JSY- MK-352

Intelligent PDU Modules

# User Manual

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1. Introduction

Professional-grade network remote monitoring and management power distribution system is the latest scientific research achievement in the field of power distribution technology after years of dedicated research. This product is based on the development trend of the world's future power distribution monitoring and management technology, combined with the technical requirements of the modern data center application environment, and adopts the latest core technology with completely independent intellectual property rights, as well as network communication, power distribution, and electric energy metering technologies to design the latest network remote monitoring and management power distributor.

2. Product Introduction

2.1 Product Overview

Single-phase and three-phase smart PDU meters are based on the innovative SUM (sustainable, scalable and maintainable) design concept technology. As a key component of the metering cabinet power distribution unit (PDU), after being installed into the main body of the PDU, it can Provides active metering capabilities for energy optimization and circuit protection. User-set alarm thresholds can effectively reduce risks by warning of potential circuit overloads through real-time local and remote alarms. Metered rack PDUs provide power usage data to support data center managers in making informed decisions about load balancing and proper IT sizing, thereby significantly reducing total cost of ownership. Users can configure metered cabinet PDU via Ethernet access or RS485. This series of products can be widely used in data center rooms such as IDC, banks, securities, governments, and enterprises.

2.2 Function introduction

Performance parameters				Technical indicators
Electrical parameters	Input Optional	Single Phase	Input voltage	176-264V
			Maximum total load current	63A
		Three-phase	Input voltage	3*220V 50/60HZ
			Maximum total load current	3*32A Optional 63A, 120A, 150A
	Output		Output Voltage	176-264V
			Output Current	8A, optional high current 20A
			Output Port	Optional, up to 36 ports
			Frequency	50Hz
User interface			Display	TFT color screen
			Operation buttons	Up, down, set, reset buttons
			Communication interface	One Ethernet, two RS485
			Temperature and humidity interface	Two
			Switch input interface	Two interfaces, 4 channels
			Switch output interface	One interface,2 channels
Electrical parameter			PDU total measurement	Voltage, current, power, electric energy

measurement		Each output measurement	Voltage, current, power, electric energy
		Each output can be remotely turned on/off	Yes
		Customize the power-on/power-off sequence and interval time for each output	Yes
		Administrator permissions can be defined in different levels	Yes
		Customize alarm signal thresholds	Voltage and current adjustable
		Cascade function	Yes, 4 products can be cascaded
Monitoring function		Load current monitoring	
		Load power monitoring	
		Voltage monitoring	
		Power monitoring	
		Ambient temperature and humidity monitoring	
Setting the function		Load current upper and lower limit settings	
		Ambient temperature and humidity upper and lower limit settings	
		Email alert address settings	
		SNMP (V1, V2c,V3) settings	
		Network parameter settings (IP, gateway, mask, DNS)	
Alarm function	system Alerts	When the load current exceeds the rated value	
		When the temperature and humidity exceed the limit	
	Custom Alerts	When the load current exceeds the rated value	
		When the temperature and humidity exceed the limit	
	Alerts Way	Buzzer beeps	
		LCD value flashes	
		Automatically send an email to the system administrator	
		SNMP sends Trap alarm status information	
		Serial communication background sends alarm status information	
Access method		WEB access and control through IE	

	SNMP (V1,V2c,V3) access and control via standard network management workstation	
User Management	User ID and password settings	
environment	Operating temperature	-20 ~ 60℃
	Extreme operating temperature	-30 ~ 70℃
	Relative humidity	10 ~ 90%
	Storage and transportation temperature limit	-40 ~ 70℃

2.3 Model selection

◆ MK-352IP stands for intelligent PDU meter head.

◆ JSY-MK-352AFE stands for three-phase four-wire power module.

◆ JSY-1073 stands for single-phase power module.

◆ JSY-1054 stands for 4-channel relay control module, current specification: 8A (maximum 16A).

◆ JSY-1084 indicates 4-channel relay control module, current specification: 20A (maximum 50A).

3. Main functions

3.1   Real-time monitoring function

The display screen can view the monitored total load current, total voltage, total power, total electric energy, power factor, and load current parameters of each independent unit: the content displayed on the LCD screen can be viewed on the Web page, and the closed/open state of each independent unit, temperature/humidity sensor data and operating status can be controlled. 4-channel switch input can be configured by the customer, and there are 2-channel switch output.

3.2   Socket unit control

◆ Control the closing and opening of a single relay, or control multiple relays simultaneously.

◆ You can set the sequential delay power-on, up to 6 seconds. (This means that when

two or more channels are controlled continuously, after the previous channel is completed, you need to wait 6 seconds before the next channel starts to operate.)

◆   Each relay can be set to start at a fixed time and date.

3.3   Customized alerts

◆   The total load current/voltage over-limit threshold can be customized, the load current over-limit threshold of each socket unit can be customized, and the temperature/humidity over-limit threshold can be customized.

◆   The buzzer sounds. an email is sent to the system administrator. SNMP sends a trap alarm status information.

3.4   Master-slave (cascade) communication

The two interfaces are the same RS485 communication bus, providing two interfaces for easy cascading. RS485 communication cascade can connect up to 4 instruments. Communication cables can use ordinary shielded twisted pair cables. When RS485 communication cables are routed outdoors, attention should be paid to the grounding of the cable shielding layer. The total length of the communication cable should not exceed 1200 meters. The positive and negative polarities of the RS-485 ports of each device must be connected correctly. If the shielded twisted pair cable is long, it is recommended to connect a 120 Ω resistor at the end and reduce the transmission rate to improve the reliability of communication.
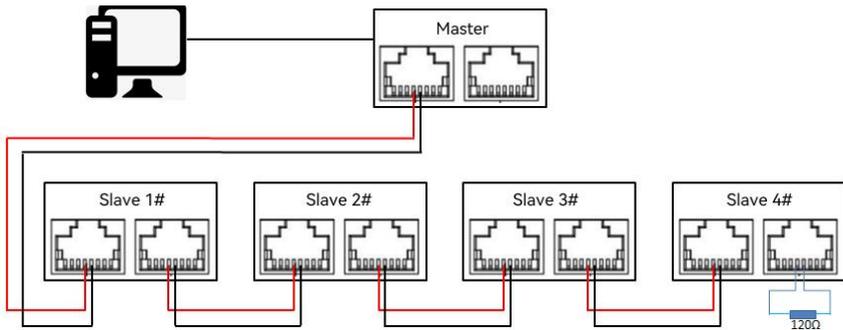
4. Technical parameters and installation

