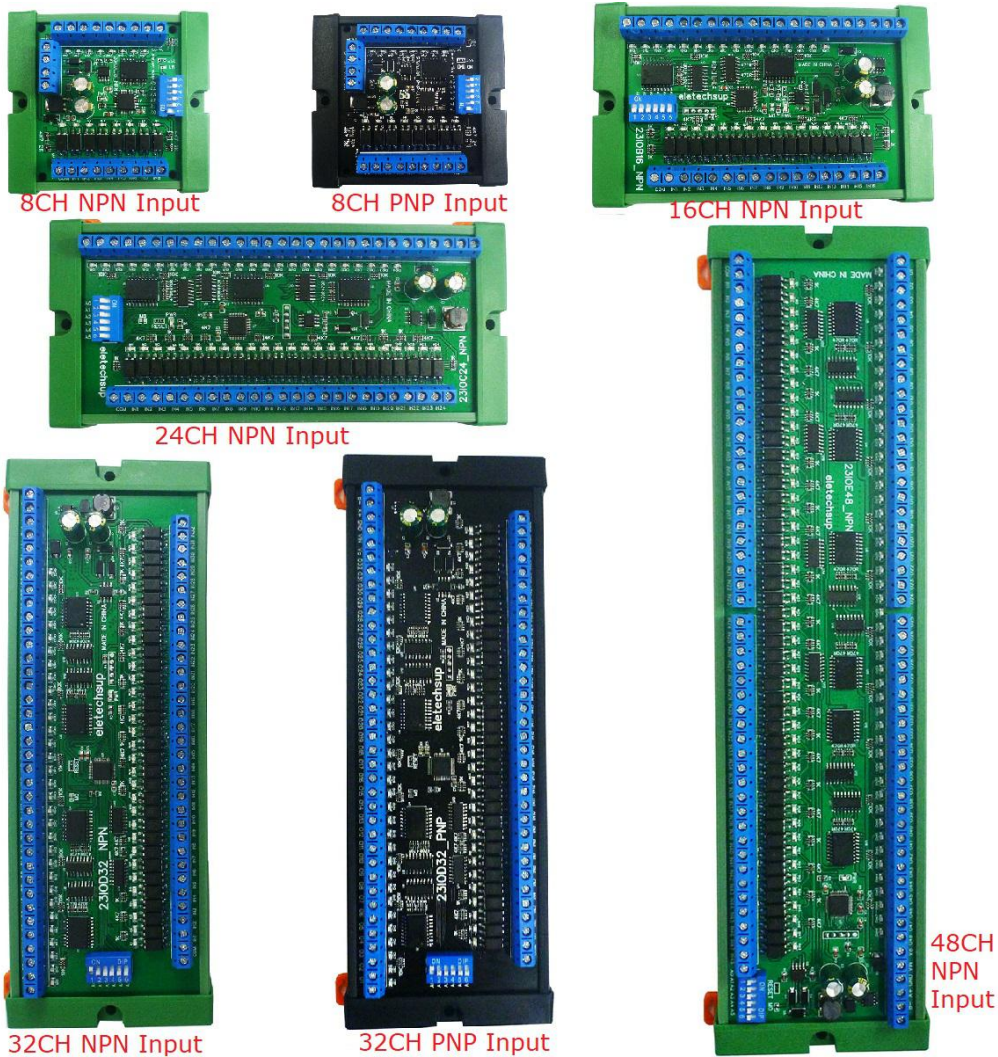


23IOXXX 8-48 Channel RS485 IO Controller Manual



1. Features:

- 1 Working voltage: DC 6.5-30V (9V 12V 24V)
- 2 Working current: 8-50MA
- 3 8/16/24/32/48 optically isolated input ports, NPN input, 8/32 channel version can choose PNP input
- 4 8/16/24/32/48 Darlington transistor outputs (ULN2803 NPN output)
- 5 The default command has a variety of output modes: open, close, jog, self-locking, interlocking, delay six output modes
- 6 The input port can remotely control the output port of another board through the RS485 bus
- 7 MODBUS command 1 supports 03 06 16 function codes, MODBUS command 2 supports 01/02/03/05/06/15/16 function codes
- 8 The maximum delay of 1 MODBUS command is 255 seconds
- 9 In MODBUS command mode, up to 64 devices can be used in parallel
- 10 The default baud rate is 9600BPS, you can choose the baud rate by jumper:
1200/2400/4800/19200/38400/57600/115200BPS

11 Sizes (with box):

85x80x30mm(8CH),130x80x30mm(16CH),173x80x30mm(24CH),215x80x30mm(32CH),293x80x30mm(48CH)

