



PowerMax™

Intelligent Power Distribution Unit (PDU) User Manual

V1.3.1

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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 environment 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 flashes 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: when the total PDU current; individual outlet current (Smart and Managed); sensors

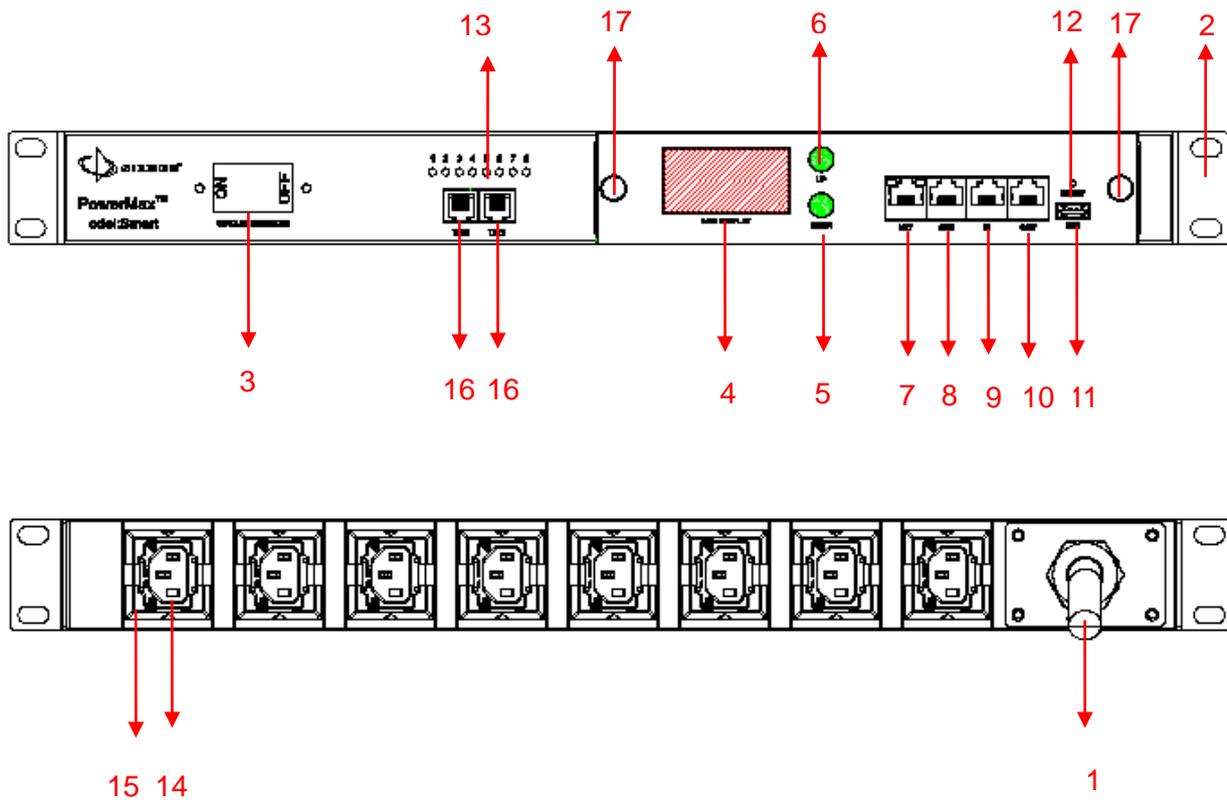
1.3. Product picture and description

1.3.1. Vertical-mounting



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/H2: temperature and humidity sensor port 2
18. SENSOR: extend sensor hub communication port
19. LED outlet indicator
20. Outlets

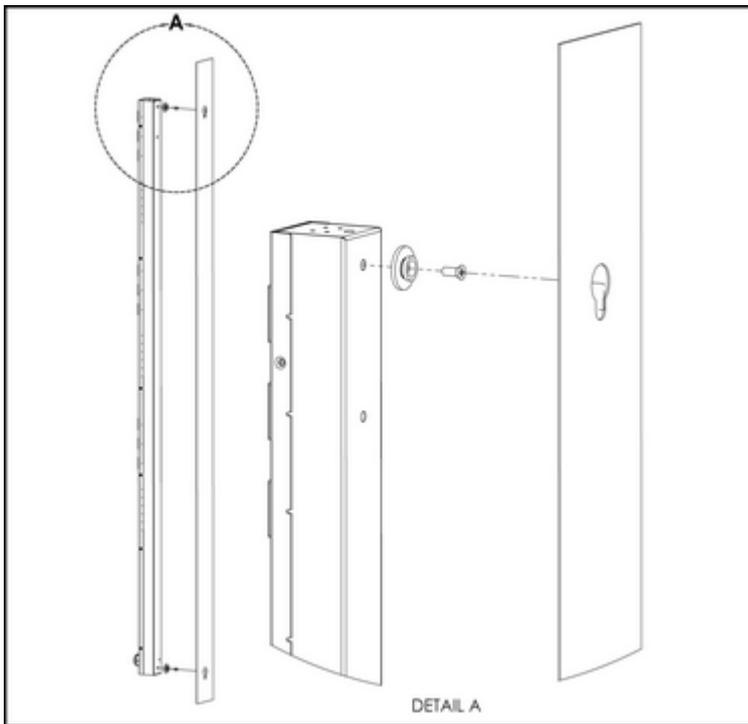
1.3.2. Horizontal-mounting



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.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)



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

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	

2.3. 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. Environment 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 UP button quickly followed by the DOWN button 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.

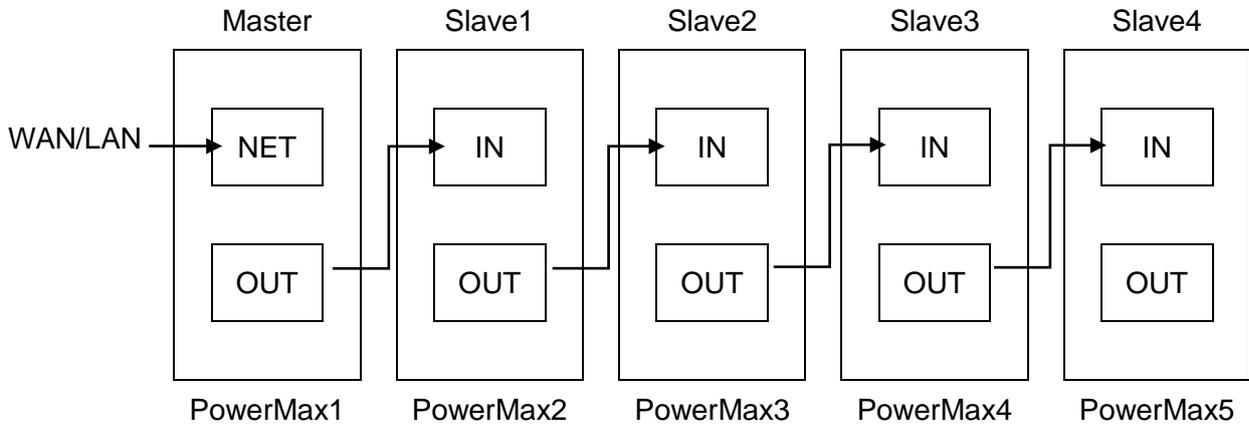
2.9. Master or Slave configuration

Configure the PowerMax PDU to be either Master or Slave in the Web interface. The current Master

or Slave status will be displayed in the LCD home page, “M/S: Master” means Master, and “M/S: Slave1” means Slave 1.

2.10. Daisy-Chain

Daisy-chain schematic:



How to daisy-chain

- 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.

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.

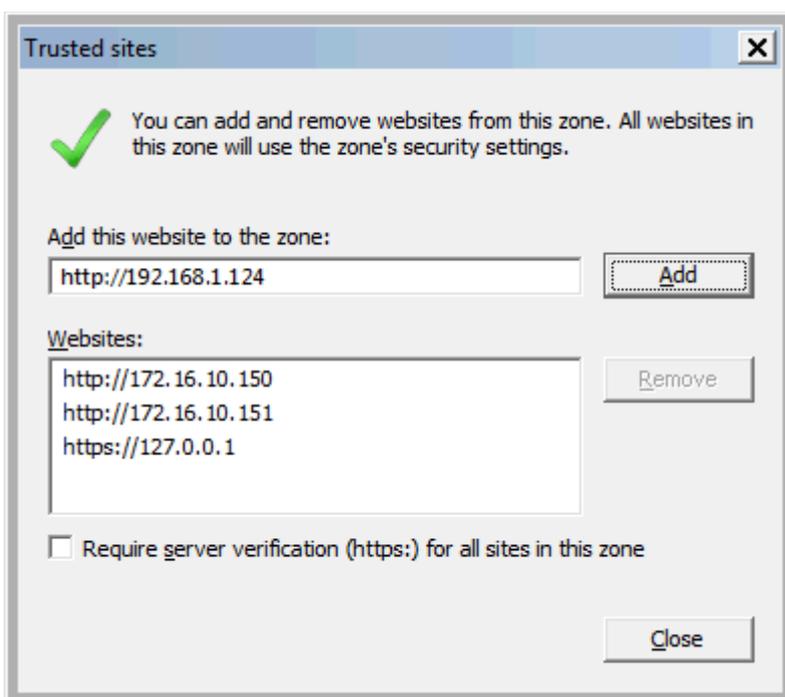
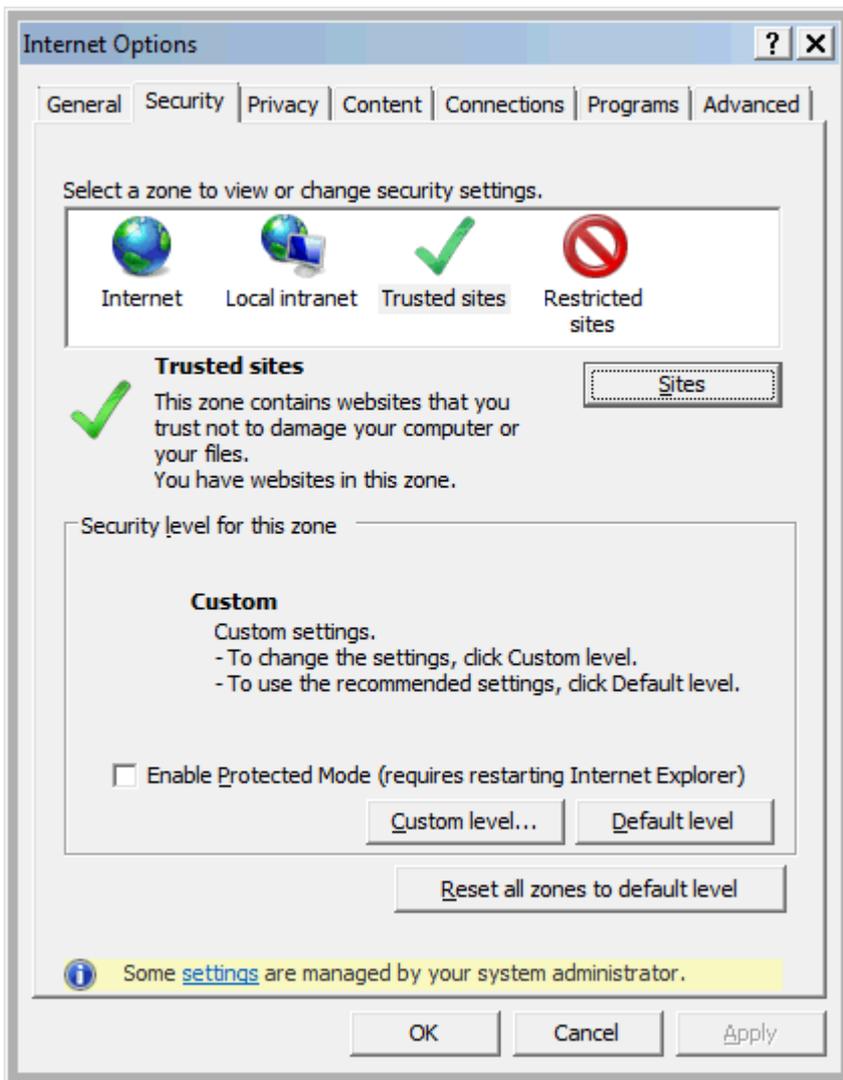
3.2. Access method

PowerMax PDUs can be accessed via browsers including Internet Explorer, Google Chrome and Firefox. 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 plug in.

3.3.Web access

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

Figure 3-1



welcome to PowerMax system

Name
siemon

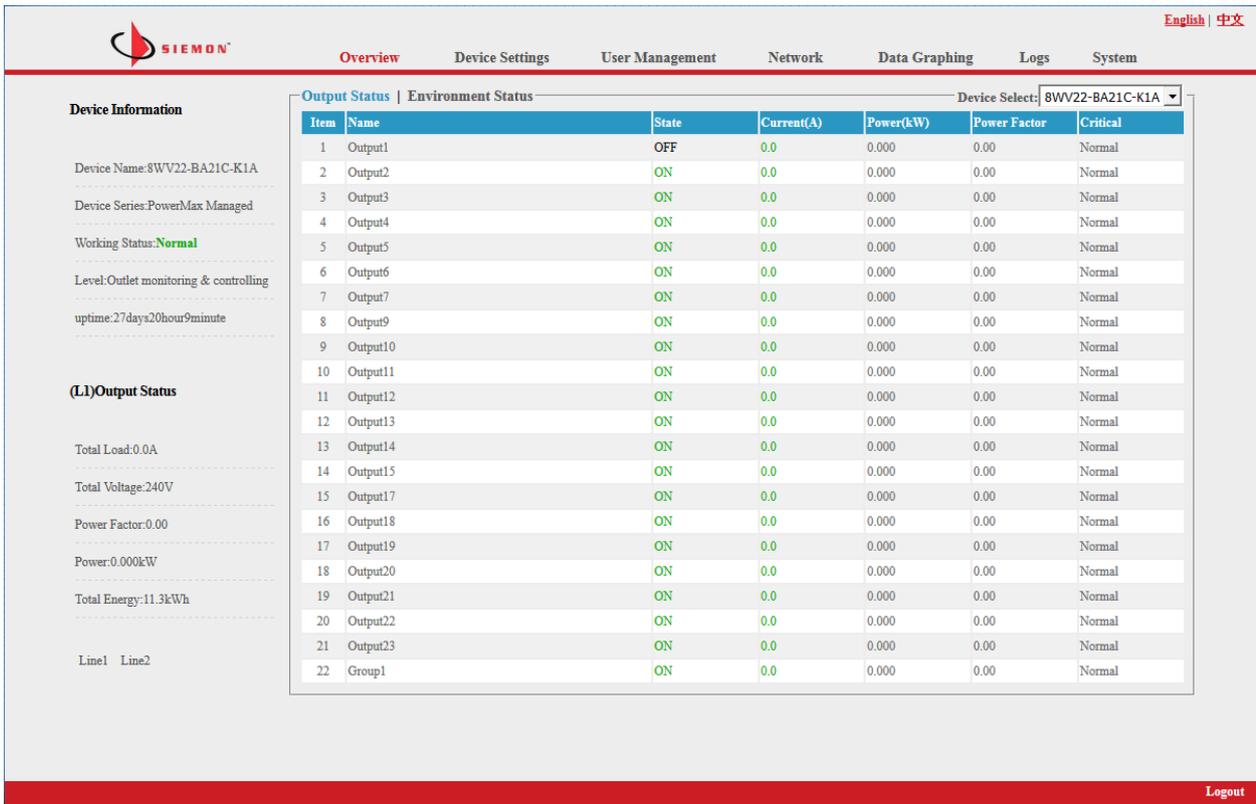
Password
●●●●●●●

Login

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 environment 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

- Work mode setting: set the device as Master or Slave (1-4) from the drop down menu and save.
- Device name setting: Apply friendly name to each device and save.
- 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 17 (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

The screenshot displays the 'Device Settings' page in the Siemon PowerMax web interface. The top navigation bar includes 'Overview', 'Device Settings' (highlighted), 'User Management', 'Network', 'Data Graphing', 'Logs', and 'System'. The right side of the header shows 'English | 中文' and a 'Logout' link at the bottom right. A left sidebar lists various settings categories: 'Device Settings', 'Basic Settings', 'Group Settings', 'Outlet Settings', 'Time Switch', 'Super Power', 'Sensor Settings', 'Energy Settings', and 'Outlet Control'. The main content area is divided into four sections, each with a 'Save' button:

- Work Mode Setting:** Work Mode: Master
- Device Name Setting:** Device Select: Master; Device Name: 8WV22-BA21C-K1A
- Power Delay:** Unify Delay: Enable; Power Delay: 1 s
- Mode Setting:** Buzzer Switch: OFF; Group Function: Enable; LCD Bright Mode: Disable

Group settings

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

Figure 3-4

The screenshot displays the 'Group Settings' configuration page for a Siemon device. The interface includes a top navigation bar with options like Overview, Device Settings, User Management, Network, Data Graphing, Logs, and System. A sidebar on the left lists various settings categories such as Basic Settings, Group Settings, Outlet Settings, Time Switch, Super Power, Sensor Settings, Energy Settings, and Outlet Control. The main content area features a table for assigning 24 outlets to six different groups. The table has columns for Item, Name, Group1, Group2, Group3, Group4, Group5, and Group6. Checkmarks in the Group1 column indicate that outlets 8, 16, and 24 are currently assigned to that group. 'Save' and 'Cancel' buttons are located at the bottom right of the table.