4.1   User interface and parameters

Product Structure Diagram	No.	Item	Parameter	
	①	LCD display	Display Mode	TFT color screen
			Display content	Meter information
			Display Direction	Adjustable
			Refresh Time	1 second
			The backlight turns off after 5 minutes without any operation	
	②	Up key	Page turning, flashing position shift right, return	
	③	Setting Key	Set menu, confirm setting items, save	
	④	Down key	Page turning, flashing digit value decreasing	
	⑤	Reset button	Short press to restart	
	⑥	Communication light	Yellow, flashing during cascade communication	
	⑦	Running lights	Green, flashing when the system is running	
	⑧	Warning light	Red, flashing when in alarm	
	⑨	Ethernet port	Network connection, remote access	
	⑩⑪	RS485	Cascade, parameter configuration	
	⑫	USB	Software Upgrade	
	⑬	Buzzer	Off by default	
	⑭	Switching	1st and 2nd channel switch input. (supports water immersion, door access control, smoke detection)	
	⑮		3rd and 4th channel switch input. (supports water immersion, door access control, smoke detection)	
	⑯		2-channel switch outputs	
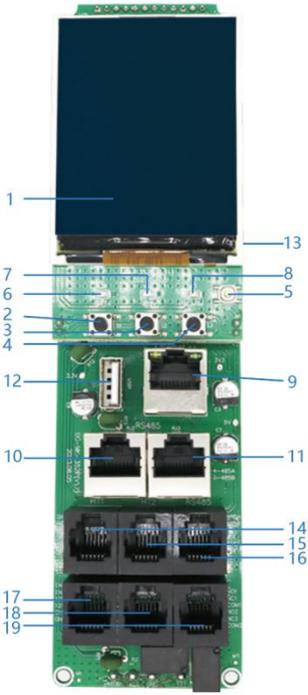
	⑰ ⑱	Temperature and humidity	2-channel temperature and humidity
	⑲	RS485	Reserved function

Note: Provide secondary development interface. SNMP (V1/V2C/V3).

4.2   Display interface introduction

LCD display information graphic	Parameter Description
2024-07-29 19:48:48 ◇ MasterInfo SocketInfo SensorInfo SystemInfo [Up] [Enter] [Next]	System main menu Host Information Socket Information Environmental Information System Information
Host Information	
2024-07-29 19:48:48 Hard 1.00 Soft 1.39 SN 2309040086 IP 192.168.1.190 [Back] [Next] 　 2024-07-29 19:48:48 U 222.13V I 1.82A P 405W EP 95.25kWh [Back] [A] [Next]	Hardware version number Software version number Equipment No. IP address
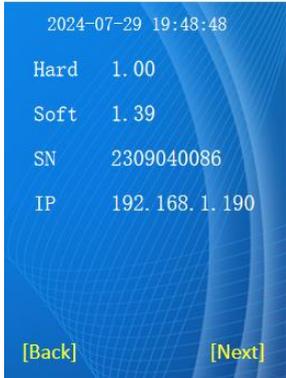
2024-07-29 19:48:48 U 222.13V I 1.81A P 403W EP 95.35kWh [Back] [B] [Next]	2024-07-29 19:48:48 U 222.23V I 1.81A P 402W EP 95.25kWh [Back] [C] [Next]	Voltage Resolution : 0.01V Current Resolution: 0.01A Electricity Resolution: 0.01KWh Power resolution Resolution: 1W Accuracy: ±1% Response time: ≤1 s
2024-07-29 19:48:48 Uab 383.66V Ubc 383.76V Uca 383.83V [Back] [Next]	2024-07-29 19:48:48 YUa 0.00° YUb 120.35° YUc 240.34° [Back] [Next]	
2024-07-29 19:48:48 YIa 0.00° YIb 120.00° YIc 240.04° [Back] [Next]	2024-07-29 19:48:48 U unbalance 0.02% I unbalance 0.02% [Back] [Next]	

Socket Information		
2024-07-29 19:48:48 01#PDU OFFLINE I 0.185A P 41.5W EP 1.290kWh [Back] [Set] [Next]	2024-07-29 19:48:48 08#PDU OFFLINE I 0.185A P 41.5W EP 1.290kWh [Back] [Set] [Next]	1 - 8 output parameters, Up to 36 channels can be connected Current, power, electrical energy. Communication abnormality shows offline. Relay settings. Password: 8310
Environmental Information		
2024-07-29 19:48:48 01#Sensor Online Temperature 28.1℃ Humidity 68.6% [Back] [Next]	2024-07-29 19:48:48 02#Sensor Online Temperature 29.1℃ Humidity 64.5% [Back] [Next]	1 -channel and 2-channel temperature and humidity, Communication abnormality is displayed as offline Temperature and humidity resolution 0.1℃ Accuracy Temperature: ±0.5℃ Humidity: ± 2% Response time: ≤1 s
2024-07-29 19:48:48 Sensor Input 01# × 03# × 02# × 04# × [Back] [Next]	2024-07-29 19:48:48 Sensor Output 01# × 02# × [Back] [Next]	

