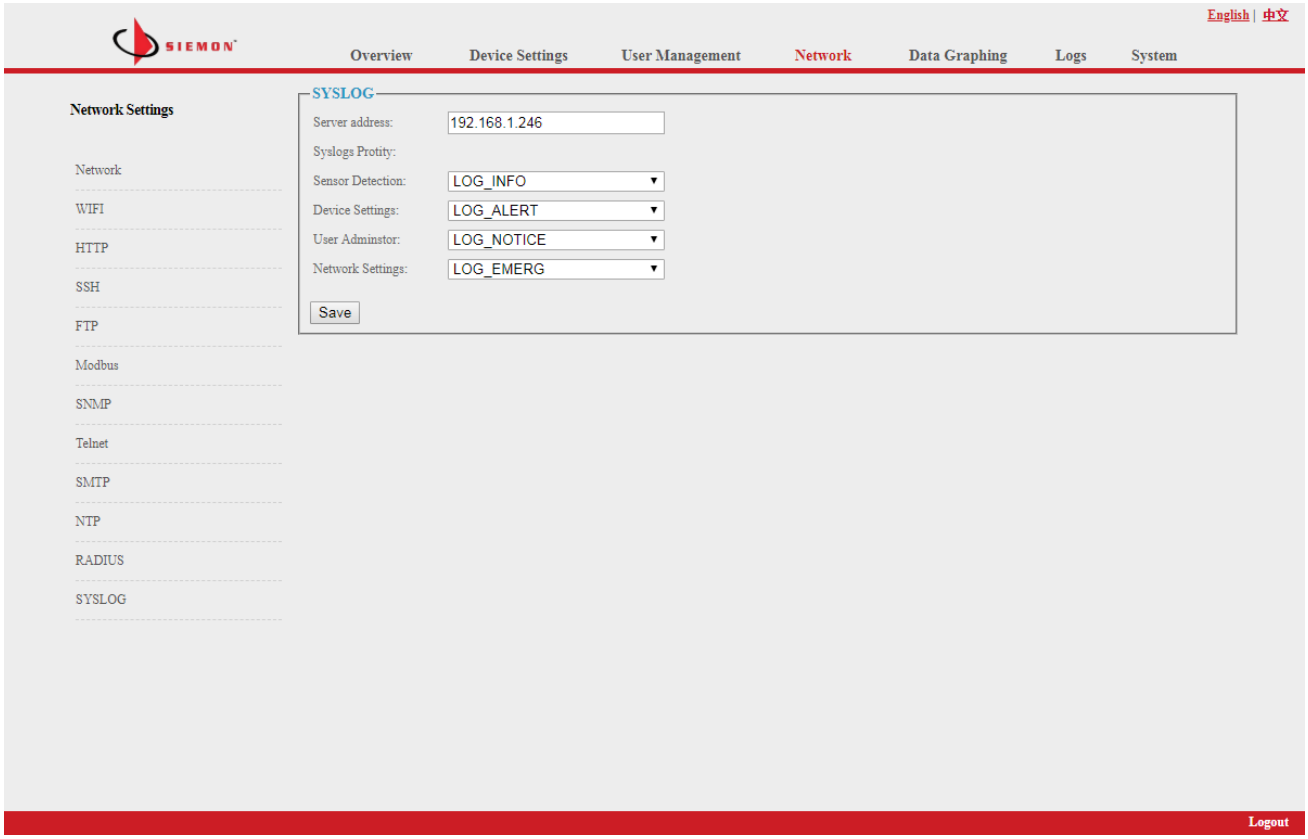
Figure 3-25



3.3.4.13 SYSLOG

Fill in the SYSLOG server IP address.

Figure 3-26

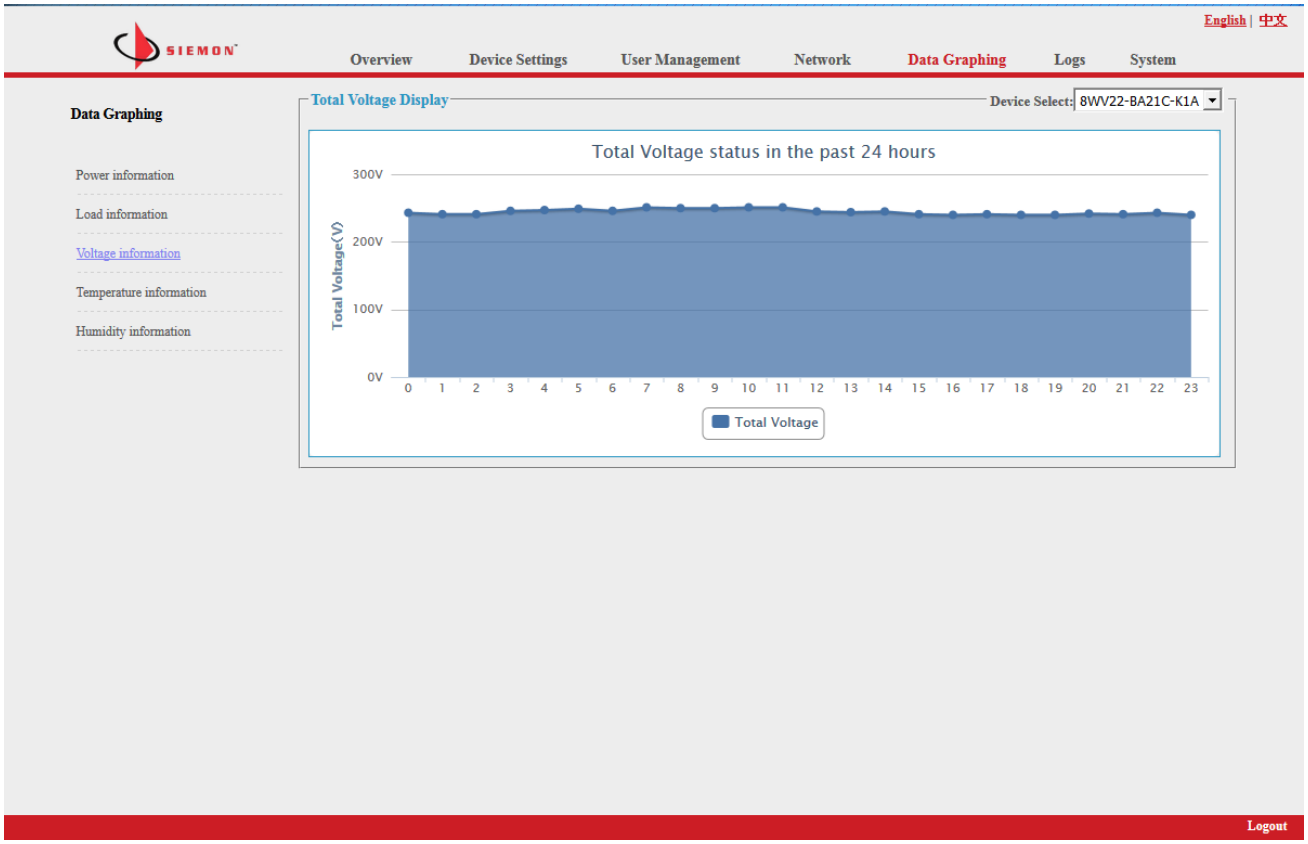


Note: SYSLOG contains system start, service errors during operation and command error information. After saving the SYSLOG server address, restart the software to take effect.

3.3.5 Data Graphing

Select device to view information over the past 24 hours including total power (kW), current (Ampere), voltage, average temperature and humidity.

Figure 3-27



3.3.6 Logs

Click Logs from the navigation bar to enter the logs interface. The logs contain events, historic data and energy data.

3.3.6.1 Logs Record

Shows the operation time, log type, user-name and log details.

Memory capacity 100Mb.

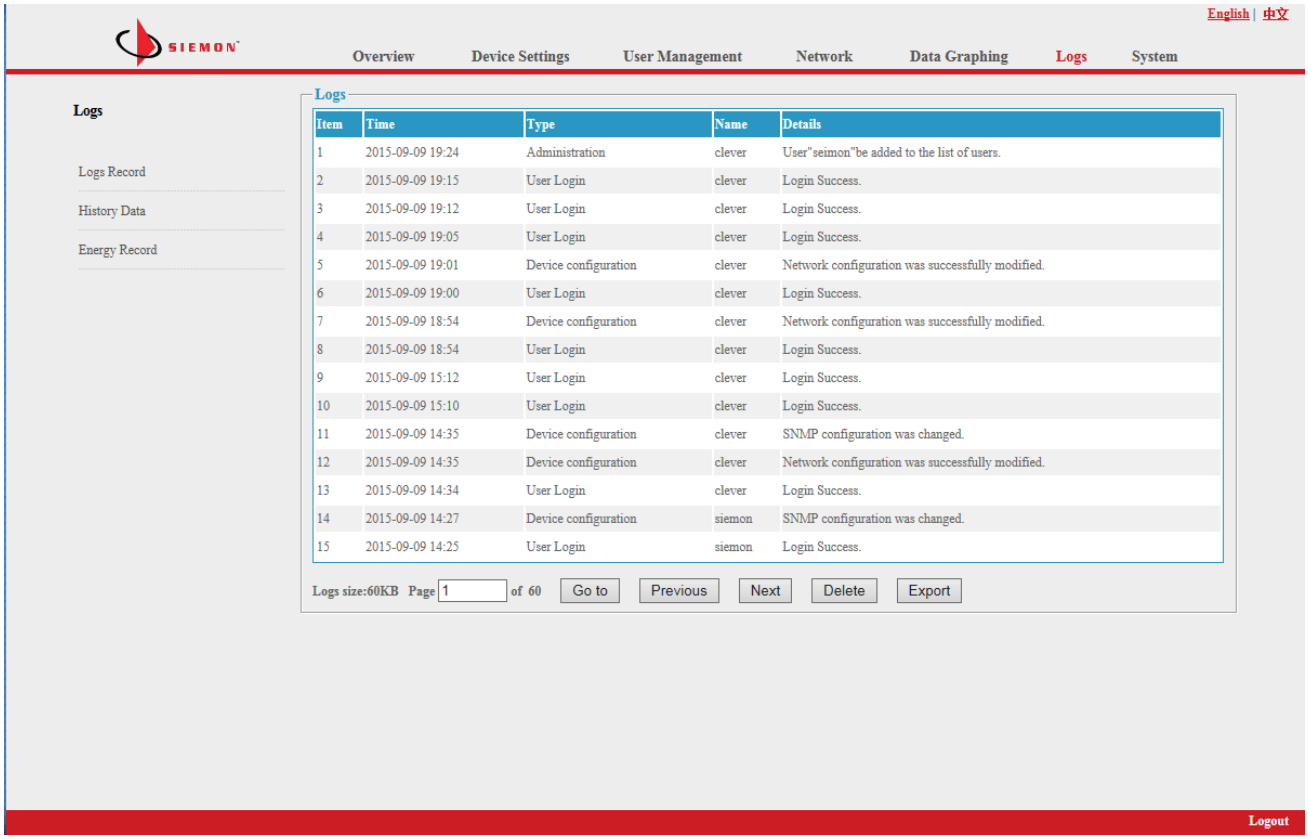
To view the data:

Click Next or Previous to move page by page or Jump to go to a specific page

Delete the logs:

Click Delete Logs. The device will request confirmation; click OK to delete all the logs.

