

CWT-MB318M

Modbus I O Module

manual

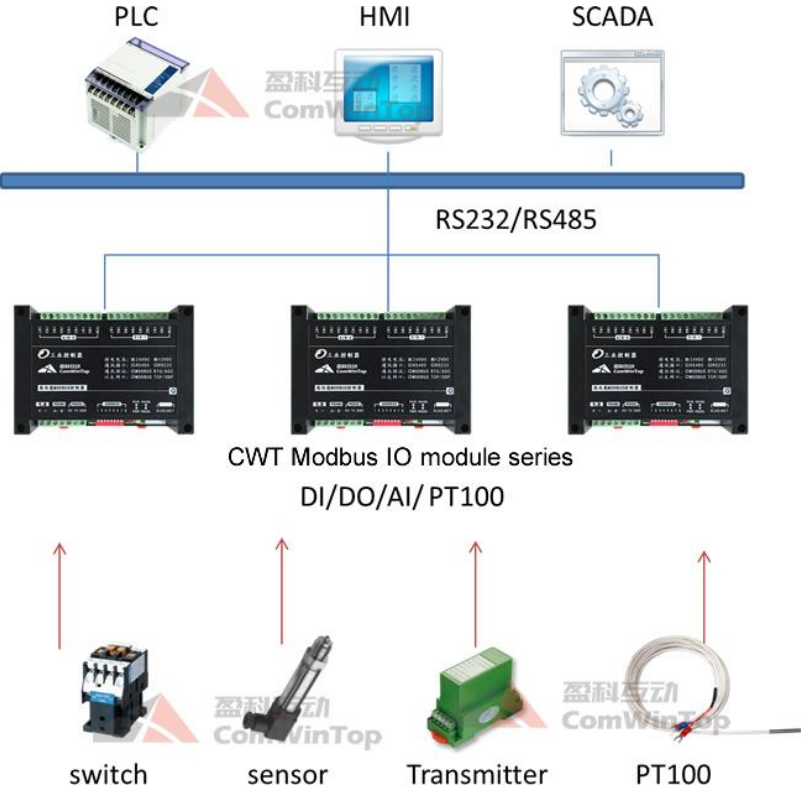
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1 OVERVIEW

Model	Options	IO Port	Communication Port	Protocol
CWT-MB318M	I-V-485-232	4PT + 11AI (4-20mA/0-10V) + 16DI	RS485+RS232	Modbus RTU
	I-V-E-485-232	4PT + 11AI (4-20mA/0-10V) + 16DI	Ethernet+RS485+RS232	Modbus TCP, Modbus RTU