System Information		
2024-07-29 19:48:48 DHCP 　　OFF [Back]　[Set]　[Next]	2024-07-29 19:48:48 IP Address 　192.168.　1.168 [Back]　[Set]　　[Next]	Network settings: DHCP Status: ON, OFF IP address Subnet Mask Gateway MAC Address Mode settings: Master/Slave#~4#
2024-07-29 19:48:48 Sub Mask 　255.255.255.　0 [Back]　[Set]　　[Next]	2024-07-29 19:48:48 Gateway 　192.168.　1.　1 [Back]　[Set]　　[Next]	Language settings: [Chinese][English] Buzzer settings: Status: ON, OFF Setting the number of slave machines: 1-4 cascade up to 4
2024-07-29 19:48:48 MAC Address 70-00-00-04-62-55 [Back]　[Set]　　[Next]	2024-07-29 19:48:48 Model 　　Master [Back]　[Set]　　[Next]	

2024-07-29 19:48:48
 	
Language
 	
   English
 	
[Back]   [Set]   [Cursor]
	2024-07-29 19:48:48
	
	Beep
	
	   OFF
	
	[Back] [Set] [Next]

2024-07-29 19:48:48 Slave num 4 [Back] [Set] [Next]	

4.3 Terminal Definition

4.3.1 RS485 interface terminal

RS485 interface, Pin4 (blue) 485 A, Pin5 (blue and white) 485 B.

Note: The wiring color of RJ45 may be incorrect, it depends on the actual usage.
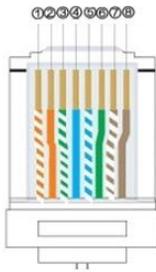
Color	Functional Description
1 Orange and white	NC
2 Orange	NC
3 Green and white	NC
4 Blue	RS485-A
5 Blue and white	RS485-B
6 Green	NC
7 Brown and white	NC
8 Brown	NC

4.3.2   Switch input interface terminal
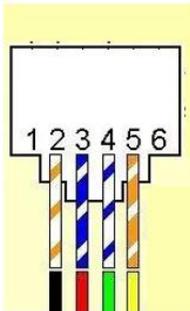
IN1, IN2 interface			IN3, IN4 interface	
No.	Functional Description		No.	Functional Description
1	Switch input 1		1	Switch input 3
2	Switch input 2		2	Switch input 4
3	DC 12V		3	DC 12V
4	DC 12V		4	DC 12V
5	GND		5	GND
6	GND		6	GND

Note: The wiring color of RJ11 may be incorrect, it depends on the actual usage.

4.3.3   Switch output interface terminal
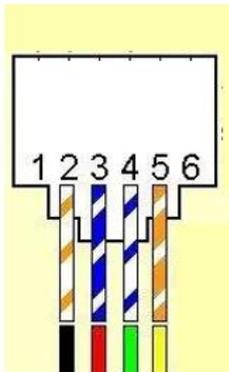
OUT1, IUT2 interface	
No.	Functional Description
1	1st normally open output
2	1st normally closed output
3	COM1
4	2nd normally open outputs
5	2nd normally closed outputs
6	COM2

4.3.4　Temperature and humidity interface terminal
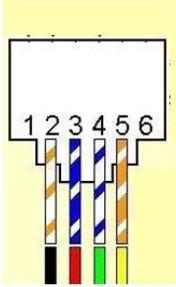
HT1 interface	
No.	Functional Description
1	GND
2	NC
3	SCL1
4	SDA1
5	GND
6	DC 5V

HT2 interface	
No.	Functional Description
1	GND
2	NC
3	SCL1
4	SDA1
5	GND
6	DC 5V

4.3.5　RS485 interface terminal (reserved for backup)
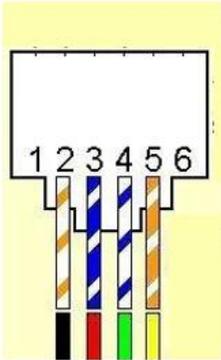
No.	Functional Description
1	RS485-A
2	RS485-B
3	DC 5V
4	DC 5V
5	GND
6	GND

