User Manual

Single-phase RS-485 PDU Meter
JSY1095

Three-phase RS-485 PDU Meter
JSY-MK-360

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1. Introduction

Professional-grade monitoring and management power supply system is the latest scientific research result obtained after years of dedicated research in the field of power distribution technology. This product is based on the development trend of future power distribution monitoring and management technology in the world and combines the technical requirements of modern data center application environment.

2. Product Introduction

2.1 Product Overview

Single-phase and three-phase PDU meters are based on the innovative SUM (Sustainable, Upgradable and Maintainable) design concept technology. As a key component of the metered cabinet power distribution unit (PDU), after being installed in the PDU body, it can provide active metering functions . User-set alarm thresholds can issue potential circuit overload warnings through real-time local alarms. Users can configure metered cabinet PDUs via RS485.

2.2 Function Introduction

Performance parameters				Technical indicators
Electrical parameters	Input Optional	Single Phase	Input voltage	176-264V
			Maximum load current	63A
		Three-phase	Input voltage	3*220V (Phase A power supply)
			Maximum load current	3*63A
		Frequency		50/60HZ
User interface		Display		Black and white dot matrix screen
		Operation buttons		Up, down, setting, reset button
		Communication interface		1-channel RS485(2 Interfaces)
		Temperature and humidity interface		2-channel
Electrical parameter measurement		PDU measurement		Voltage, current, power, electric energy
		Customize alarm signal thresholds		Voltage and current adjustable

Monitoring function		Load current monitoring	
		Load power monitoring	
		Voltage monitoring	
		Power consumption monitoring (active power, reactive power)	
		Ambient temperature and humidity monitoring	
Setting the function		Load current upper limit setting	
		Voltage upper and lower limit settings	
		Chinese / English switch	
Alarm function	System Alarm	When the load current exceeds the rated value	
	Custom Alerts	When the load current exceeds the threshold value	
		When the voltage exceeds the threshold	
	Alarm method	Buzzer beeps	
Serial communication function	Port Definition	Two RJ45 interfaces (RS485 interfaces) are standard	
	Communication Protocol	Default MODBUS RTU protocol	
	Baud rate	Default: 9600bps, configurable 4800, 19200, 38400bps.	
	cascade	Support RS485 cascade	
Environment		Operating temperature	-10 ~ 50℃
		Extreme operating temperature	-20 ~ 60℃
		Relative humidity	10 ~ 90%
		Storage and transportation temperature limit	-30 ~ 70℃

2.3　Model selection

◆　JSY1095 represents single-phase RS485 communication PDU meter.

◆　JSY-MK-360 represents three-phase RS485 communication PDU meter.

3. Functional technical parameters

3.1 Real-time monitoring function

◆ The display screen displays the monitored load current, voltage, power, electric energy, power factor. Temperature/humidity sensor data and operating status.

3.2 Customized Alarms

◆   Load current/voltage over-limit threshold can be customized.

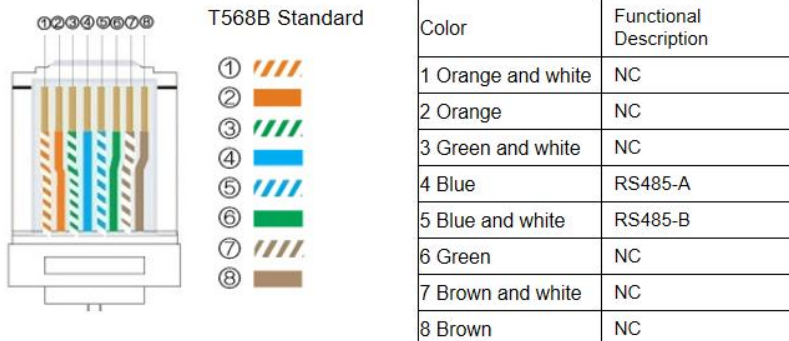◆   The buzzer sounds.

3.3 Definition of key indicator light

◆ [Direction Keys] : Short press the direction keys to cycle through information such as current, temperature and voltage.