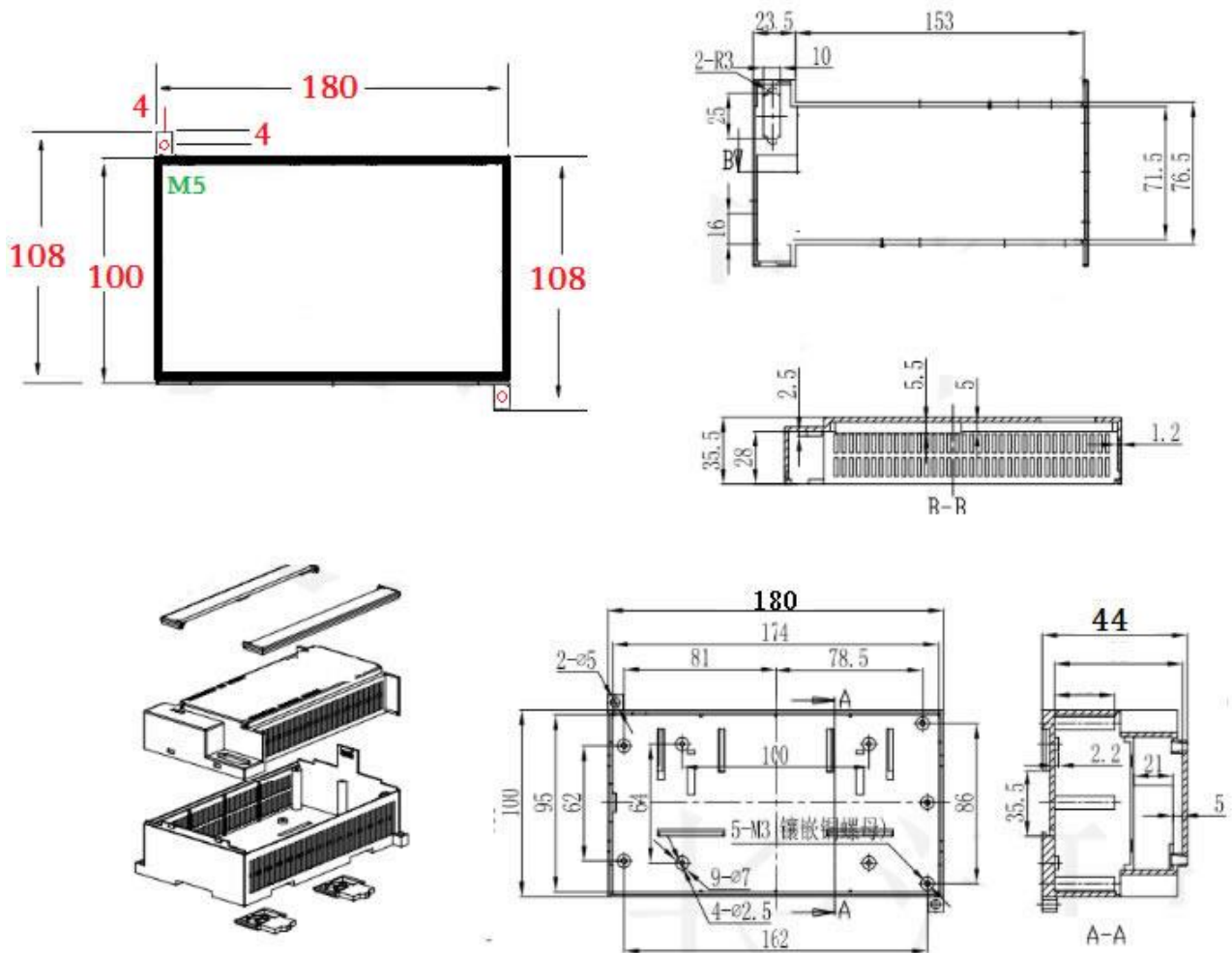


1.1 System Parameter

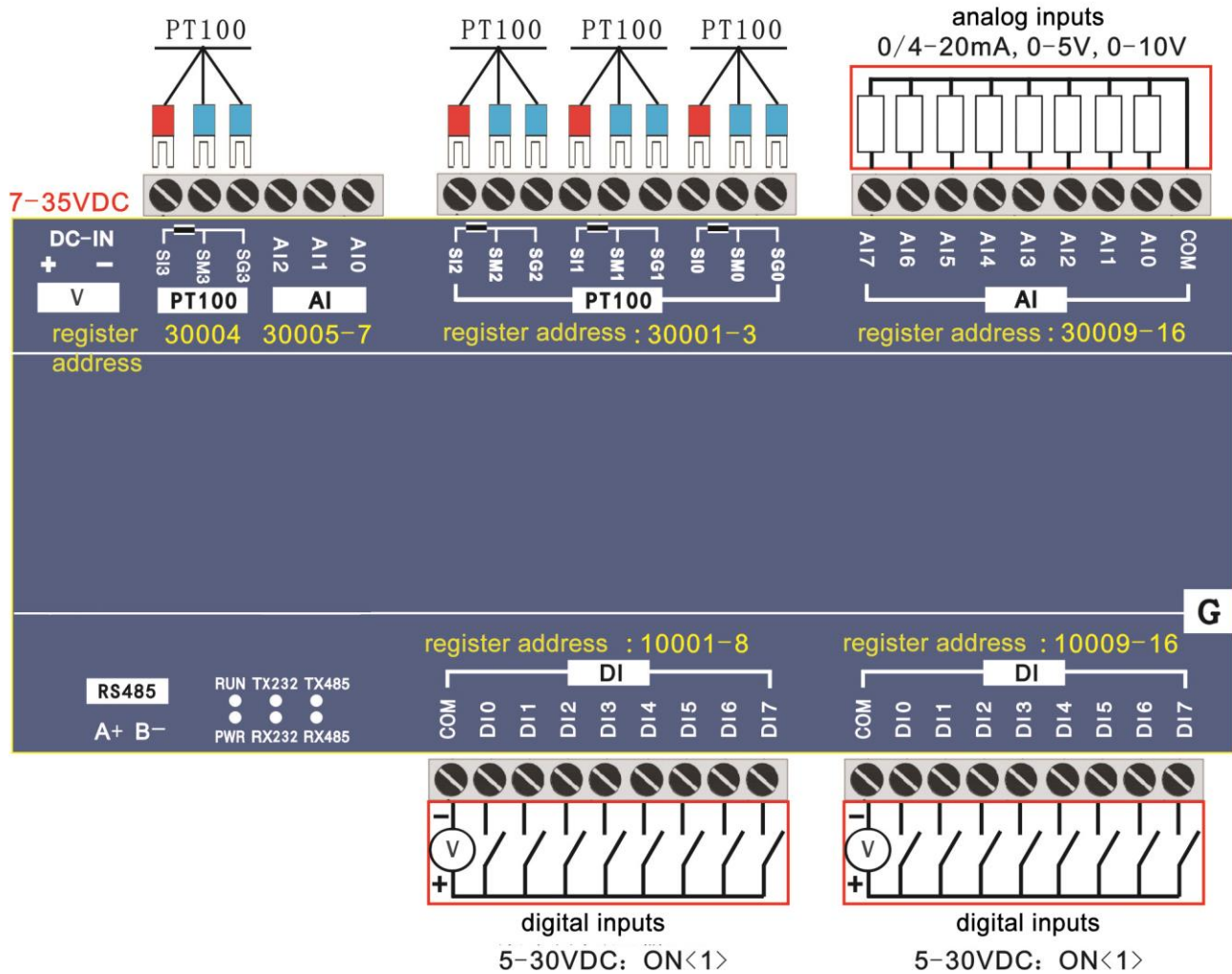
CPU	32-bit ATMEL ARM, 72MHZ
OS	GCOS, 10ms scheduling mechanism
Power	7-35VDC @2W, power supply reverse protection, isolation design
Installation	DIN rail mounting or screw fixing 
Working Environment	-40℃~85℃ , 5%~95%RH(non-condensing)
Protection	IP20
Watchdog	1.5m guard