4.4　Product size

◆　MK-352IP Intelligent PDU Dimensions.
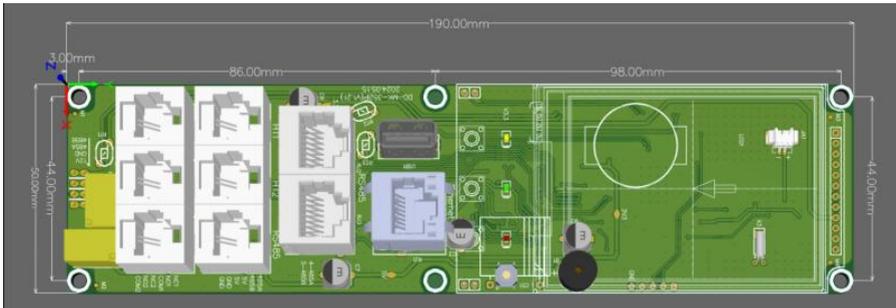
◆ JSY-1084 4-channel relay control module dimensions
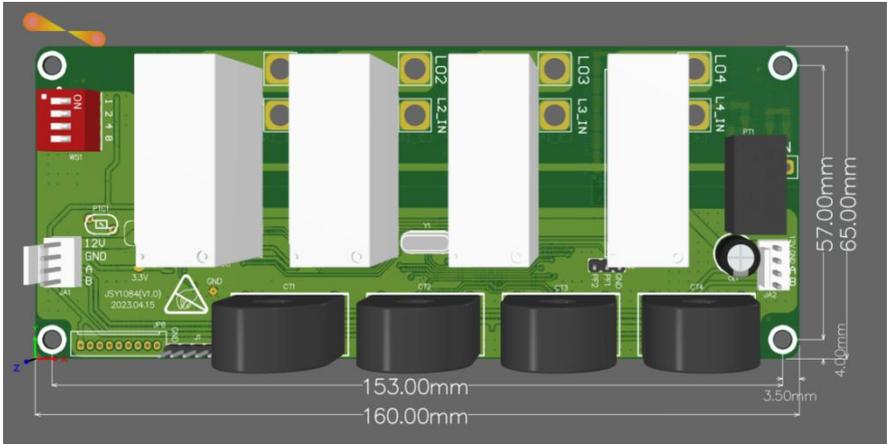
◆ JSY-MK-352AFE three-phase four-wire power module dimensions
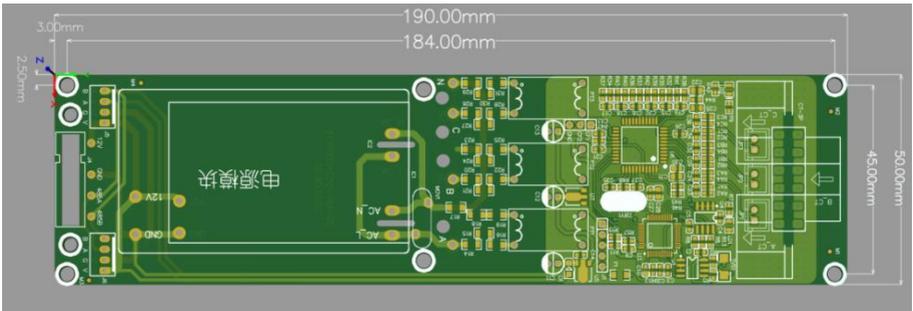
◆ JSY-MK-1073 single-phase power module dimensions
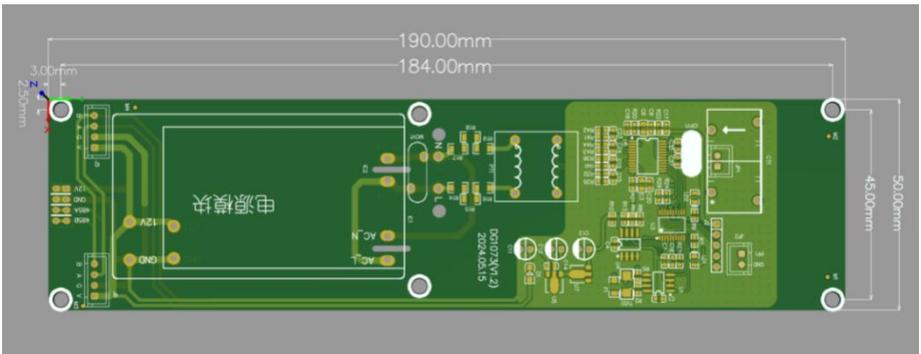
◆   JSY-1054 4-channel relay control module dimensions
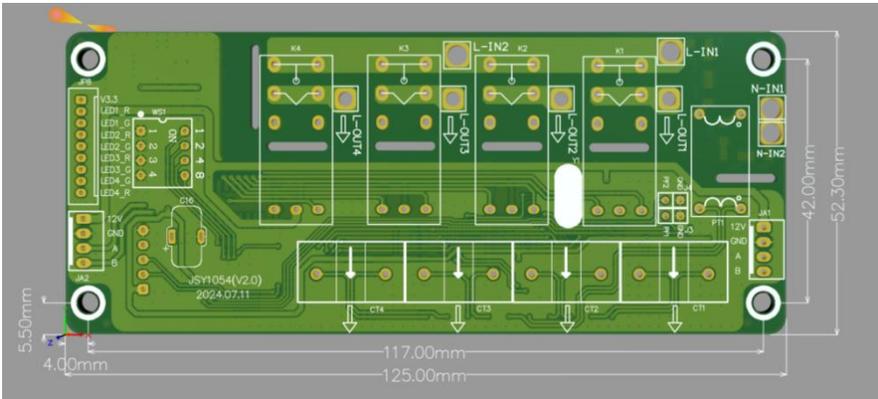
5. WEB Network Operation

5.1   Supported browsers

You can access the PDU through its web interface using IE, Google 360, or Microsoft Edge . Other commonly used browsers may work but have not been fully tested.

5.2   Cascade Setting Instructions

◆   You can use the PDU's system IP address as the URL of the web interface and log in using a case-sensitive username and password.

◆   The PDU uses a static IP address by default when it leaves the factory. The default address is 192.168.1.190. The current IP address can be queried from the network status page on the LCD display of the display module. If you need to configure a dynamic IP, you need to enable the DHCP function of the device.

◆   Before using the cascading function, you need to select the master-slave mode for each PDU configuration. The master mode has only one PDU, and the slave mode can be configured with 4 PDUs by default .

5.2.1   Cascade settings

After the PDU is powered on, plug the network cable into its network port. At this time, in the LCD display of the display module, by short pressing the button, you can query

the IP address from the host information, as shown in the figure 192.168. 1 .1 90.
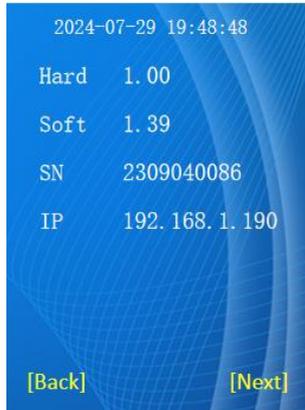
5.2.2   Log in

Enter the IP address of the PDU in the URL address field of the web browser (
http://192.168.1.190 on the web page) as shown in the figure.
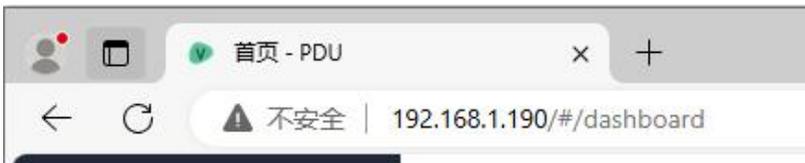
The default username and password for the super administrator is: " admin", then click Login. as shown in Figure 5.2.2:
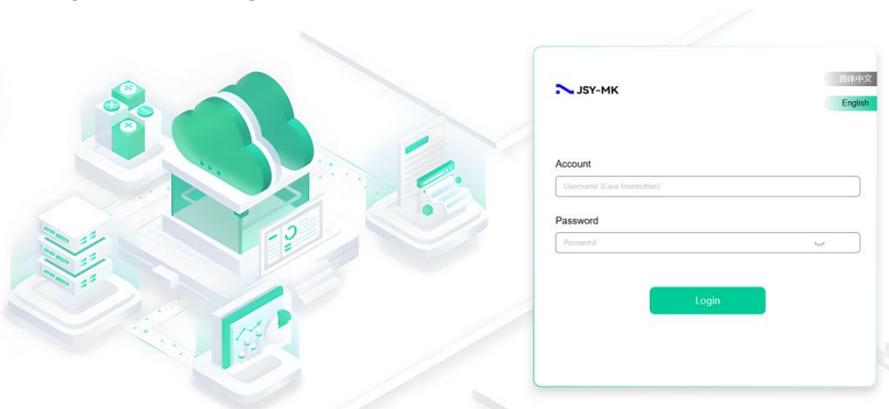
Figure 5.2.2

The main interface consists of three parts: main menu bar, status information, and

login status.

