

UPS-IPGuard RS485 to MODBUS Introduction

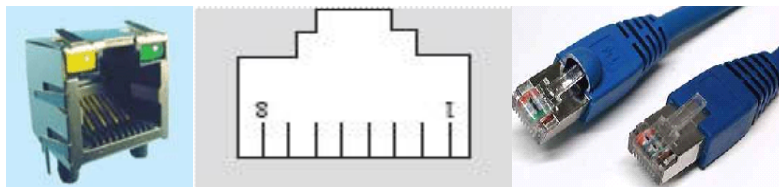
- The appearance of the product:



- RS232/Device Interface Pin Definition:

Pin Definition: 2---RX
 3---TX
 5---GND

- RS485 Interface Pin Definition:



pin	definition
1	RS422_RX+
2	RS422_RX-
3	
4	RS422_TX-
5	RS422_TX+
6	

7	+12V
8	GND
Green light	RS422RXD
Yellow light	RS422TXD

● **RS485 cabling instruction :**

Half duplex: network Cable (only one end has a RJ-45 plugs, taking 568B as an example) RJ-45 plugs is connected to the UPS-IPGuard RS485 interface;

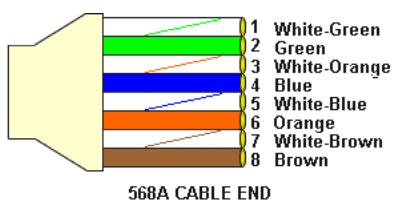
The other end of Cable:

White-Orange (RX+) and White-Blue LINE(TX+) short-circuit as 485+ connect to A
 Orange Line(RX-) and Blue Line(TX-) short-circuit as 485- connect to B.

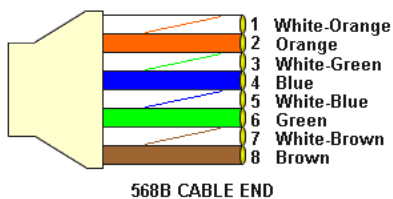
Full duplex: network Cable (only one end has a RJ-45 plugs, taking 568B as an example) RJ-45 plugs is connected to the UPS-IPGuard RS485 interface;;

The other end of Cable: White-Orange Line(RX+) connect to TX+,
 Orange Line(RX-) connect to TX-,
 Blue Line(TX-) connect to RX-,
 White-Blue LINE(TX+) connect to RX+.

PS: Standard 568A and Standard 568B



Standard 568A: white-green, green, white-orange, blue, white-blue, orange, white-brown, brown