Item	Name	Group1	Group2	Group3	Group4	Group5	Group6
1	Output1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Output2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Output3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Output4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Output5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Output6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Output7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Output8	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
9	Output9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Output10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Output11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Output12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Output13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Output14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Output15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Output16	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
17	Output17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Output18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	Output19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	Output20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	Output21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	Output22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	Output23	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	Output24	<input checked="" type="checkbox"/>	<input type="checkbox"/>				

3.3.2.2. 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

Item	Name	Current(A)	Min(A)	Lower(A)	Upper(A)	Max(A)	Save
1	Output1	0.0	0.0	0.0	10.0	16.0	Save
2	Output2	0.0	0.0	0.0	10.0	16.0	Save
3	Output3	0.0	0.0	0.0	10.0	16.0	Save
4	Output4	0.0	0.0	0.0	10.0	16.0	Save
5	Output5	0.0	0.0	0.0	10.0	16.0	Save
6	Output6	0.0	0.0	0.0	10.0	16.0	Save
7	Output7	0.0	0.0	0.0	10.0	16.0	Save
8	Output9	0.0	0.0	0.0	10.0	16.0	Save
9	Output10	0.0	0.0	0.0	10.0	16.0	Save
10	Output11	0.0	0.0	0.0	10.0	16.0	Save
11	Output12	0.0	0.0	0.0	10.0	16.0	Save
12	Output13	0.0	0.0	0.0	10.0	16.0	Save
13	Output14	0.0	0.0	0.0	10.0	16.0	Save
14	Output15	0.0	0.0	0.0	10.0	16.0	Save
15	Output17	0.0	0.0	0.0	10.0	16.0	Save
16	Output18	0.0	0.0	0.0	10.0	16.0	Save
17	Output19	0.0	0.0	0.0	10.0	16.0	Save
18	Output20	0.0	0.0	0.0	10.0	16.0	Save
19	Output21	0.0	0.0	0.0	10.0	16.0	Save
20	Output22	0.0	0.0	0.0	10.0	16.0	Save
21	Output23	0.0	0.0	0.0	10.0	16.0	Save
22	Group1	0.0	0.0	0.0	20.0	25.0	Save

3.3.2.2.1. 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

The screenshot shows the 'Time Switch' configuration page in the Siemon PowerMax web interface. The page has a navigation bar with 'Overview', 'Device Settings', 'User Management', 'Network', 'Data Graphing', 'Logs', and 'System'. The 'Device Settings' sidebar is active, showing categories like Basic Settings, Group Settings, Outlet Settings, Time Switch, Super Power, Sensor Settings, Energy Settings, and Outlet Control. The main content area displays a table for scheduling outlet actions. The table has columns for Item, Name, Power on time, Power off time, Cycle, and Select. The 'Device Select' dropdown is set to '8WV27-BA21C-K1A'. The table contains 24 rows, each representing a scheduled outlet action with a specific power on and off time, and both 'Cycle' and 'Select' checkboxes are checked for all items.

Item	Name	Power on time	Power off time	Cycle	Select
1	1	2018-12-04 10:01	2018-12-04 10:00	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	2	2018-12-04 10:03	2018-12-04 10:02	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	3	2018-12-04 10:05	2018-12-04 10:04	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	4	2018-12-04 10:07	2018-12-04 10:06	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	5	2018-12-04 10:09	2018-12-04 10:08	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6	6	2018-12-04 10:11	2018-12-04 10:10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7	7	2018-12-04 10:13	2018-12-04 10:12	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8	8	2018-12-04 10:15	2018-12-04 10:14	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9	9	2018-12-04 10:17	2018-12-04 10:16	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10	10	2018-12-04 10:19	2018-12-04 10:18	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11	11	2018-12-04 10:21	2018-12-04 10:20	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12	12	2018-12-04 10:23	2018-12-04 10:22	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
13	13	2018-12-04 10:25	2018-12-04 10:24	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
14	14	2018-12-04 10:27	2018-12-04 10:26	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
15	15	2018-12-04 10:29	2018-12-04 10:28	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
16	16	2018-12-04 10:31	2018-12-04 10:30	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
17	17	2018-12-04 10:33	2018-12-04 10:32	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
18	18	2018-12-04 10:35	2018-12-04 10:34	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
19	19	2018-12-04 10:37	2018-12-04 10:36	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	20	2018-12-04 10:39	2018-12-04 10:38	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
21	21	2018-12-04 10:41	2018-12-04 10:40	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
22	22	2018-12-04 10:43	2018-12-04 10:42	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
23	23	2018-12-04 10:45	2018-12-04 10:44	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
24	24	2018-12-04 10:47	2018-12-04 10:46	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

3.3.2.2.2. Overload power cut-off

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

Figure 3-7

The screenshot shows the 'Super Power' configuration page for a device (8WV22-BA21C-K1A). The page features a sidebar with navigation options and a main table for configuring power settings for each outlet.

Item	Name	Current(A)	Min(A)	Max(A)	select
1	Output1	0.0	0.0	16.0	<input type="checkbox"/>
2	Output2	0.0	0.0	16.0	<input type="checkbox"/>
3	Output3	0.0	0.0	16.0	<input type="checkbox"/>
4	Output4	0.0	0.0	16.0	<input type="checkbox"/>
5	Output5	0.0	0.0	16.0	<input type="checkbox"/>
6	Output6	0.0	0.0	16.0	<input type="checkbox"/>
7	Output7	0.0	0.0	16.0	<input type="checkbox"/>
8	Output9	0.0	0.0	16.0	<input type="checkbox"/>
9	Output10	0.0	0.0	16.0	<input type="checkbox"/>
10	Output11	0.0	0.0	16.0	<input type="checkbox"/>
11	Output12	0.0	0.0	16.0	<input type="checkbox"/>
12	Output13	0.0	0.0	16.0	<input type="checkbox"/>
13	Output14	0.0	0.0	16.0	<input type="checkbox"/>
14	Output15	0.0	0.0	16.0	<input type="checkbox"/>
15	Output17	0.0	0.0	16.0	<input type="checkbox"/>
16	Output18	0.0	0.0	16.0	<input type="checkbox"/>
17	Output19	0.0	0.0	16.0	<input type="checkbox"/>
18	Output20	0.0	0.0	16.0	<input type="checkbox"/>
19	Output21	0.0	0.0	16.0	<input type="checkbox"/>
20	Output22	0.0	0.0	16.0	<input type="checkbox"/>
21	Output23	0.0	0.0	16.0	<input type="checkbox"/>
22	Group1	0.0	0.0	25.0	<input type="checkbox"/>

3.3.2.3. 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

The screenshot displays the 'Sensor Settings' configuration page for a Siemon device. The interface includes a top navigation bar with 'Overview', 'Device Settings', 'User Management', 'Network', 'Data Graphing', 'Logs', and 'System'. A sidebar on the left lists various settings categories: Basic Settings, Group Settings, Outlet Settings, Time Switch, Super Power, Sensor Settings, Energy Settings, and Outlet Control. The main content area shows a table for configuring sensor thresholds. The table has columns for Item, Name, Current value, Min, Max, and Save. The 'Device Select' dropdown is set to '8WV22-BA21C-K1A'. The table contains 10 rows, with the last two rows representing total load settings for Line 1 and Line 2.

Item	Name	Current value	Min	Max	Save
1	Temperature1	0	0	40	Save
2	Temperature2	0	0	40	Save
3	Temperature3	0	0	40	Save
4	Temperature4	0	0	40	Save
5	Humidity1	0	0	99	Save
6	Humidity2	0	0	99	Save
7	Humidity3	0	0	99	Save
8	Humidity4	0	0	99	Save
9	Total Load(L1)	0.0	0.0	16.0	Save
10	Total Load(L2)	0.0	0.0	16.0	Save

3.3.2.4. 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

The screenshot shows the Siemon PowerMax web interface. The top navigation bar includes 'Overview', 'Device Settings', 'User Management', 'Network', 'Data Graphing', 'Logs', and 'System'. The 'Device Settings' menu is expanded, showing options like 'Basic Settings', 'Group Settings', 'Outlet Settings', 'Time Switch', 'Super Power', 'Sensor Settings', 'Energy Settings', and 'Outlet Control'. The 'Energy Settings' sub-menu is selected, displaying a table for device '8WV22-BA21C-K1A'. The table lists 22 items, each with a name, energy consumption in kWh, and an 'Energy reset' button.

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

3.3.2.5. 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;

Also users can switch on or off all socket together by clicking the ALL on/off button

Figure 3-10

The screenshot displays the 'Outlet Control' configuration page for a Siemon device. The page features a sidebar with 'Device Settings' and various sub-menus like 'Basic Settings', 'Group Settings', 'Outlet Settings', 'Time Switch', 'Super Power', 'Sensor Settings', 'Energy Settings', and 'Outlet Control'. The main content area shows a table of outlets with columns for 'Item', 'Name', 'Status', 'On', 'Off', and 'Cycle'. Each outlet has a corresponding 'On', 'Off', and 'Cycle' button. The status of all outlets is 'ON'. At the bottom of the table, there are 'On' and 'Off' buttons for the 'ALL' group.

Item	Name	Status	On	Off	Cycle
1	Output1	ON	On	Off	Cycle
2	Output2	ON	On	Off	Cycle
3	Output3	ON	On	Off	Cycle
4	Output4	ON	On	Off	Cycle
5	Output5	ON	On	Off	Cycle
6	Output6	ON	On	Off	Cycle
7	Output7	ON	On	Off	Cycle
9	Output9	ON	On	Off	Cycle
10	Output10	ON	On	Off	Cycle
11	Output11	ON	On	Off	Cycle
12	Output12	ON	On	Off	Cycle
13	Output13	ON	On	Off	Cycle
14	Output14	ON	On	Off	Cycle
15	Output15	ON	On	Off	Cycle
17	Output17	ON	On	Off	Cycle
18	Output18	ON	On	Off	Cycle
19	Output19	ON	On	Off	Cycle
20	Output20	ON	On	Off	Cycle
21	Output21	ON	On	Off	Cycle
22	Output22	ON	On	Off	Cycle
23	Output23	ON	On	Off	Cycle
22	Group1	ON	On	Off	Cycle
	ALL		On	Off	

3.3.3. User Management

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

Figure 3-11

The screenshot displays the 'User Management' section of the Siemon PowerMax web interface. At the top, there is a navigation bar with the Siemon logo on the left and menu items: Overview, Device Settings, User Management (highlighted in red), Network, Data Graphing, Logs, and System. In the top right corner, there are language options: English | 中文. On the left side, a sidebar menu lists: Administration (selected), User Settings, User Group Settings, and Outlet Permission. The main content area is titled 'Administration' and contains a form for user configuration. The form fields are: User Select (dropdown menu with 'siemon' selected), User Name (text input with 'siemon'), Password (password input with 6 dots), Confirm Password (password input with 6 dots), E-mail Address1 (text input with 'stuart_gray@siemon.co.uk'), E-mail Address2 (empty text input), E-mail Address3 (empty text input), Phone Number (empty text input), and User Group (dropdown menu with 'admin' selected). Below the form are three buttons: Delete, Add, and Modify. At the bottom right of the interface, there is a 'Logout' link.

3.3.3.1.1. User Settings

Click User settings from the User Management menu.

- a. Create new account: Click user settings and fill in the new user name and password, click Add to finish
- b. Edit account: Click User settings, enter changed user name and password in the right hand side, click Modify to finish
- c. Delete account: Click User settings and select the account from the drop down list, then click Delete to finish
- 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 3-12

Figure 3-12

The screenshot displays the Siemon PowerMax User Management interface. The top navigation bar includes the Siemon logo, the text 'SIEMON', and several menu items: Overview, Device Settings, User Management (highlighted in red), Network, Data Graphing, Logs, and System. In the top right corner, there are links for 'English' and '中文'. On the left side, under the 'Administration' section, there is a sidebar menu with 'User Settings', 'User Group Settings', and 'Outlet Permission'. The main content area is titled 'User Group Configuration' and contains the following fields and options:

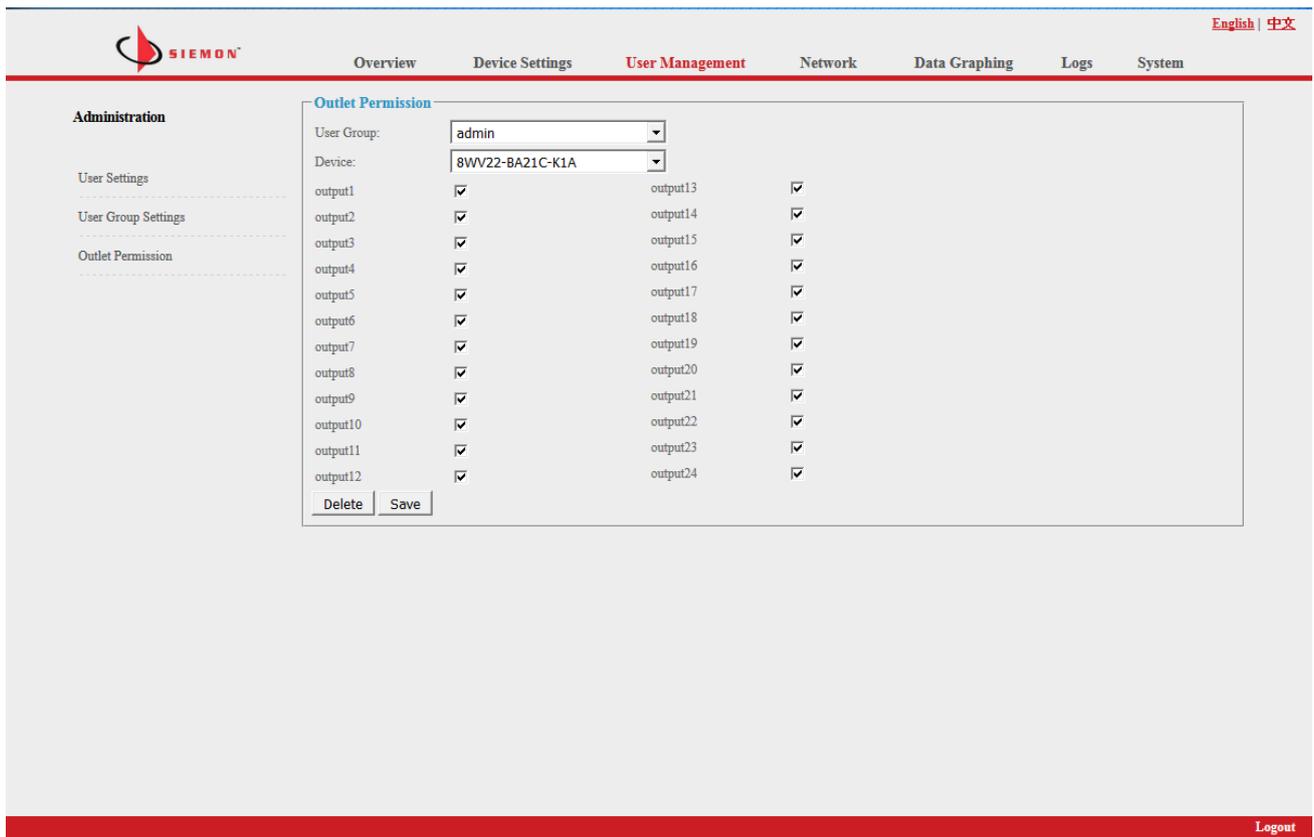
- User Group Select: A dropdown menu with 'admin' selected.
- User Group Name: A text input field containing 'admin'.
- User Configuration:
- Device Configuration:
- Log Management:
- System Update:

At the bottom of the configuration area, there are two buttons: 'Delete' and 'Save'. In the bottom right corner of the interface, there is a 'Logout' link.

