

SC1250B



[http:// www.sonbus.com](http://www.sonbus.com)

RS485 relay signal controller

Product Overview

SC1250B is a standard protocol for remote RS485 relay signal controllers. In RS485 mode ditto-machine communication equipment industry gathering common standard MODBUS-RTU protocol, convenient configuration software with a variety of combinations, the rapid formation of a variety of control systems. This product has 4, 8 and 16 kinds of channels from several options. Confirm Model Please refer to product selection before ordering.



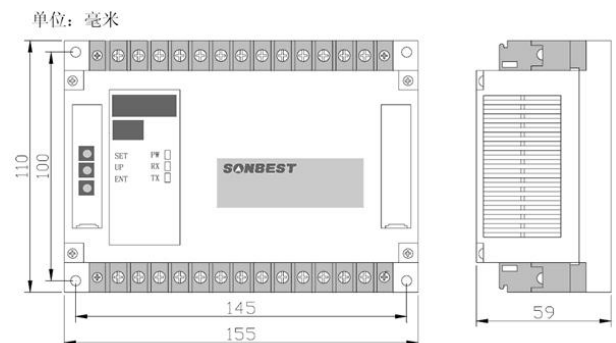
ORDERING INFORMATION

Parameters

Parameter	Technical indicators
Relay contact capacity	10A AC 220V
Number of Channels	4, 8, 16 optional
Response time	<1 second
Communication Port	RS485 (MODBUS-RTU communication protocol based)
Power supply	DC 6-24V 2A
Weight	300g
Storage temperature	-20 ~ 85 ℃
Working environment	-40℃~85℃
Dimensions	155mm×111mm×60mm

No.	Type	Note
1	RS485 4-way controller relay signals	SC1250B-4
2	RS485 8-way controller relay signals	SC1250B-8
3	RS485 16-way controller relay signals	SC1250B-16

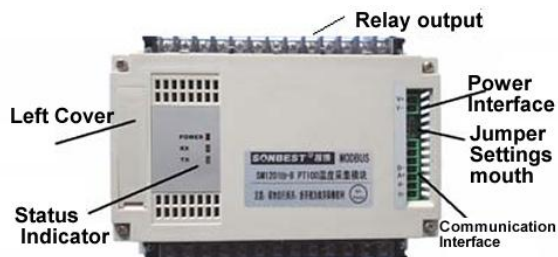
Package dimensions



Feature

1. Provide secondary development of communication protocols for secondary development
2. RS485 bus interface, standard MODBUS-RTU protocol
3. Following the electrical power output.
4. Each instrument has a unique address number to facilitate networking
5. Can be directly connected with the other configuration king configuration software

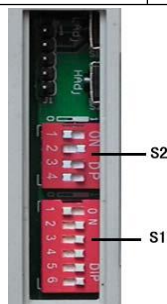
Interface description



Communication baud rate setting

The equipment for the RS485 interface, you must pull to the right when paragraph 4 S2 ON this side, that is the position. The baud rate is set via DIP switch S2 of the first three segments, as shown at right, DIP switch to "ON" indicates "1", pull to the side of the digital representation of "0", representing the following meaning:

DIP switch S2			Baud Rate (bps)
Segment 3	Segment 2	Segment 1	
0	0	0	9600
0	0	1	9600
0	1	0	9600
0	1	1	9600
1	0	0	9600
1	0	1	4800
1	1	0	2400
1	1	1	1200



The default baud rate is 9600, the position as shown above.

You must restart your device (power off) the new baud rate set to enter into force.

Setting the device address

In the application, sometimes need to use multi-machine network, the network device address is not the same, so the user to change the device address, the address range is 1-63. Change the device address of the device through the DIP switch S1 to achieve. DIP switch to "ON" indicates "1", turn off the system in the following table 1-6 DIP switch S1 segment of the address is as follows:

DIP switch S1 (on the DIP switch on the standard figure of Dan number)						Device Address
Segment 1	Segment 1	Segment 1	Segment 1	Segment 1	Segment 1	
1	1	1	1	1	0	1
1	1	1	1	0	1	2
1	1	1	1	0	0	3
...	...	...	...	...	...	...
0	0	0	0	0	0	63

The default device address is 1, DIP position as shown above.

Note: You must restart the new device address setting device (power) to enter into force

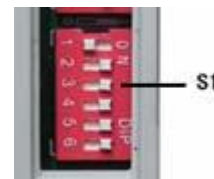


Figure 1 address

Lights explanation

Device power supply interface connector two core green. Power equipment is DC6-24V, must not exceed the maximum voltage of 24V, the minimum voltage is not lower than 5.5V, the power supply is recommended for use DC9V 1A when used alone, and more if the sensor wire is longer, it is recommended to use 2A-3A the DC9V power. Remote multi-machine communication, it is recommended to use DC12 2A above monolithic power.