2 INSTALL

2.1 size



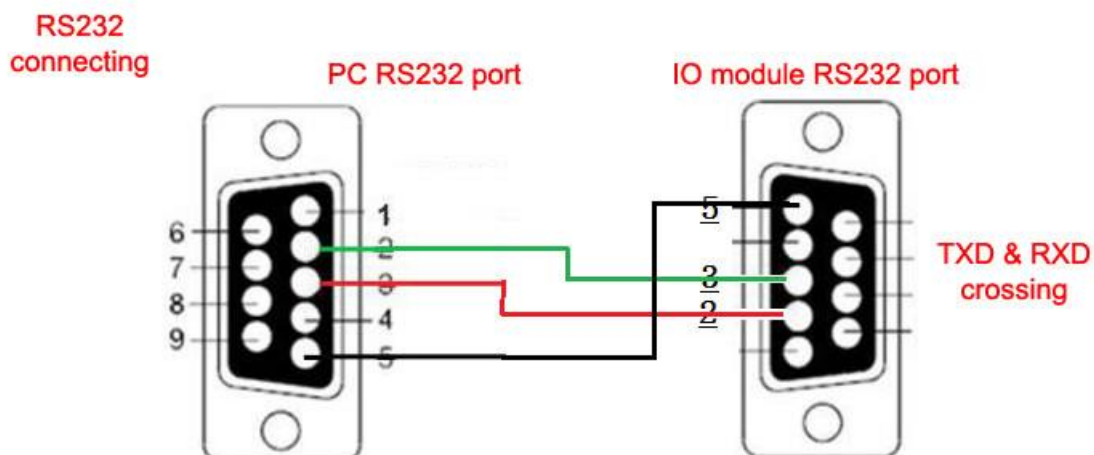
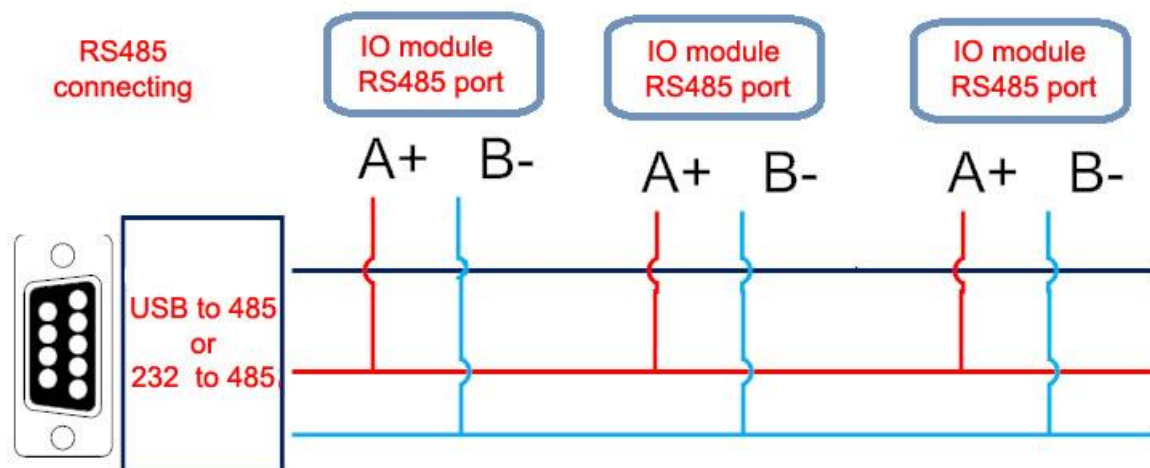
2.2 wiring



