APDU Production Instruction

PROFESSIONAL NETWORK POWER MANAGER SYSTEM

DESIGNATED MODULARIZED AND MULTI-FUNCTIONAL

POWER DISTRIBUTION UNIT FOR CABINET

Catalog

1. Product Name

APDU:Network remote monitoring and management power distribution unit

2.Brief introduction

APDU adopts the latest core technology of independent intellectual property rights, and a well-designed hot-swap network remote monitoring and management power distributor that integrates network communication, power distribution, electric energy metering and other technologies. It is the result of our many years of focused research in the field of power distribution technology. According to the development requirements of future power distribution monitoring and management technology, combined with the needs of modern data center application environments, this product is a professional security-level network remote monitoring and management power distribution system.

3.APDU Application and field of use

The wide application of APDU can greatly reduce labor costs and improve operating efficiency. At present, multi-data computer rooms are operated in an unattended operation mode. Once equipment failure occurs, the business will be unable to operate for a long time and cause serious losses. APDU products can realize remote monitoring and control. By configuring the corresponding remote power management software, the operation and maintenance personnel can use the local area network or the wide area network to detect, control and manage the power supply of multiple equipment in the computer room and cabinet. Save labor costs. Intelligent power management solutions allow users to more accurately and effectively monitor power consumption, equipment operation control, and computer room environment monitoring.

Field of use:

Various mines,network communications, telecommunications and electricity, finance and insurance, aerospace, transportation, information processing, education and medical e-government, etc.

4. Features and functions of the APDU

1) Features:

Network remote monitoring, control and management of each output position;
Accurate to the electric energy measurement of each unit;
Use embedded real-time operating system;
Input high current, maximum can input 3-phase 125A
The control header can be hot swapped
Every four digits of a module can be plugged and replaced
SNMP V3 encryption
ETL certification
Fast speed, strong confidentiality, high efficiency, energy saving, environmental protection, safety and reliability;

2) Function introduction:

a. Monitoring function:

You can view the monitored total load current, total voltage, total power, total energy, power factor, load current of each independent unit, and on/off status of each independent unit through the LCD panel display interface with buttons.

b. Control function:

Output unit on/off control, output unit sequential on/off interval delay time setting.

c. Original status retention:

The original status and retention of each output unit when restarting.

d. Custom alarm:

When the total load current exceeds its threshold setting value, when the load current of each output unit exceeds its threshold setting value, and when the temperature/humidity exceeds its threshold setting value.

e. System default alarm:

When the total load current exceeds the rated value, when the load current of each output unit exceeds the rated value, when smoke occurs, when flooding occurs, and when the door is opened.

f. Multiple alarm methods:

Local buzzer buzzer; red font on the web page reflects abnormal information, LCD screen pops up abnormal information page; automatically sends E-mail to the system administrator; SNMP sends Trap alarm status information; abnormal output unit green light Flashing alternately with orange light

g. Cascade function: support hardware cascade, up to 9 cascades, including 10 hosts.

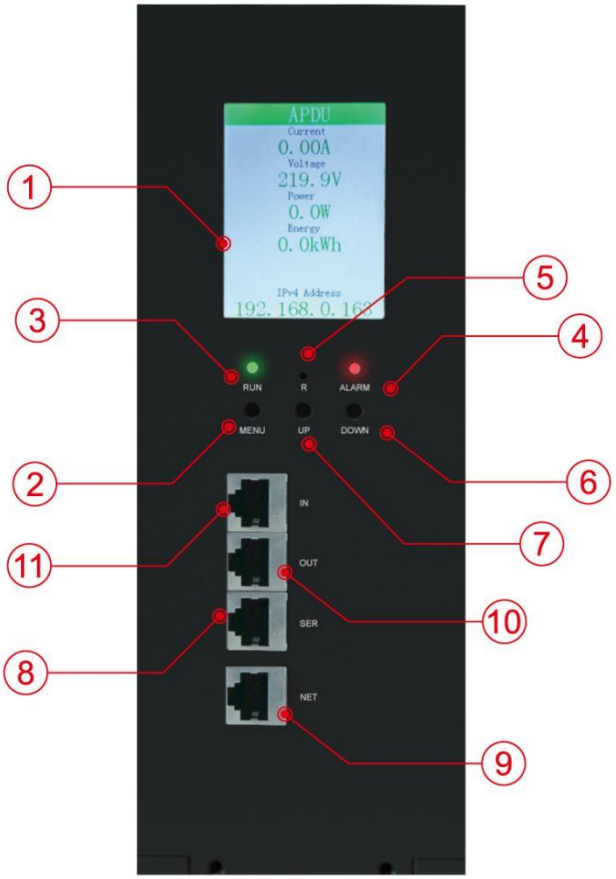
h. User management: single user management

i. Access method: WEB, SNMP (V1/V2c/V3).

j. Support software upgrades.