- 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 finish
- g. Edit User Group rights: Select User Group from the drop down list and select the rights accordingly, click Save to finish

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

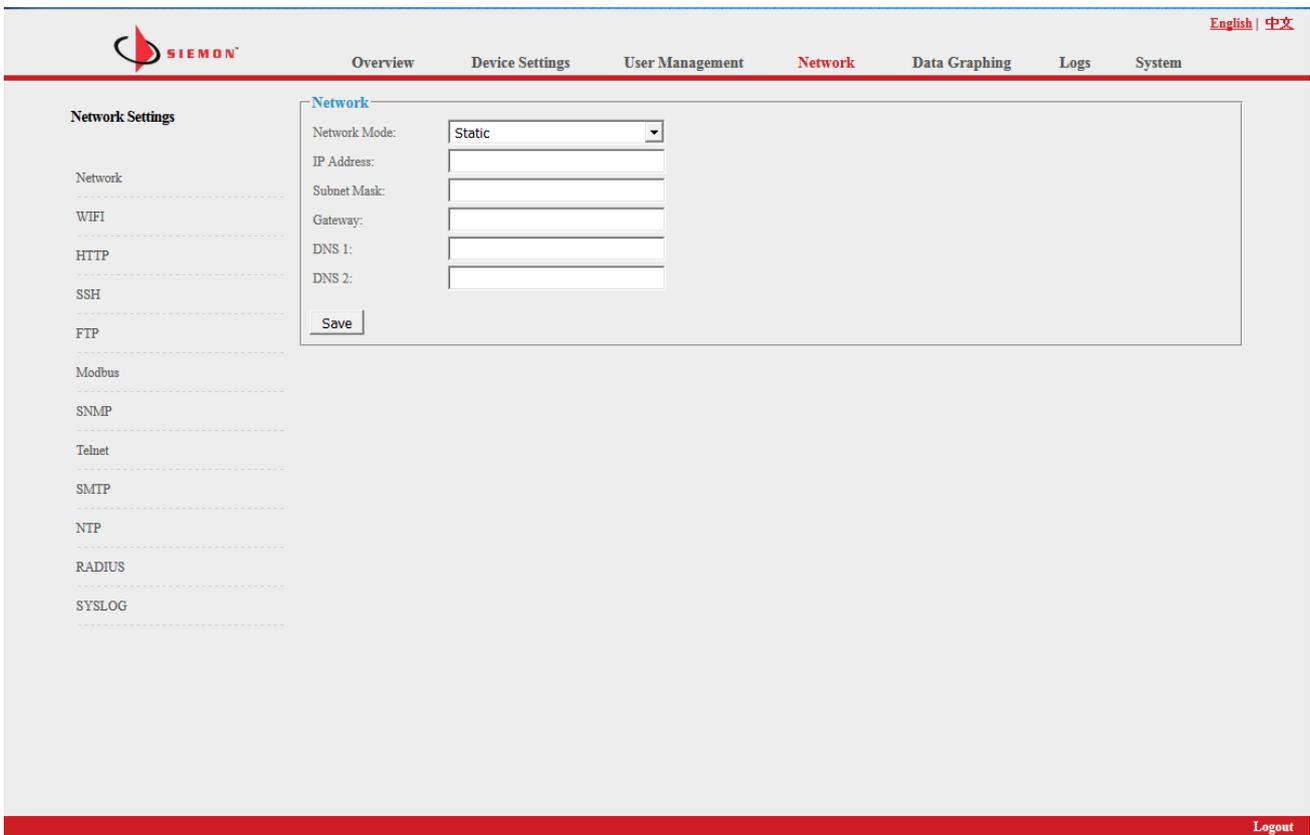
Figure 3-13



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,

3.3.4.1. Network

Users can configure the network manually or by automatic acquisition.

1. Manual 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 modification of network settings.

2. Automatic acquisition

Select Automatic acquisition and click “Save”, then restart the software, device will assign 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 manual or automatic acquisition

1. Manual 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. Automatic acquisition

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 3-15

The screenshot displays the Siemon PowerMax web management interface. At the top, there is a navigation bar with the Siemon logo and menu items: Overview, Device Settings, User Management, Network (highlighted), Data Graphing, Logs, and System. The top right corner shows language options: English | 中文. On the left, a sidebar lists various settings: Network Settings, Network, WIFI (highlighted), HTTP, SSH, FTP, Modbus, SNMP, Telnet, SMTP, NTP, RADIUS, and SYSLOG. The main content area is divided into three sections:

- WIFI Connection Setting:** Network Mode: Disable (dropdown), SSID: link, Password: masked with dots. A Save button is present.
- WIFI Network Setting:** Network Mode: Manual (dropdown), IP address: empty, Subnet Mask: empty, Gateway: empty, DNS 1: empty, DNS 2: empty. A Save button is present.
- WIFI Signal Searching:** A Search Network button.

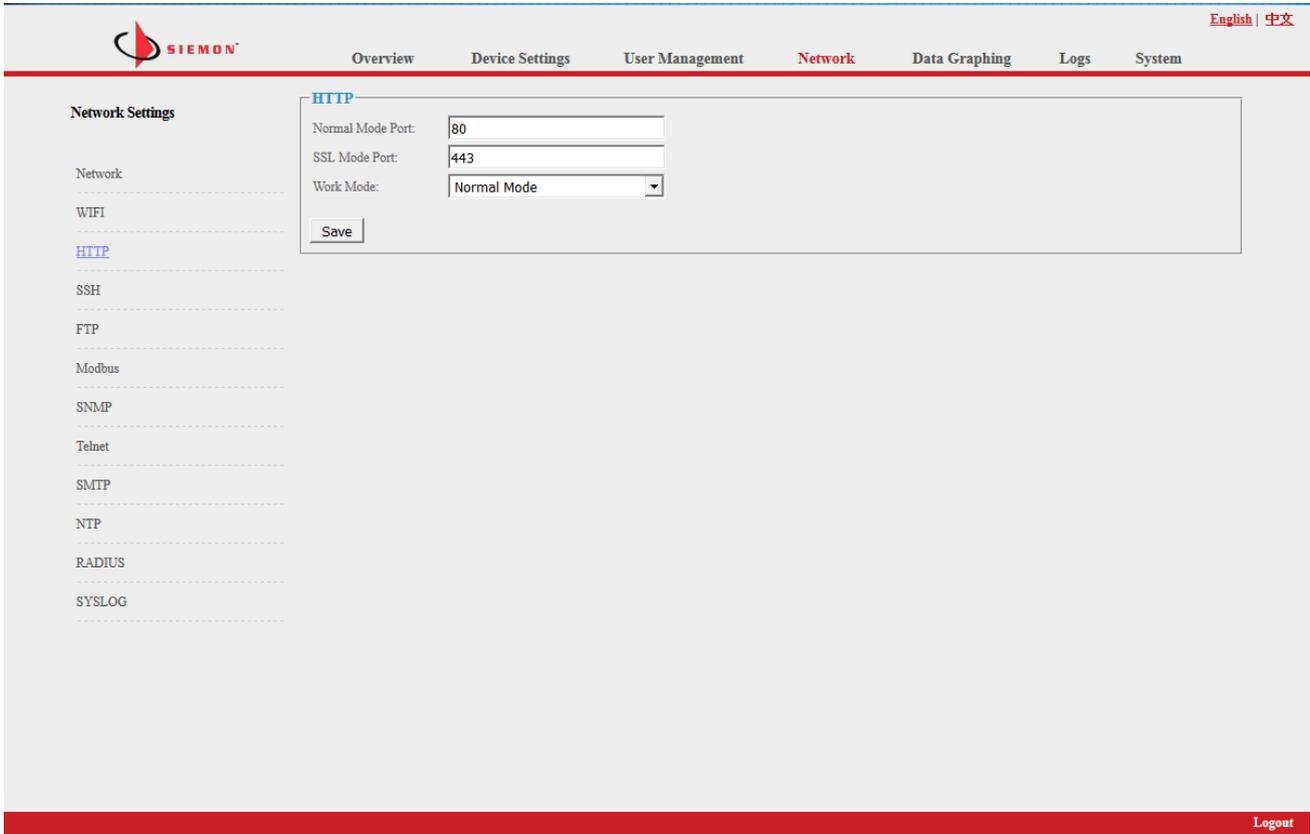
A Logout button is located at the bottom right of the interface.

3.3.4.3. HTTP

Fill in the correct HTTP port and save; under normal work mode, the default port is 80. HTTPS(SSL) Mode Port: default as 443.

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

Figure 3-16

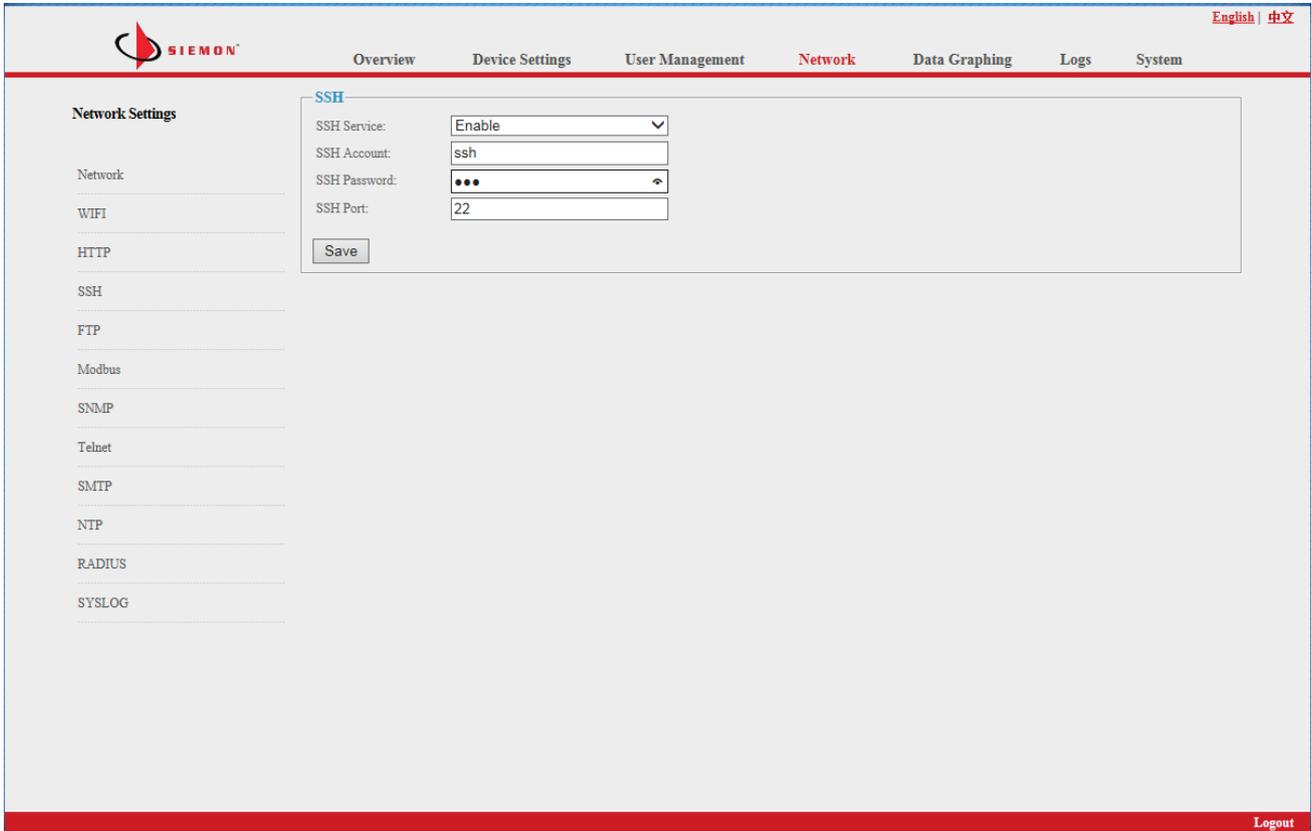


3.3.4.4. SSH

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

Note: SSH command line access, please refer to Telnet access instruction

Figure 3-17



3.3.4.5. FTP

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

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

Figure 3-18

The screenshot displays the Siemon PowerMax web management interface. At the top, there is a navigation bar with the Siemon logo and menu items: Overview, Device Settings, User Management, Network (highlighted), Data Graphing, Logs, and System. In the top right corner, there are language options: English and 中文. On the left side, a sidebar titled 'Network Settings' lists various protocols: Network, WIFI, HTTP, SSH, FTP, Modbus, SNMP, Telnet, SMTP, NTP, RADIUS, and SYSLOG. The 'FTP' option is selected. The main content area shows the 'FTP' configuration form with the following fields: 'FTP Service' set to 'Enable', 'FTP Account' set to 'tp', 'FTP Password' masked with three dots, and 'FTP Port' set to '21'. A 'Save' button is located at the bottom of the form. A 'Logout' link is visible in the bottom right corner of the interface.

3.3.4.6. MODBUS

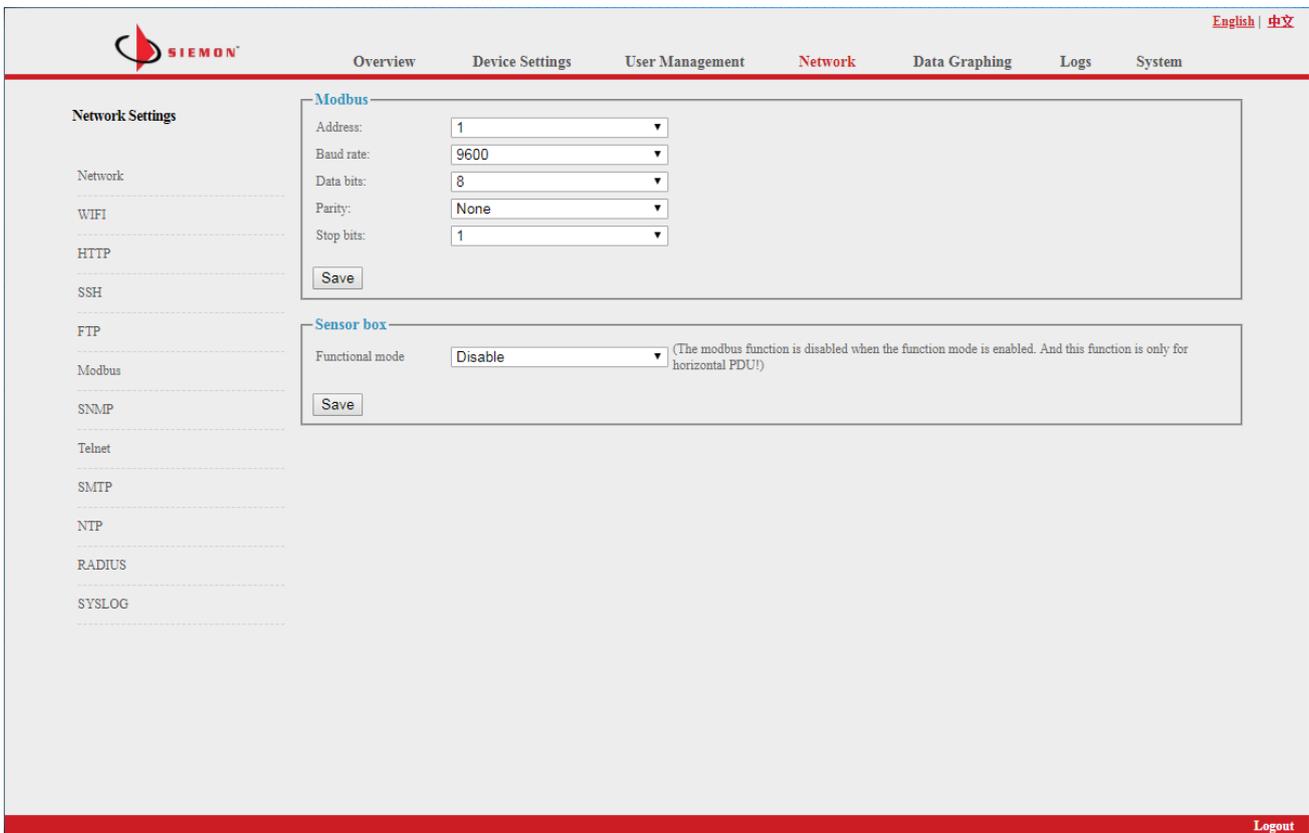
MODBUS protocol configuration includes MODBUS communication address (1-255), baud rate (9600,19200,38400,57600,115200), data bit (6,7,8), parity (N/A, even number, odd number), stop bit (1,2).