12 Weight (with box): 97g (8CH), 148g (16CH), 197g (24CH), 246g (32CH), 339g (48CH)

13 Maximum load: the maximum load current of each channel is 300MA

2. Glossary:

Vo: equal to the working voltage DC 6.5-30V

O1/2/3...48: Output ports, low-level output

"Open": the output port outputs low level

"Close": The output port outputs high impedance (floating)

Momentary : Enter the Momentary command, the Rreceiver Relay is Open, delay of 0.5 seconds after, Relay is Close;

Toggle : Enter the Toggle command, the Rreceiver Relay is Open, Enter the Toggle command again, Relay is Close;

Latched : Enter the Channel 1 Latched command, the receiver Channel 1 is Open, the Channel 2 is Close.

Enter the Channel 2 Latched command the receiver Channel 2 is Open, the Channel 1 is Close.

Enter the Channel 3 Latched command the receiver Channel 1 is Close, the Channel 2 is Close.

Delay : Enter the Delay command, the Rreceiver Relay is Open, delay of 0-9999 seconds(MODBUS command is 0-255 seconds)after, Relay is Close;

During the delay, Eter the Close command, immediately close the relay



Slave ID: A0-A5 is the slave ID, you can choose 64 different slave ID.

Under the MODBUS command mode,the slave ID must be correct

Command Description:



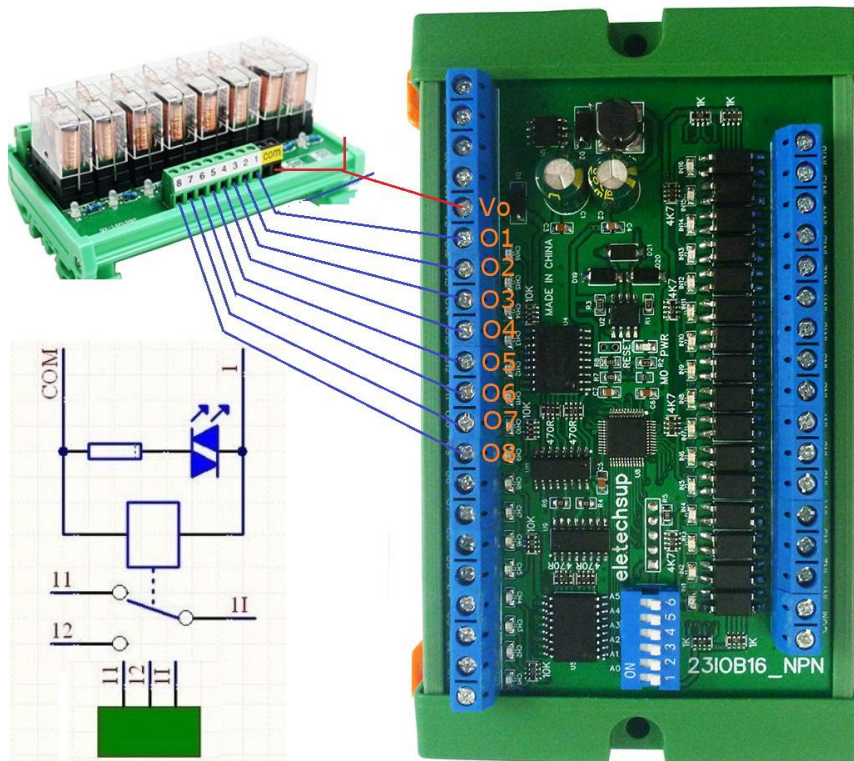
Default,Please refer to “23IOXXX Modbus RTU Command 1(default)”



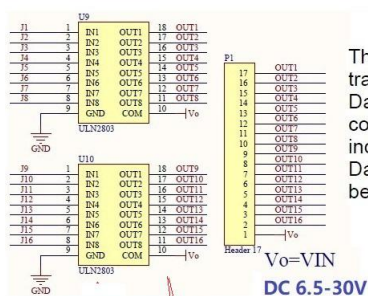
M0 Shorted,Please refer to “23IOXXX Modbus RTU Command 2(M0 Shorted)”

3 .Output description

Wiring diagram of driving PLC amplifier board



ULN2803 drive circuit diagram



The ULN2803A device is a 50 V, 500 mA Darlington transistor array. The device consists of eight NPN Darlington pairs that feature high-voltage outputs with common-cathode clamp diodes for switching inductive loads. The collector-current rating of each Darlington pair is 500 mA. The Darlington pairs may be connected in parallel for higher current capability.