◆ [Settings] : Press and hold the Setting button for 3 seconds to enter the Setting interface. The system parameters can modify communication parameters, various thresholds, Chinese and English switching and other parameters.

◆ [Reset button]: Press it briefly to reset the system .

◆ [Alarm indicator light] : It is off under normal circumstances and stays on when there is an alarm signal.

◆ [Operation indicator] : After the device is successfully powered on, the operation indicator flashes .

◆ [Communication indicator light] : The indicator light flashes when the device is communicating , and the indicator light goes out when there is no communication.
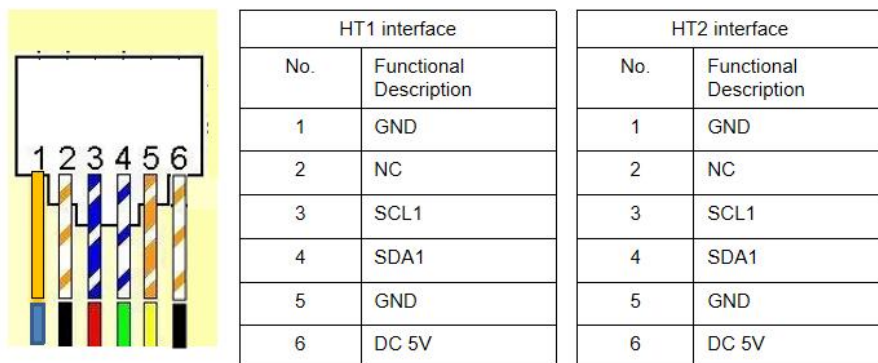
3.4 Terminal Definition

3.4.1 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

3.4.2 Temperature and humidity interface terminals

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

Note: The above wiring colors may be incorrect, please refer to the actual wiring situation .

3.5 User Interface and Parameters

Product Structure Diagram	No.	Item	parameter	
	①	LCD display	Display Mode	LCD screen
			Display content	Instrument information
			Display Direction	Adjustable
			Refresh Time	1 second
			When the button is pressed, the backlight lights up. If there is no operation for 3 minutes, the backlight will turn off.	
	②	Up key	Turn the page, the flashing position moves right	
	③	Setting Key	Set menu, confirm setting items, save	
	④	Down key	Display page turning , flashing digit value decreasing	
	⑤	Reset button	Short press to restart	
	⑥	Communication light	Yellow, flashing during communication	
	⑦	Running light	Emerald green, flashing when the system is running	
	⑧	Warning light	Red, always on when in alarm	
	⑨	Temperature and humidity 1	1-way temperature and humidity sensor detection port	
	⑩	Temperature and humidity 2	2-way temperature and humidity sensor detection port	
	⑪	RS485	Communication interface	
	⑫	RS485	Communication interface	

3.6 Display interface introduction

LCD Display		Parameter Description
Voltage Current A:220.00V 10.00A B:220.00V 10.00A C:220.00V 10.00A	Line Voltage 50.00Hz A: 380.00V B: 380.00V C: 380.00V	Voltage Resolution : 0.01V Current Resolution: 0.01A Electricity Resolution: 0.01KWh power Resolution: 1W temperature Resolution: 0.1℃ humidity Resolution: 0.1% Accuracy: ±1% Response time: ≤1 s
Active Power +6600W A: +2200W B: +2200W C: +2200W	Reactive P +6600Var A: +2200Var B: +2200Var C: +2200Var	
Apparent P +6600VA A: +2200VA B: +2200VA C: +2200VA	Power factor 1.000 A: 1.000 B: 1.000 C: 1.000	
Energy 0.00KWh A: 0.00KWh B: 0.00KWh C: 0.00KWh	Temperature humidity 1: 0.0 ℃ 0.0 % 2: 0.0 ℃ 0.0 %	

|		
RS485 parameter Address: 1 Baudrate: 9600	**Version information** Hardware: 1.00 Software: 1.00	Hardware version number Software version number Correspondence address Baud rate You can search by turning the page
System Information		
1 Overall Monitoring 2 Socket Details 3 System Parameter ‹ ›		Press and hold the setting button for 3 seconds to enter. Note (no 2 socket information function).
3. System parameter modification		