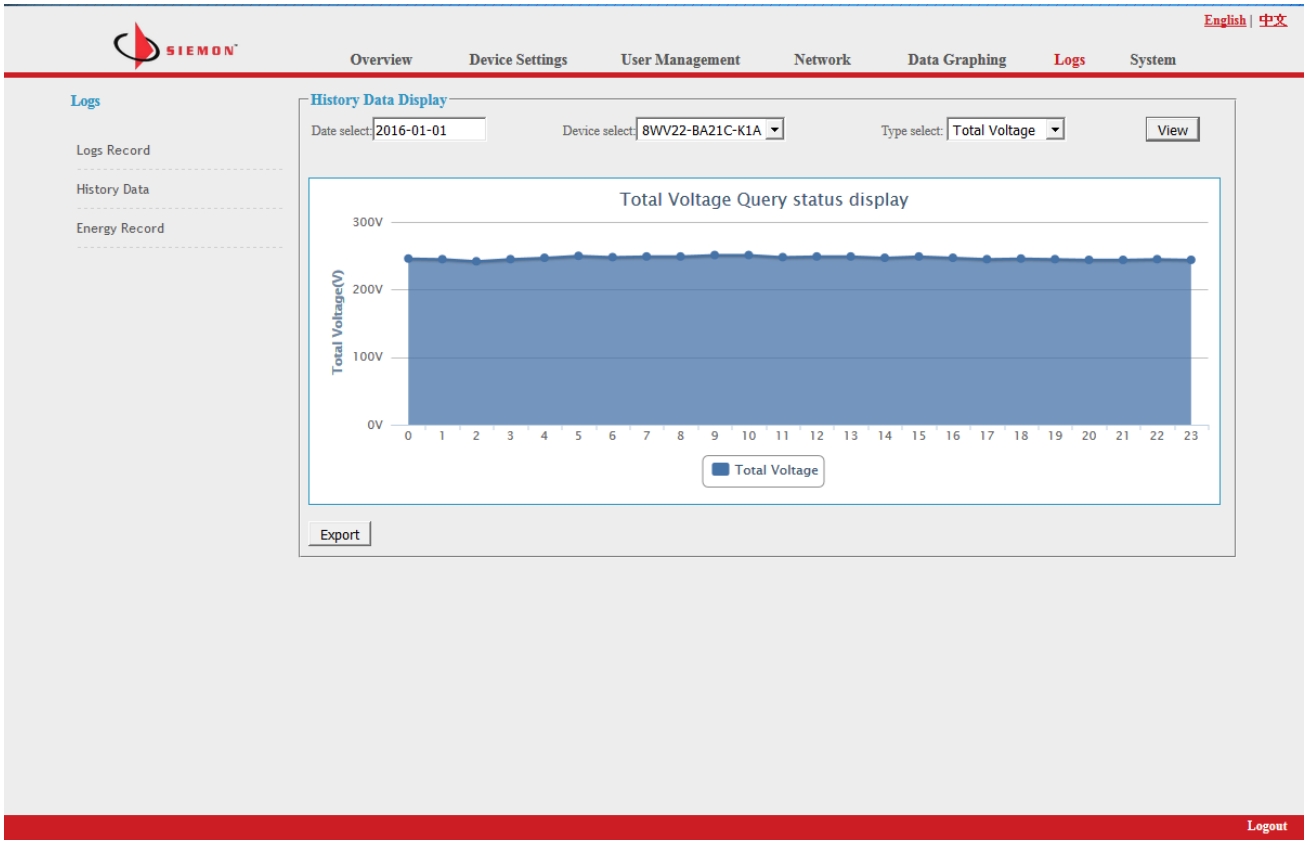
Figure 3-28



3.3.6.2 History Data

Select the date, device and information type (total power, voltage, power, temperature and humidity) you want to view, and then click “View” to see the history data.

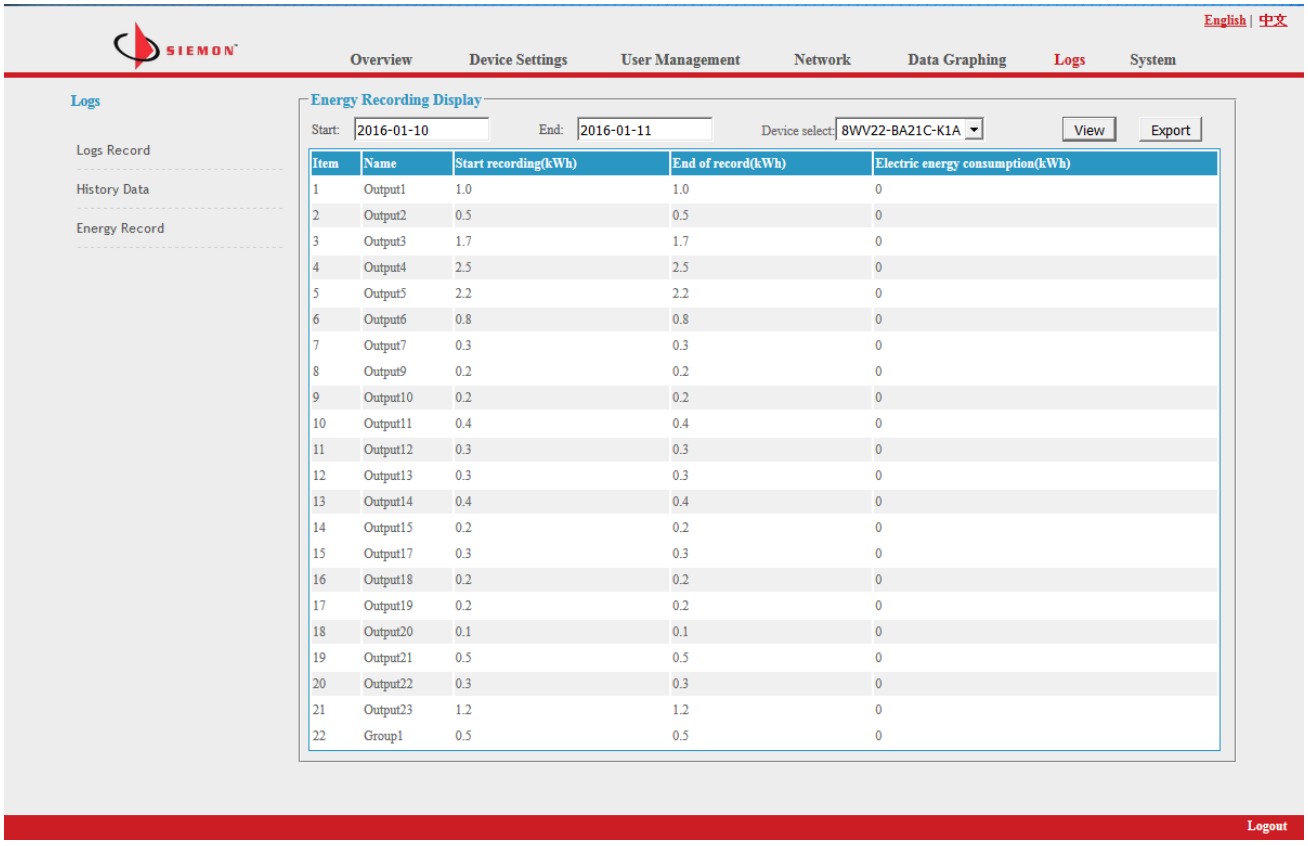
Figure 3-1629



3.3.6.3 Energy Record

Select the device, start and end date, and click “View”. The system will show the accumulated kWh value on each date and calculate the kWh value during that period.

Figure 3-30



Item	Name	Start recording(kWh)	End of record(kWh)	Electric energy consumption(kWh)
1	Output1	1.0	1.0	0
2	Output2	0.5	0.5	0
3	Output3	1.7	1.7	0
4	Output4	2.5	2.5	0
5	Output5	2.2	2.2	0
6	Output6	0.8	0.8	0
7	Output7	0.3	0.3	0
8	Output9	0.2	0.2	0
9	Output10	0.2	0.2	0
10	Output11	0.4	0.4	0
11	Output12	0.3	0.3	0
12	Output13	0.3	0.3	0
13	Output14	0.4	0.4	0
14	Output15	0.2	0.2	0
15	Output17	0.3	0.3	0
16	Output18	0.2	0.2	0
17	Output19	0.2	0.2	0
18	Output20	0.1	0.1	0
19	Output21	0.5	0.5	0
20	Output22	0.3	0.3	0
21	Output23	1.2	1.2	0
22	Group1	0.5	0.5	0

3.3.7 System

Click System from the navigation bar to enter the system.

