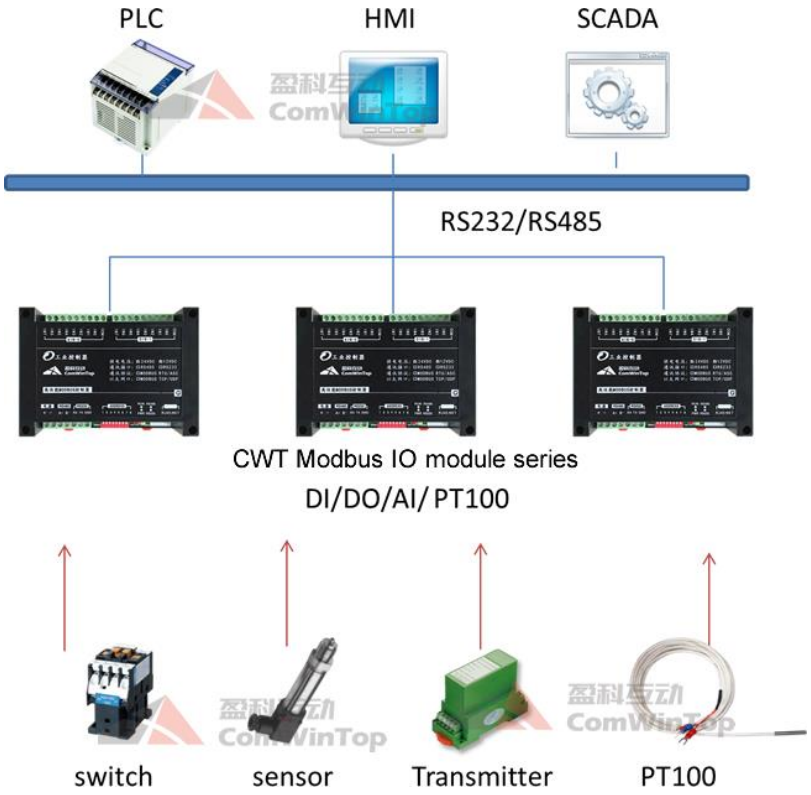
CWT-MB318B
Modbus I O Module
manual

CONTENTS

1 OVERVIEW

Model	Options	IO Port	Communication Port	Protocol
CWT-MB318B	I-V-485-232	4PT + 4AI (4-20mA/0-10V)	RS485+RS232	Modbus RTU
	I-V-E-485-232	4PT + 4AI (4-20mA/0-10V)	Ethernet+RS485+RS232	Modbus TCP, Modbus RTU

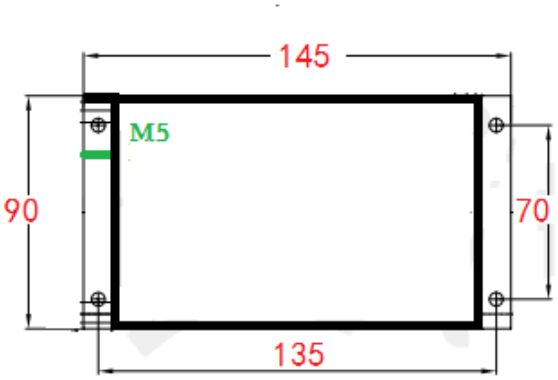


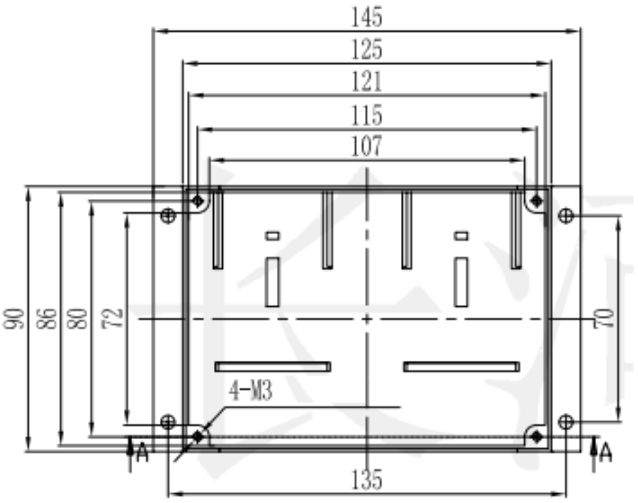
1.1 System Parameter

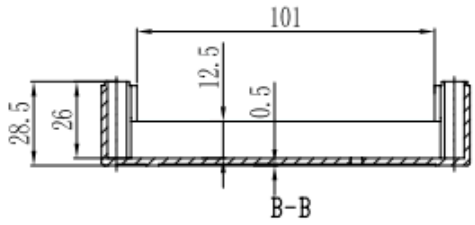
CPU	32-bit ATMEL ARM, 72MHZ
OS	GCOS，10ms scheduling mechanism
Power	7-35VDC @2W, power supply reverse protection, isolation design
Installation	DIN rail mounting or screw fixing 
Working Environment	-40℃～85℃，5%～95%RH(non-condensing)
Protection	IP20
Watchdog	1.5m guard