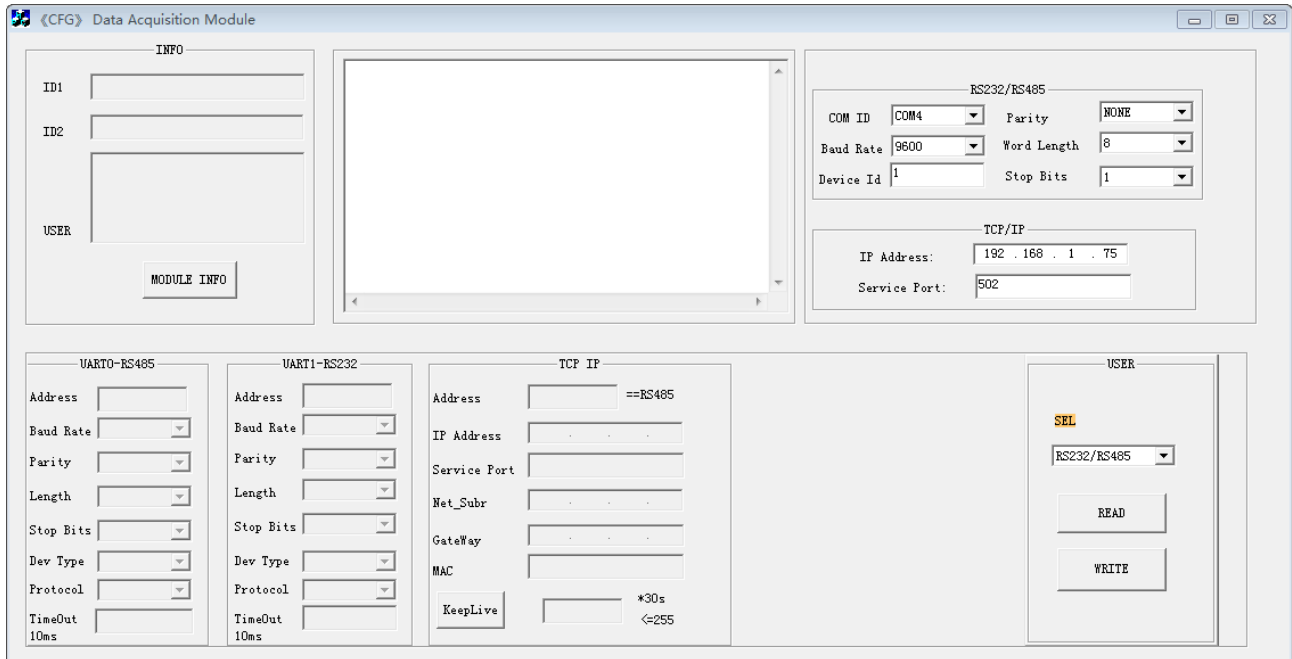
3 CONFIGURATION

3.1 RS232/RS485

Port type	1RS485 & 1RS232
Protection	DCDC isolation design, 2500V lightning protection, ESD, overvoltage, overcurrent protection
Baud rate	1200~115200, default 9600
Parity	Even, Odd, None
start bit	1 bit
data bits	8 bit
Stopbits	1,2bits
Protocol	MODBUS RTU
default	9600.N.8.1, slave id is 1



3.2 Configuration software



The screenshot shows the 'Data Acquisition Module' configuration window. It is divided into several sections:

- INFO:** Fields for ID1, ID2, and USER. A 'MODULE INFO' button is at the bottom.
- RS232/RS485:** Fields for COM ID (COM4), Parity (NONE), Baud Rate (9600), Word Length (8), Device Id (1), and Stop Bits (1).
- TCP/IP:** Fields for IP Address (192.168.1.75) and Service Port (502).
- UART0-RS485:** Fields for Address, Baud Rate, Parity, Length, Stop Bits, Dev Type, Protocol, and TimeOut (10ms).
- UART1-RS232:** Fields for Address, Baud Rate, Parity, Length, Stop Bits, Dev Type, Protocol, and TimeOut (10ms).
- TCP IP:** Fields for Address (set to ==RS485), IP Address, Service Port, Net_Subr, GateWay, MAC, and KeepLive (set to *30s <=255).
- USER:** A 'SEL' button, a dropdown menu set to RS232/RS485, and 'READ' and 'WRITE' buttons.

Set salve ID, default is 1

4 DESCRIPTION OF IO CHANNEL

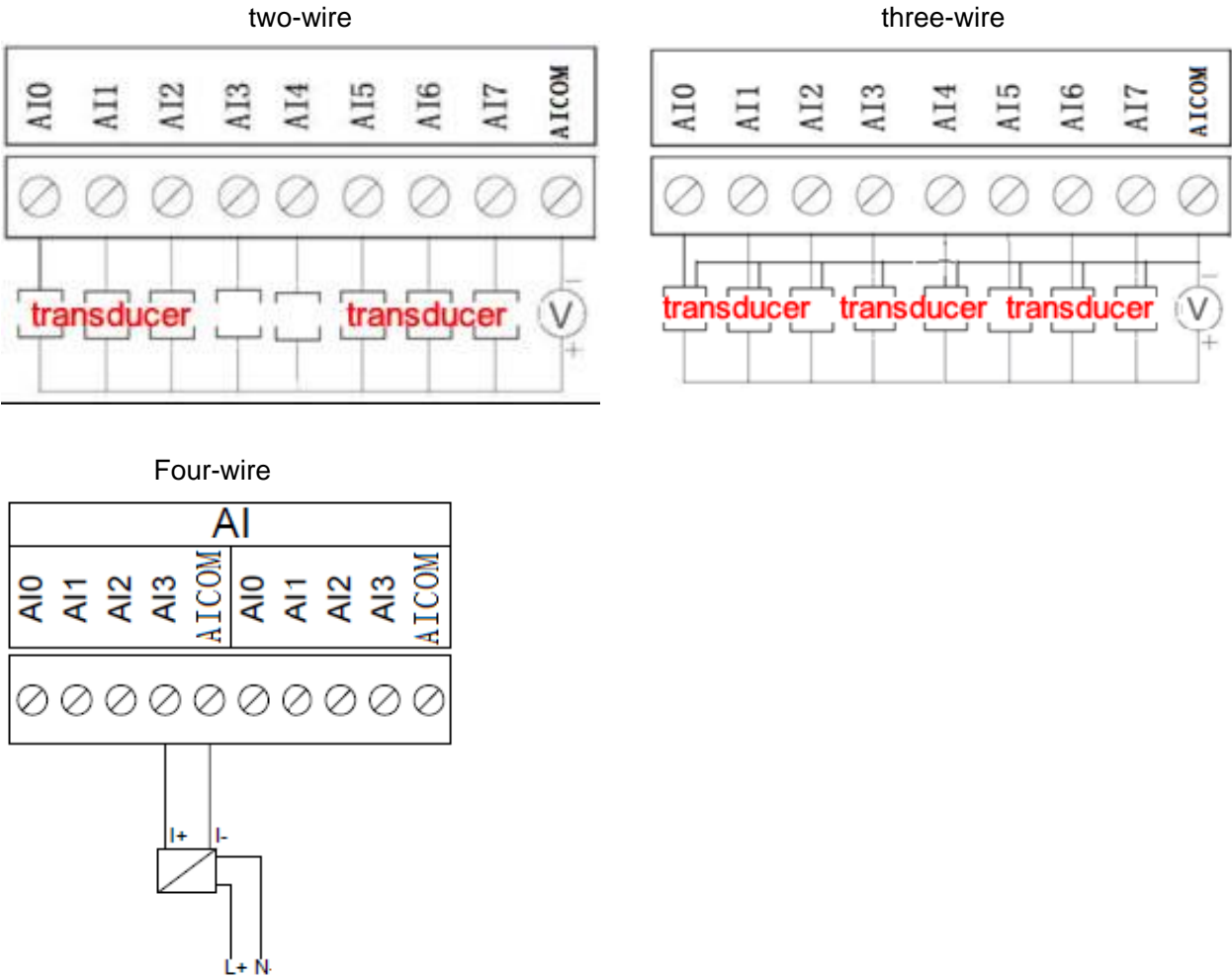
4.1 Analog input

Input type	4~20mA<default>, support: 0~20mA/0~5/1~5/0~10V (need open housing to jumper)
Precision	0.1%, 16 bit
Refresh rate	0.01m