5. **Hardware introduce**

1) Product appearance introduction



1、 LCD
2、 Menu
3、 RUN
4、 Alarm
5、 Reset
6、 Down
7、 Up
8、 Ser（RS485）
9、 Net
10、 Cascade Out
11、 Cascade IN
12、 T/H1 (optional)
13、 T/H2 (optional)

2) Button Instructions

a) Enter the menu mode (click UP or DOWN);

b) Select the menu (through the UP or DOWN scroll,choose to look at a menu item);

c) Enter the current selection menu (click on the MENU);

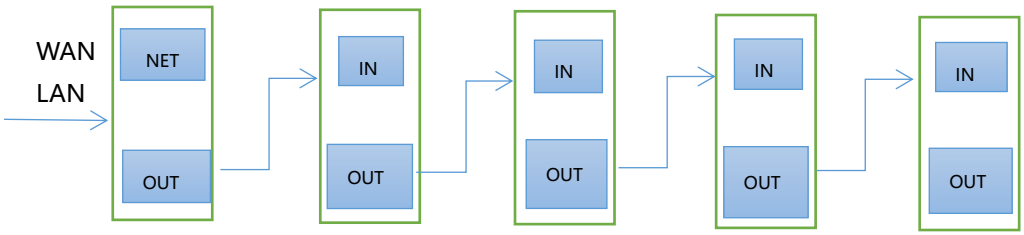
d) Exit the current selection menu (select Quit);

e) Restore the factory settings of the hardware (press and hold the MENU button, click the Reset button or power on again, wait until Run is running, then release, restore the factory settings successfully);

3) LCD menu page display instructions standby page

4) Cascade connection mode

Schematic diagram of serial cascade connection:



4.1) Set up a host, other from the slave, the maximum can be cascaded 9 units ,including a host of 10 devices.

Cascade operation method:

a. As shown in a serial connection diagram, 10 hosts are cascaded by an attachment cascade connection line;

b. Logging in each device WEB access control interface of each device, the "work mode' in the "device configuration" of the configuration of the corresponding master,slave machine

c. One end of the connection line is connected to the host Out interface by attachments.One end is connected to the slave in interface.Then a cascaded connection line is connected from the current slave Out interface to the next slave in interface.As shown in the above diagram.

d.Through the web browser or other management system of the PC,the host system can monitor and manipulate the equipment,and the cascade is successful.

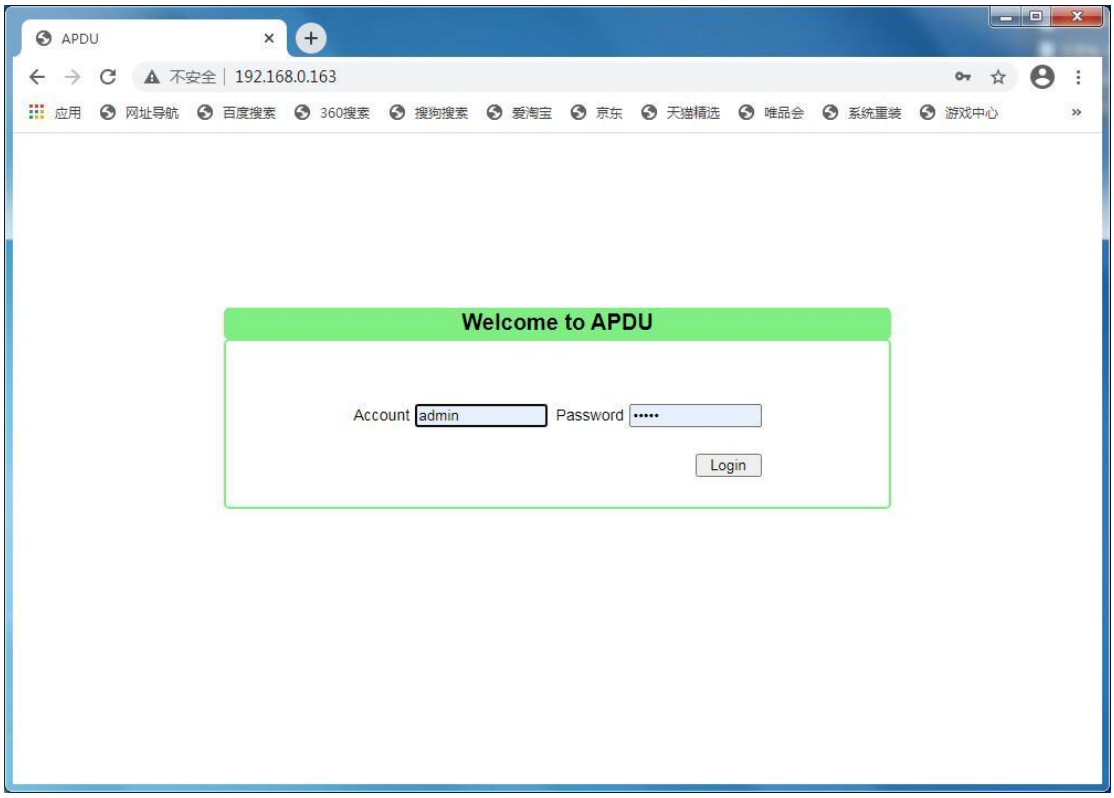
6.Software introduce

1.) HTTP visiting

1.1.1)Through LCD display,we can see the device IPV4 subnet mask,IPV4 default gateway,modify the local computer IPV4 address ;IPV4 default gateway,make the device and the local computer in the same LAN.