Show system information: Users can check system version, last update date, flash size etc. and download an update tool to remotely update the software provided;

Download user manual and MIB file; Data backup and quick mass-setup of PDUs: Click Settings to save the device's settings, user settings and network settings through batch download. Users can upload all the backup information by using the upgrade tool.

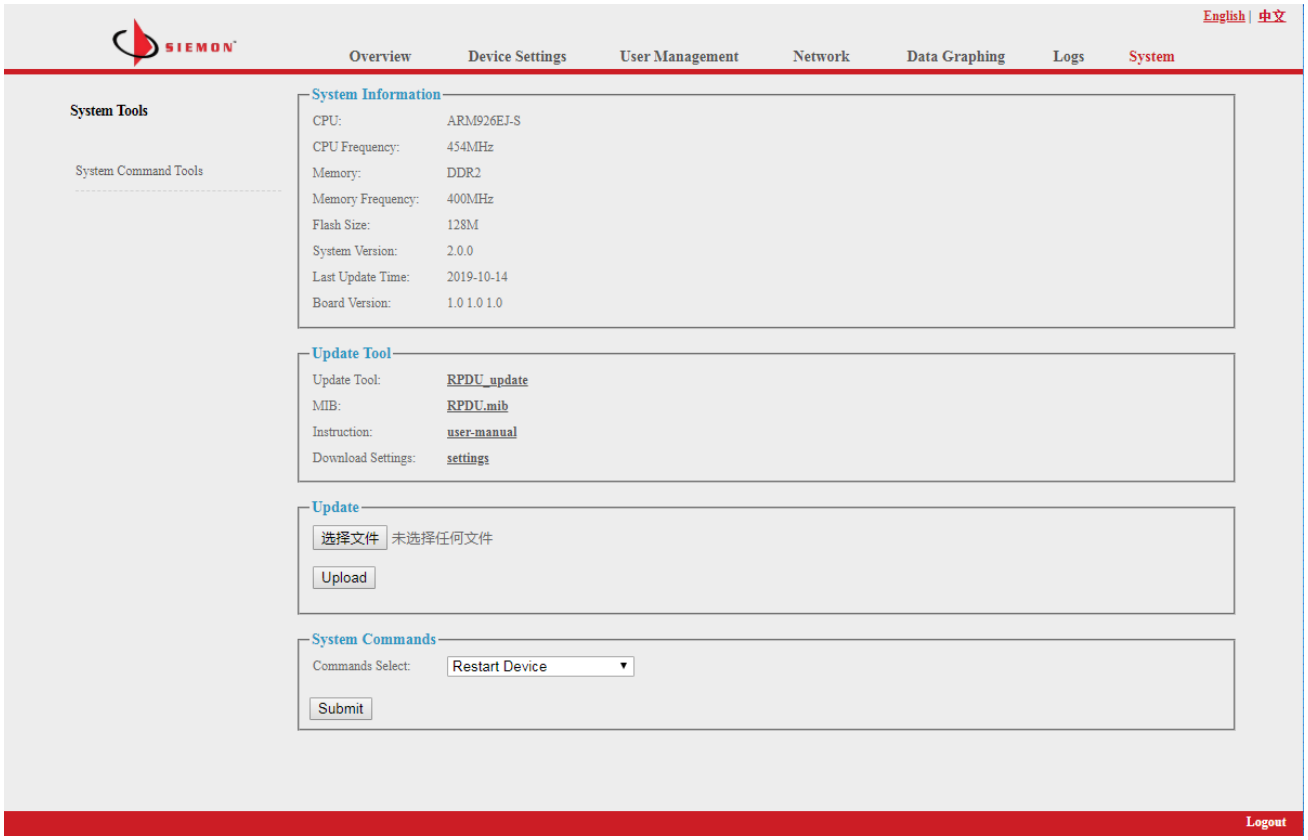
Users can upgrade the software version through the Rootfs.bin file provided by following the instructions in the upload software.

Note: Please make sure the PDU is directly connected to the PC

Do not power off, disconnect the network or control the PDU during upgrading

Restart the PDU or restore to factory default configuration from the System commands.

Figure 3-31



3.3.7.1 SNMP Access

This software supports SNMP V1, V2C and V3, a MIB file can be downloaded from the System menu.

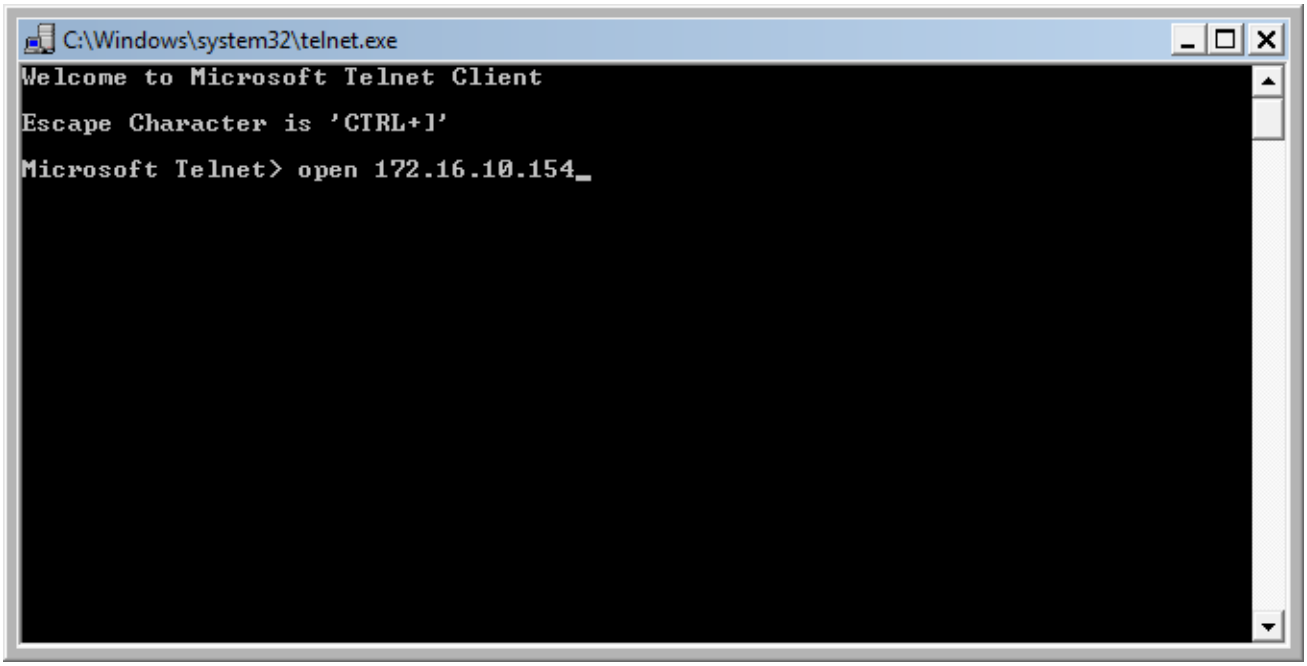
3.4 Telnet Access

The device supports Telnet access, after entering the username and password, users can remotely monitor and manage the device. Telnet access supports daisy-chain to enable the user to manage up to 5 devices.

To open the Telnet client Start→ Run command→enter “Telnet” in the input box and click OK

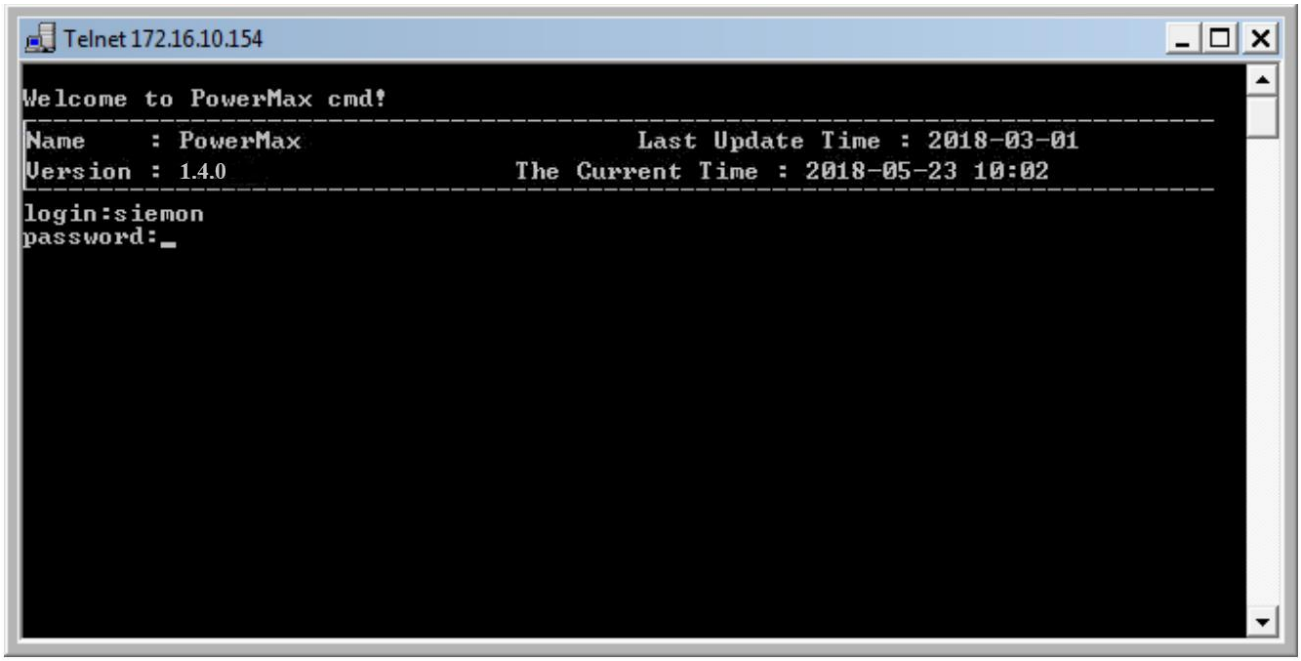
Enter the IP address.

