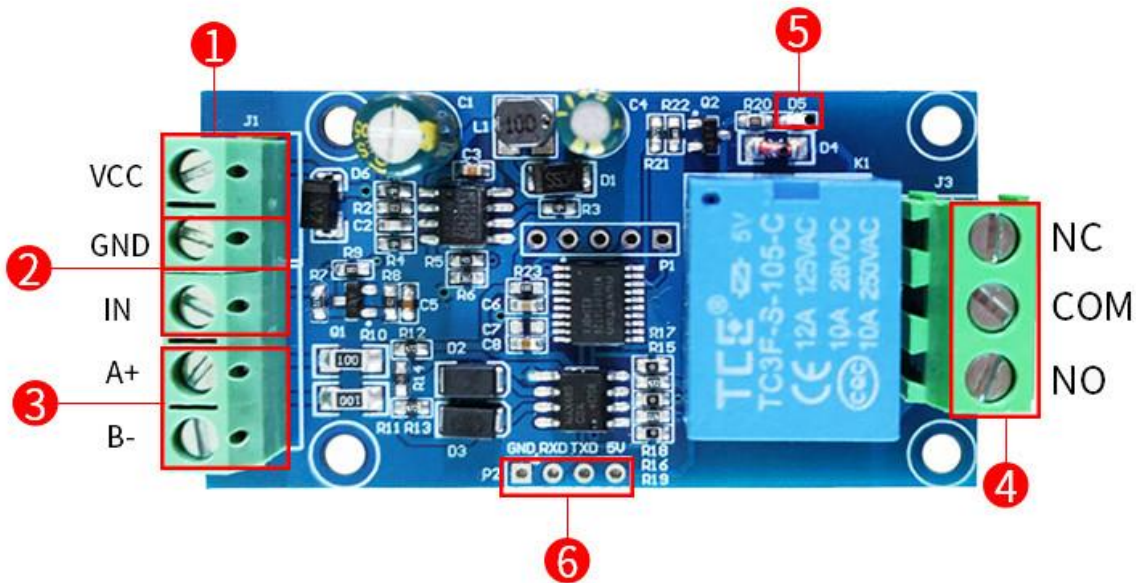


7 To 24V 1 Channel Relay Module With Modbus RTU - RS485/TTL Anti-Reverse Connection



Description:

Single Modbus relay module is equipped with mature and stable 8-bit MCU and RS485 level communication chip. RS485 communication using standard MODBUS RTU format Communication protocol, which can realize 1 optical coupler input signal detection and 1 relay output, which can be used for digital Word quantity detection or power control occasions.

Features/Specs:

1. On-board mature and stable 8bit MCU and MAX485 level conversion chip
2. Communication protocol: support standard Modbus RTU protocol
3. Communication interface: [support RS485/TTL UART interface](#)
4. Communication baud rate: 4800/9600/19200, default 9600bps, support power-off save
6. Optocoupler input signal range: DC3.3-30V (this input cannot be used for relay control)
7. Output signal: relay switch signal, support manual, flash off, flash off mode, flash off/flash
The base number of the time delay is 0.1S, and the maximum flash-off/flash-off time can be set as
 $0xFFFF * 0.1S = 65535 * 0.1S = 6553.5S$
8. Device address: range 1-255, default 255, support power-off save
9. Onboard 1 way 5V, 10A/250V AC 10A/30V DC relay, can suck continuously 100,000 times, with diode effusion protection, short response time
10. On-board relay switch indicator
11. Supply voltage: DC7-24V, with input anti-reverse connection protection

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Introduction to Modbus RTU instruction:

The Modbus device executes the [Modbus RTU command](#) by receiving the Modbus RTU command from the external control terminal (e.g. host computer/MCU) Line related operations,-frame instructions-generally consist of device address, function code, register address, register data, check code Composition, frame length is related to function code. -Generally, the first byte of each frame of data is the device address, and the setting range is 1-255, the default is 255 (ie 0xFF), the last 2 bytes are the CRC check code. Assuming the device address is 255, the commonly used

Modbus RTU commands are as follows:

1. Turn on relay No. 1 (manual mode)

Send: FF 05 00 00 FF 00 99 E4
Return as it is: FF 05 00 00 FF 00 99 E4

Remarks: 1.1 The 3-4 bytes of the sending frame represent the relay address, the address of relay 1--relay 8

Don't be 0x0000,0x0001,0x0002,0x0003,0x0004,0x0005,0x0006,0x0007

1.2 The 5-6 bytes of the transmitted frame represent data, 0xFF00 represents open relay, 0x0000 represents closed

Close the relay.

2. Turn off the No. 1 relay (manual mode)

Send: FF 05 00 00 00 00 D8 14
Return as it is: FF 05 00 00 00 00 D8 14

3. Turn on all relays

Send: FF 0F 00 00 00 08 01 FF 30 1D
Return: FF 0F 00 00 00 08 41 D3

4. Turn off all relays

Send: FF 0F 00 00 00 08 01 00 70 5D
Returns: FF 0F 00 00 00 08 41 D3

5. Set the device address to 1

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Send: 00 10 00 00 00 01 02 00 01 6A 00.
Return as it is: 00 10 00 00 00 01 02 00 01 6A 00

Remarks: The 9th byte of the sending frame, 0x01, is the written device address

6. Set the device address to 255

Send: 00 10 00 00 00 01 02 00 FF EB 80
Return as it is: 00 10 00 00 00 01 02 00 FF EB 80

Remarks: The 9th byte 0xFF of the sending frame is the written device address

7. Read the device address

Send: 00 03 00 00 00 01 85 DB
Return: 00 03 02 00 FF C5 C4

Remarks: The 5th byte of the return frame, 0xFF, is the device address read

8. Read the relay status

Send: FF 01 00 00 00 08 28 12
Returns: FF 01 01 01 A1 AO

Remarks: Bit0--Bit7 of the 4th byte of the return frame 0x01 represent relay 1--relay 8, 0 is off
Closed, 1 is open

9. Read optocoupler input status

Send: FF 02 00 00 00 08 6C 12
Returns: FF 02 01 01 51 AO

Remarks: IN1--IN8 of the 4th byte of the return frame 0x01 represent the input sig

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