2.)HTTP log-in page

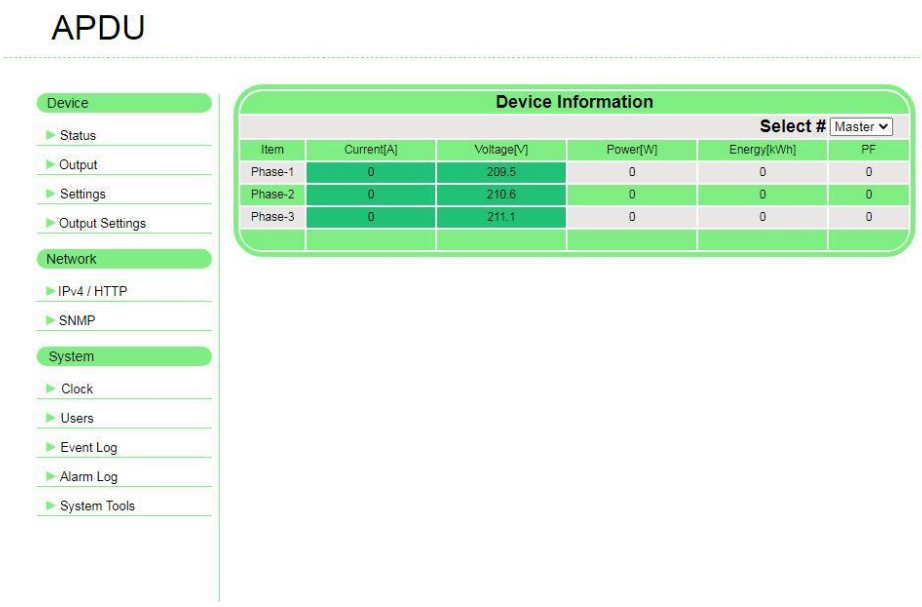
Open the IE or Google browser,and enter the device IP address bar,as shown below.



Open the web page,enter the account password,click the landing,you can view the device web page(default login and password :admin)

3.)Device status page:

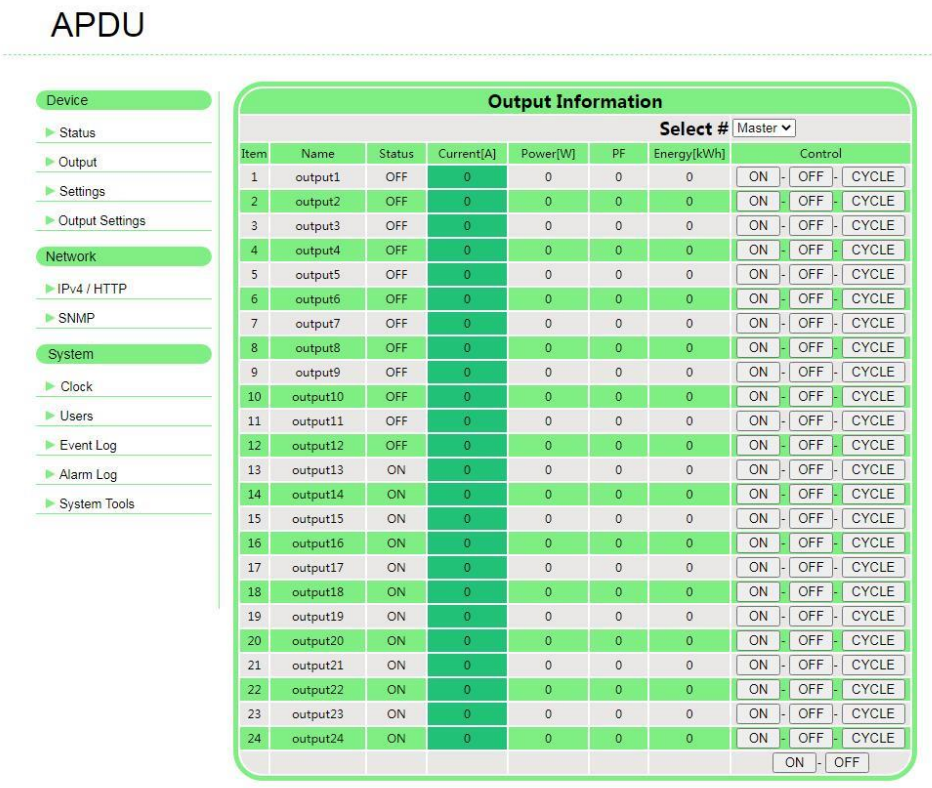
The device status page can be viewed : total voltage,total power,power factor,temperature,humidity,door control,smoke,water immersion and abnormal information.