Figure 3-32



Enter the username and password. The Telnet interface will pop up

Figure 3-33

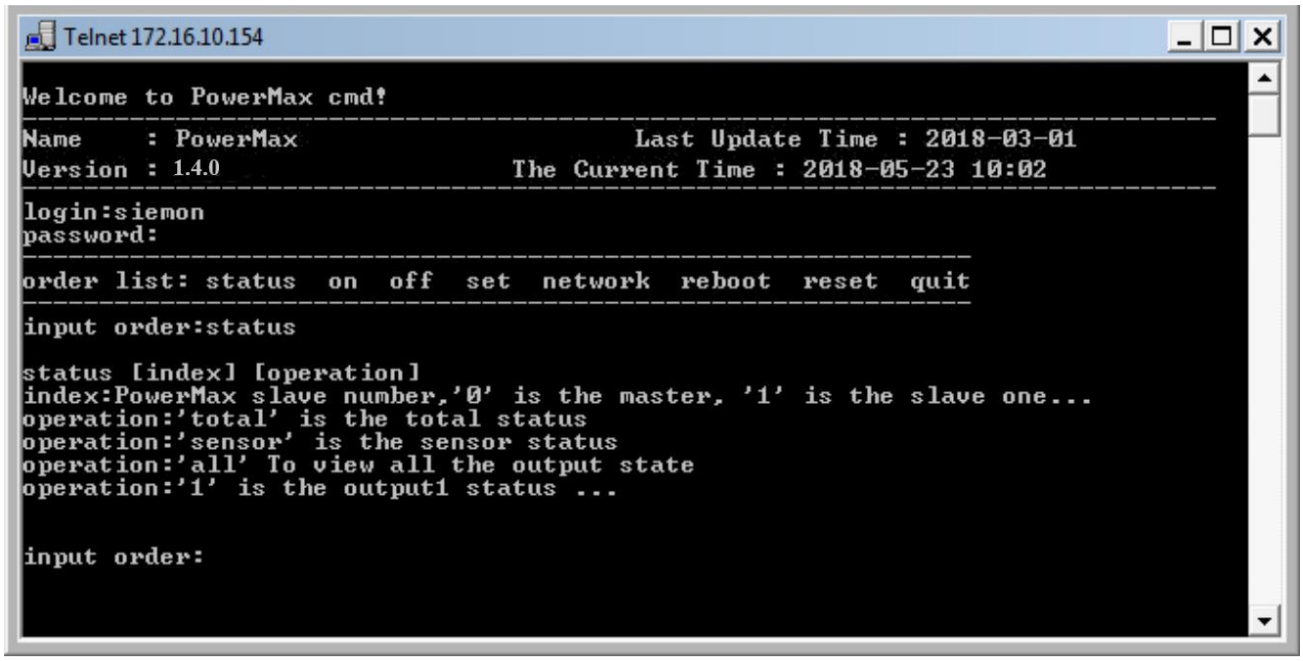


3.4.1 “STATUS” command

Input “STATUS” command to view the individual outlet status (including current, on/off state, Max. and Min. current value, kW and kWh) and the overall status (including total current, voltage, kW and kWh).

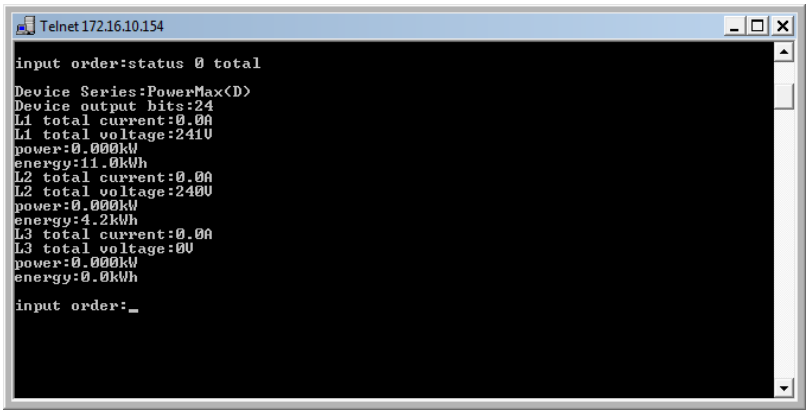
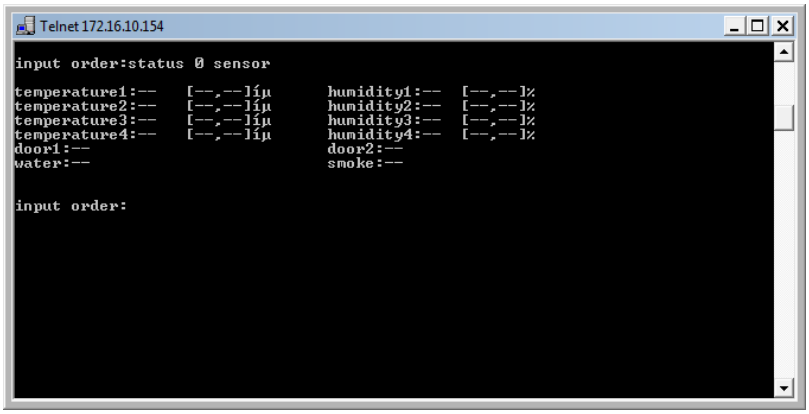
Command line format: STATUS 【index】【operation】

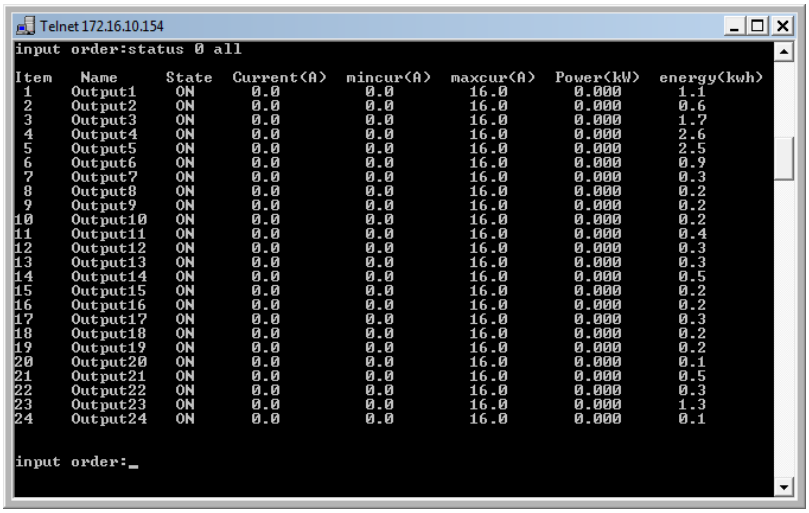
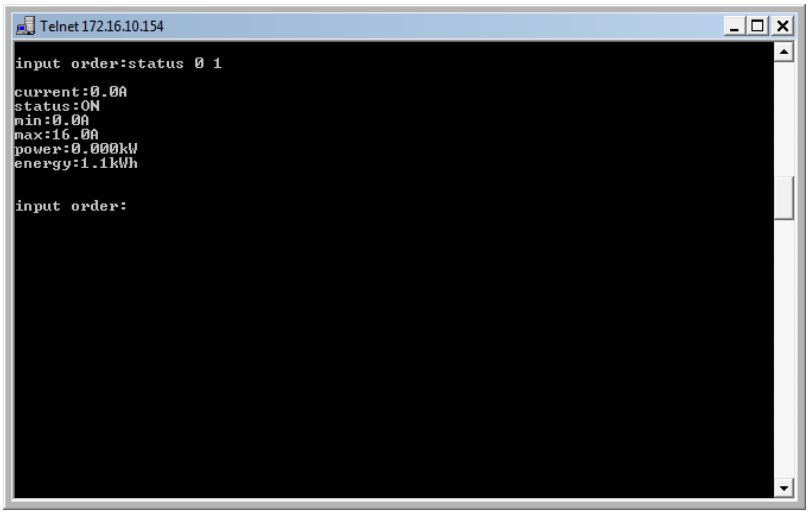
Figure 3-34



【index】:device mode（0-9， 0 is master，1-4 is slave）;

【operation】:view the device information, details as below:

【operation】	Description
Total	For example:  Enter command line---status 0 total: 0 means the Master(1-4 means Slave 1 to Slave 4), total means the overall status, the above figure shows input “status 0 total”.
sensor	