Applications

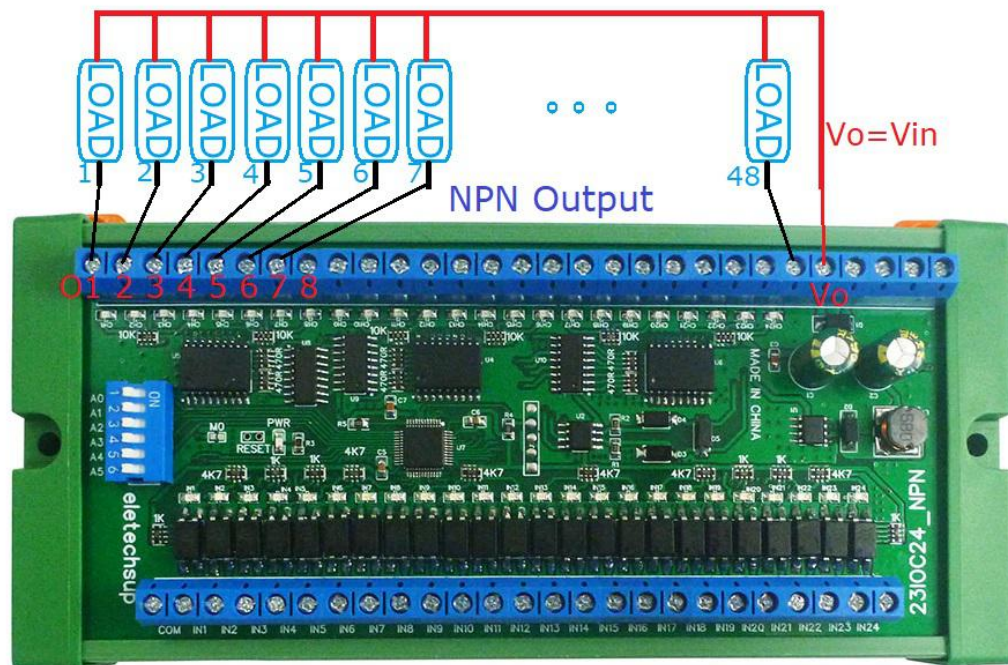
- Relay Drivers
- Hammer Drivers
- Lamp Drivers
- Display Drivers (LED and Gas Discharge)
- Line Drivers
- Logic Buffers
- Stepper Motors
- IP Camera
- HVAC Valve and LED Dot Matrix

4. Input and output wiring diagram:

Application 1:

Control 8/16/24/32/48 channel switch output through RS485 bus

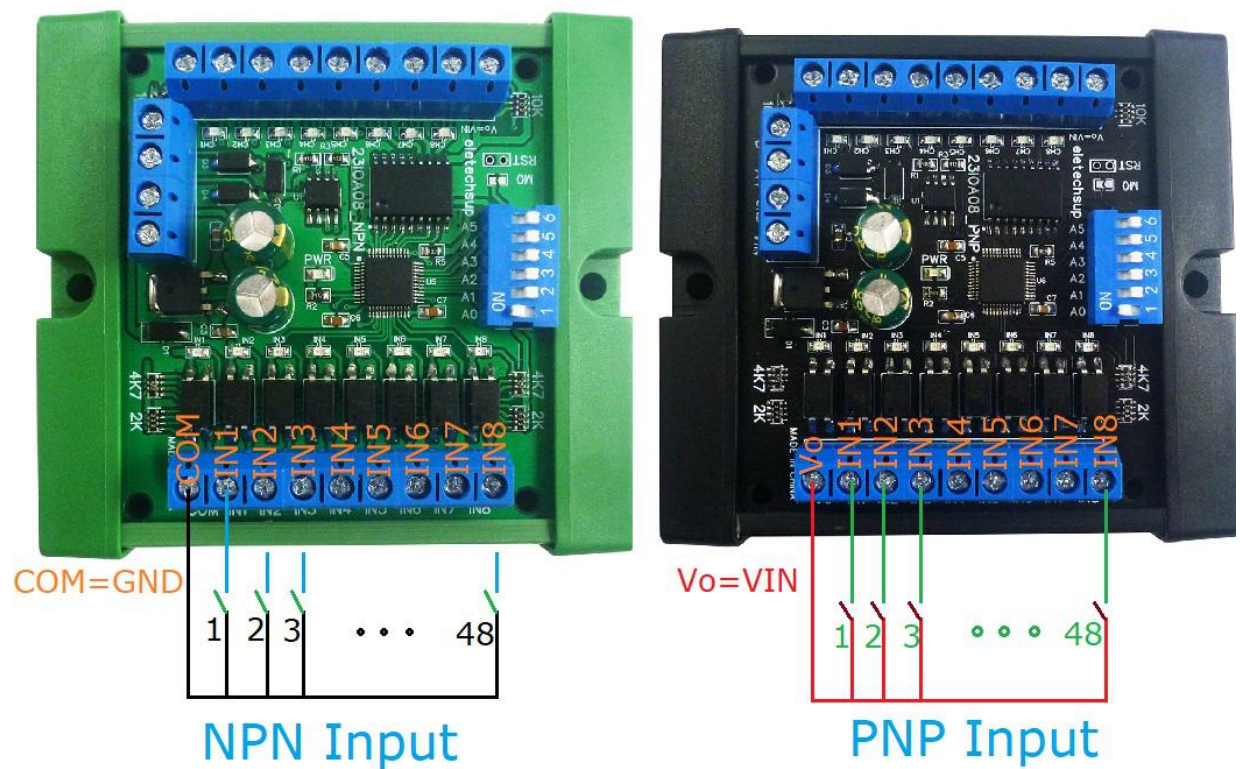
Application 1:
Control 8/16/24/32/48-channels
switch output through RS485 bus