4.)Output unit page:

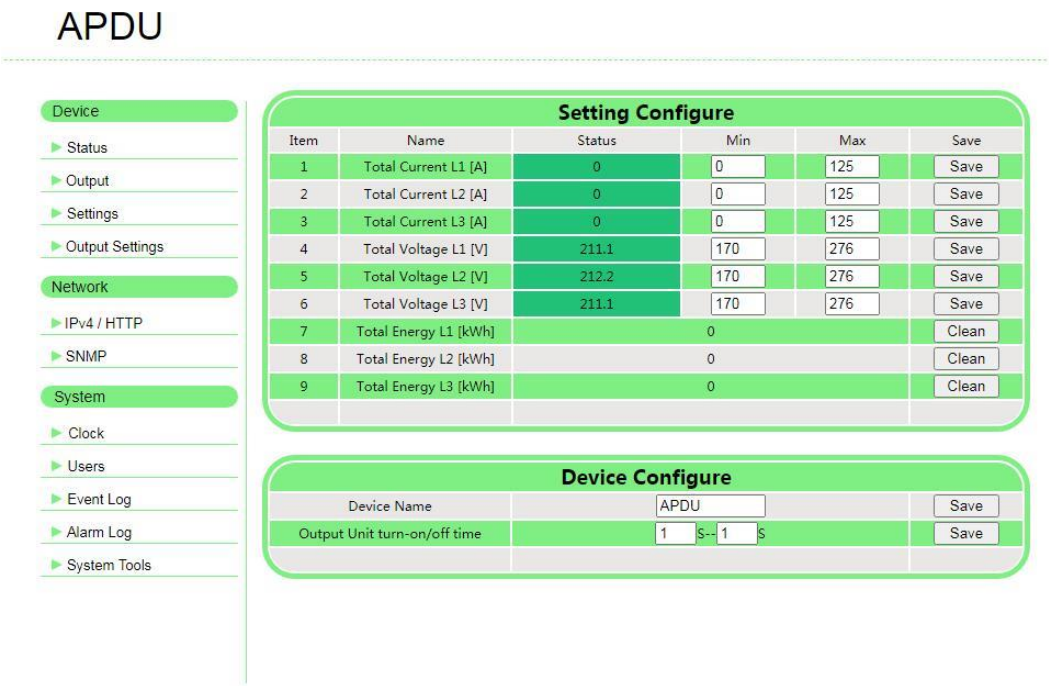
Output unit page,you can view:the number of the device,the current switching state of each output unit,the current,power,and electrical energy.

Output unit switch page,you can view:each output state of switch,use website button to on/of,cycle control output unit.



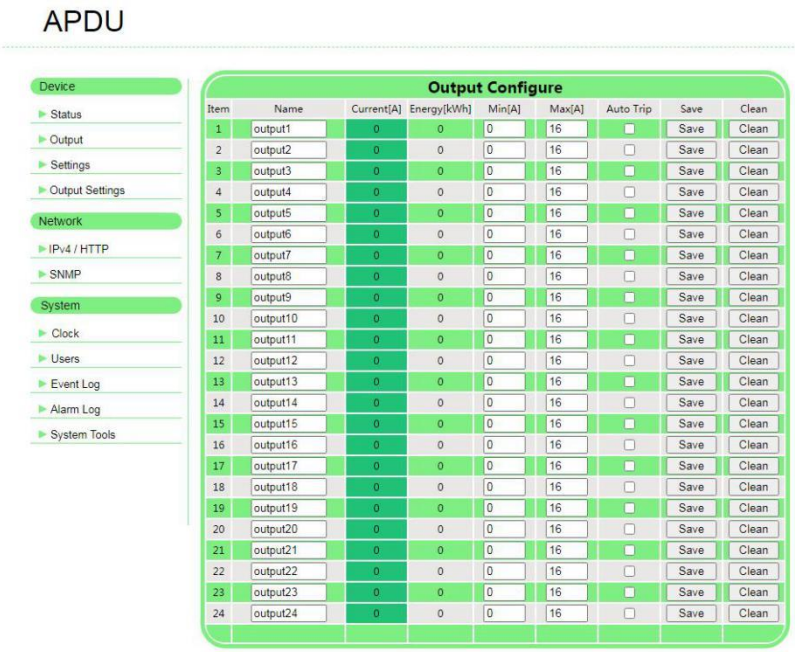
4.) Device setting page

Device setting page, you can view: total current, total voltage status and threshold, total power, expanded sensor threshold configuration and device configuration information;



5.)Output Unit threshold page;

Output unit valve page can be viewed :each output unit name,current,minimum value. Output unit name :can be based on each unit of output power for different changes in turn unit name,in the case of view web pages ,you can know the operating status, current, minimum and maximum of each powered device;



Note 1: Alarm mode:

a.Local buzzer

b.The red font of the web page reflects abnormal information;

c.Display the abnormal information page of LCD screen;

d.Send abnormal alarm email;

e.SNMP sends TRAP information

f.Abnormal output unit green light and orange light alternately flash ;