Note: The Master unit collects data from the SER port, please refer to the MODBUS protocol detail for reference.

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 RPDU.

Figure 3-19



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: 2 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 software must be restarted.

Figure 3-20

The screenshot displays the 'SNMP Agent(v1/v2c)Setting' and 'SNMP Agent(v3)Setting' configuration pages. The top navigation bar includes 'Overview', 'Device Settings', 'User Management', 'Network', 'Data Graphing', 'Logs', and 'System'. The left sidebar lists 'Network Settings' with sub-items: Network, WIFI, HTTP, SSH, FTP, Modbus, SNMP, Telnet, SMTP, NTP, RADIUS, and SYSLOG. The main content area shows two configuration sections:

- SNMP Agent(v1/v2c)Setting:**
 - SNMP agent: Enable
 - Write community: private
 - Read community: public
 - Trap1 address: 192.168.1.111
 - Trap2 address: 192.168.1.110
 - System location: location
 - System contact: contact
 - Save button
- SNMP Agent(v3)Setting:**
 - SNMP v3: Disable
 - Account: [empty]
 - Password: [empty]
 - Private Key: [empty]
 - Save button

The bottom right corner of the interface features a 'Logout' button.

3.3.4.9. Telnet

Telnet: select “Enable” or “Disable” and save. Restart the software after modification.

Fill in Telnet account and password. Telnet port is 23.

Figure 3-21

The screenshot displays the Siemon PowerMax web interface. At the top, there is a navigation bar with the Siemon logo and menu items: Overview, Device Settings, User Management, Network (highlighted), Data Graphing, Logs, and System. In the top right corner, there are language options: English and 中文. On the left side, a sidebar titled "Network Settings" lists various protocols: Network, WIFI, HTTP, SSH, FTP, Modbus, SNMP, Telnet, SMTP, NTP, RADIUS, and SYSLOG. The main content area is titled "Telnet" and contains the following configuration fields:

- Telnet Service: A dropdown menu set to "Enable".
- Telnet account: An empty text input field.
- Telnet password: An empty text input field.
- Telnet port: A text input field containing the value "23".

Below these fields is a "Save" button. In the bottom right corner of the interface, there is a "Logout" link.

3.3.4.10. SMTP

Click SMTP from network setting to configure SMTP.

Fill in the parameters of SMTP service including SMTP account, password, SMTP server, port and authentication mode. After saving, restart the software 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, reset the SMTP.

Figure 3-22

The screenshot displays the Siemon PowerMax web interface. At the top, there is a navigation bar with the Siemon logo and the text "English | 中文". Below this, a menu bar contains the following items: Overview, Device Settings, User Management, Network (highlighted in red), Data Graphing, Logs, and System. On the left side, there is a "Network Settings" sidebar with a list of options: Network, WIFI, HTTP, SSH, FTP, Modbus, SNMP, Telnet, SMTP (highlighted in red), NTP, RADIUS, and SYSLOG. The main content area is divided into two sections. The first section, titled "SMTP", contains the following fields: "SMTP account:" (text input), "Password:" (password input), "SMTP Server:" (text input), "Port:" (text input with "25" entered), and "Authenticate Mode:" (dropdown menu with "SSL" selected). A "Save" button is located below these fields. The second section, titled "SMTP Test", contains a "Receiver Account:" (text input) and a "Test" button. At the bottom right corner of the interface, there is a "Logout" link.

3.3.4.11. NTP

Click NTP from network settings.

Local time is the present time of the device server.

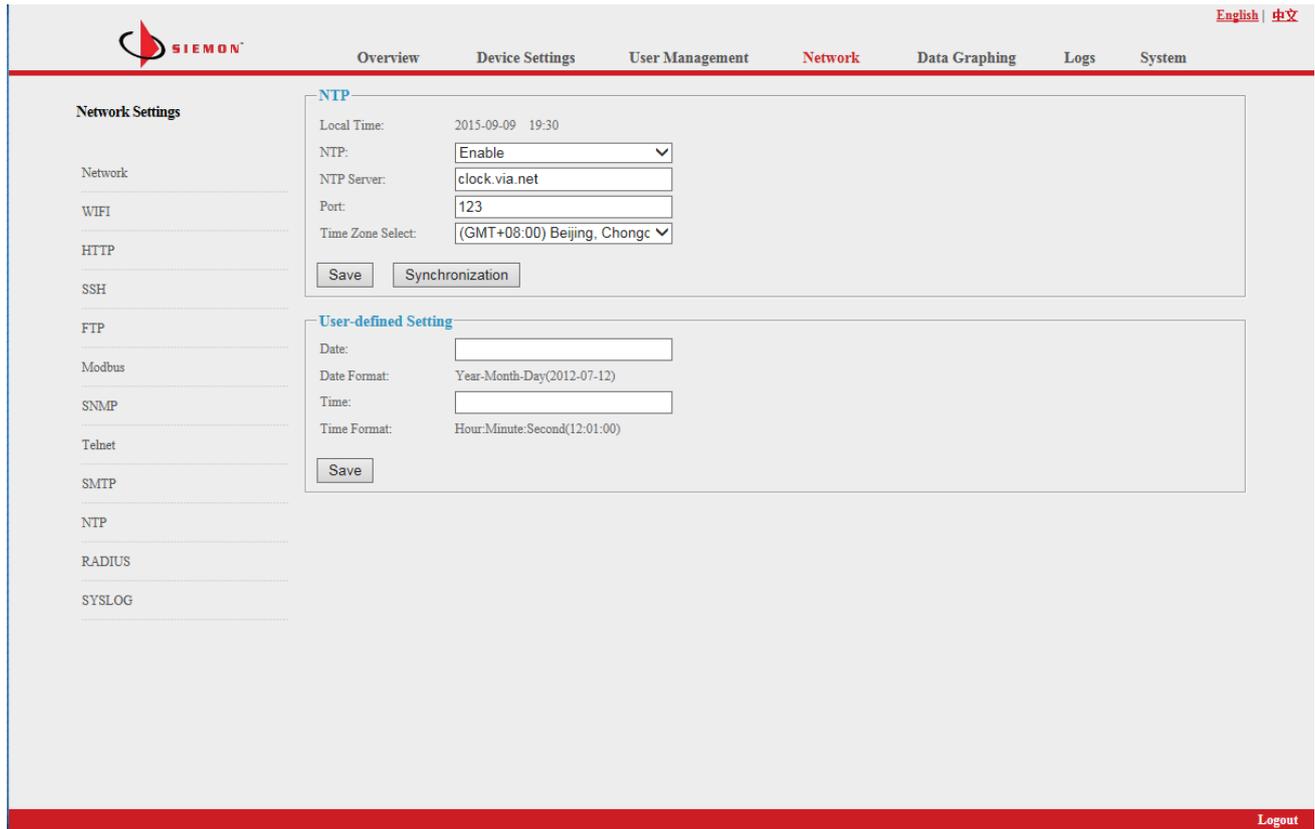
Enable or disable NTP service and click Save. Then restart the device.

Enable NTP, fill in the NTP server and port, select time zone and click "Save".

Click "Synchronization", device will automatically update to the local system time according to the current time zone and date from the internet.

User-defined setting: Disable NTP first and then fill in the date and time.

Figure 3-23



3.3.4.12. RADIUS

Users can choose basic authentication or Radius authentication.

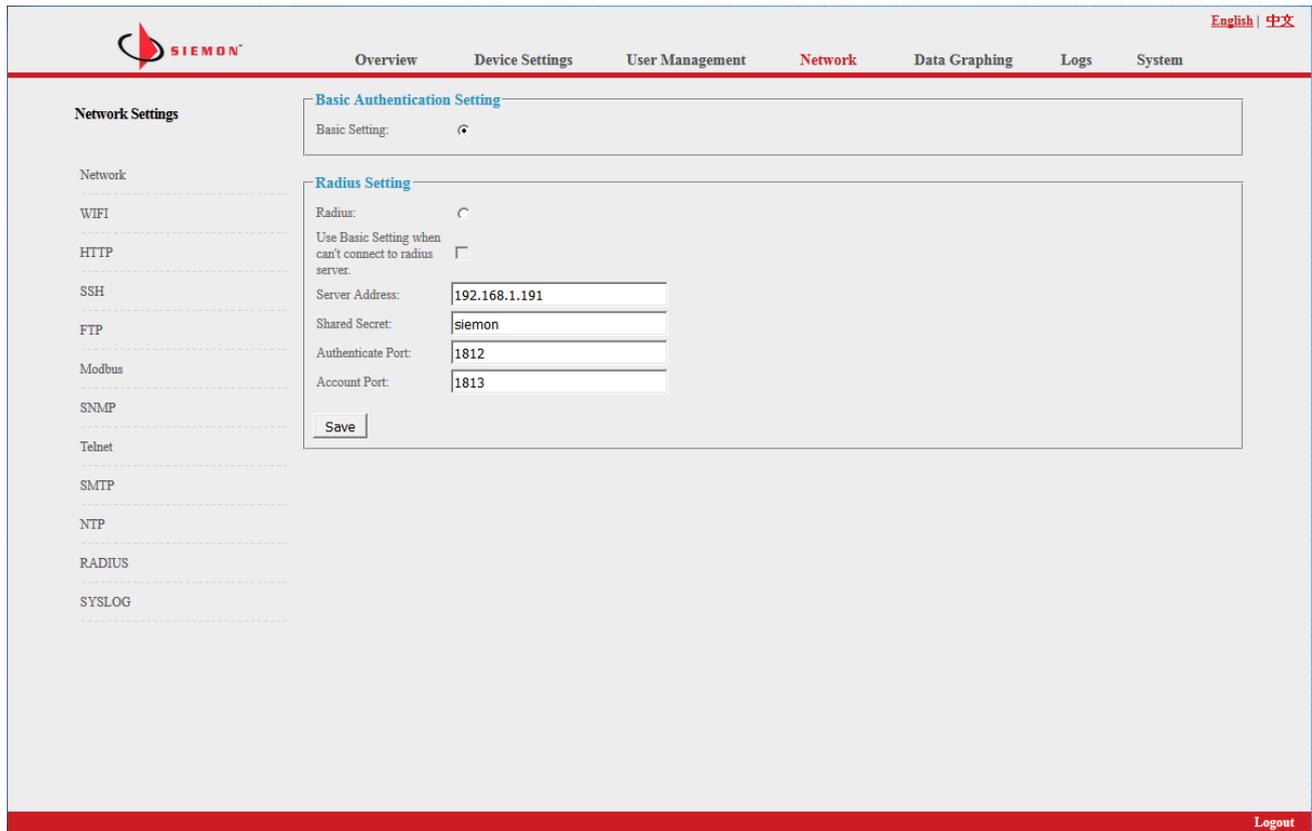
Select Radius authentication, device will authenticate a user account from the Radius server.

Server address: fill in the Radius server address.

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

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

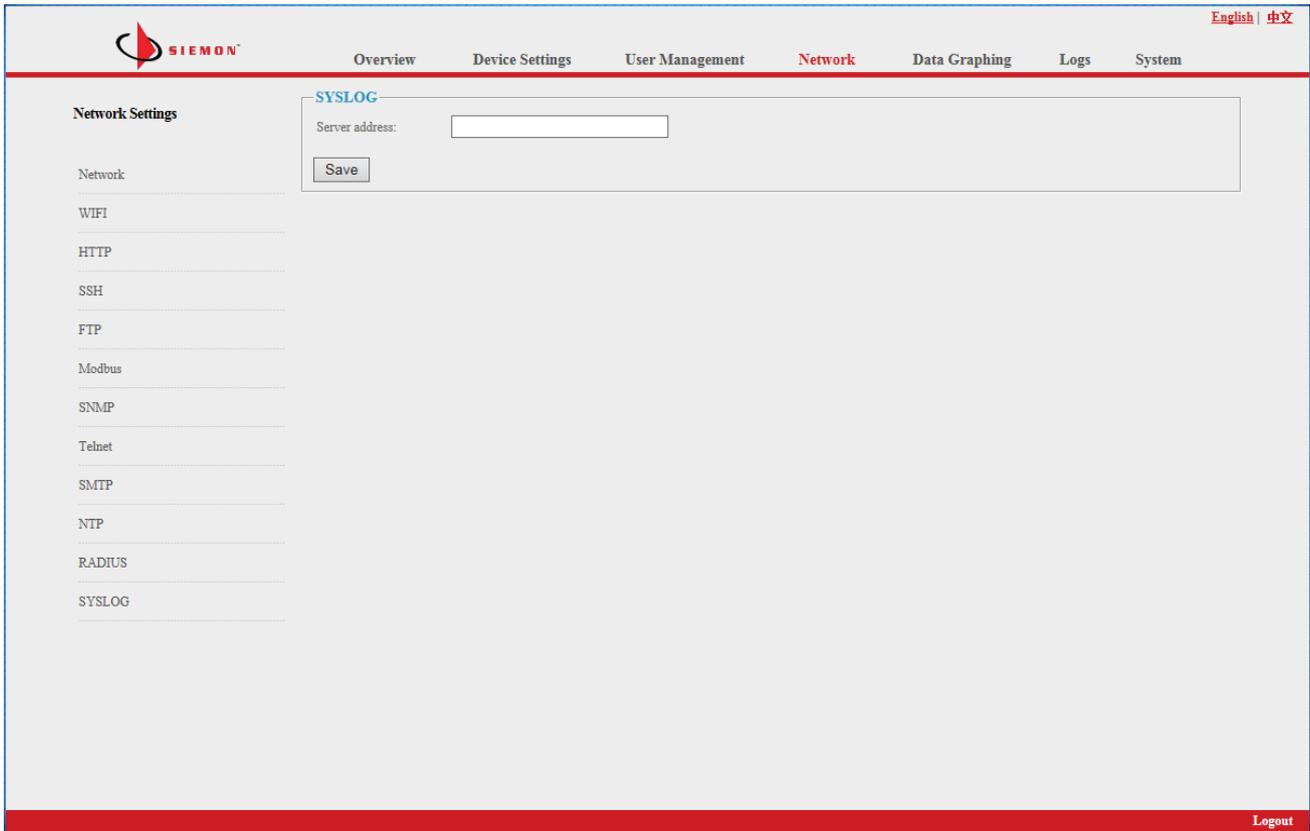
Figure 3-24



3.3.4.13. SYSLOG

Fill in the SYSLOG server IP address.