Main menu: including PDU Logo and navigation function menu.

Status information: mainly includes temperature and humidity information, slave/divided relay status and voltage, current, power, power factor, electric energy , PDU voltage , total current, total power and other information.

5.2.3   Host and slave connection method

After one host PDU and four slave PDUs (up to four) are set to the host-slave mode respectively, the network port of the host PDU is connected to the network cable, and the network ports of the four slave PDUs (up to four) are left floating. the host and slave, and slave and slave are connected in series through the RS485 interface in turn, so that the host PDU and slave PDU are cascaded, and the user can control the host PDU and slave PDU through web pages by logging into the Web interface of the host PDU.

5.3   Device Status Description

The device selection includes the device information of the host and slave, power-related data, temperature and humidity information, and alarm status information.
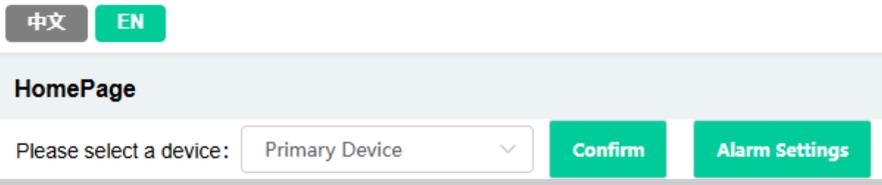
In the Web interface, click Device Selection, and the host data is displayed by default. You can select the host and slave (up to 4) data information through the drop-down menu. as shown in Figure 5.3.0

中文 EN

HomePage

Please select a device: Primary Device   ∧   **Confirm**   **Alarm Settings**

Primary Device
Slave Unit One
Slave Unit Two
Slave Unit Three
Slave Unit Four

232.58V

No1 Real-time Curre...   Voltage RMS   No1 Real-time...
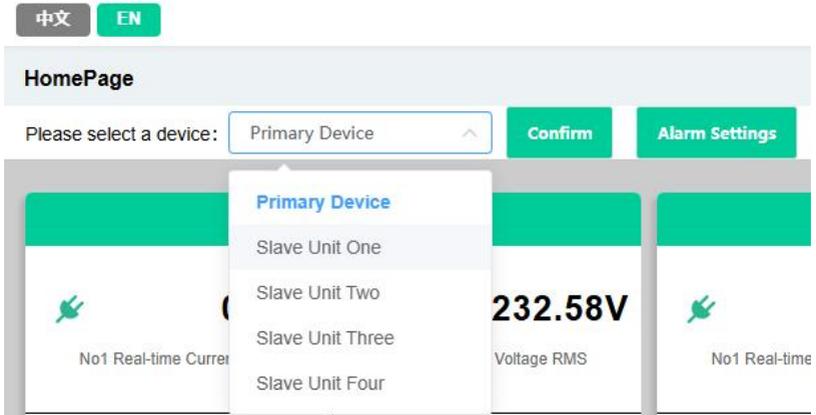
Figure 5.3.0

5.3.1   System Information

PDU system information includes system operation status, device information (product model, version number, etc.), network status and other related information. as shown in Figure 5.3.1

Figure 5.3.1

5.3.2　Electrical parameter information

◆ JSY-MK-352 IP intelligent PDU connected to JSY-MK-352AFE three-phase four-wire power module includes: voltage, current, power, power factor, electric energy and other information parameters. as shown in the figure

A Phase Data		B Phase Data		C Phase Data		
⚡ **0.00A** No1 Real-time Current RMS	⚡ **234.62V** No1 Real-time Voltage RMS	⚡ **0.00A** No1 Real-time Current RMS	⚡ **234.68V** No1 Real-time Voltage RMS	⚡ **0.00A** No1 Real-time Current RMS	⚡ **234.66V** No1 Real-time Voltage RMS	**0** Energy
⏻ **0W** No1 Active Power RMS	🕸 **1.000** No1 Power Factor RMS	⏻ **0W** No1 Active Power RMS	🕸 **1.000** No1 Power Factor RMS	⏻ **0W** No1 Active Power RMS	🕸 **1.000** No1 Power Factor RMS	**0%** No1 Humidity RMS **0℃** No1 Temperature RMS
▭ **0.00kWh** No1 Real-time Energy RMS	∿ **50** No1 Real-time Frequency RMS	▭ **0.00kWh** No1 Real-time Energy RMS	∿ **50** No1 Real-time Frequency RMS	▭ **0.00kWh** No1 Real-time Energy RMS	∿ **50** No1 Real-time Frequency RMS	**0%** No2 Humidity RMS **0℃** No2 Temperature RMS

◆ JSY-MK-352 IP intelligent PDU connected to JSY1073 single-phase power module includes: voltage, current, power, power factor, electric energy and other information parameters. as shown in the figure

A Phase Data			
⚡ **0.00A** No1 Real-time Current RMS	⚡ **0.00V** No1 Real-time Voltage RMS	**0 kWh** Energy	💧 **0%** No1 Humidity RMS 🌡 **0℃** No1 Temperature RMS
⏻ **0W** No1 Real-time Active Power RMS	🕸 **0.000** No1 Real-time Power Factor RMS		💧 **0%** No2 Humidity RMS 🌡 **0℃** No2 Temperature RMS
▭ **0.00kWh** No1 Real-time Energy RMS	∿ **0** No1 Real-time Frequency RMS	(+)	