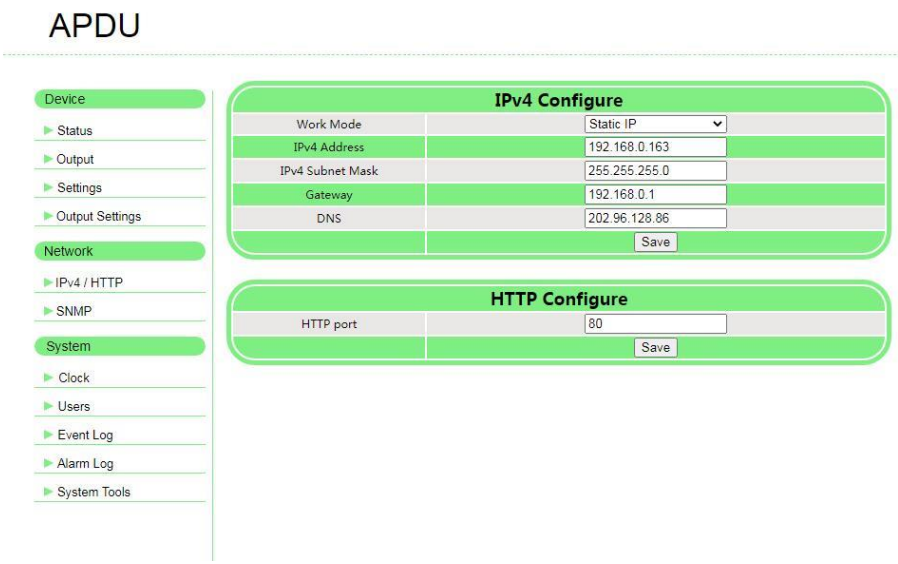
7) IPV4/HTTP configuration

IPV4 page, please view: device static IPV4 address, IPV4 sub-page code, IPV4 default gateway, DNS server, can be modified the configuration according to the local LAN;

Configurable static IP or dynamic IP;

Dynamic IP (DHCP):in the working mode, dynamic IP is selected to enable DHCP service, After APDU is power on,the IP address can be assigned through the router,and the IP address of APDU can be viewed through the LCD display screen.

The HTTP configuration, please view: HTTP port,open HEEPS:

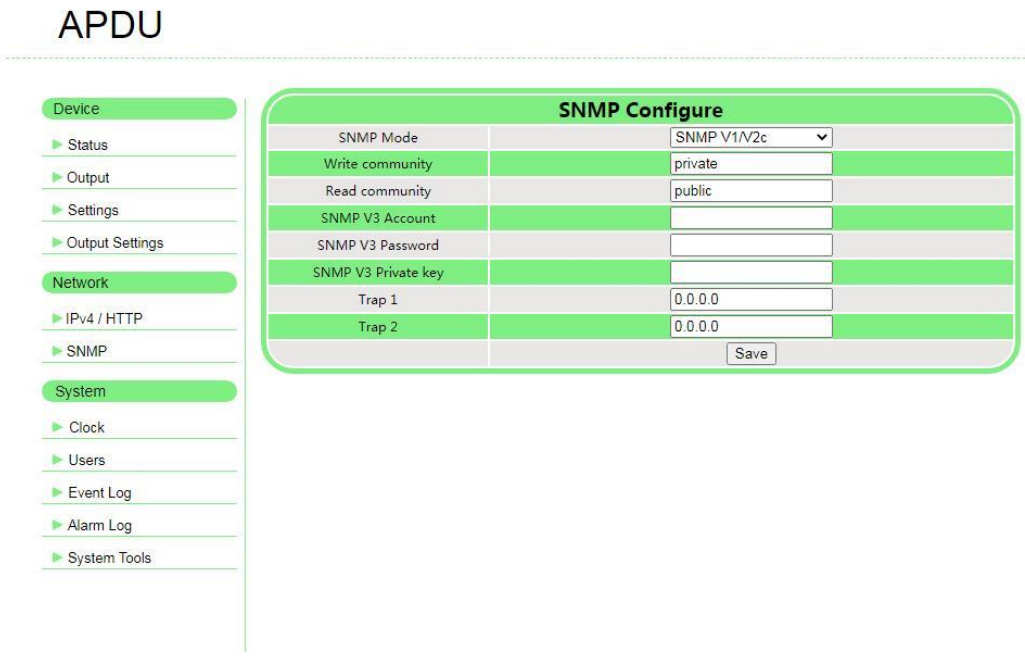


Note 2:

To select dynamic IP, it needs a network cable to connect to the router, which assigns IP address to the APDU by router. If it is not connected to the router, the dynamic IP assignment will fail.

1.)The SNMP configuration;

SNMP page,can view :SNMP service,modify Get Communty,Set Community password;
Can open SNMP V3 service;
According to the SNMP management platform of the computer room,fill in the TARP address and receive the abnormal information of SNMP Trap;