Figure 3-25

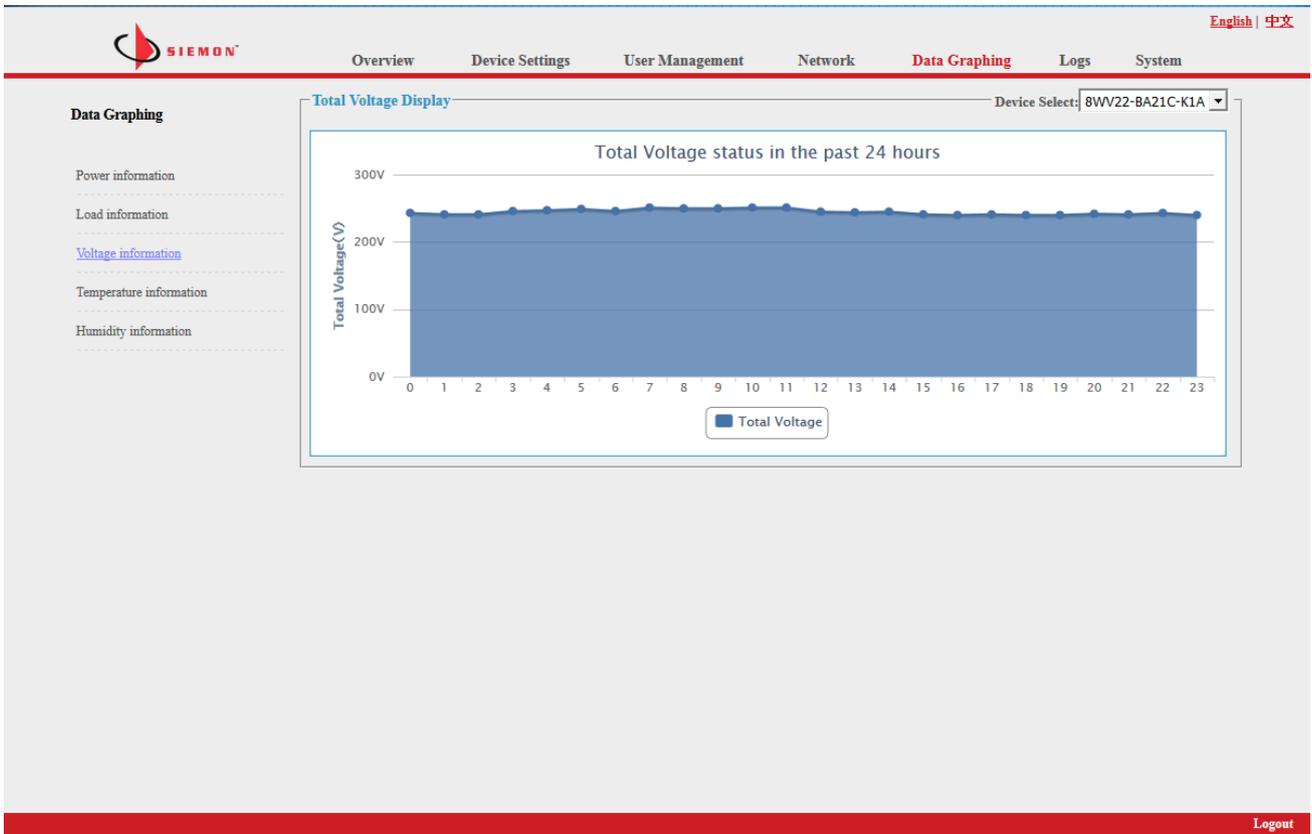


Note: SYSLOG contains system start, service errors during operation and command error information. After saving the SYSLOG server address, restart the software to take effect.

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 3-26



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 3-27

The screenshot shows the Siemon PowerMax web interface. At the top, there is a navigation bar with the Siemon logo and menu items: Overview, Device Settings, User Management, Network, Data Graphing, **Logs**, and System. In the top right corner, there are language options: English and 中文. On the left side, there is a sidebar with the following options: **Logs**, Logs Record, History Data, and Energy Record. The main content area displays a table titled "Logs" with the following data:

Item	Time	Type	Name	Details
1	2015-09-09 19:24	Administration	clever	User "seimon" be added to the list of users.
2	2015-09-09 19:15	User Login	clever	Login Success.
3	2015-09-09 19:12	User Login	clever	Login Success.
4	2015-09-09 19:05	User Login	clever	Login Success.
5	2015-09-09 19:01	Device configuration	clever	Network configuration was successfully modified.
6	2015-09-09 19:00	User Login	clever	Login Success.
7	2015-09-09 18:54	Device configuration	clever	Network configuration was successfully modified.
8	2015-09-09 18:54	User Login	clever	Login Success.
9	2015-09-09 15:12	User Login	clever	Login Success.
10	2015-09-09 15:10	User Login	clever	Login Success.
11	2015-09-09 14:35	Device configuration	clever	SNMP configuration was changed.
12	2015-09-09 14:35	Device configuration	clever	Network configuration was successfully modified.
13	2015-09-09 14:34	User Login	clever	Login Success.
14	2015-09-09 14:27	Device configuration	siemon	SNMP configuration was changed.
15	2015-09-09 14:25	User Login	siemon	Login Success.

Below the table, there are controls for page navigation: "Logs size:60KB Page 1 of 60" followed by buttons for "Go to", "Previous", "Next", "Delete", and "Export". At the bottom right of the interface, there is a "Logout" button.

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 3-28



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 3-29

The screenshot shows the 'Energy Recording Display' interface. At the top, there is a navigation bar with 'Logs' highlighted. Below the navigation bar, there are input fields for 'Start' (2016-01-10), 'End' (2016-01-11), and 'Device select' (8VV22-BA21C-K1A). There are 'View' and 'Export' buttons. The main content is a table with the following data:

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.

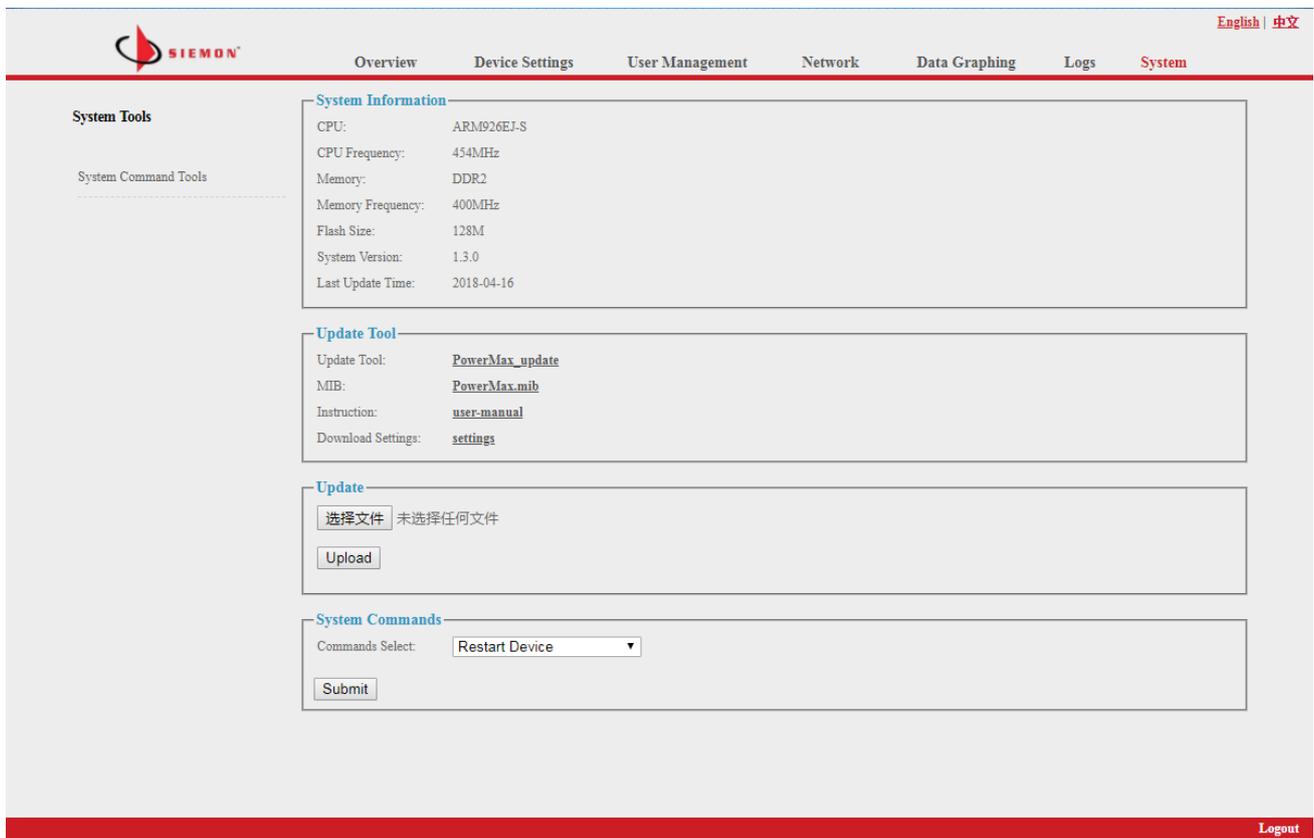
Users can upgrade the software version through the Rootfs.bin file provided by following the instructions in the upload software.

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 software or restore to factory default configuration from the System commands.

Figure 3-30



3.3.7.1. SNMP Access

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

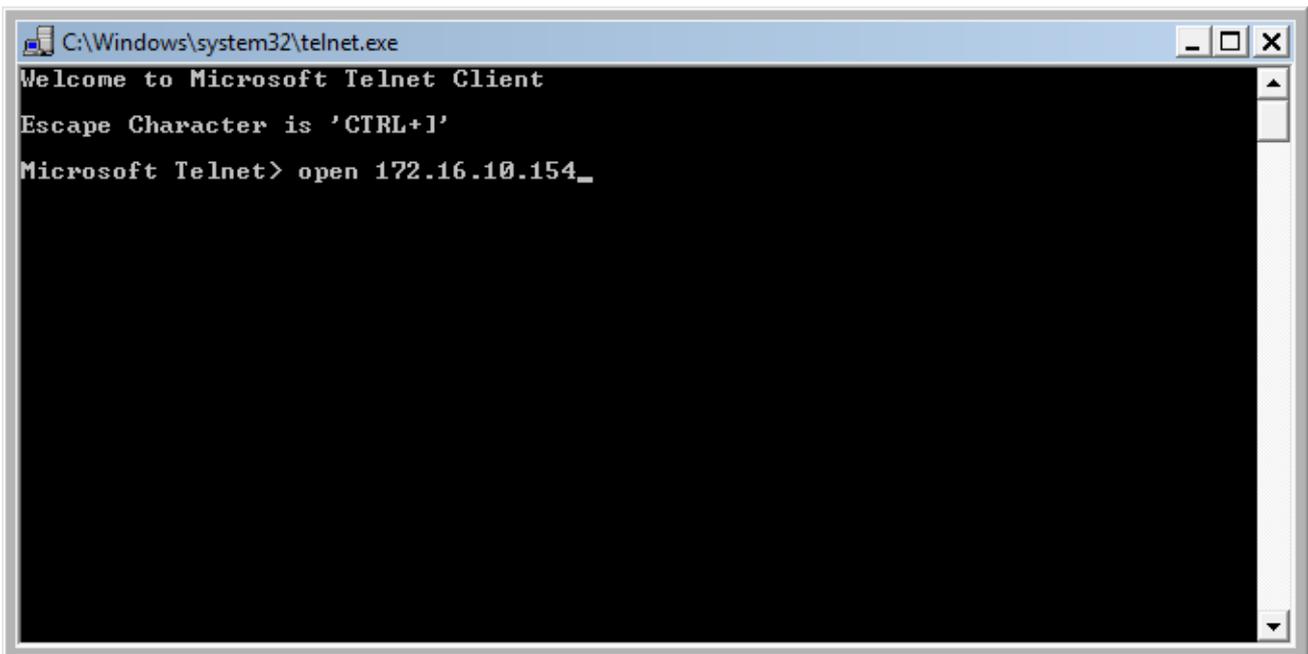
3.4. Telnet Access

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

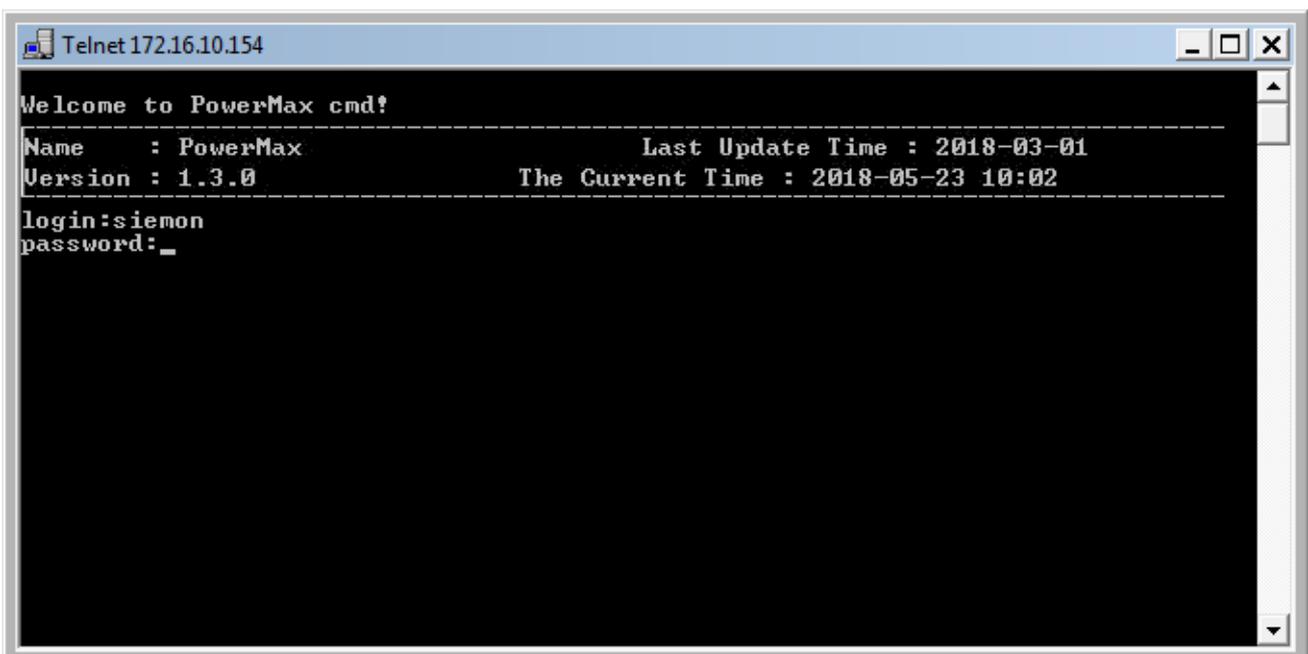
Enter the IP address.

Figure 3-31



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

Figure 3-32

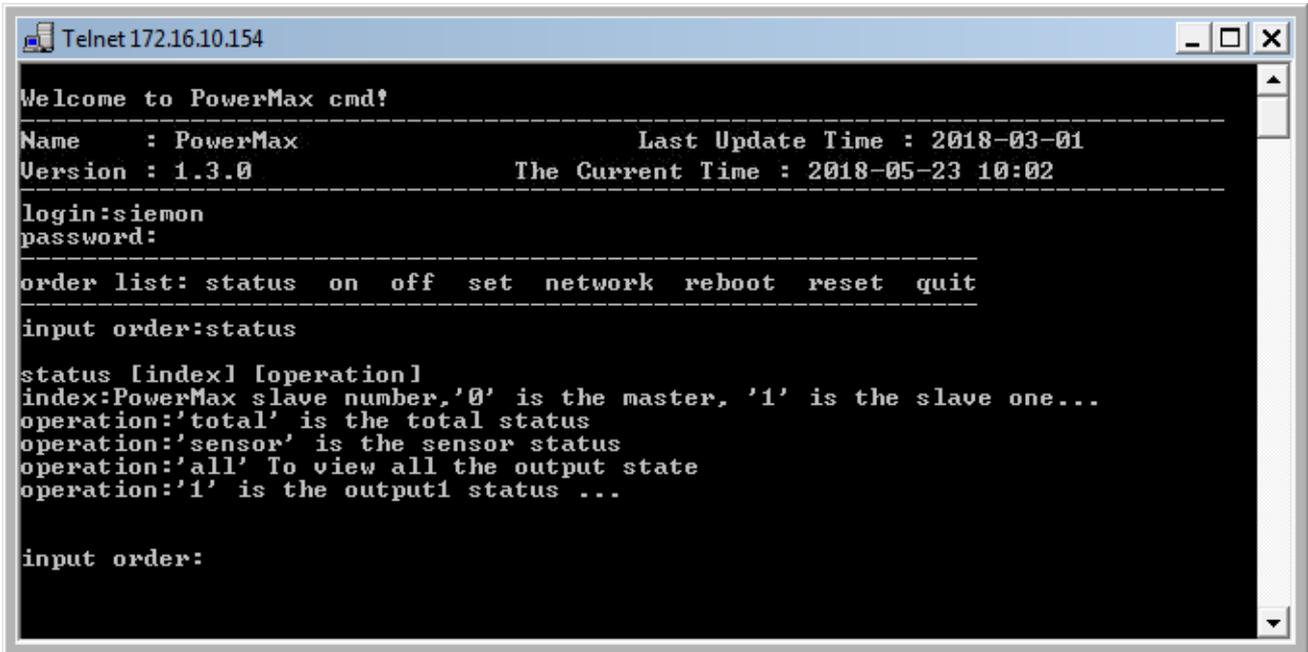


3.4.1. “STATUS” command

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).