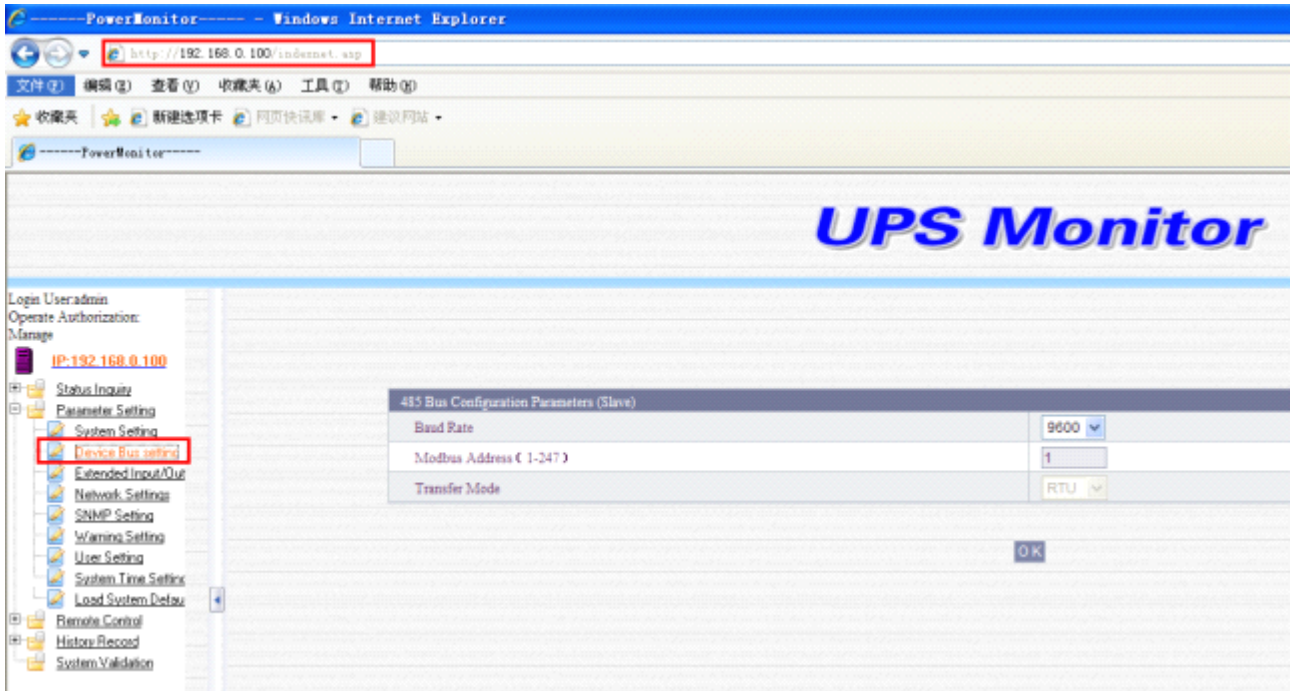


Standard 568B: white-orange, orange, white-green, blue, white-blue, green, hite-brown, brown

● **MODBUS address setting:**

The default Modbus address is 1, 9600 baud rate, to set up the Modbus address:

Connect the PC and the ethernet port with the network cable ,log in the website
 (Device default IP address: 192.168.0.100) →click Parameter setting→click **Device bus setting**→enter RS485 bus setting page to set up MODBUS address and baud rate



● **UPS-IPGuard signal representing the amount collected in MODBUS:**

Support the MODBUS standard RTU ,half duplex/full duplex

Baud rate (default): 9600

Word Length: 8

Stop Bits: 1

Parity: none

Analog:

	Point type	Register address	Description	BYTE	
Single-phase UPS	4	1	UPS input voltage	2	unit: 0.1V
	4	2	UPS default input voltage	2	unit: 0.1V
	4	3	UPS output voltage	2	unit: 0.1V
	4	4	UPS current load	2	unit: 0.1%
	4	5	UPS Input Frequency	2	unit: 0.1Hz
	4	6	UPS的电池单体电压	2	unit: 0.1V

	4	7	UPS temperature	2	unit: 0.1°C
	4	8	UPS battery capacity	2	unit: 0.1%
	4	9	Input MaxLine Voltage	2	unit: 0.1V
	4	10	minimum output voltage	2	unit: 0.1V
	4	11	Battery temperature	2	unit: 0.1°C
	4	12	Total battery voltage	2	unit: 0.1V

Three-phase UPS	4	21	Ups Auto Restart Type	2	10 enable, 11 disable
	4	22	Shutdown type	2	0x10 shutdown output, 0x11 shutdown system
	4	23	Battery Condition	2	0x10 good, 0x11 0x12
	4	24	Battery status	2	0x10 Normal, 0x11 lowBattery 0x12表示缺少电池液
	4	25	Battery Charge Status	2	0x10 Float, 0x11 Charging, 0x12 ormancy, 0x13 Discharge
	4	26	Second On Battery	2	unit: 0.1 second
	4	27	Estimated Minutes Onbat	2	unit: 0.1 minute
	4	28	estimatedCharge	2	unit: 0.1%
	4	29	Battery Voltage	2	unit: 0.1V
	4	30	Battery Current	2	unit: 0.1A
	4	31	Battery Temperature	2	unit: 0.1°C
	4	32	Input Line Bads	2	unit: 0.1phase
	4	33	Input Lines	2	unit: 0.1phase
	4	34	Input Line1 Frequency	2	unit: 0.1Hz
	4	35	Input Line1 Voltage	2	unit: 0.1V
	4	36	Input Line1 Current	2	unit: 0.1A
	4	37	Input Line1 Power	2	unit: 0.1W
	4	38	Input Line2 Frequency	2	unit: 0.1Hz
	4	39	Input Line2 Voltage	2	unit: 0.1V
	4	40	Input Line2 Current	2	unit: 0.1A
4	41	Input Line2 Power	2	unit: 0.1W	
4	42	Input Line3 Frequency	2	unit: 0.1Hz	