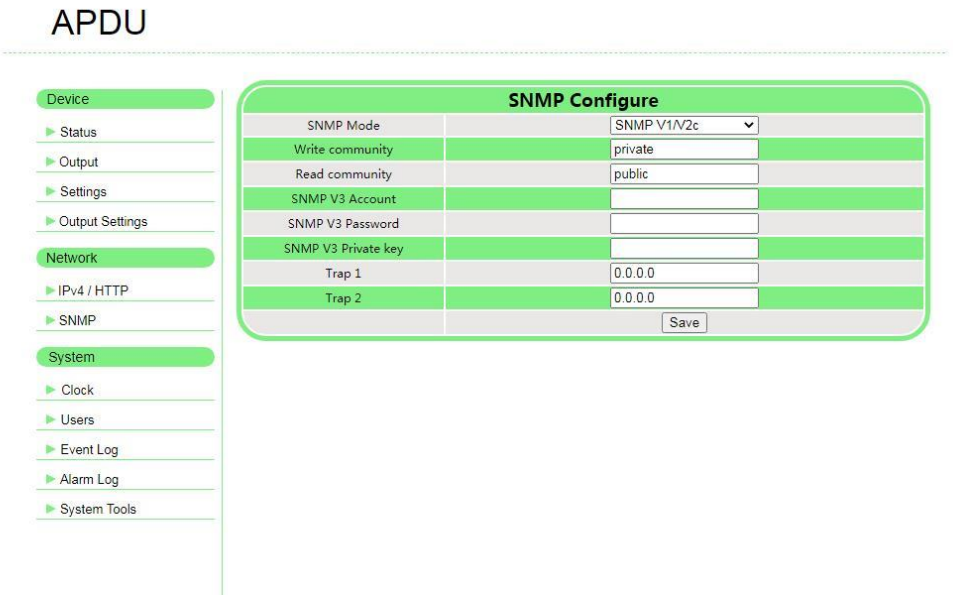
Note 3;

SNMP OID node information,list,please check SNMP OID details;

9.)Email configuration

Email configuration page can view ;mail mode:(ordinary or encrypted),outbox account,outbox password ,outbox server,outbox port,;

Email configuration,fill in information of outbox,when APDU produce abnormal information,the outbox will send out a exception mail,delivered to each user inbox.



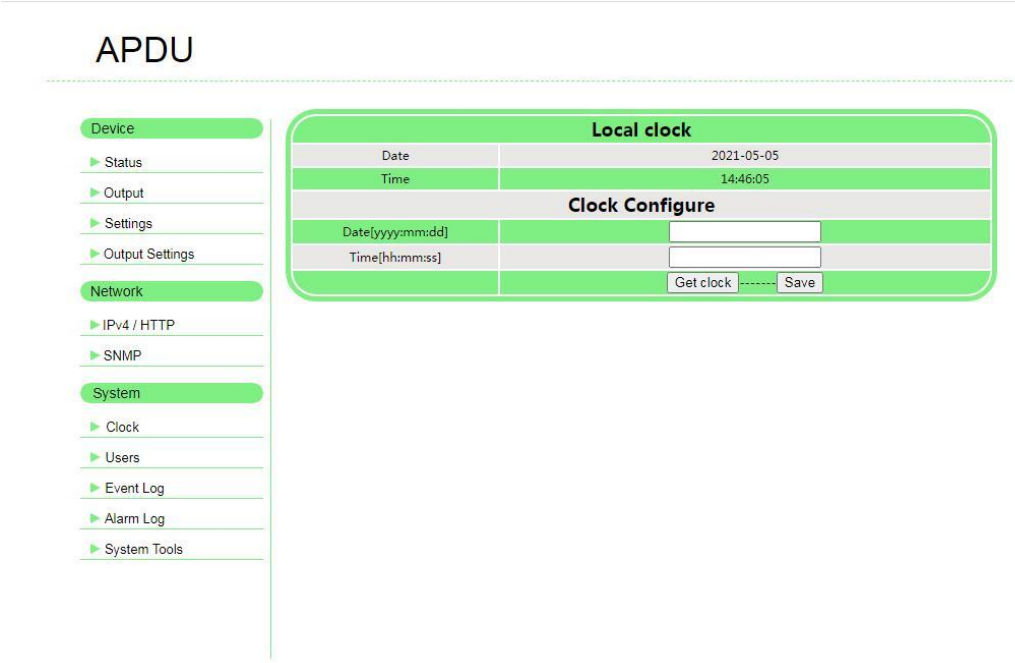
Note 4;

After network configuration,it is necessary to restart the device to take effect.

10.)The clock configuration

Clock configuration page,can view:device current clock,can set local and synchronous network clock.

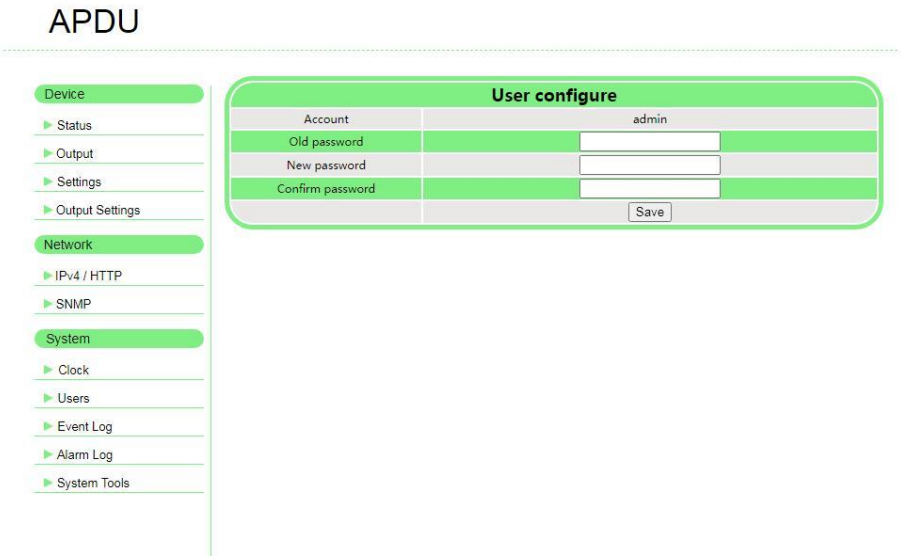
Local clock.filling date and time,date format :20160101,time format:08:31:20;