Modbus Register map

channel	Register address	Function code	Format	Scaling	
AI0-AI10	30005-30007 30009-30016	04	UINT16	0.0004	4-20mA
				0.0004	0-20mA
				0.0001	0-5V
				0.0002	0-10V

AI wiring diagram



4.2 Digital input

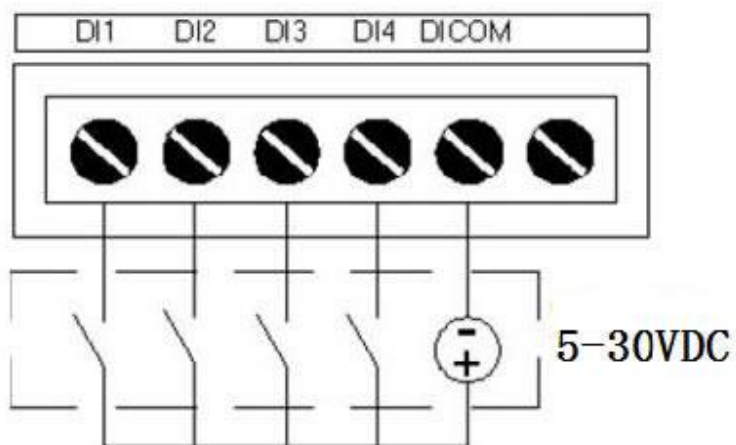
ON signal level	5-30VDC, 6mA@24VDC
OFF signal level	0-3VDC
Protection	opt coupler isolation, 2500V lightning protection, overvoltage, overcurrent protection
Sample rate	0.01m

Modbus Register map

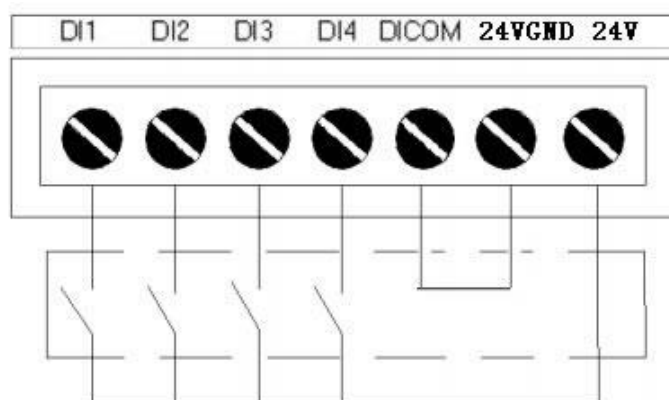
channel	Register address
DI0-DI15	10001-10016

DI wiring diagram

Wet contact wiring



Dry contact wiring



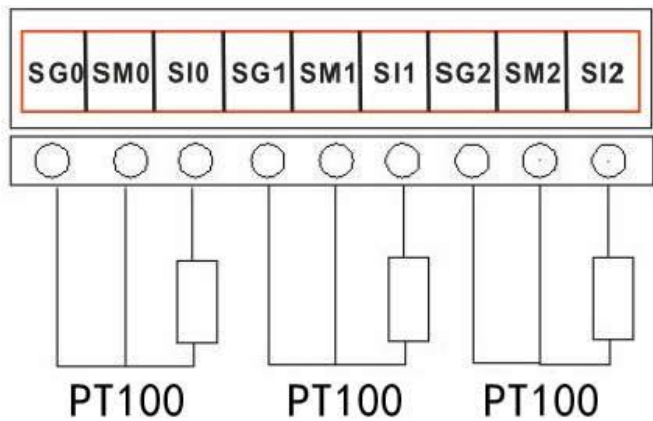
4.3 PT100 Input

Input type	PT100
Precision	0.1℃
Measurement range	-200℃～220℃

Modbus Register map

channel	Register address	Function code	Format	Scaling
PT0-PT3	30001-30004	04	signed UINT16	0.1

Three wire



Two wire