4	43	Input Line3 Voltage	2	unit: 0.1V
4	44	Input Line3 Current	2	unit: 0.1A
4	45	Input Line3 Power	2	unit: 0.1W
4	46	Outpur Source	2	0x10 normal,0x11 battery mode, 0x12 Bypass mode, 0x13减压输出, 0x14升压输出, 0x15 other
4	47	Output Fre	2	unit: 0.1Hz
4	48	Output Lines	2	unit: 0.1Phase
4	49	Output Line1 Vol	2	unit: 0.1V
4	50	Output Line1 Cur	2	unit: 0.1A
4	51	Output Line1 Power	2	unit: 0.1W
4	52	Output Line1 Load	2	unit: 0.1%
4	53	Output Line2 Vol	2	unit: 0.1V
4	54	Output Line2 Cur	2	unit: 0.1A
4	55	Output Line2 Power	2	unit: 0.1W
4	56	Output Line2 Load	2	unit: 0.1%
4	57	Output Line3 Vol	2	unit: 0.1V
4	58	Output Line3 Cur	2	unit: 0.1A
4	59	Output Line3 Power	2	unit: 0.1W
4	60	Output Line3 Load	2	unit: 0.1%
4	61	Bypass Fre	2	unit: 0.1Hz
4	62	Bypass Lines	2	unit: 0.1Phase
4	63	Bypass Line1 Vol	2	unit: 0.1V
4	64	Bypass Line1 Cur	2	unit: 0.1A
4	65	Bypass Line1 Power	2	unit: 0.1W
4	66	Bypass Line2 Vol	2	unit: 0.1V
4	67	Bypass Line2 Cur	2	unit: 0.1A
4	68	Bypass Line2 Power	2	unit: 0.1W
4	69	Bypass Line3 Vol	2	unit: 0.1V
4	70	Bypass Line3 Cur	2	unit: 0.1A
4	71	Bypass Line3 Power	2	unit: 0.1W
4	72	UPS test Result	2	0x10表示不在测试, 0x11表示测试通过, 0x12测试中, 0x13正常测试失败, 0x14电池测试失败, 0x15电池深度测试失败
4	73	Output Total load	2	unit: 0.1%
4	74	Battery capacity	2	unit: 0.1%
4	75	ambienTemperature	2	unit: 0.1℃
4	76	Fault ID Definition	2	
4	77	同步告警	2	三菱定制的同步告警状态; 0x10: 同步; 0x11: 异步; 0x12: 未知.

Alarm status:

	Point type	Register address	Description	Bit	
Single-phase UPS	2	1	Summary Alarm	1	1 on, 0 off
	2	2	UPS shutdown	1	1 on, 0 off
	2	3	UPS test	1	1 on, 0 off
	2	4	UPS type	1	1 back up, 0 on line
	2	5	UPS Status	1	1 on, 0 off
	2	6	UPS Bypass	1	1 on, 0 off
	2	7	UPS batteryVolLow	1	1 on, 0 off
	2	8	UPS AC power failure	1	1 on, 0 off
	2	32	Ups Communication	1	1 disconnect, 0 connect
Three-phase UPS	2	17	Temperature Too High	1	1 Alarm , 0 Non Alarm
	2	18	Input Fault	1	1 Alarm , 0 Non Alarm
	2	19	Output Fault	1	1 Alarm , 0 Non Alarm
	2	20	Over Load	1	1 Alarm , 0 Non Alarm
	2	21	Bypass Fault	1	1 Alarm , 0 Non Alarm
	2	22	Output Shutdown	1	1 Alarm , 0 Non Alarm
	2	23	Ups Shutdown	1	1 Alarm , 0 Non Alarm
	2	24	Charge Fault	1	1 Alarm , 0 Non Alarm
	2	25	System Shutdown	1	1 Alarm , 0 Non Alarm
	2	26	Fan Fault	1	1 Alarm , 0 Non Alarm
	2	27	Fuse Fault	1	1 Alarm , 0 Non Alarm
	2	28	Gengeral Fault	1	1 Alarm , 0 Non Alarm
	2	29	Auto Restart	1	1 Alarm , 0 Non Alarm
	2	30	Shutdown Delay	1	1 Alarm , 0 Non Alarm
	2	31	Shutdown at once	1	1 Alarm , 0 Non Alarm
	2	32	Ups Communication	1	1 disconnect, 0 connect
	2	33	Battery Fault	1	1 Alarm , 0 Non Alarm
	2	34	Battery Vol Low	1	1 Alarm , 0 Non Alarm
	2	35	Bypass	1	1 Bypass mode, 0 Battery mode
2	36	Other Fault	1	1 Alarm , 0 Non Alarm	
2	37	Test In Progress	1	1 testting, 0 not on testting	