◆ The slave JSY-MK-352 IP intelligent PDU connected to the JSY1073 single-phase power module includes: voltage, current, power, power factor, electric energy and other information parameters. as shown below

Please select a device: Slave Unit One   [Confirm] [Alarm Settings]

| A Phase Data			
⚡ **0.00A** No1 Real-time Current RMS	⚡ **0.00V** No1 Real-time Voltage RMS	**0 kWh** Energy	💧 **0%** No1 Humidity RMS 🌡 **0℃** No1 Temperature RMS
⏻ **0W** No1 Real-time Active Power RMS	🕸 **0.000** No1 Real-time Power Factor RMS		💧 **0%** No2 Humidity RMS 🌡 **0℃** No2 Temperature RMS
▭ **0.00kWh** No1 Real-time Energy RMS	∿ **0** No1 Real-time Frequency RMS	(+)	
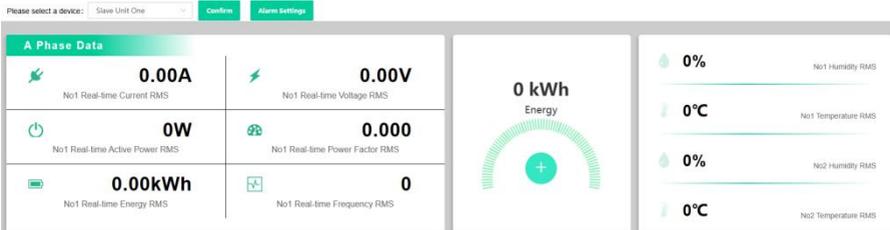
◆ The electrical parameter information of the output control unit (JSY-1054 4-channel relay control module) includes: voltage, current, power, power factor, electric energy and other information parameters. it can connect up to 9 control modules and up to 36 channels. (or optional JSY1084 high current relay control module). as shown in the figure

All Socket Basic Information Table

| No.	Alias	Status	Type	Effective Voltage	Effective Current	Active Power	Energy Consumption
1		Open	single-phase	232.70V	0.000A	0.0W	0.000kWh
2		Open	single-phase	232.97V	0.000A	0.0W	0.000kWh
3		Open	single-phase	232.86V	0.000A	0.0W	0.000kWh
4		Open	single-phase	232.66V	0.000A	0.0W	0.000kWh
5		Open	three-phase	232.91V	0.000A	0.0W	0.000kWh
6		Open	single-phase	232.67V	0.000A	0.0W	0.000kWh
7		Open	single-phase	232.81V	0.000A	0.0W	0.000kWh
8		Open	single-phase	232.63V	0.000A	0.0W	0.000kWh

5.3.3   Temperature monitoring

The temperature and humidity status of the PDU displays the current temperature and humidity data, as shown in the figure
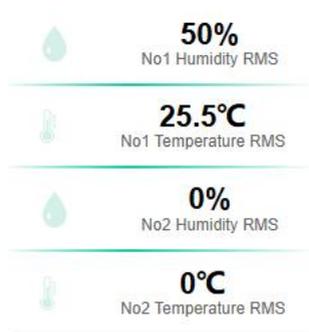
◆ If the system fails to read information from the temperature and humidity sensor, a " 0 " will be displayed.

◆ The device has only two temperature and humidity interfaces by default. The device supports expanding the temperature and humidity device interface through the RS485 interface .

5.3.4   Alarm status

P DU alarm status, showing voltage, current, temperature and humidity, IO node sensors (access control/water immersion/smoke sensors), time settings, user settings, logs, device information, etc. relative to the corresponding thresholds.

5.3.5   Event Log

The PDU will record two types of logs: event log and alarm log

Event List

Export All Events

Time	Type	Level	SubType	Number	Alarm Value
2024-11-14 15:11:27	Socket Switch	General	Open	8#	Web Page Operation
2024-11-14 15:11:25	Socket Switch	General	Open	7#	Web Page Operation
2024-11-14 15:11:23	Socket Switch	General	Open	6#	Web Page Operation
2024-11-14 15:11:21	Socket Switch	General	Open	5#	Web Page Operation
2024-11-14 15:11:19	Socket Switch	General	Open	4#	Web Page Operation
2024-11-14 15:11:18	Socket Switch	General	Open	3#	Web Page Operation
2024-11-14 15:11:16	Socket Switch	General	Open	2#	Web Page Operation
2024-11-14 15:11:11	Socket Switch	General	Open	1#	Web Page Operation
2024-11-14 14:57:37	User Login	General		Administrator	0
2024-11-14 10:28:42	Socket Switch	General	Close	36#	Web Page Operation

Total 100   10/page   <   1   2   3   4   5   6   …   10   >   Go to   1

◆ The log information includes: offline alarm from the host/slave, control module, undervoltage alarm, overvoltage alarm, overcurrent alarm, temperature and humidity offline alarm, temperature upper and lower limit alarm, humidity upper and lower limit alarm.

◆ The information content is in the format of: time-type-level-subtype-sequence number-alarm value.

◆ 100 alarm messages can be stored , and the latest alarm message will overwrite the previous message.

5.3.6   LOGO upload

Support user-defined uploaded pictures.

LOGO Upload

Only png files can be uploaded, the size does not exceed 500kb, and the maximum pixel size does not exceed 2000*1600.

Please import the LOGO file to be uploaded.   Import Firmware

Confirm Upload

The LOGO , company abbreviation and full name of the WEB page can be changed according to needs. The LOGO can only upload png files with a file size not exceeding 500KB and a size of 200 *100 pixels. After filling in, click "Confirm Upload".

5.4   System parameter settings

5.4.1   Account Addition

In the web interface, click Account Management

Account List

Account Name	Account Description	Handle
admin	Administrator	✎ Edit

⊕ Add New Account

◆　　In account management, it is used to add, modify or delete users.

◆　　The default username and password for the administrator are both "admin". The username and password for the administrator can be modified.