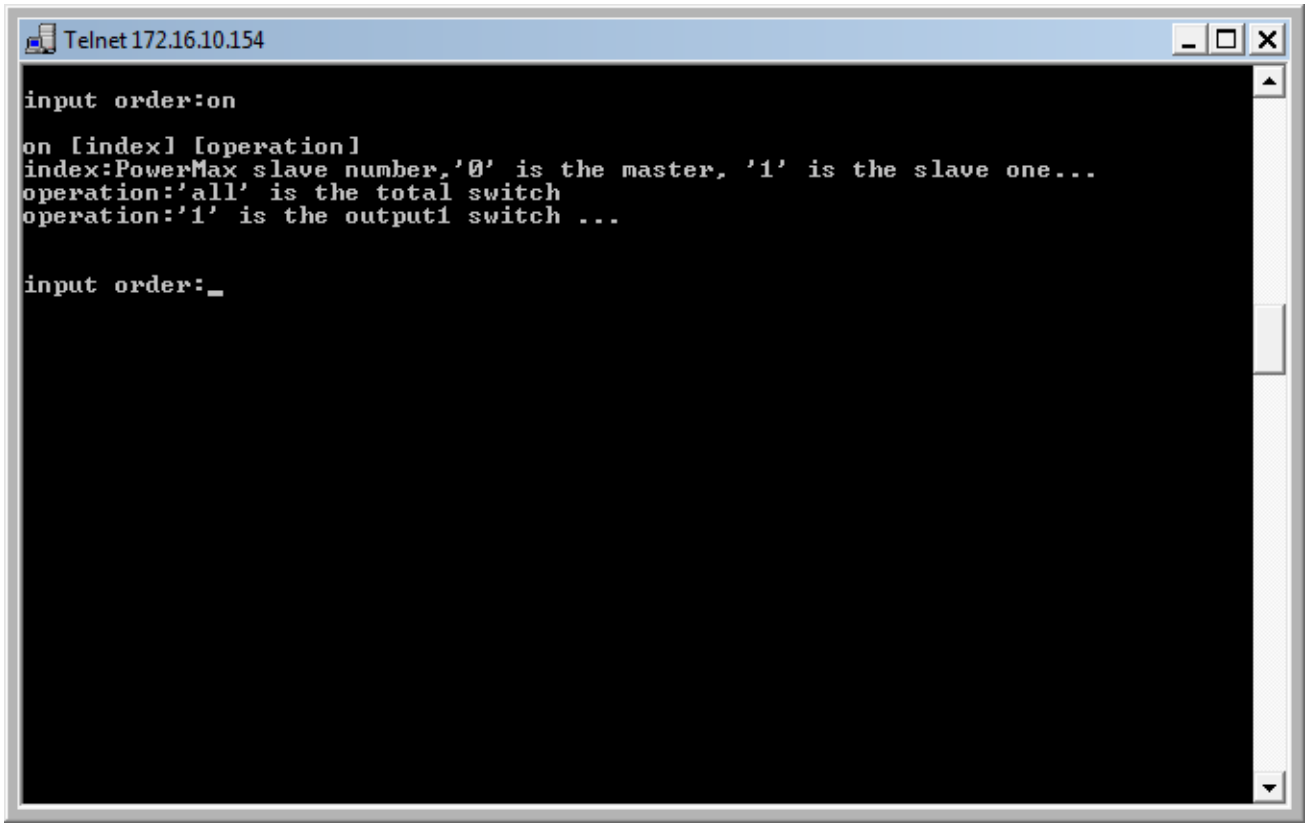
	Enter command line--- status 0 sensor: 0 means the Master unit; 1-4 means the Slave units.
all	 Enter command line--- status 0 all, 0 means the Master unit; 1-4 means the Slave units**.**
Output	For example  command line---status 0 1: 0 means the Master(1-4 means Slave 1 to Slave 4), 1 means the status of first outlet, the above figure will be displayed after input “status 0 1”

3.4.2 “ON/OFF” command

“ON/OFF” command enables the user to switch on/off the individual outlet or the complete device

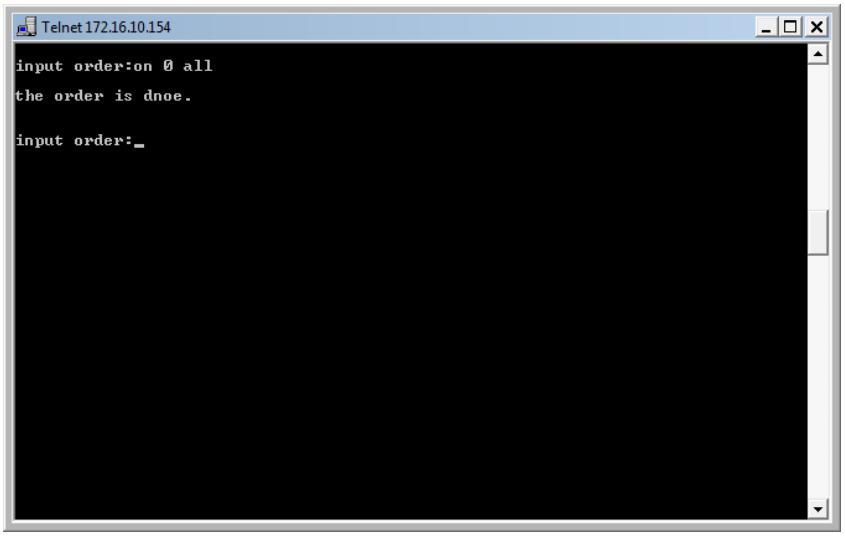
Command format: ON/OFF 【index】【operation】

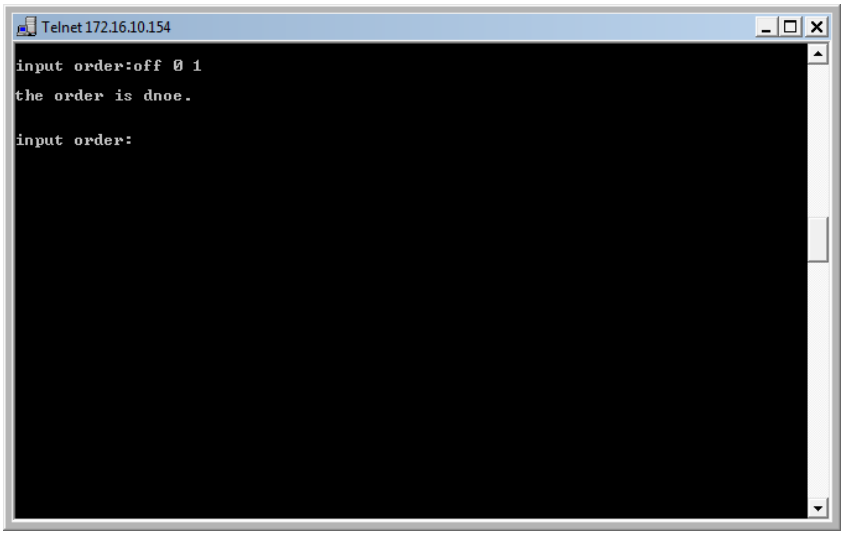
Figure 3-35



【index】:device mode（0-9， 0 is master，1-4 is slave）;

【operation】:view device information.

【operation】	Description
ALL	 Command line---on 0 all means to switch on all outlets of the Master unit

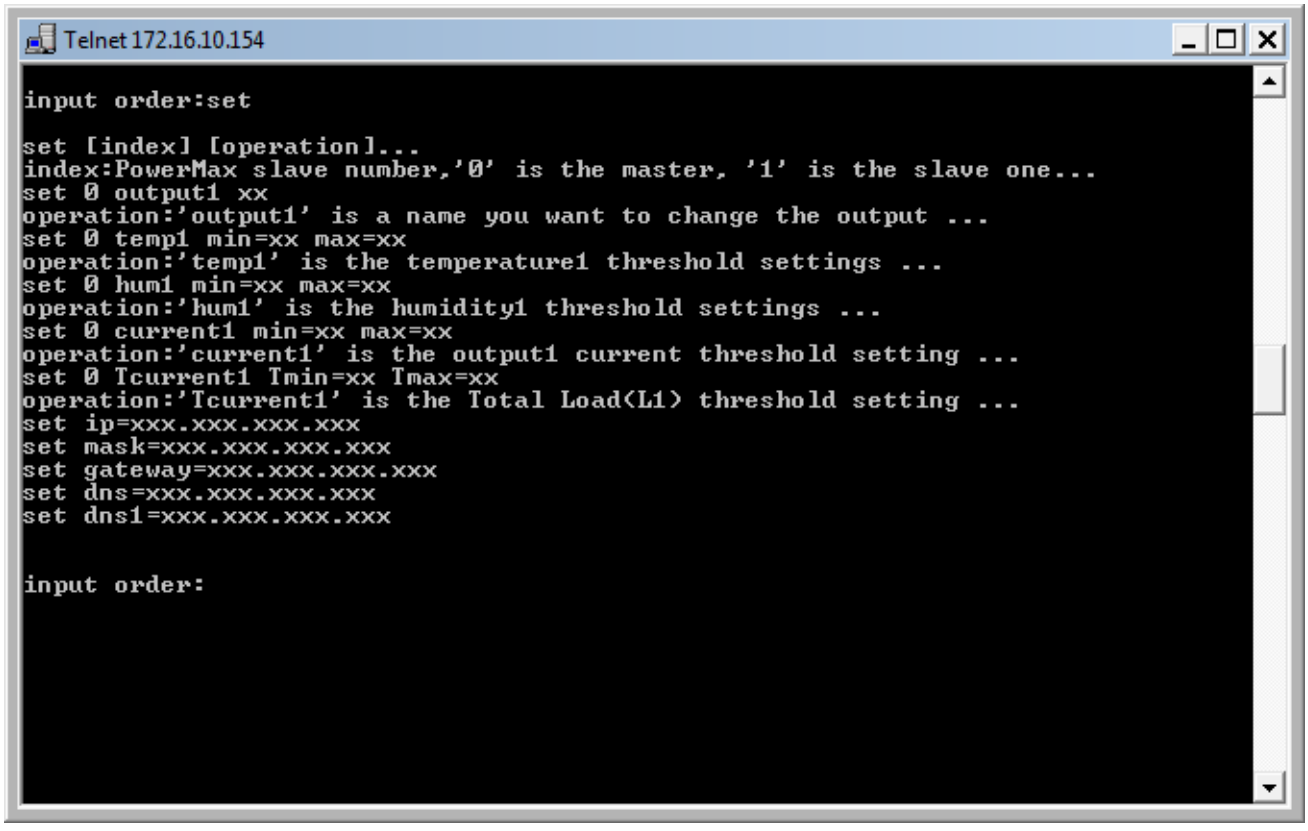
Output	 Command line---off 0 1 means to switch off the first outlet of the Master unit

3.4.3 “Set” command

“Set” command enables setting of outlet current, temperature and humidity minimum and maximum threshold, IP address, subnet mask, gateway, dns , dns1;