11.)User configuration

User information page,can view :user information,user inbox account,

Note 5:APDU only supports single-user mode.



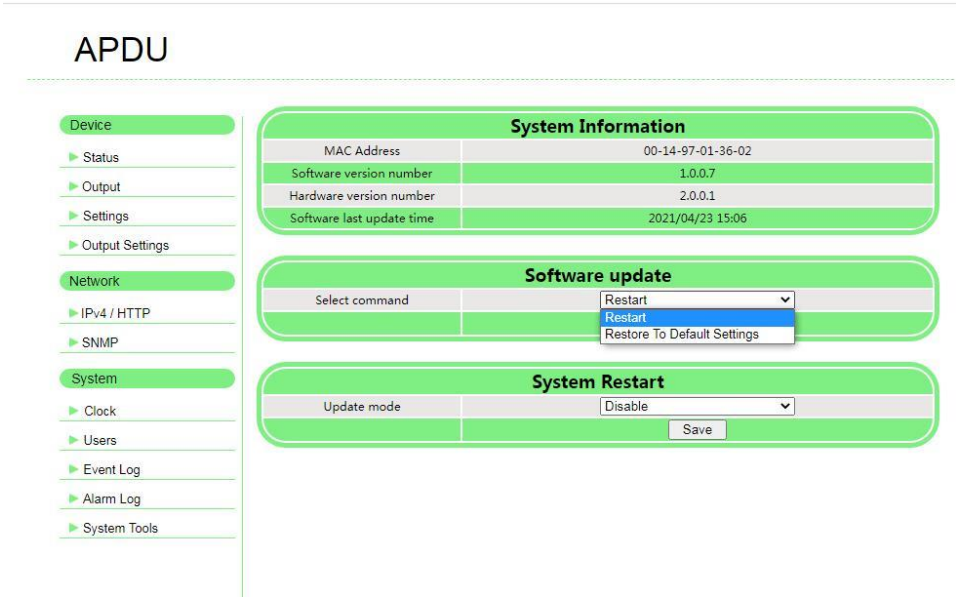
12.)System information

System information page ,can view :MAC address ,software version,hardware version,system last update time.

System recovery: restore factory settings button;

Software restart: You can choose to restart or restore factory settings;

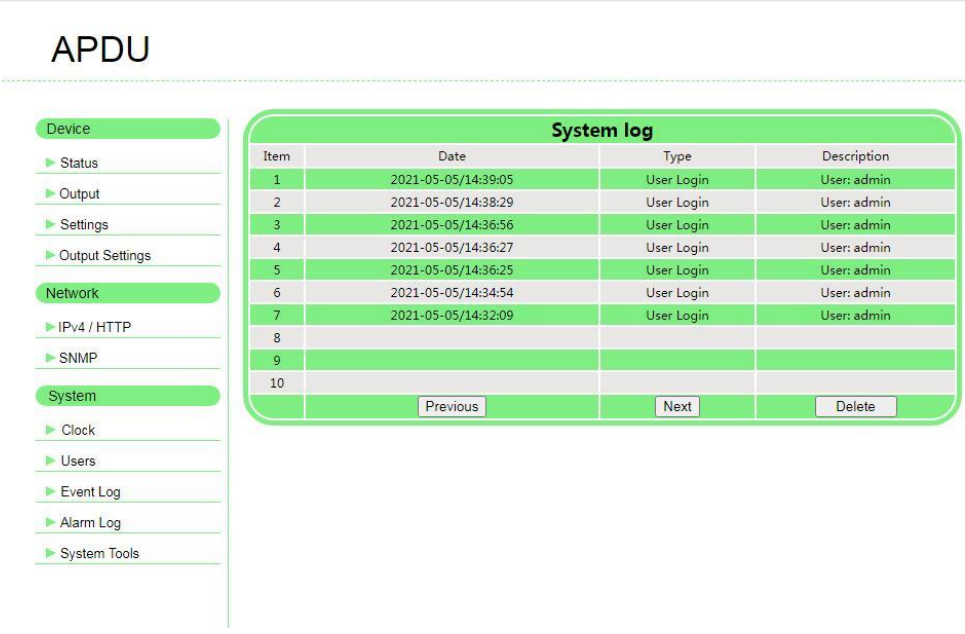
System update: used for software update. Update software needs to be turned on; it is usually disabled;



13,)The user log

User log page can be viewed:operation records of different users;

Record type:user login,output configuration,network configuration,device configuration,user configuration,log deletion.