No.	Name	Description
V+	Positive power supply	DC6-24V positive electrode terminal.
V-	Negative Power Supply	DC6-24V negative electrode

Communication Interface

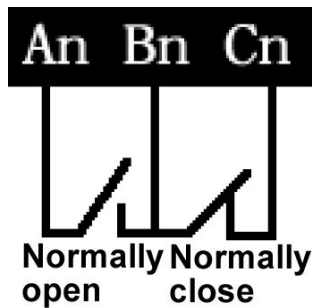
No.	Name	Description
GND	RS232 ground wire	The device does not use
RX	RS232 receive	The device does not use
TX	RS232 send	The device does not use
B-	RS485 B+	RS485 communication interface B-
A+	RS485 A-	RS485 communication interface A-

1. Communication port

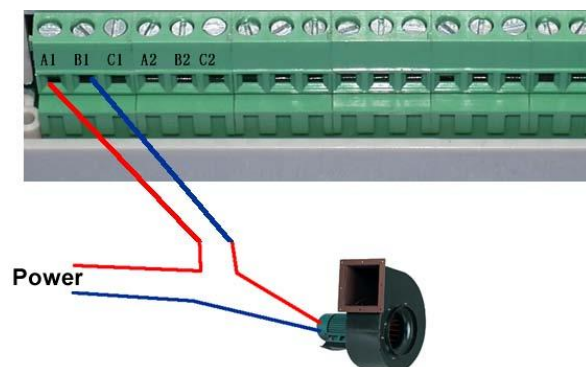
The machine comes standard communication interface RS485. Because the device has a unique ID, the machine is 01, you can switch to change the device address via DIP.

2. Relay output interfaces

Relay output has three terminals. See terminal block, An is normally open, Bn common point, Cn is normally closed. N = 1,2,3,4. According to the following chart:



Relay output interfaces each channel is controlled independently. Flag respectively A01 \ B0 \ C1, A02 \ B02 \ C2... the following figure with A01, B01 normally open access to the fan Fig.



As shown above, due to An, Bn (n = 1-20) as a separate switch normally open, you can press the manner shown in the figure, the access control device to be associated.

Communication Protocol

Set the default communication Baud rate: 9600

Register set command: 05 (function code);

Computer sends commands:

[Device Address] [Function code] [Starting Address: 2 bytes]

[Data Length: 2 bytes] [CRC16 checksum]

Meaning is as follows:

Computer sends commands:

[Device Address] [Command number: 0x05] [0x00 0x00] [[0xff or 0x00] [0x00] [CRC low 8] [CRC high 8] the following meaning:

A, device address. The default device address is 1.

B, order number: 0x05

C, the start address register: 0x00 0x00, the address-based device register address.

D, set the controller on or off. 0xff to open the fan, 0x00 off fan.

E, CRC checksum: consisting of two bytes;

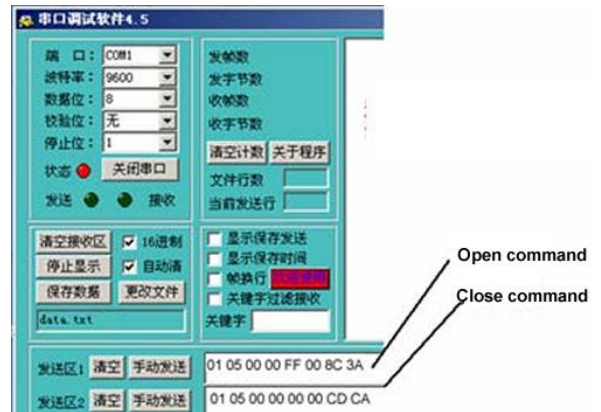
For example, we want to open the fan, send command:

01 05 00 00 FF 00 8C 00

For example, we want to open the fan, send command:

01 05 00 00 00 00 CD CA

Note: To ensure the effectiveness of controls, while sending a command, be sure to have a response when it receives the device, the device is considered to action. Otherwise you need to reissue the command until the equipment responds.



The figure of the serial debugging assistant Test Screenshots Reading device address (function code 0x25) Host sends command:

[Device Address: Channel Command 0xFA] [Command number: 0x25] [Sub-command: 0x02] [Fixed 00] [High-data-length] [Low-data-length] [CRC low 8] [CRC high 8]

Meaning as follows: A, device address: When the device

address without knowing the situation, you can use 250 or
0XFA read channel address

The actual address, when you use this command, make sure
that access is only one device on the RS485 bus.

B, order number: 0x22; subcommands: 01

C, CRC check, read the high number 8, the lower 8 bits.

Example: a sensor-specific 8-byte serial number is written to
the device number 1 position, sending commands to:

FA 25 02 00 00 01 99 FE

Unit reply:

01 25 01 01 D0 C3

Module response format:

[Device Address] [Command function code: 0x25] [Length: 01]

[Actual address value] [CRC low 8] [CRC high 8]