Command format: set 【index】【operation】

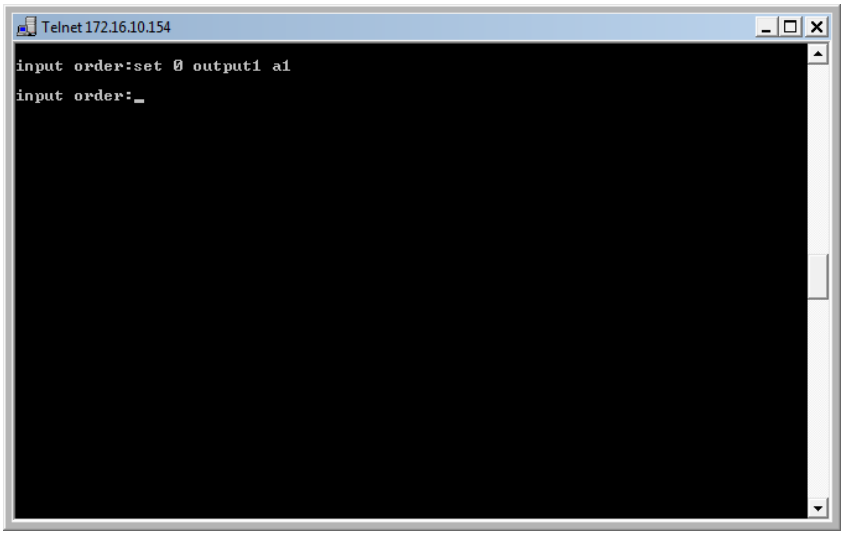
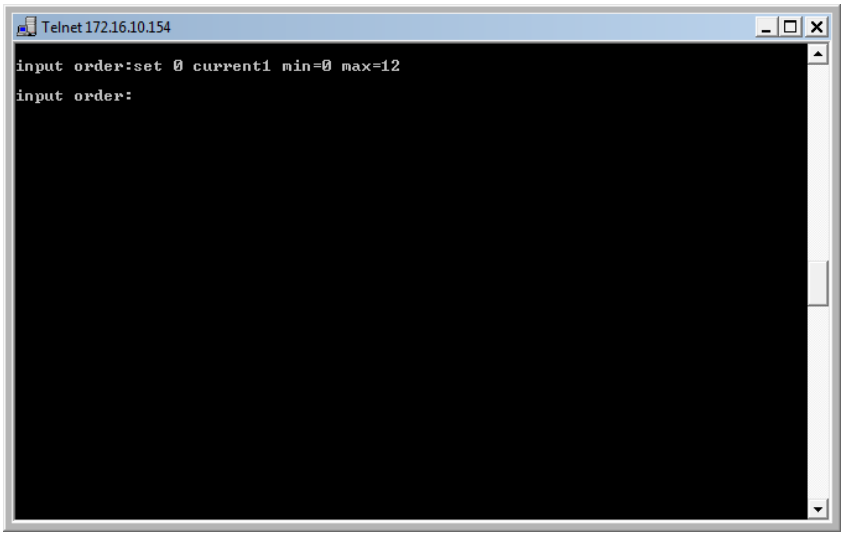
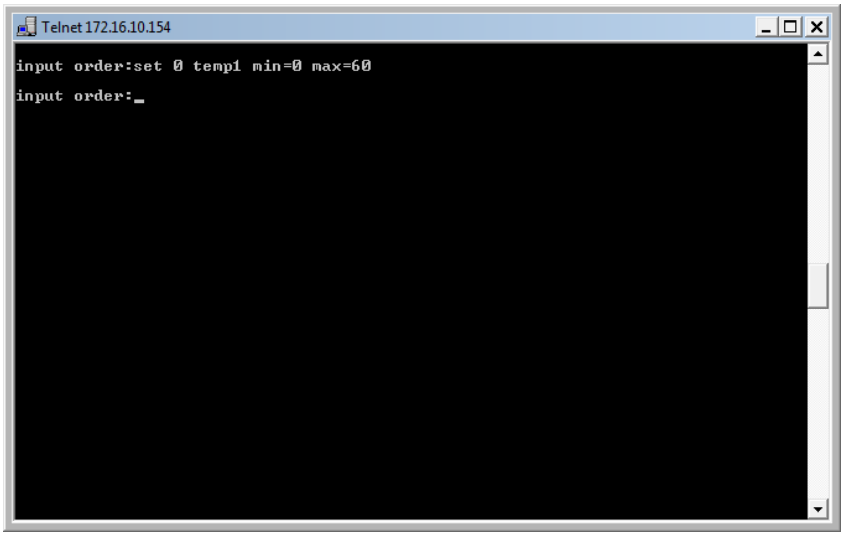
Figure 3-36

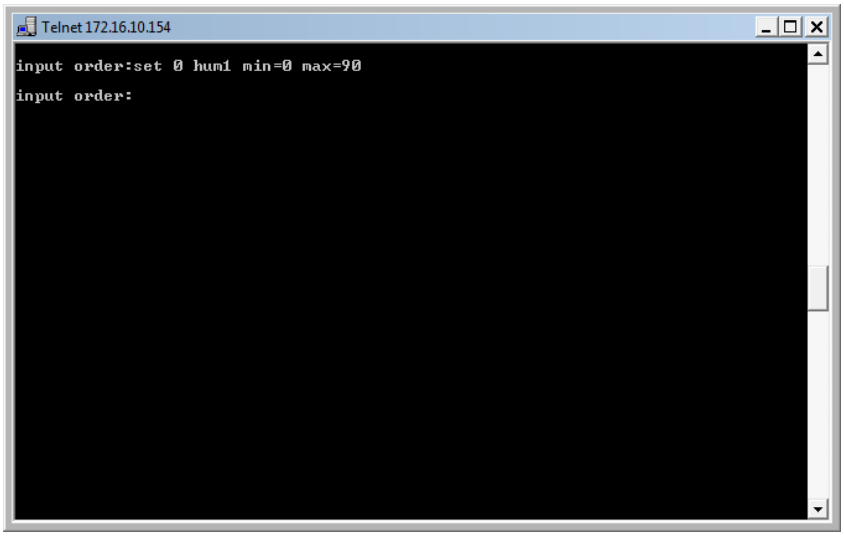
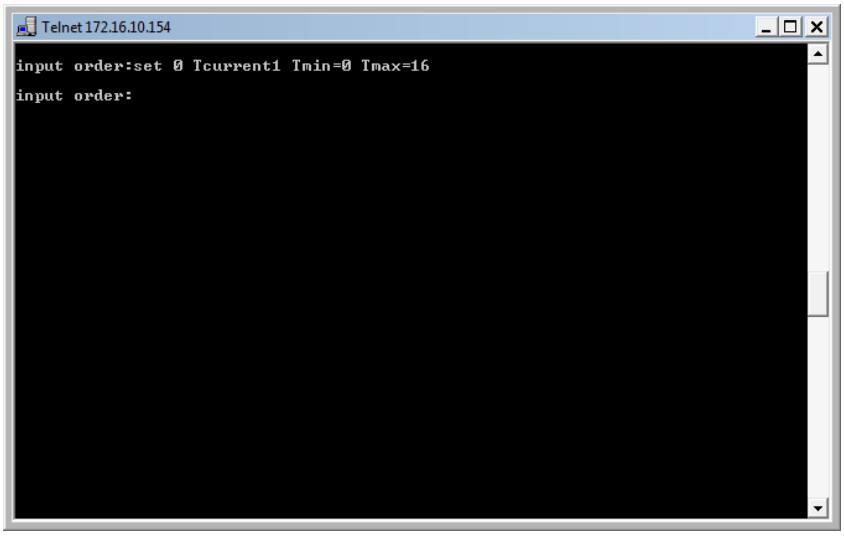
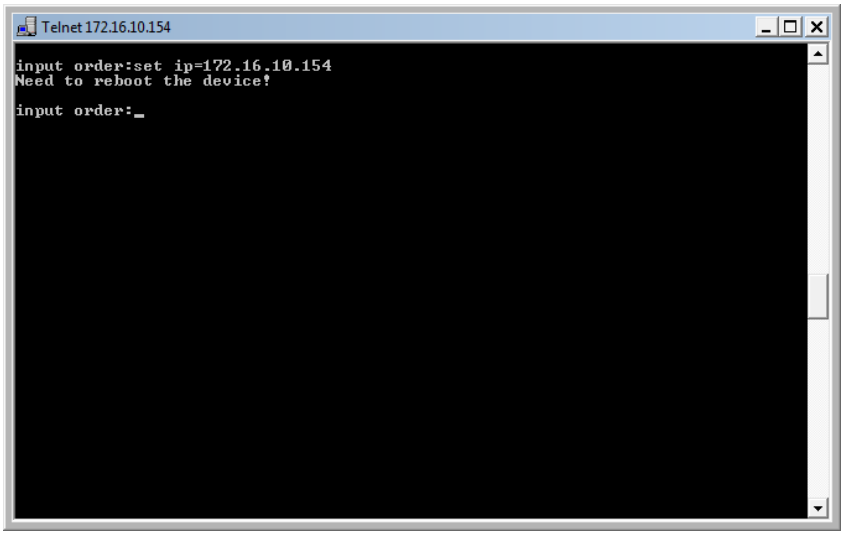


【index】:device mode（0-9， 0 is master，1-4 is slave）;

【operation】:view device information, details as below:

【operation】	Description

output	 Command line---set 0 output1 a1 means rename the output 1 as a1
current	 Command line--- set 0 current1 min=0 max=12 means minimum current as 0 and maximum current as 12 for output 1 of Master unit
temperature	 Command line--- set 0 temp1 min=0 max=60 means minimum temperature as 0 degree and maximum temperature 60 degree