◆　　By default, ordinary users do not have output loop control permissions. Administrators can add output loop control permissions for ordinary users.

◆　　The super user has the highest permissions on the device and can access or modify any options that can be set and modified.

5.4.2   TCP/IP Settings

◆　　In TCP/IP settings, DHCP is selected as "ON" by default, and the PDU will automatically obtain the IP address assigned from any DHCP server. If DHCPP is "ON", the input in the IP address, mask and gateway boxes will be invalid.

◆　　Network settings include IP address settings, SNMP settings, web login settings, email settings, upgrade settings, etc.

The device supports the setting of static IP address or dynamic IP address.

LAN:

　● **Static IP**　　○ Dynamic IP

IP Address:　　192.168.1.221

Subnet Mask:　　255.255.255.0

Gateway:　　192.168.1.1

When selecting a static IP address, the user can set a fixed IP address, mask, and gateway according to the existing network environment. if a dynamic IP address is selected, the IP address will be automatically obtained according to the router settings in the LAN where the device is located.

Note: After modifying the network configuration information, you need to restart the system to take effect.

5.4.3   SNMP Settings

PDU supports SNMP v1, SNMP v2c, and SNMP v3 . When users select SNMP v1, SNMP v2c and SNMP v3, they can operate SNMP by setting the following properties:

SNMP Password

Read Community:	public
Write Community:	private
sysContact:	Contact
sysName:	Name
sysLocation:	Location
USM User:	usr-md5-des
Auth Password:	••••••••
Privacy:	••••••••
Trap IP:	192.168.1.19

completing the SNMP settings, you need to install the corresponding SNMP management software.

5.4.4   Alarm threshold setting

Note: The alarm contents are overvoltage, undervoltage, and overcurrent. the overvoltage threshold range is 110-300VAC , the default is 265V. the undervoltage alarm threshold range is 0 -300VAC , the default is 175V. the overcurrent alarm threshold range is 0 -63A , the default is 63A (fill in the threshold with an integer)

◆   In the Wed interface, click Alarm Settings to set the main circuit alarm threshold settings. as shown in the figure

Alarm Settings:

Effective Current: (Accuracy: 0.001A)

☑ Lower Warning Limit [0] A ☑ Warning Upper Limit [0] A

Effective Voltage: (Accuracy: 0.01V)

☑ Lower Warning Limit [0] V ☑ Warning Upper Limit [0] V

Active Power: (Accuracy: 0.01W)

☑ Lower Warning Limit [0] W ☑ Warning Upper Limit [0] W

The voltage/current threshold is used to set the upper and lower alarm thresholds of the current voltage/current. When the measured value is within the threshold range, it will display green "normal", and when the measured value exceeds the threshold, it will display red "warning"

◆   Output control unit alarm threshold setting. single loop setting.

No.	Alias	Status	Handle	Information
1		Open	✓ Open ✕ Close	Setting
2		Open	✓ Open ✕ Close	Setting

◆   Output control unit alarm threshold setting. batch setting and sequential power-on delay setting.

◆   When the measured value is within the threshold range, it will display green "Normal", and when the measured value exceeds the threshold, it will display red "Warning".

Work Schedule Settings

☑ Select All
☐ Socket01 ☐ Socket02 ☐ Socket03 ☐ Socket04 ☐ Socket05 ☐ Socket06 ☐ Socket07 ☐ Socket08 ☐ Socket09 ☐ Socket10 ☐ Socket11 ☐ Socket12 ☐ Socket13 ☐ Socket14
☐ Socket15 ☐ Socket16 ☐ Socket17 ☐ Socket18 ☐ Socket19 ☐ Socket20 ☐ Socket21 ☐ Socket22 ☐ Socket23 ☐ Socket24 ☐ Socket25 ☐ Socket26 ☐ Socket27 ☐ Socket28
☐ Socket29 ☐ Socket30 ☐ Socket31 ☐ Socket32 ☐ Socket33 ☐ Socket34 ☐ Socket35 ☐ Socket36

Sequential Power-on Delay: [−] 0 [+] S

Alarm Settings:

Effective Current: (Accuracy: 0.001A)

☑ Lower Warning Limit [0] A ☑ Warning Upper Limit [0] A

Effective Voltage: (Accuracy: 0.01V)

☑ Lower Warning Limit [0] V ☑ Warning Upper Limit [0] V

Active Power: (Accuracy: 0.01W)

☑ Lower Warning Limit [0] W ☑ Warning Upper Limit [0] W

5.4.5   Temperature and humidity alarm threshold settings

◆   Temperature and humidity alarm threshold settings

Temperature and Humidity Threshold Setting

Temperature:

☑ Lower Limit   0   ℃   ☑ Upper Limit   80   ℃

Humidity:

☑ Lower Limit   0   %   ☑ Upper Limit   80   %

Cancel   Confirm

◆ The user can set the upper and lower alarm thresholds of the current temperature and humidity. The current device only supports setting two temperature and humidity interfaces, but the device supports expanding the temperature and humidity device interface through the RS485 interface . Here, the upper and lower alarm thresholds of the sensor temperature and humidity can be set, so that when it exceeds the limit, an alarm can also be issued through the PDU.

5.4.6　NTP Settings

PDU supports NTP settings, and users can enable or disable NTP service according to usage .

Enable: Set and fill in the NTP server and NTP time zone, click the NTP setting button, and the device will obtain the time and date of the currently selected time zone in the network based on the NTP server and time zone filled in by the user, and update the device system time (automatically synchronized every 10 minutes).

NTP configuration

NTP:	Enable ⌄
NTP Server:	time.ustc.edu.cn
NTP Port:	123
Time Zone:	UTC+8:00 ⌄

Confirm

5.4.7   Event Configuration Description

◆   Users can set the alarm level, and events can be divided into three levels: general, warning, and critical.