Application 2:

Read 8/16/24/32/48 Channel switch input via RS485 bus

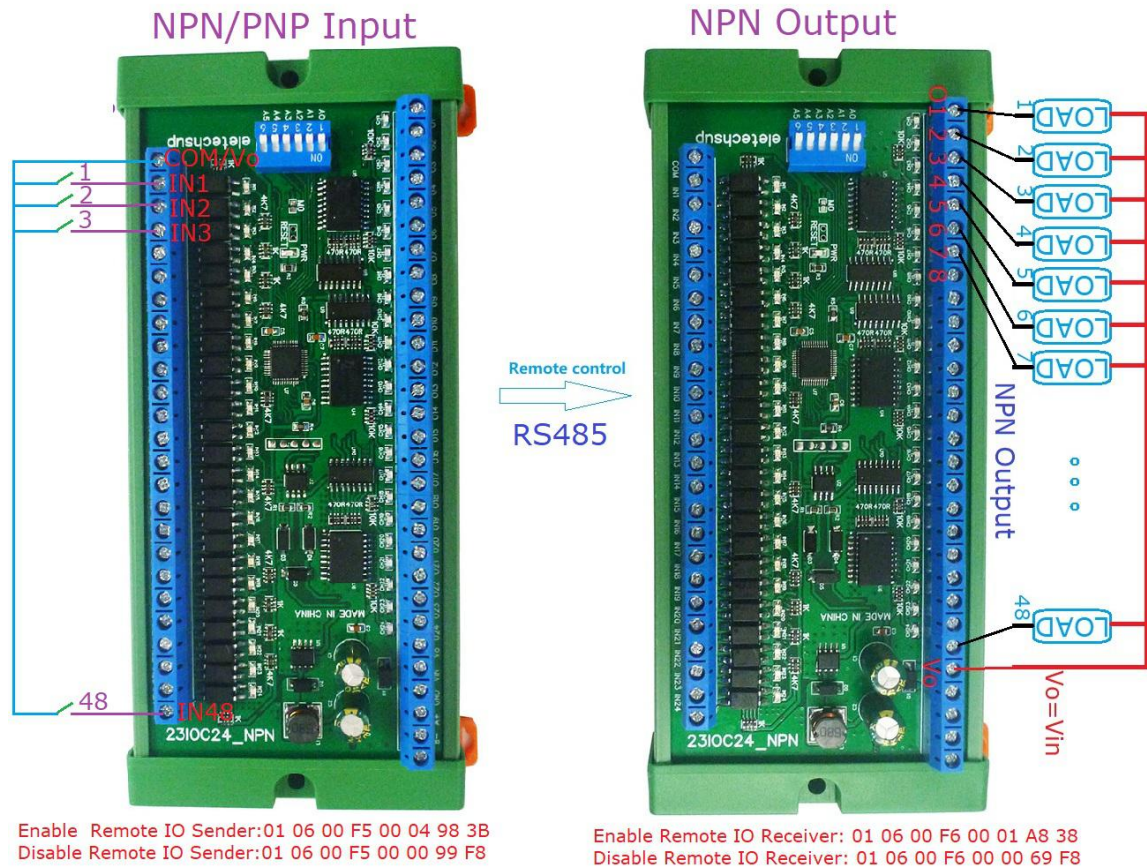
Application 2: Read 8/16/24/32/48-channel switch input via RS485 bus



Application 3:

8/16/24/32/48channel input remote control 16-channel output

Application 3: 8-48CH input remote control 8-48CH output



1 RS485 address must be the same

2 The Remote IO Sender Register Enable (Register 0x00F5 > 0)

3 The Remote IO Receiver Register Enable (Register 0x00F6 = 1)

5 Typical applications:

