

1. The digital quantity control module function introduction

WM - IO10 is isolated digital quantity input module. Isolate the digital quantity input module has 10 road, support and level signal switch contact signal. Support the standard Modbus protocol, applicable to the acquisition of industrial field digital signal and control small power electrical equipment.



1.1 The main technical indicators

1.1.1 Digital quantity input

- > input way: 4 road (photoelectric isolation)
- > input types: switch contact signal or level signal
- > isolation voltage: 2500 VDC
- > contact input impedance: 2 k or less Ω
- > level input range:
- > high level (figure 1) : + 4.0 V ~ + 30 V
- > low level (0) : + 1 v or less

1.1.3 System parameters

- > power supply voltage: + 9 ~ + 30 VDC, the power supply reverse connect protection
- > working temperature range: - 20 $^{\circ}\text{C}$ ~ + 85 $^{\circ}\text{C}$
- > plastic shell, standard DIN rail installation
- > communication interface: isolate 2500 VDC, ESD, over voltage, over current protection

1.3 Terminal information

The appearance of the WM - IO10 modules as shown A total of 20 terminals, terminal is arranged on the shell as shown.



1.3.2 Terminal description

WM - IO10 terminal definition stated below:

- > GND, VCC as the power input end of the module, GND connect power negative side, the VCC power connection is end;
- > INIT as module default hardware can make terminal communication parameters, when the IN - GND terminal, the module will be IN

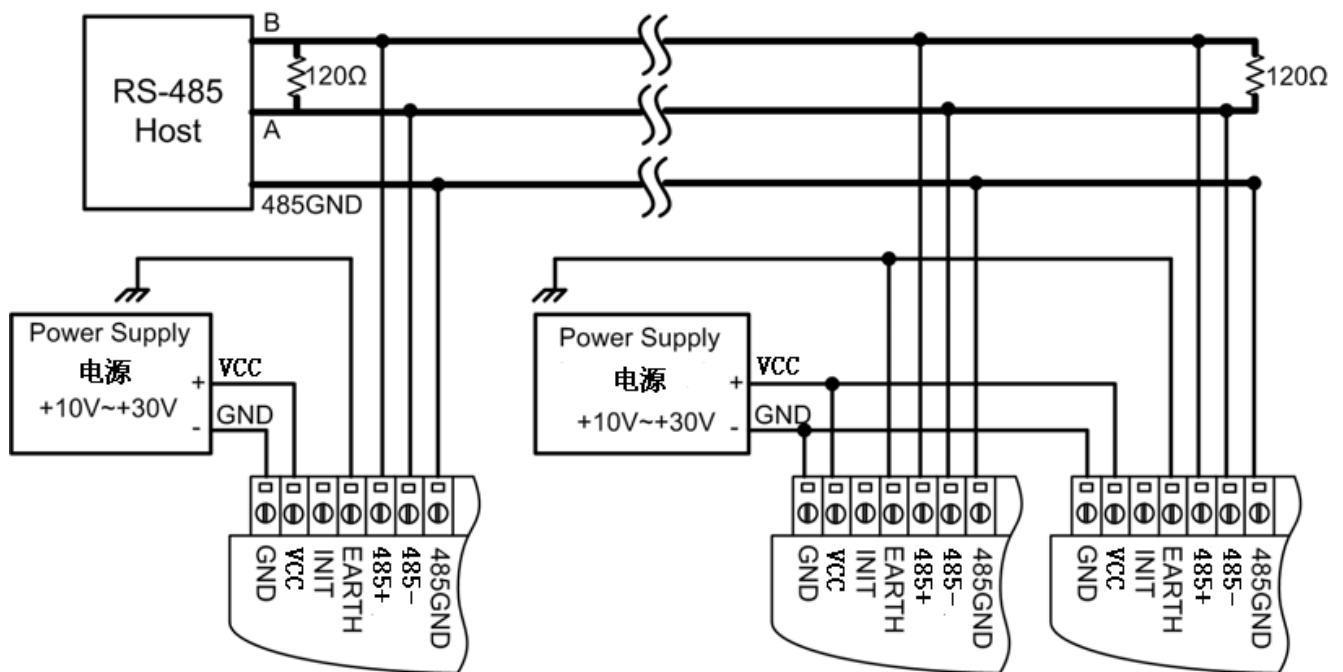
the default communication

- > to initialize parameters, parameters can be configured and communication;
- > GND, 485 - A, 485 - B for RS - 485 interface terminals, GND for interface in isolation,
- > 485 + connect the RS - 485 transceiver of A side, the 485 - connect the RS - 485 transceiver B.
- > DI0 ~ DI9 for module 4 road digital quantity input channel terminals.
- > GND for digital quantity input port IN public, and module DI9 DI0 ~ for the same, they are
- > & gnd between electrical isolation, isolation voltage up to 2500 VDC.

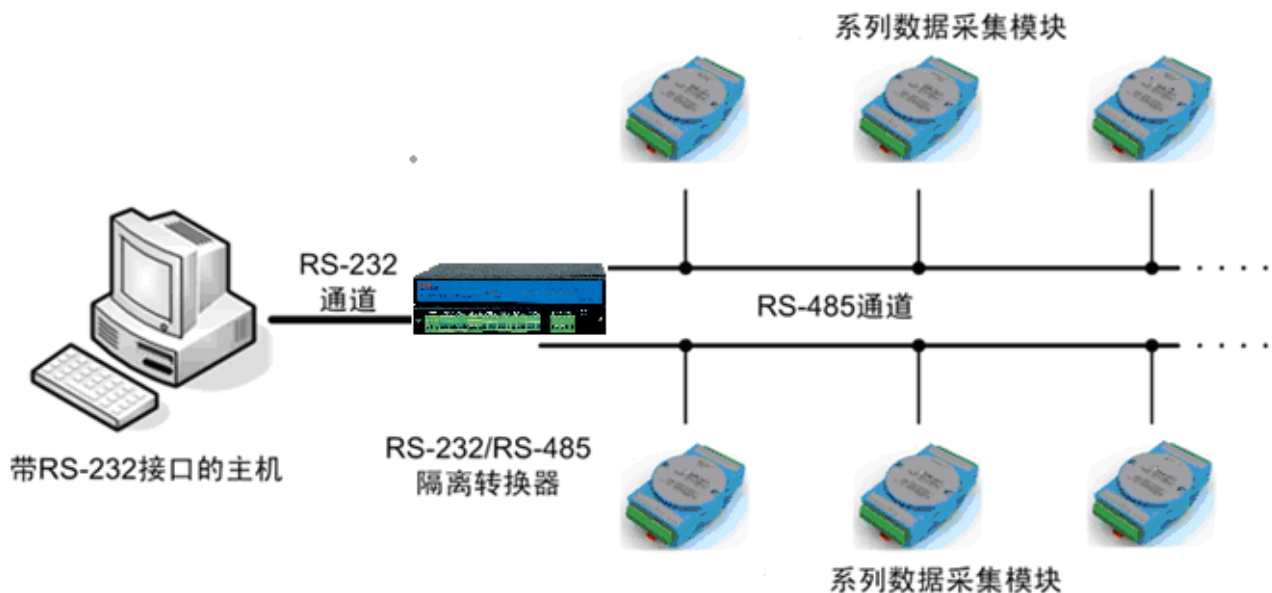
1.1 The signal light

PWRS for (red) and the working state of the indicator light is RUN (color) 485 communication (TXD) to send light, (RXD) receives the light.

1.2 Connection of power supply and communication lines



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WM - IO10 input and output functions

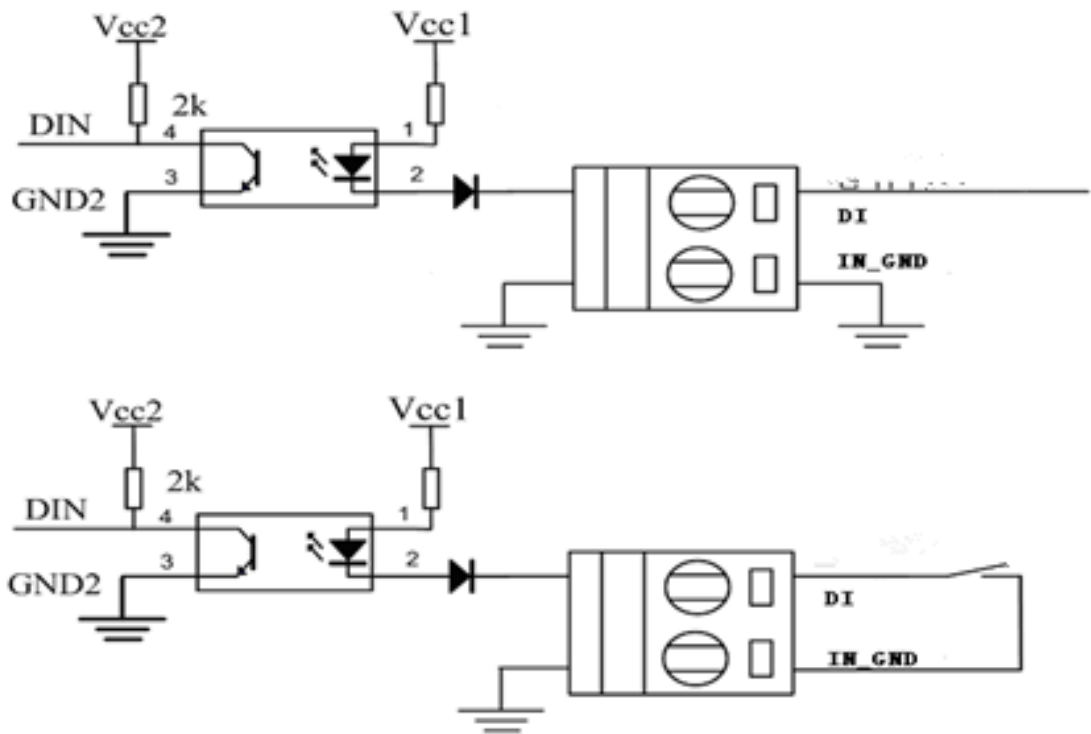
In the process of industrial control, often need to the scene of the digital quantity input signal acquisition.

WM - IO10 module has a digital quantity input channel 10 road, can be widely used in various industrial fields. Output data security protection function module and can be lost during communication module and host, output the user set the state of a set of output, to ensure the safety of the controlled device.

2.1 Digital quantity input

WM - IO10 4 road isolation digital quantity input channels, which can be used to detect and level signal switch contact signal, input signal logic state defined as shown in table 2.1.

2.1 define the type of the input signal input signal		Signal definition
Voltage type digital quantity input signal	High level signal	State 1, voltage range: +30 V - + 4.0 V
	Low level signal	State 0 voltage range: ≤+ 1 v



2.1 Digital quantity input connection mode

When the level as the digital quantity input, $V_{in} = L (<1.0V)$ Isolation optical coupling conduction, Coupling of light output $DIN = L$, When the input $V_{in} = H (+4.0 \sim +30V)$, Don't light coupling conduction, Coupling of light output $DIN = H$.