Event Level Configuration

Events can be divided into three levels: general, warning, and critical.   Submit

Event Type	Event Level
Temperature and Humidity Alarm	General
Voltage Alarm	General
Current Alarm	General
Power Alarm	General
Meter Offline Alarm	General
Socket Offline Alarm	General
Temperature and Humidity Offline Alarm	General
Switching Value Input Event	General
Switching Value Output Event	General
Circuit Breaker Alarm	General
User Login	General
New Users	General
Delete Users	General
Socket Switch	General

◆   The log supports downloading. Click " Export all events" and the log will be downloaded to the accessed PC through the browser.

5.4.8   Email Settings

The mailbox supports SMTP to send warning emails to the specified mailbox:

Notification Sender Configuration

Please inform the registered mailbox information as the sender of the event notification.
Note: Some mailboxes require an authorization code instead of the password here.   Submit

SMTP Server Address:	Please enter SMTP server address
User Name:	Please enter user name
Password:	Please enter password
Port:	25
Encryption Method:	

After the user has set up all functions, the device needs to be restarted to make them effective. Then the user can click the "Send Test Email" button to test whether the current configuration is effective.

Notify Receiver Configuration

Fill in the email address as the recipient of the event notification.   Submit

Email Address:	Please enter an email address
Notify Event Level:	General

Fill in the email address in the corresponding "Receiving Account" input box. modify the notification event level: general, warning, critical.

5.4.9   System Upgrade

In the upgrade settings, you can see the system and web page firmware versions , and you can upgrade the current firmware information when new firmware is available.

Import the firmware before upgrading. The firmware is a bin file. After the upgrade is

completed, the PDU will automatically restart.

System Update

Current System Version: V5.01

Please import the system firmware to be updated.   **Import Firmware**

System Update

Web Page Update

Current Web Page Version: V2.03

Please import the package to be updated.   **Import Update Package**

Web Page Update

◆ If the power is cut off during the upgrade process, the device can continue to upgrade normally after it is powered on again.

◆ The PDU firmware is relatively large, so during the upgrade process, please wait patiently for the upgrade to complete and ensure that the network is unobstructed.

◆ During the PDU upgrade process, please do not perform other operations, such as clicking buttons, using SNMP, logging into the web page, etc.

5.4.10   System time acquisition

◆ After the user gets the PDU, it is recommended to set the time to ensure the accuracy of the system time.

◆ PDU supports directly obtaining the current PC time as the PDU time, and also supports accessing the NTP server for time synchronization.

◆ When the user uses the current PC time as the PDU time, he can directly click "Synchronize".

System Time Configuration

Host Time: 2024-11-14 17:06:26

Standard Time: 2024-11-14 17:07:35

Synchronize

Note: When users use NGP server for time synchronization. refer to 5.5.3 NTP

settings

5.4.11   Switch quantity alias modification

◆   Supports modification of switch quantity aliases. as shown in the figure

Input Switching Value Alias Configuration

Switching Value No.	Switching Value Alias	Handle
1		Edit
2		Edit
3		Edit
4		Edit

Input Switching Value Alias Configuration

Switching Value No.	Switching Value Alias	Handle
1		Edit
2		Edit
3		Edit
4		Edit

5.5   Other settings instructions

5.5.1   Display column description

There is a current status display bar in the upper right and upper left corners of the interface. It can display the current logged-in user, Chinese and English switching, and the current device time.

◆   Click the current login user name, you can choose to log out (exit) the current user, and switch between different users.

◆   Click "EN" to switch the device to the English interface display.

5.5.2   IP address acquisition

There are several ways for PDU to obtain IP address:

The first method: After the PDU is connected to the router, the IP address assigned by the router is obtained statically or dynamically.

The second method: After the PDU is directly connected to the PC via a network cable, the PC is set to a static IP address. At this time, if the PDU has been set to a static IP

address and is in the same network segment as the PC, it can be accessed directly.

The third method: Users can directly set the dynamic or static address of the PDU through the LCD.

5.5.3 System version view

The system updates and records the current PDU firmware version. When the user needs after-sales service for the current device, the user can provide the current screenshot to our company, and our company can provide relevant after-sales service based on the information on the current interface.

System Update

Current System Version: V5.01

| Please import the system firmware to be updated. | Import Firmware |

System Update

Web Page Update

Current Web Page Version: V2.03

| Please import the package to be updated. | Import Update Package |

Web Page Update

6. Troubleshooting

6.1 Frequently Asked Questions

question	Solution
Network disconnection	◆ Check if the LED indicator of the network port is flashing and make sure it is flashing normally. ◆ Check the integrity of the network cable ◆ Verify the PDU network settings
No access Web User Interface	◆ Verify that you can ping the IP address of the PDU ◆ Verify that the browser you are using supports PDU web browsing. See "Supported Browsers" ◆ Verify that the URL is entered correctly ◆ Reset the device
LCD display shows garbled characters	◆ Reset device parameters via LCD ◆ Restart by pressing the Reset button ◆ If the problem is still not solved, please contact our after-sales service

6.2 SNMP Issues

question	Solution
Unable to execute GET or SET	◆ Verify the community and view "SNMP Devices" ◆ Verify that UDP port 161 is open correctly ◆ Check whether the parameters are correct when using SNMP
Unable to receive trap	◆ Verify that the trap proxy server IP address is configured correctly ◆ Verify that UDP port 162 is open
The trap received by the network management system is not recognized	◆ Please refer to the documentation received by your gateway to verify that these traps are correctly integrated into the alert/trap database

Note: The equipment should be operated in a place without explosion, corrosive gas and conductive dust, and without significant shaking, vibration and impact.

7. Transportation and storage

1. The product should not be subject to severe impact during transportation and unpacking, and should be transported and stored in accordance with the national standard GB/T13384-2008 "General Technical Conditions for Packaging of Mechanical and Electrical Products".

2. This product is an electronic device, so you should try to avoid heavy objects hitting and bumping it when handling, picking up and placing it.

3. The ambient temperature of the storage location should be -40 ~ +70 ℃, the relative humidity should not exceed 85 %, and there should be no corrosive and harmful substances in the air .

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