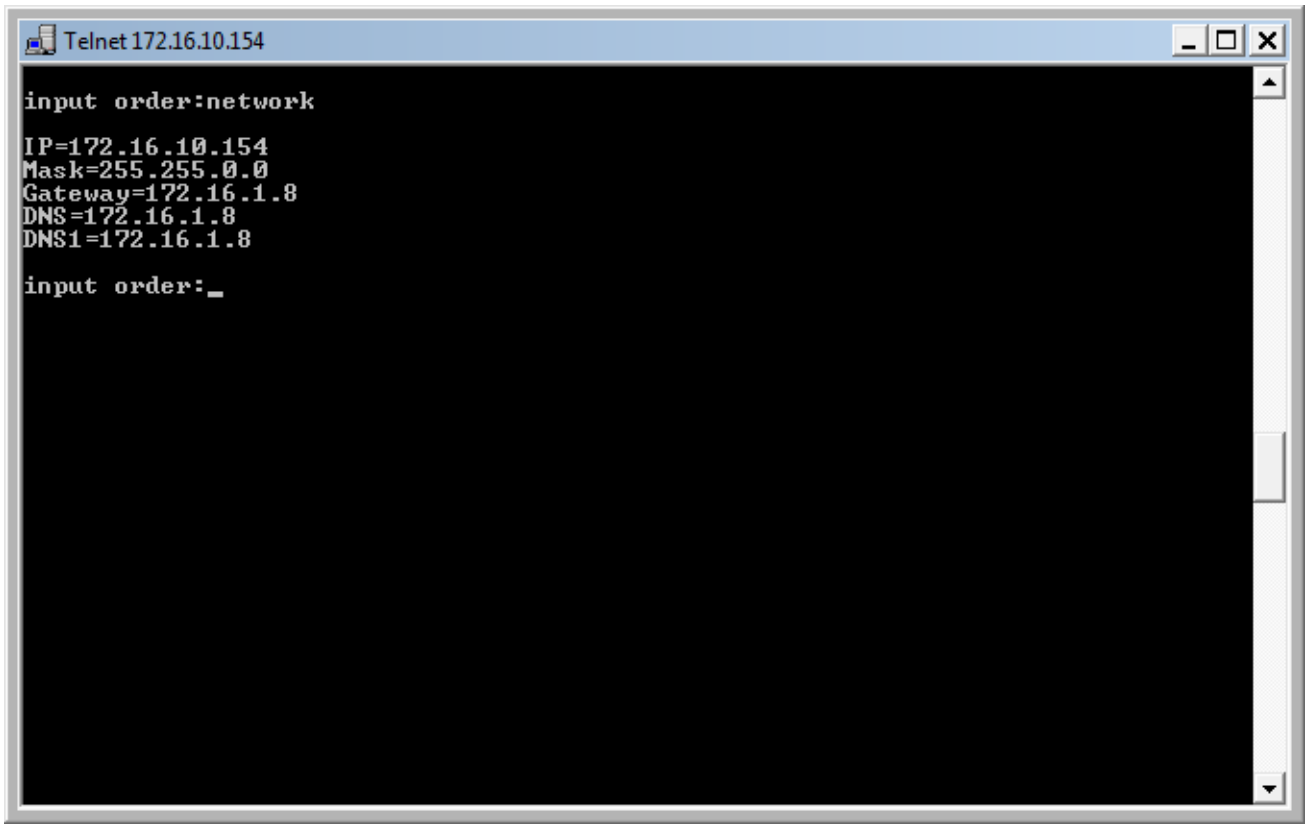
	for temperature sensor 1 of master unit
humidity	 Command line---set 0 hum1 min=0 max=90 means minimum humidity as 0% and maximum humidity as 90% for humidity sensor 1 of Master unit
Tcurrent	 Command line---set 0 Tcurrent1 Tmin=0 Tmax=16 means minimum current as 0A and maximum current as 16A for total current of phase A of Master unit
network	

	Command line---set 0 ip=172.16.10.154 means Master network IP address as 172.16.10.154

3.4.4 “Network” command

Check network configuration information, such as IP address, subnet mask, default gateway, main DNS, spare DNS.

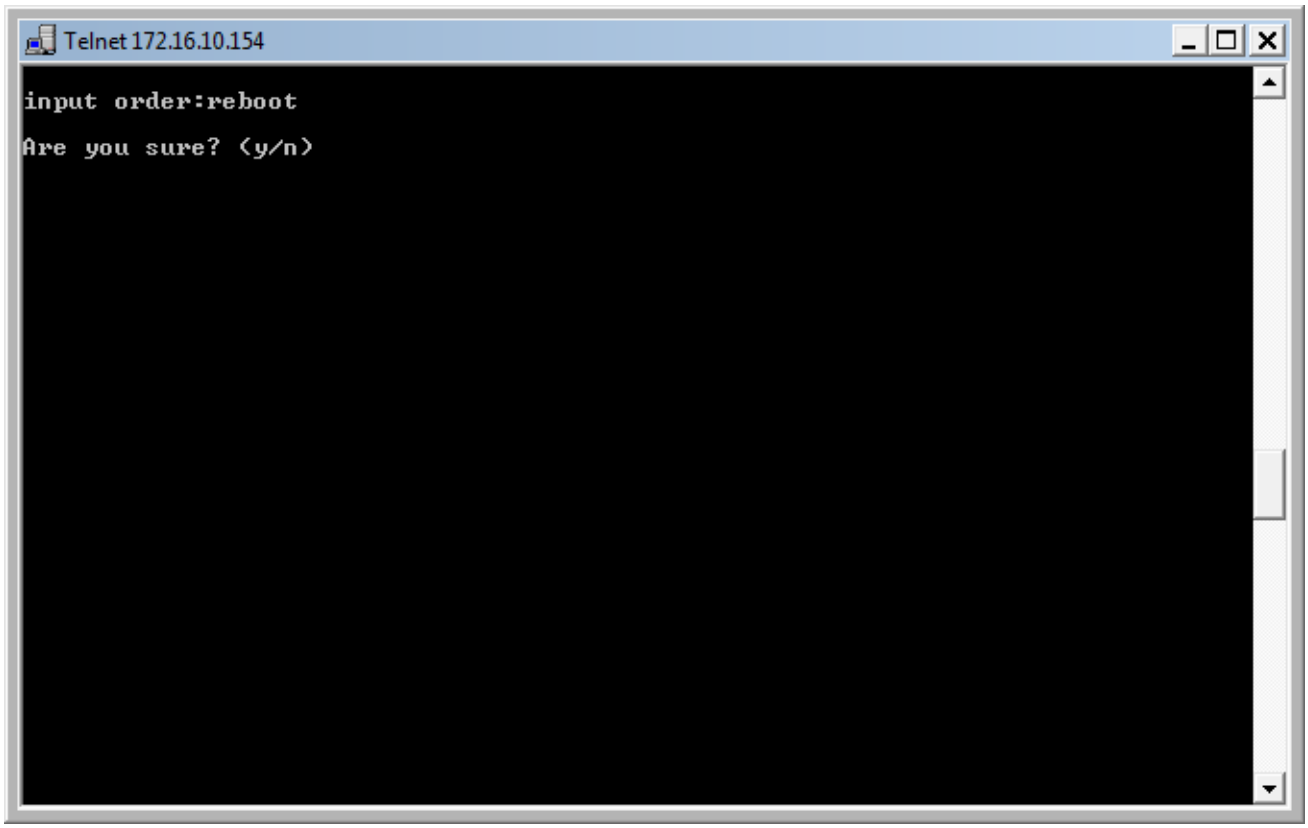
Figure 3-37



3.4.5 “Reboot” Command

Reboot command: to restart device

Figure 3-38

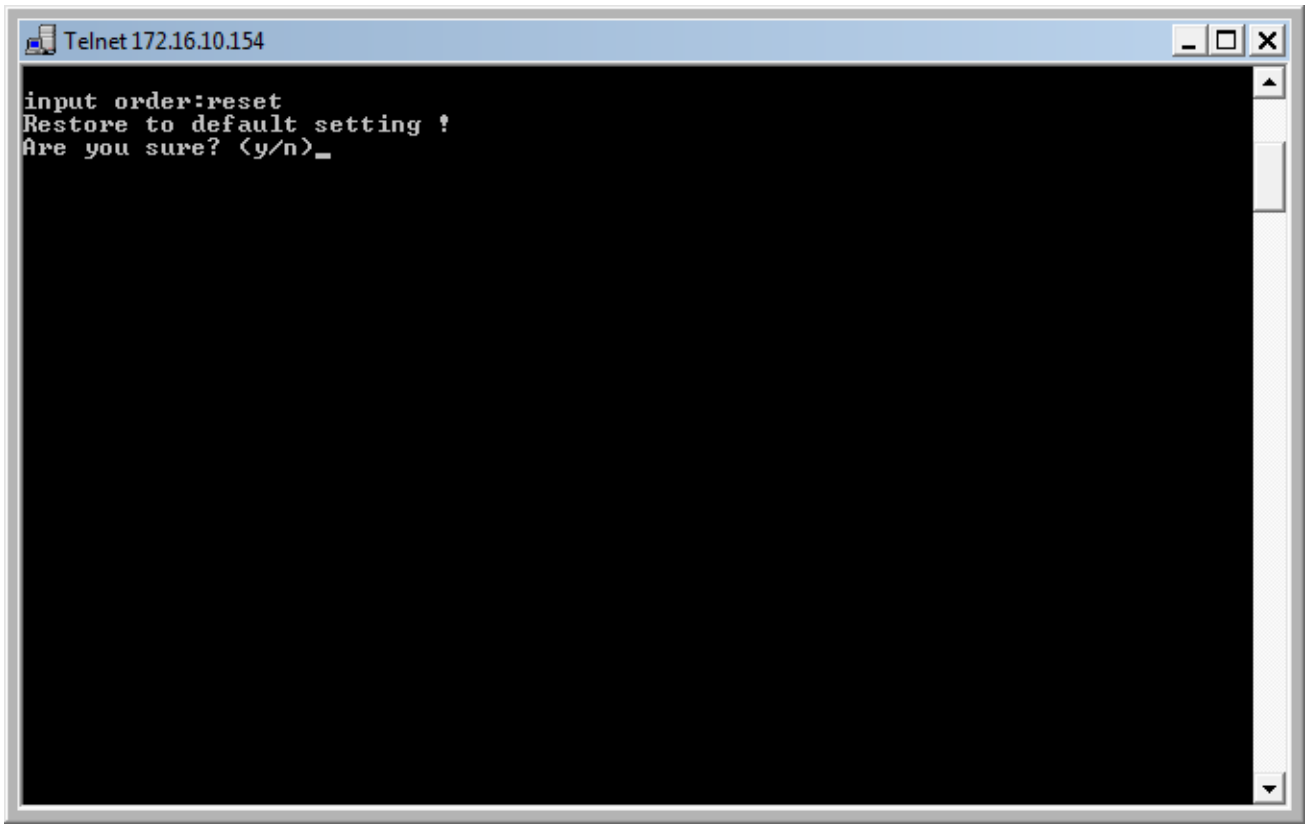


To exit the telnet interface and restart the device choose y and enter; type n and press Enter to exit the telnet interface without restarting the device