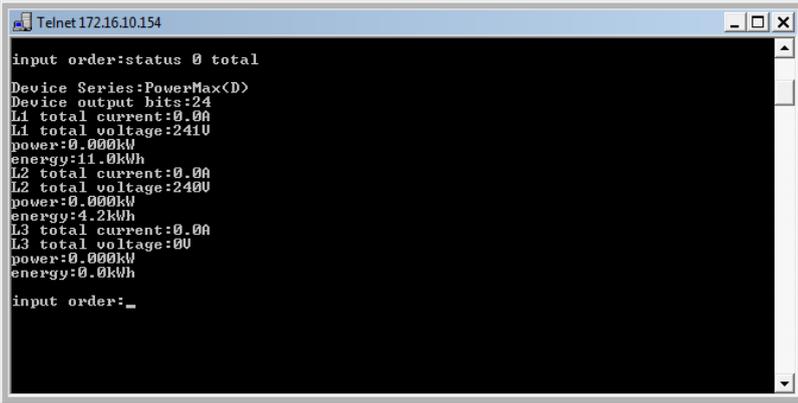
Command line format: STATUS **【index】****【operation】**

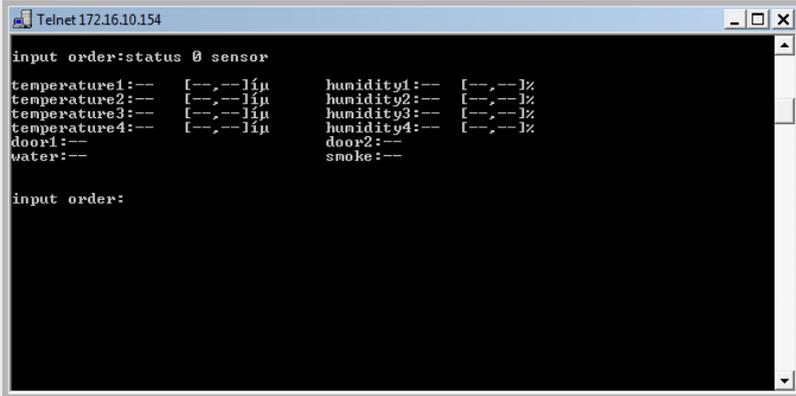
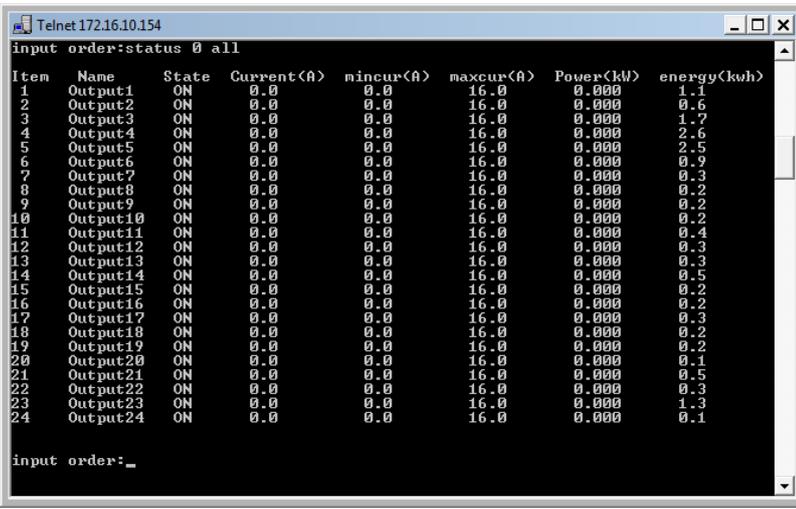
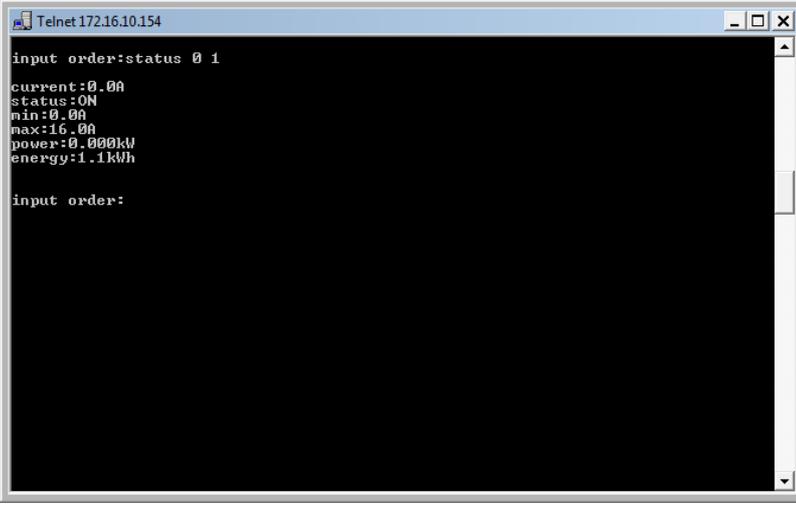
Figure 3-33



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

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

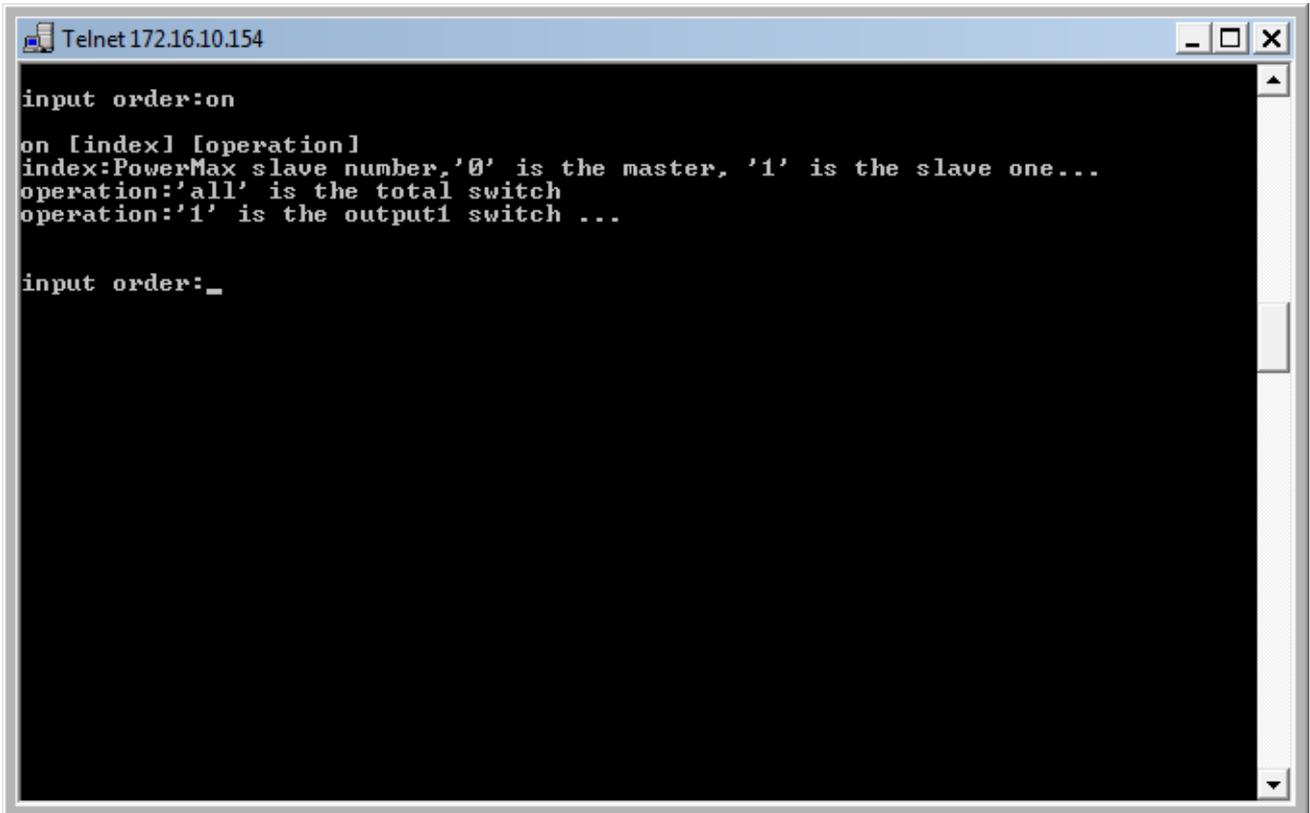
【operation】	Description
Total	<p>For example:</p>  <p>Enter command line---status 0 total: 0 means the Master(1-4 means Slave 1 to Slave 4), total means the overall status, the above figure shows input “status 0 total”.</p>

<p>sensor</p>	 <pre> Telnet 172.16.10.154 input order:status 0 sensor temperature1:-- [---,---]1µ humidity1:-- [---,---]1% temperature2:-- [---,---]1µ humidity2:-- [---,---]1% temperature3:-- [---,---]1µ humidity3:-- [---,---]1% temperature4:-- [---,---]1µ humidity4:-- [---,---]1% door1:-- water:-- smoke:-- input order: </pre> <p>Enter command line--- status 0 sensor: 0 means the Master unit; 1-4 means the Slave units.</p>																																																																																																																																																																																																								
<p>all</p>	 <pre> Telnet 172.16.10.154 input order:status 0 all </pre> <table border="1"> <thead> <tr> <th>Item</th> <th>Name</th> <th>State</th> <th>Current(A)</th> <th>mincur(A)</th> <th>maxcur(A)</th> <th>Power(kW)</th> <th>energy(Kwh)</th> </tr> </thead> <tbody> <tr><td>1</td><td>Output1</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>1.1</td></tr> <tr><td>2</td><td>Output2</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.6</td></tr> <tr><td>3</td><td>Output3</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>1.7</td></tr> <tr><td>4</td><td>Output4</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>2.6</td></tr> <tr><td>5</td><td>Output5</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>2.5</td></tr> <tr><td>6</td><td>Output6</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.9</td></tr> <tr><td>7</td><td>Output7</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.3</td></tr> <tr><td>8</td><td>Output8</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.2</td></tr> <tr><td>9</td><td>Output9</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.2</td></tr> <tr><td>10</td><td>Output10</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.2</td></tr> <tr><td>11</td><td>Output11</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.4</td></tr> <tr><td>12</td><td>Output12</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.3</td></tr> <tr><td>13</td><td>Output13</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.3</td></tr> <tr><td>14</td><td>Output14</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.5</td></tr> <tr><td>15</td><td>Output15</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.2</td></tr> <tr><td>16</td><td>Output16</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.2</td></tr> <tr><td>17</td><td>Output17</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.3</td></tr> <tr><td>18</td><td>Output18</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.2</td></tr> <tr><td>19</td><td>Output19</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.2</td></tr> <tr><td>20</td><td>Output20</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.1</td></tr> <tr><td>21</td><td>Output21</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.5</td></tr> <tr><td>22</td><td>Output22</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.3</td></tr> <tr><td>23</td><td>Output23</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>1.3</td></tr> <tr><td>24</td><td>Output24</td><td>ON</td><td>0.0</td><td>0.0</td><td>16.0</td><td>0.000</td><td>0.1</td></tr> </tbody> </table> <pre> input order:_ </pre> <p>Enter command line--- status 0 all, 0 means the Master unit; 1-4 means the Slave units.</p>	Item	Name	State	Current(A)	mincur(A)	maxcur(A)	Power(kW)	energy(Kwh)	1	Output1	ON	0.0	0.0	16.0	0.000	1.1	2	Output2	ON	0.0	0.0	16.0	0.000	0.6	3	Output3	ON	0.0	0.0	16.0	0.000	1.7	4	Output4	ON	0.0	0.0	16.0	0.000	2.6	5	Output5	ON	0.0	0.0	16.0	0.000	2.5	6	Output6	ON	0.0	0.0	16.0	0.000	0.9	7	Output7	ON	0.0	0.0	16.0	0.000	0.3	8	Output8	ON	0.0	0.0	16.0	0.000	0.2	9	Output9	ON	0.0	0.0	16.0	0.000	0.2	10	Output10	ON	0.0	0.0	16.0	0.000	0.2	11	Output11	ON	0.0	0.0	16.0	0.000	0.4	12	Output12	ON	0.0	0.0	16.0	0.000	0.3	13	Output13	ON	0.0	0.0	16.0	0.000	0.3	14	Output14	ON	0.0	0.0	16.0	0.000	0.5	15	Output15	ON	0.0	0.0	16.0	0.000	0.2	16	Output16	ON	0.0	0.0	16.0	0.000	0.2	17	Output17	ON	0.0	0.0	16.0	0.000	0.3	18	Output18	ON	0.0	0.0	16.0	0.000	0.2	19	Output19	ON	0.0	0.0	16.0	0.000	0.2	20	Output20	ON	0.0	0.0	16.0	0.000	0.1	21	Output21	ON	0.0	0.0	16.0	0.000	0.5	22	Output22	ON	0.0	0.0	16.0	0.000	0.3	23	Output23	ON	0.0	0.0	16.0	0.000	1.3	24	Output24	ON	0.0	0.0	16.0	0.000	0.1
Item	Name	State	Current(A)	mincur(A)	maxcur(A)	Power(kW)	energy(Kwh)																																																																																																																																																																																																		
1	Output1	ON	0.0	0.0	16.0	0.000	1.1																																																																																																																																																																																																		
2	Output2	ON	0.0	0.0	16.0	0.000	0.6																																																																																																																																																																																																		
3	Output3	ON	0.0	0.0	16.0	0.000	1.7																																																																																																																																																																																																		
4	Output4	ON	0.0	0.0	16.0	0.000	2.6																																																																																																																																																																																																		
5	Output5	ON	0.0	0.0	16.0	0.000	2.5																																																																																																																																																																																																		
6	Output6	ON	0.0	0.0	16.0	0.000	0.9																																																																																																																																																																																																		
7	Output7	ON	0.0	0.0	16.0	0.000	0.3																																																																																																																																																																																																		
8	Output8	ON	0.0	0.0	16.0	0.000	0.2																																																																																																																																																																																																		
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12	Output12	ON	0.0	0.0	16.0	0.000	0.3																																																																																																																																																																																																		
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14	Output14	ON	0.0	0.0	16.0	0.000	0.5																																																																																																																																																																																																		
15	Output15	ON	0.0	0.0	16.0	0.000	0.2																																																																																																																																																																																																		
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17	Output17	ON	0.0	0.0	16.0	0.000	0.3																																																																																																																																																																																																		
18	Output18	ON	0.0	0.0	16.0	0.000	0.2																																																																																																																																																																																																		
19	Output19	ON	0.0	0.0	16.0	0.000	0.2																																																																																																																																																																																																		
20	Output20	ON	0.0	0.0	16.0	0.000	0.1																																																																																																																																																																																																		
21	Output21	ON	0.0	0.0	16.0	0.000	0.5																																																																																																																																																																																																		
22	Output22	ON	0.0	0.0	16.0	0.000	0.3																																																																																																																																																																																																		
23	Output23	ON	0.0	0.0	16.0	0.000	1.3																																																																																																																																																																																																		
24	Output24	ON	0.0	0.0	16.0	0.000	0.1																																																																																																																																																																																																		
<p>Output</p>	<p>For example</p>  <pre> Telnet 172.16.10.154 input order:status 0 1 current:0.00A status:ON min:0.00A max:16.00A power:0.000kW energy:1.1kWh input order: </pre> <p>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”</p>																																																																																																																																																																																																								

3.4.2. “ON/OFF” command

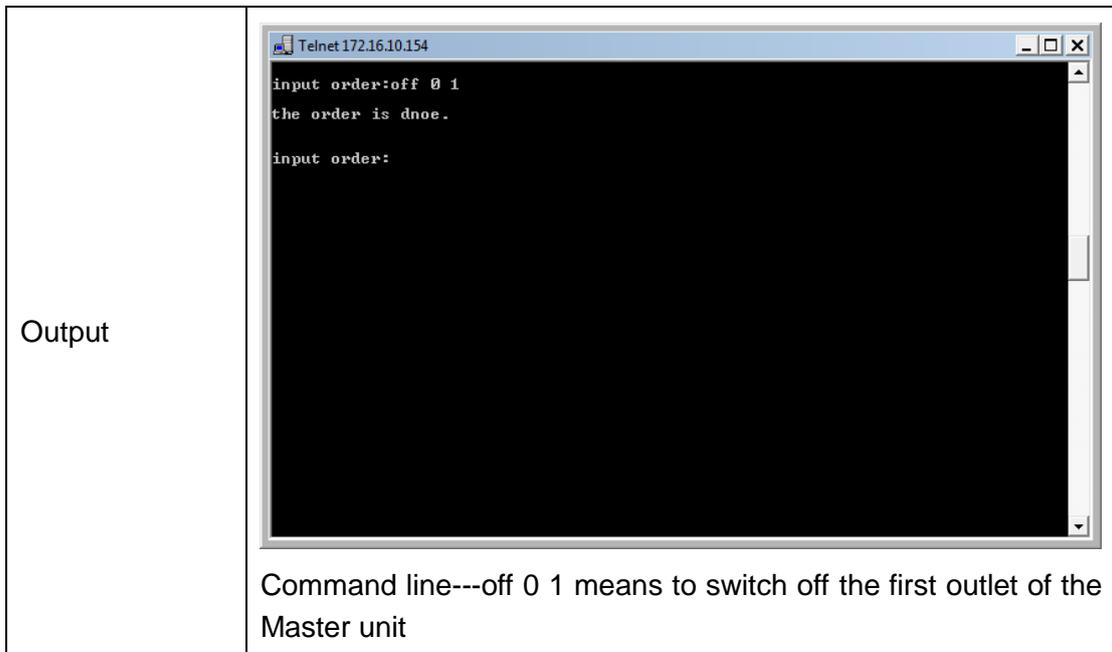
“ON/OFF” command enables the user to switch on/off the individual outlet or the complete device
Command format: ON/OFF 【index】 【operation】

Figure 3-34



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

【operation】	Description
ALL	<pre> Telnet 172.16.10.154 input order: on 0 all the order is done. input order: _ </pre> <p>Command line---on 0 all means to switch on all outlets of the Master unit</p>

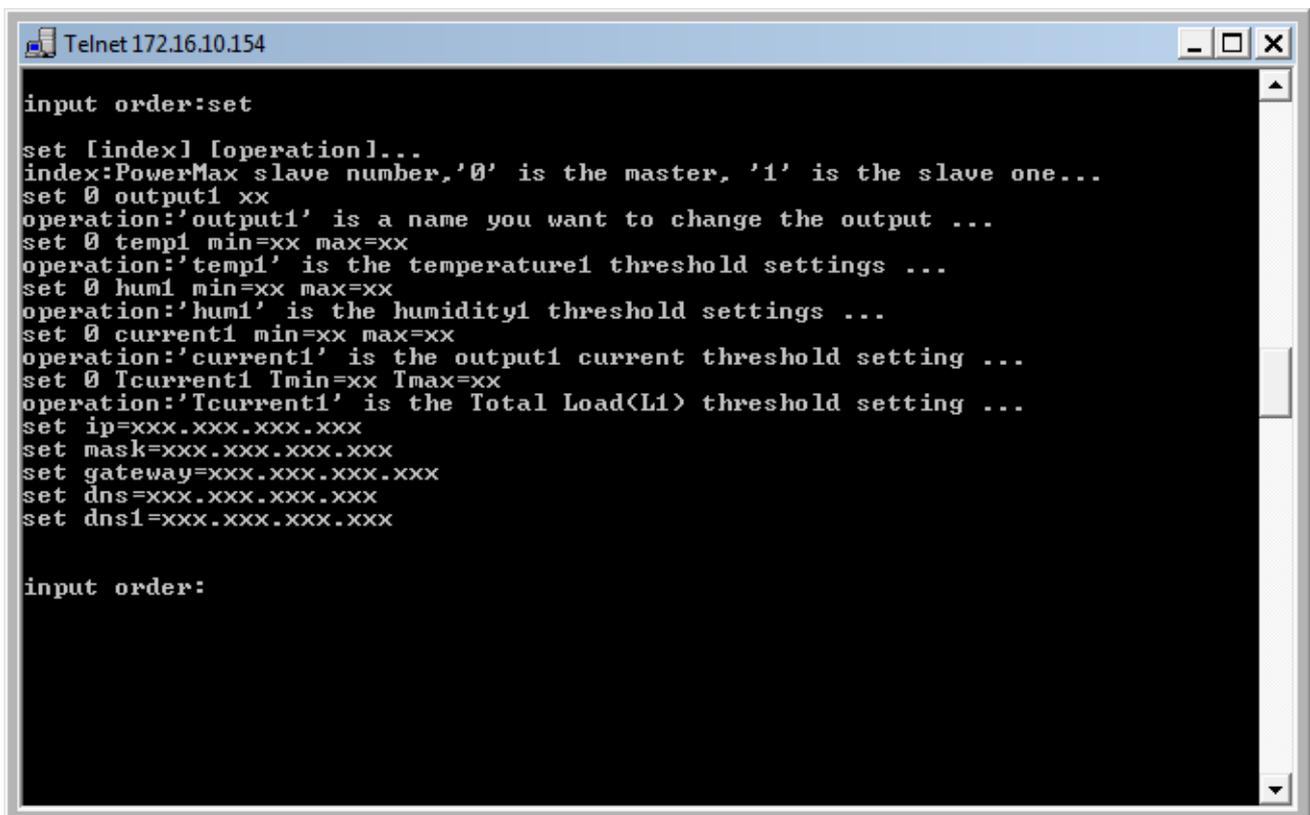


3.4.3. “Set” command

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

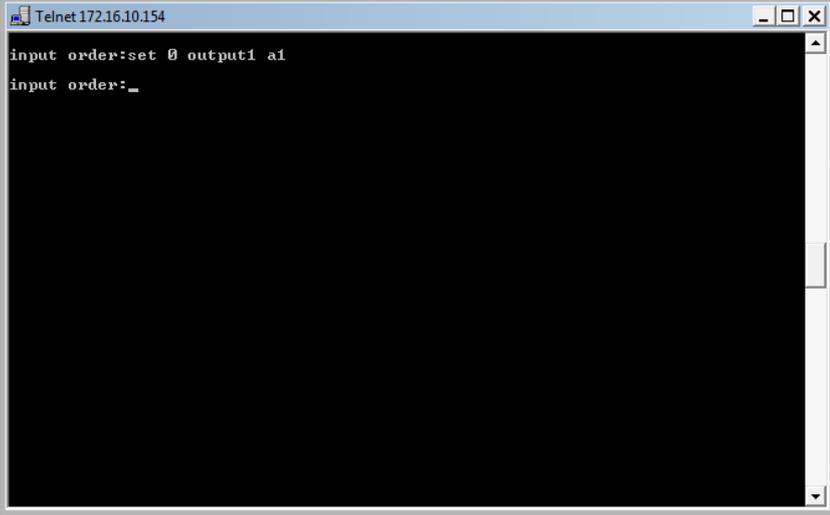
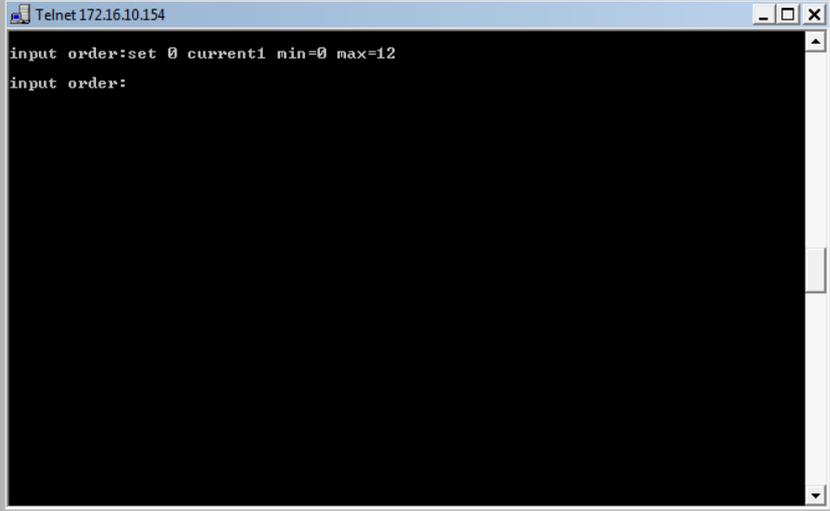
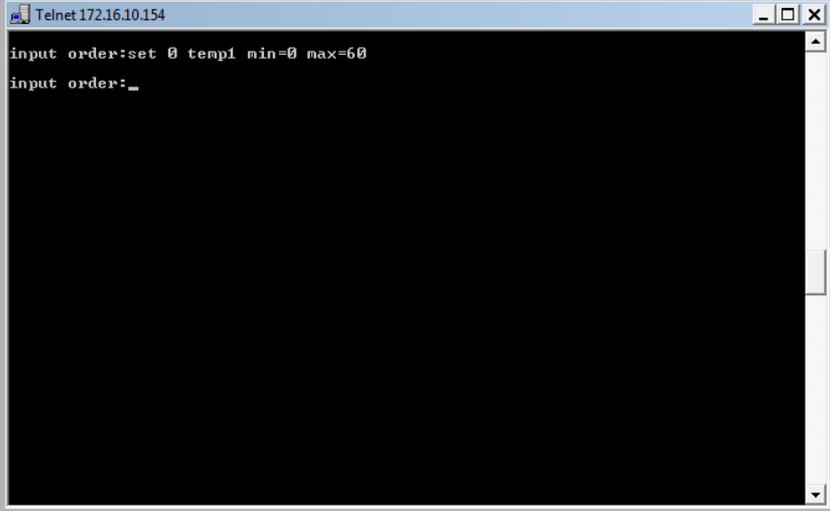
Command format: set **【index】【operation】**

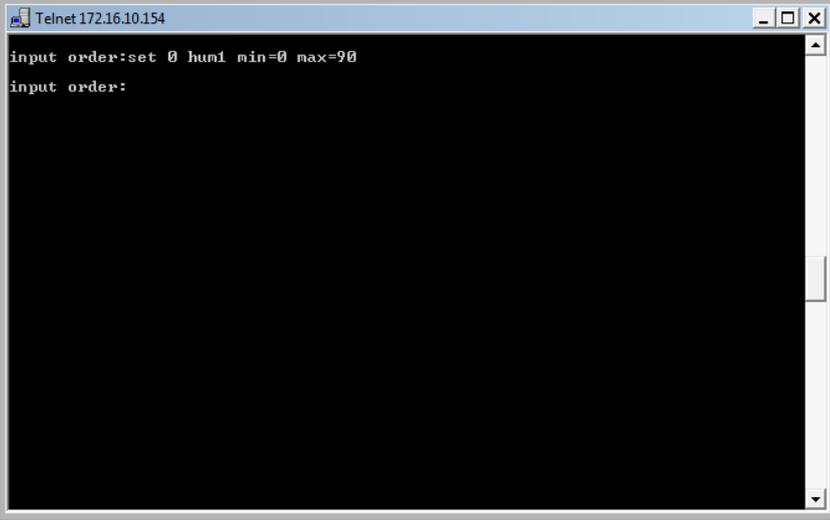
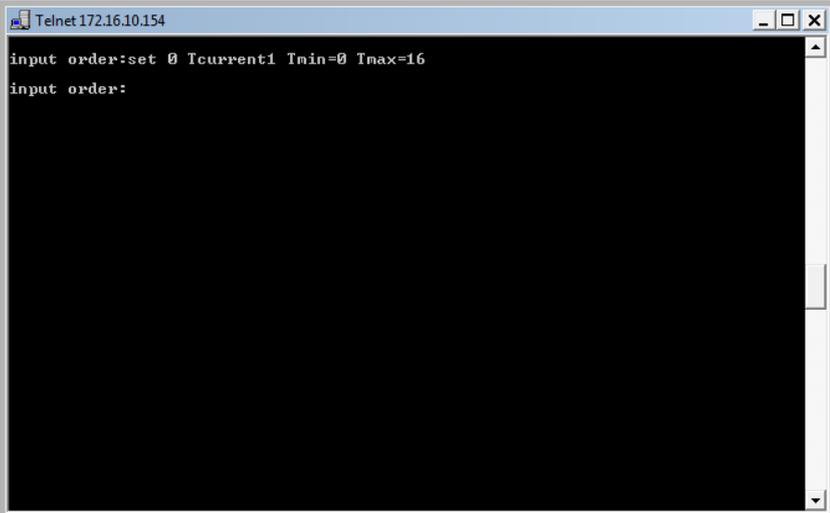
Figure 3-35

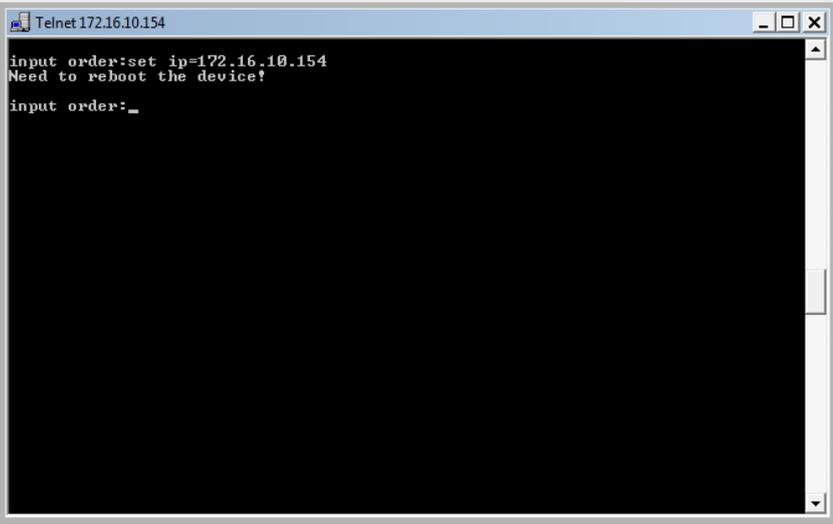


【index】 :device mode (0-9, 0 is master, 1-4 is slave) ;

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

【operation】	Description
output	 <p>Command line---set 0 output1 a1 means rename the output 1 as a1</p>
current	 <p>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</p>
temperature	 <p>Command line--- set 0 temp1 min=0 max=60 means minimum</p>

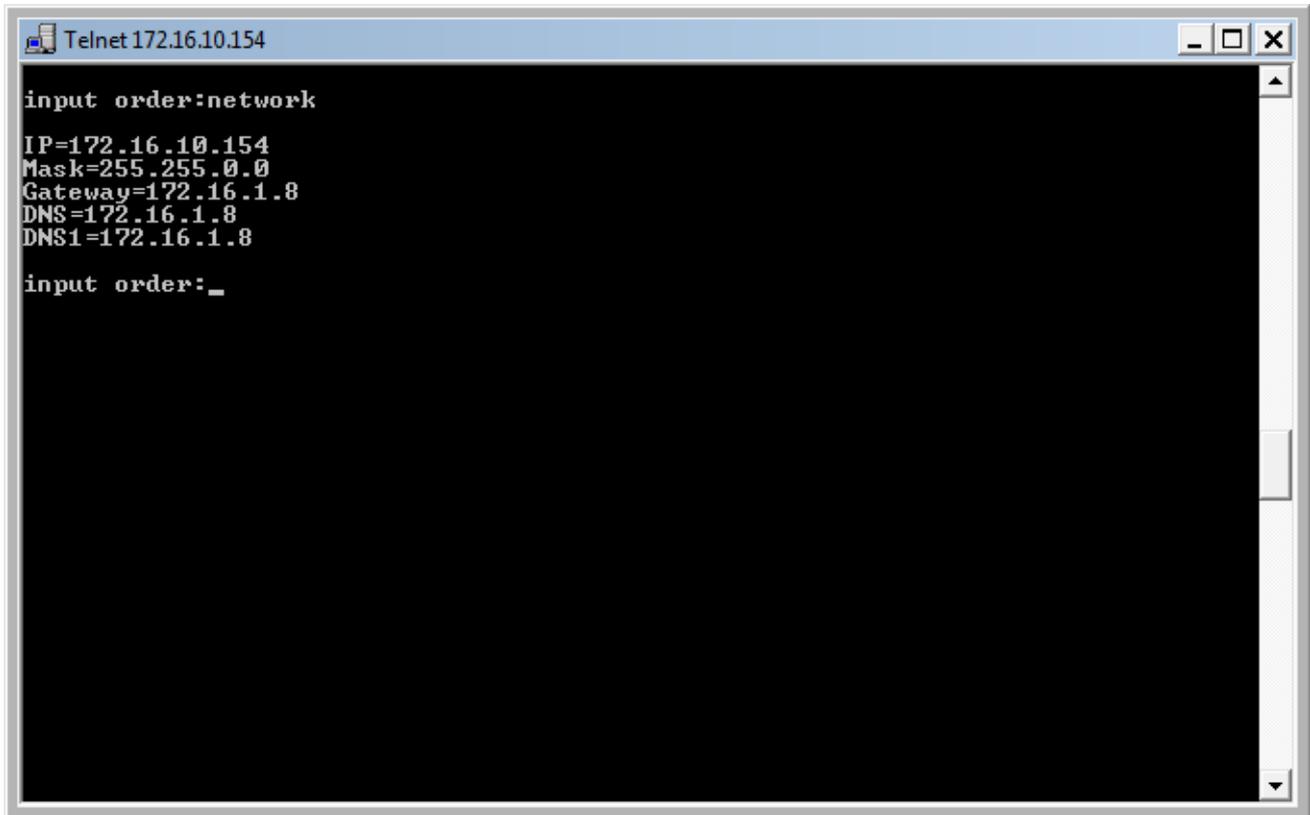
	<p>temperature as 0 degree and maximum temperature 60 degree for temperature sensor 1 of master unit</p>
humidity	 <p>Command line---set 0 hum1 min=0 max=90 means minimum humidity as 0% and maximum humidity as 90% for humidity sensor 1 of Master unit</p>
Tcurrent	 <p>Command line---set 0 Tcurrent1 Tmin=0 Tmax=16 means minimum current as 0A and maximum current as 16A for total current of phase A of Master unit</p>

<p>network</p>	 <pre>Telnet172.16.10.154 input order:set ip=172.16.10.154 Need to reboot the device! input order:_</pre> <p>Command line---set 0 ip=172.16.10.154 means Master network IP address as 172.16.10.154</p>
----------------	---

3.4.4. “Network” command

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

Figure 3-36

A screenshot of a Telnet window titled "Telnet 172.16.10.154". The window has a black background with white text. The text displayed is:

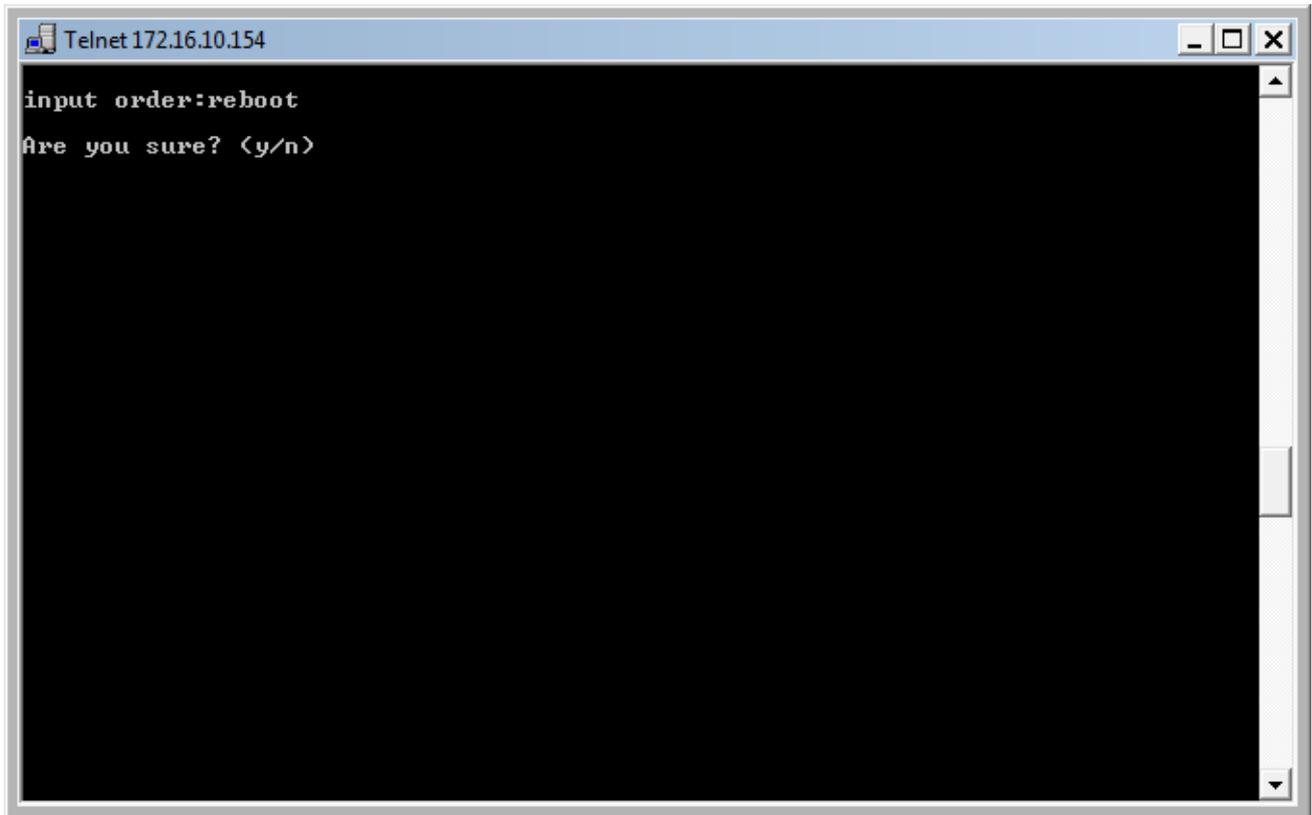
```
input order:network
IP=172.16.10.154
Mask=255.255.0.0
Gateway=172.16.1.8
DNS=172.16.1.8
DNS1=172.16.1.8
input order: _
```

The window includes standard window controls (minimize, maximize, close) in the top right corner and a vertical scrollbar on the right side.

3.4.5. “Reboot” Command

Reboot command: to restart device

Figure 3-37

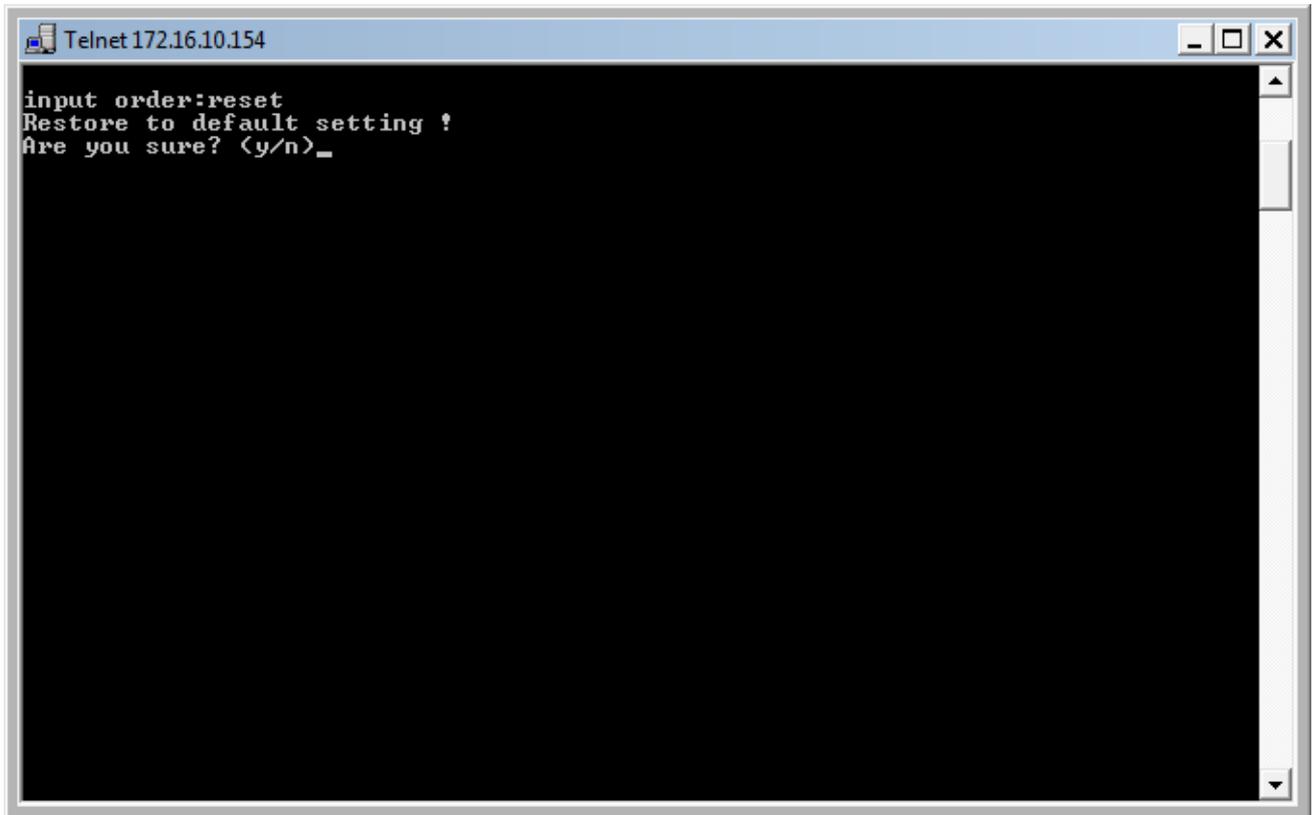


To exit the telnet interface and restart the device choose y and enter; type n and press Enter to exit the telnet interface without restarting the device

3.4.6. “RESET” command

To restore to factory settings

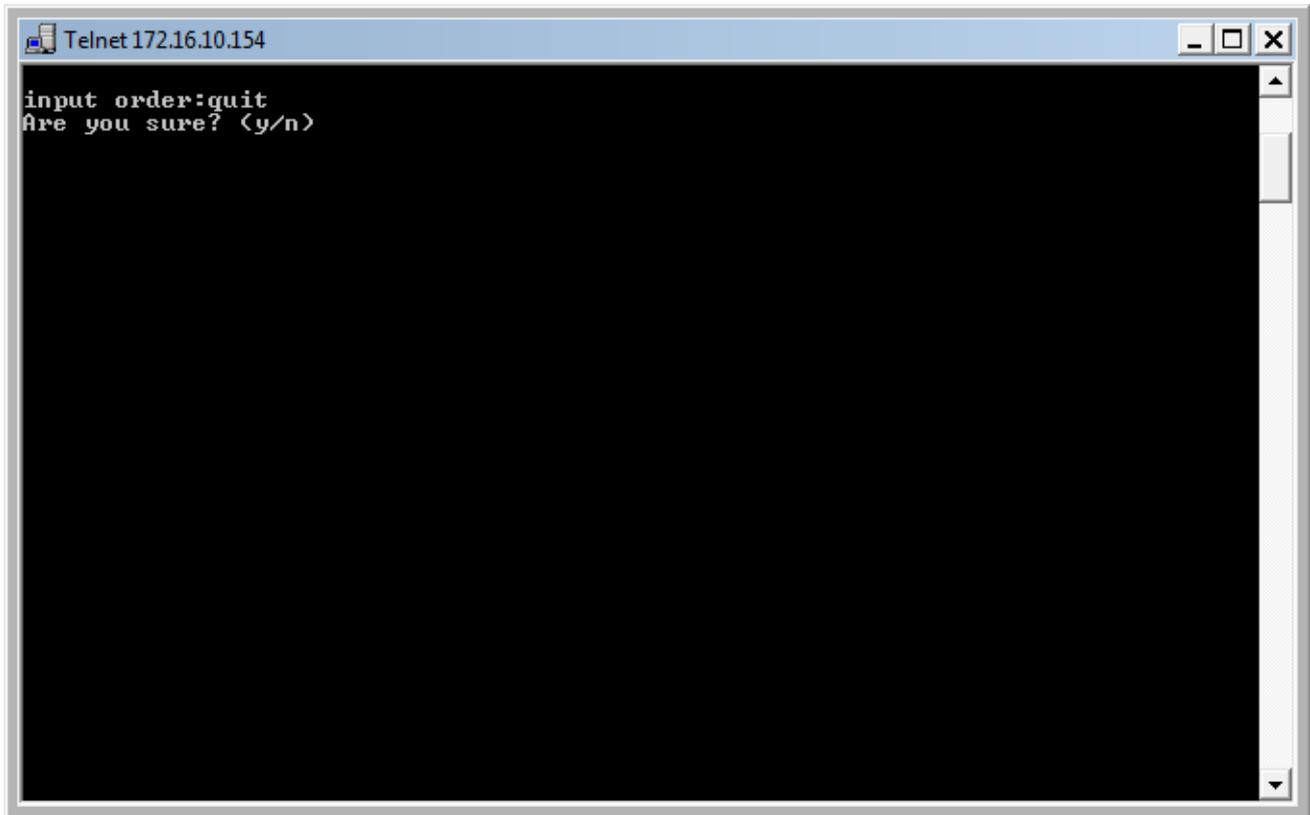
Figure 3-38



3.4.7. “QUIT” command

To quit the telnet client

Figure 3-39



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

3.5.MODBUS Access

Please refer to the 《PowerMax MODBUS RTU Protocol Instruction》 for MODBUS access.

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.Lost IP

- 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:3×2.5mm ² 32A:3×6.0mm ² ; 3×16A:5×2.5mm ² 3×32A:5×6.0mm ²
		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, alarm state	LCD screen (Resolution: 128x64)
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	Temperature	Working range: -40°C ~ +100°C Accuracy:±1°C, Response: 400ms
	Technology requirement	Humidity	Accuracy:±5%RH, Response: 400ms
7	Product size	Product size (LxWxH)	X2x56x50mm
		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°C~+45°C Relative humidity: 5%~95%
		Storage Environment	Temperature: -20°C~+70°C Relative humidity :5%~95%
12	ROHS	Compliance	

6. Warranty and Service

Siemon warrants 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.

6.1. Technical service

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.

Lors de l'installation, respectez les consignes de sécurité suivantes:

- A. Utiliser avec prudence lors de l'installation ou de la modification circuits de télécommunications.
- B. Ne jamais toucher les bornes de fil métallique non isolés sauf si le circuit a été débranché.
- C. Ne jamais installer cet appareil dans un endroit humide.
- D. Ne jamais installer pendant un orage.