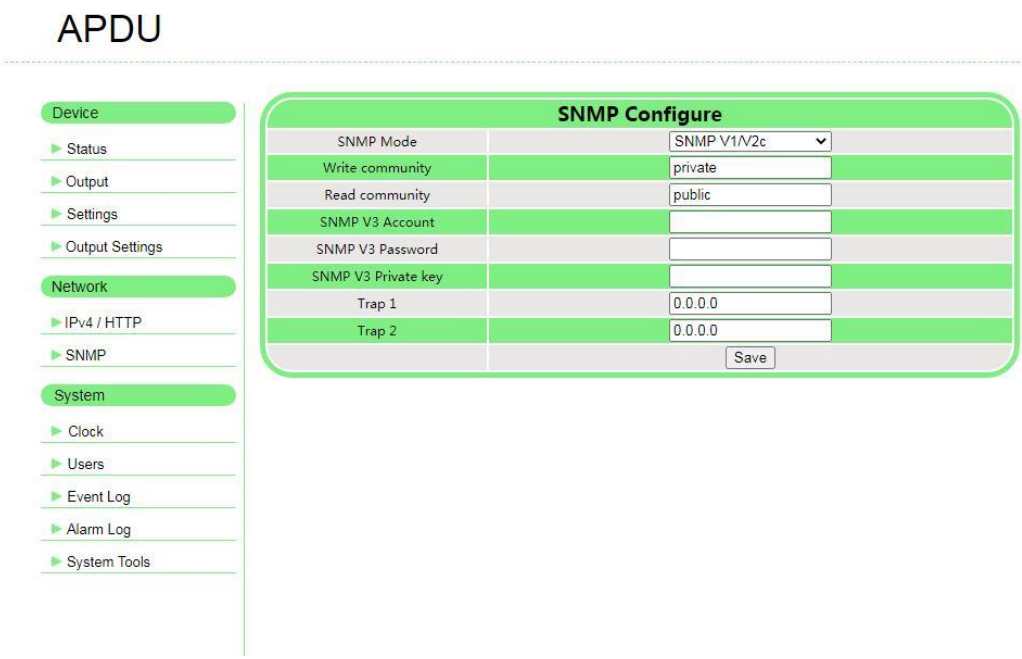


14.)Abnormal log

The exception log page can view the abnormal information generated by APDU in the running process;

15.)SNMP visit

APDU supports SNMP secondary development protocol,Support V1,V2,V3 version,Please configure the page according to the SNMP configuration page,In the second development process,the corresponding OID description is required to view the SNMP OID document.



7.Technical Parameters

No.	Main function	Function description					Explanation
1	Input characteristics	Rated input voltage					
			L-N 220-250V； L-L 380-433V; 3 wire +PE 50/60 Hz,125A				
		Input terminal type	industry standard plug/connector				
			Optional configuration: junction box				
		Cable specifications					
			3*125A：5×2AWG				
		Cable length	According to the length required by the guest				
		Maximum total load current	Maximum：125A；20% allowance shall be reserved for normal use				
		Overload protection					optional function
			Master control three-phase circuit breaker; (three-phase)				
2	Output characteristics	Rated output	220-250V				
		Maximum output current of each					
			15.6A each port				
		Output sockets	24*C19				Optional customization
		Output unit					
3	Display characteristics	Main control module	color LCD digital display; It can display the total input voltage, total/min current, total energy consumption, Total power factor, IP address, etc.;,				
		Display accuracy	total voltage	Full scale: 300V Accuracy: ±1％+2 words Resolution: 0.1V Response time: 400ms;			
			Total current	Full range: 125A Accuracy: ±1％+1 word Resolution: 0.1A Response time: 400ms;			
			Total electric	Energy constant:1600imp/kWh Grade: Class 1 Resolution: 0.1kWh;			
			Unit current	Full scale: 20A Accuracy: ± 1 ％ +1 word Resolution: 0.1A Response time: 400ms;			
			Temperature	resolution: 0.1℃ Optional			
			Humidity	resolution: 0.1%; Optional			
4	Environment	Working temperature	0℃~55℃；	Relative humidity	10~90%；	Storage temperature	-20℃ ~ +70℃；

8. Technical support and after-sales service

This product is guaranteed for two years from the date of purchase by the customer. During the warranty period, the company’ s basic obligations are limited to replacement, repair or return to the company for repair. During the warranty period, customers are generally provided with free maintenance. If the product has expired or the company determines that the product is caused by illegal operation, appropriate fees will be charged. The above warranty does not apply to problems caused by the following situations:

1. Failure caused by customer's incorrect or improper maintenance.
2. Failure caused by unauthorized changes, modifications or misuse.
3. Failure caused by use in an environment outside the range of the physical environment specified by the product.

Maintenance notes:

1. If you need to return the product for repair, please make sure to use protective hard box packaging. Damage during transportation is not covered by the warranty.
2. Please give a concise description of the repaired product problem and operation process.
3. The customer needs to prepay the shipping cost of the product sent back to our company, and will pay all duties and taxes.
4. Please write down your name, address and a telephone number that can be contacted at any time.