Address
 	
                1
	Baudrate
	
	                9600
		3. System parameters

Upper voltage limit
 	
        265V
	Lower voltage limit
	
	        175V	

Current upper limit	Sound Swith
63A	OFF

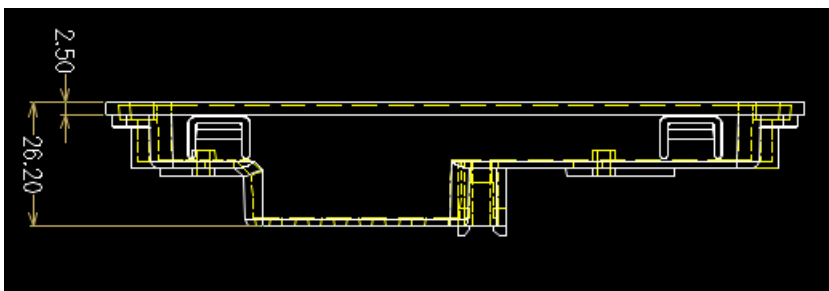| Display direction	Language
0º	中文 English

3.7 Product size

◆　Product front appearance dimensions
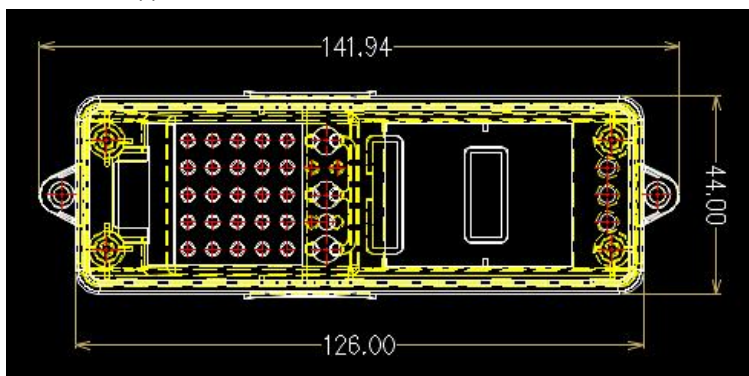
◆　Product side appearance dimensions
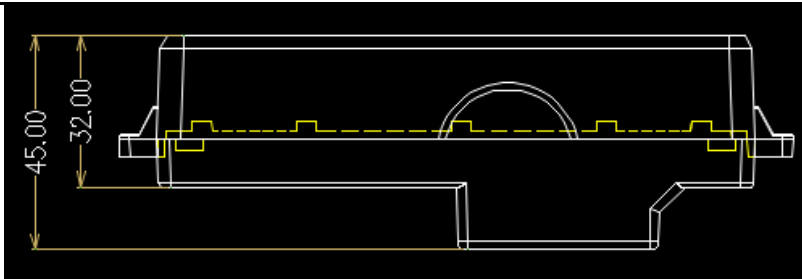
◆   Product bottom cover appearance dimensions

3.8 System parameter settings

3.81 Alarm Threshold Settings

Overvoltage alarm threshold range: 110-300VAC , default 265V .

Undervoltage alarm threshold range: 0 -300VAC , default 175V .

Overcurrent alarm threshold range: 0 -63A , default 63A (fill in an integer for the threshold).

   Note: The alarm contents are overvoltage, undervoltage and overcurrent respectively.

   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 is "normal". When the measured value exceeds the threshold, an audible and visual alarm occurs.

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

4. transportation and storage

1. The product should not be subjected 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 Electromechanical Products".

2. This product is an electronic device, so try to avoid heavy impact and bump when transporting and placing it.

3. The ambient temperature of the storage location should be -30 ~ +70 ℃, the relative humidity should not exceed 85 % and there should be no corrosive harmful substances in the air .

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