3.4.6 “RESET” command

To restore to factory settings

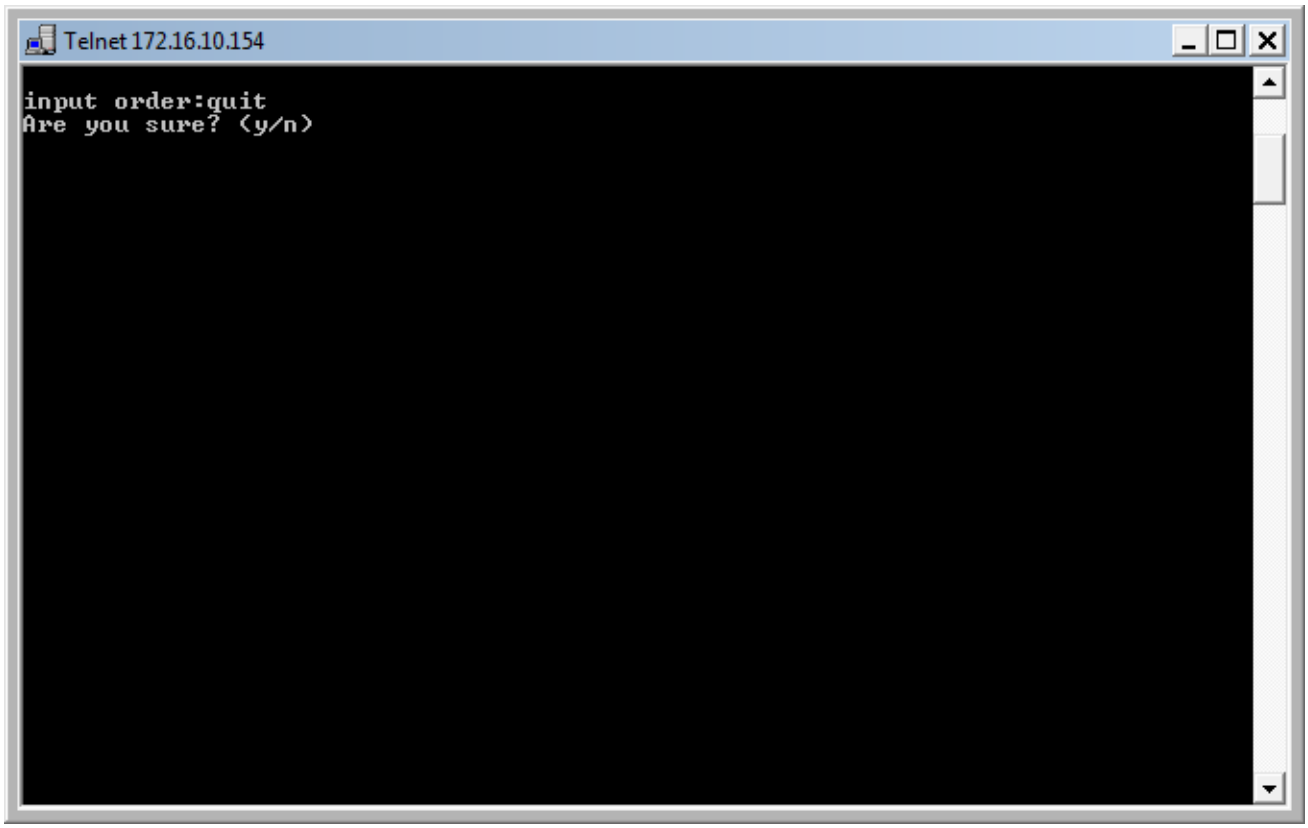
Figure 3-39



3.4.7 “QUIT” command

To quit the telnet client

Figure 3-40



Type y and press Enter to quit the Telnet interface. Type n and press Enter to cancel the operation.

3.5 MODBUS Access

- For further details on PowerMax PDU MODBUS, please request our MODBUS support document from Siemon Technical Support.

4 Frequently Asked Questions

4.1 Forgot IP address

- Check on the LCD screen, the first page displays the IP address.

4.2 Failed to send email

- Check and confirm that the device is connected to network and the network is working normally.
- Check DNS configuration and confirm whether it is successful.
- Check and confirm POP, SMTP sever is correct and the same as the sender mailbox sever. Confirm SMTP port is correct.

4.3 Reset IP address to default

- Press and hold the RESET button for 6 seconds, Release the RESET button when the device buzzes, the device will restart with the default IP address.

5 Technology Parameters

No	Performance parameter		Technical parameter
1	Input	Rated input voltage	110/220VAC 50/60HZ; 380V~ 50/60 Hz;
		Rated input plug	IEC60309 standard
		Cable specification	16A:3×2.5mm² 32A:3×6.0mm²; 3×16A:5×2.5mm² 3×32A:5×6.0mm²
		Cable length	2.5M
		Max. load current	16A, 32A 3×16A, 3×32A
		Overload protector	1P circuit breaker 3P circuit breaker
2	Output	Socket standard	Standard IEC320 C13、C19
		Socket quantity	Monitored Series: 8、16、24、36way; Smart Series: 8、16、24way; Switched Series: 8、16、24way; Managed Series: 8、16、24way;
		Output voltage	110/220VAC 50/60HZ
		Output current	16A、32A 3*16A、3*32A
3	Control ports	Net port	1xRJ45 port
		Daisy chain port	2xRJ45 port
		Software update port	1x RJ45 port
		Temperature & humidity port	Max 2xRJ11 port（can add more）
		Smoke sensor port	Max 1xRJ11 port（optional）
		Water sensor port	Max 1xRJ11 port（optional）
		Door sensor port	Max 1xRJ11 port（optional）
4	Display	Working state	1xLED
		Power pulse	1xLED
		IP Address, M/S PowerMax state, measurement value,	LCD screen（Resolution: 128×64）

		alarm state	
5	Load current display technology requirement	Total current	Full-scale:16A/32A,Accuracy:±1%+0.2 Resolution:200mA, Response:400ms
		Individual load current	Full-scale: 10A/ 16A, Accuracy:±1%+0.1, resolution:100mA, Response:400ms
6	Temperature / humidity Technology requirement	Temperature	Working range: -40℃ ~ +100℃ Accuracy:±1℃，Response: 400ms
		Humidity	Accuracy:±5%RH, Response: 400ms
7	Product size	Product size（L×W×H）	X2×56×50mm
		Mounting hole	X3
8	Case color	Color	Black
9	Fittings	Installation bracket	1 set
10	Optional fittings	Sensor	Temperature/humidity sensor
			Smoke sensor
			Door sensor
			Water logging sensor
11	Environment	Working Environment	Temperature: -10℃～+45℃ Relative humidity: 5%～95%
		Storage Environment	Temperature: -20℃～+70℃ Relative humidity: 5%～95%
12	ROHS	Compliance	

6 Warranty and Service

Siemon warranties the PDU to be free from any defects, material and workmanship for a period of two years from the date of purchase. Siemon's obligation under this warranty is limited to repairing or replacing.

This warranty does not apply to equipment that has been damaged by negligence, misuse or has been altered or modified in any way. Siemon does not warrant integration with 3rd party hardware or applications.

6.1 Technical support

Global Headquarters

Watertown, Connecticut USA

Tel: (1) 866-548-5814

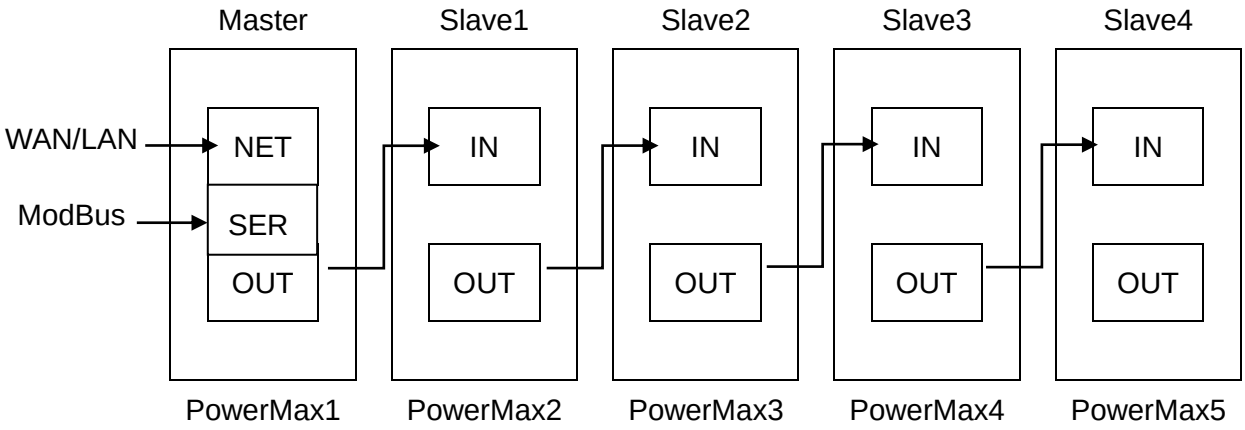
For a complete listing of our global offices visit our web site www.siemon.com

6.2 General policies

To assist safe installations, comply with the following:

A. Use caution when installing or modifying telecommunications circuits.

B. Never touch uninsulated wire terminals unless the circuit has been disconnected.

C. Never install this device in a wet location.

D. Never install wiring during a lightning storm.