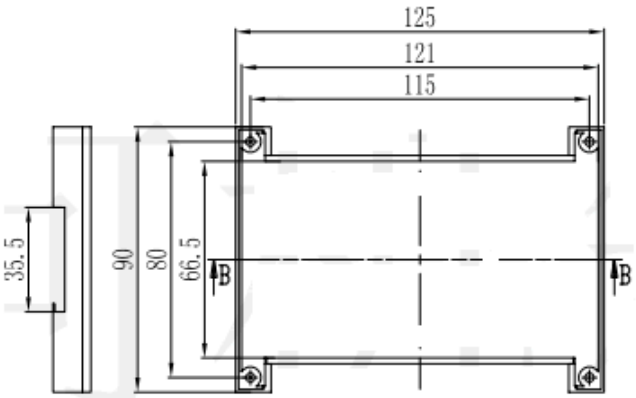
2 INSTALL

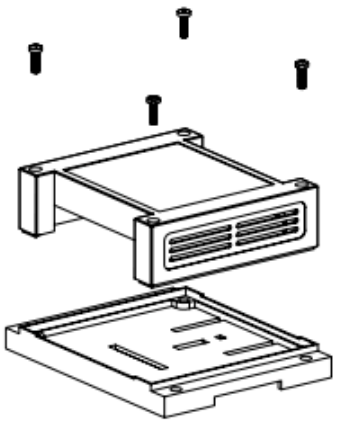
2.1 size

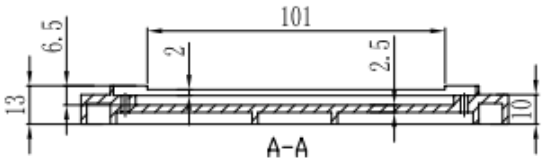






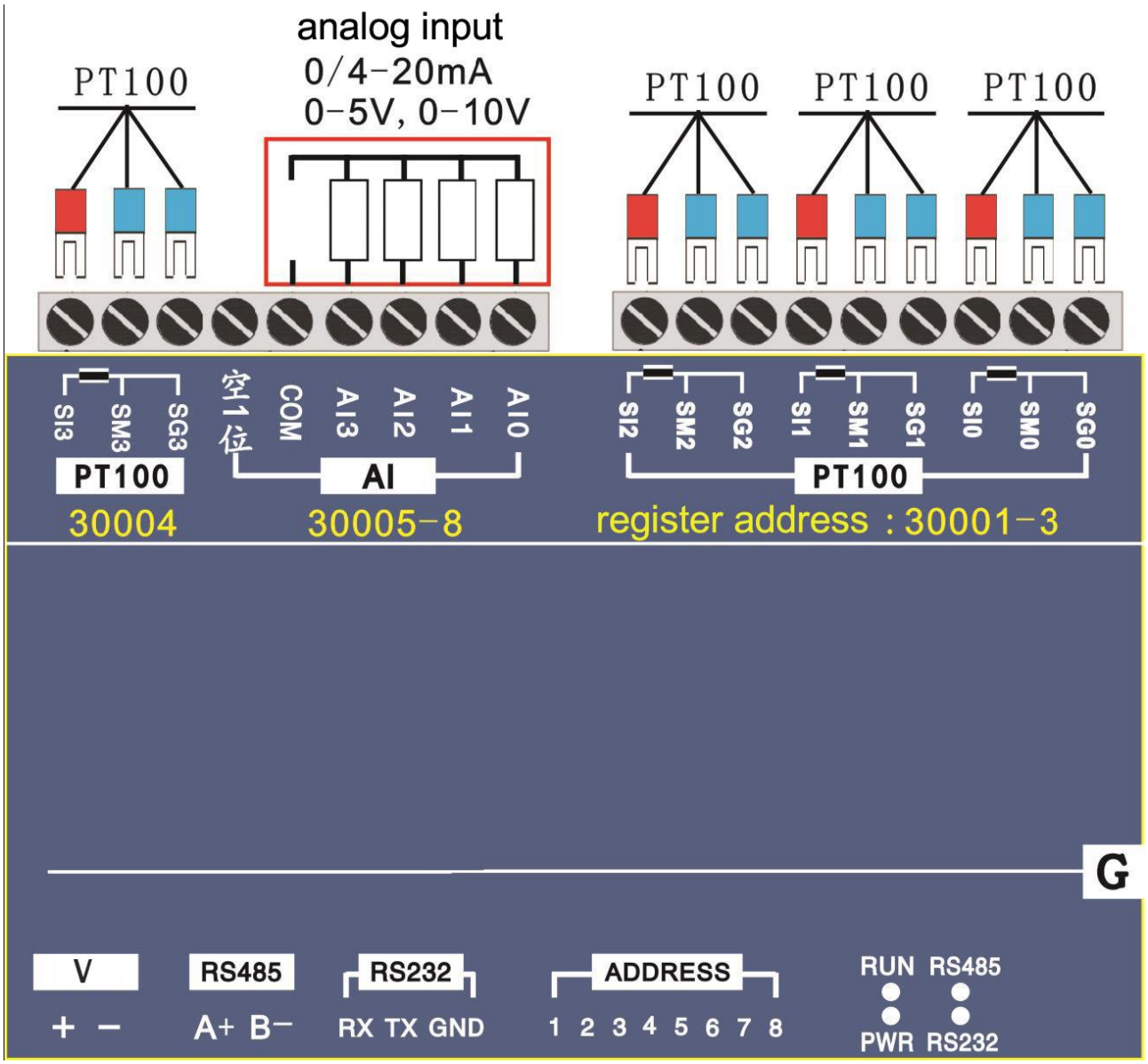






145 x 90 x 40 (mm)

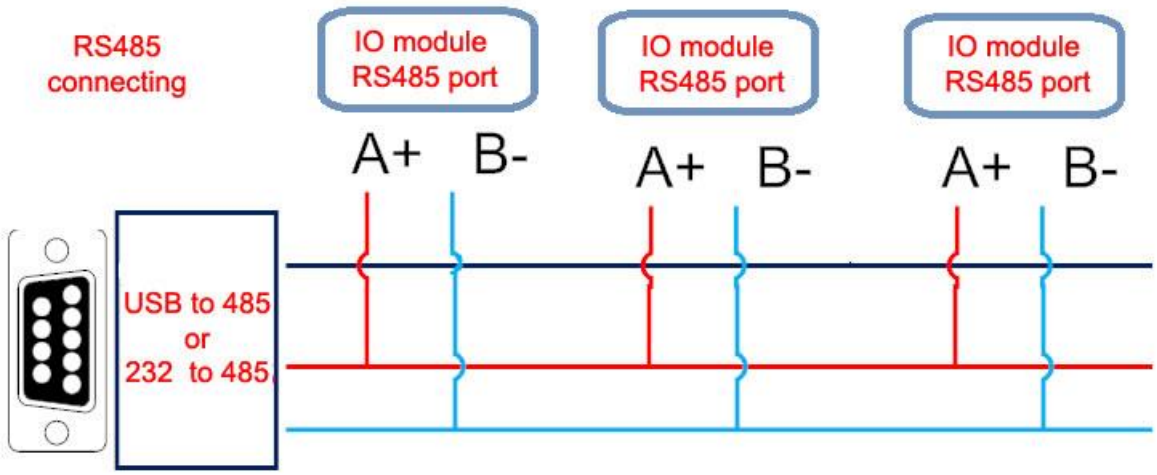
2.2 wiring

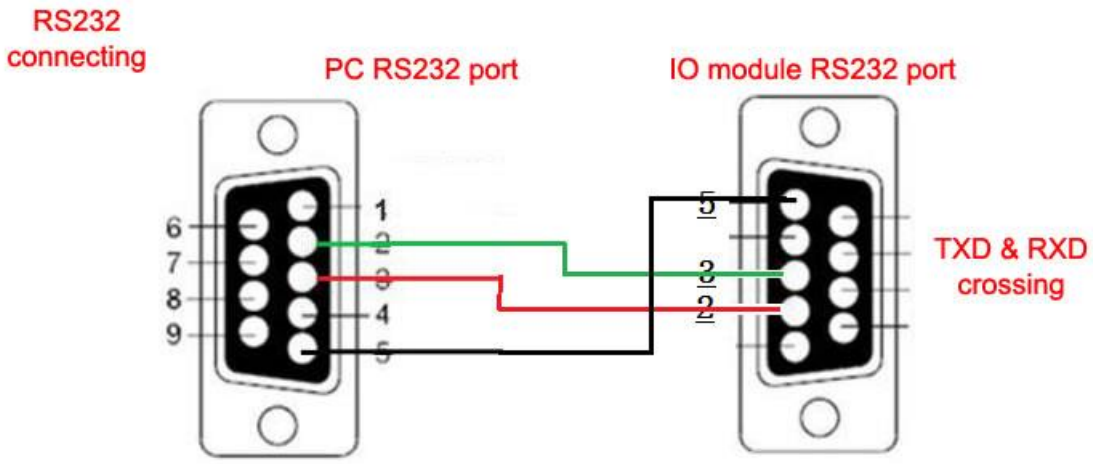

analog input
0/4-20mA
0-5V, 0-10V
PT100
PT100
PT100
PT100
SI3
SM3
SG3
空1位
COM
AI3
AI2
AI1
AI0
SI2
SM2
SG2
SI1
SM1
SG1
SI0
SM0
SG0
PT100
AI
PT100
30004
30005-8
register address : 30001-3
G
V
+ -
RS485
A+ B-
RS232
RX TX GND
ADDRESS
1 2 3 4 5 6 7 8
RUN
PWR
RS485
RS232

3 CONFIGURATION

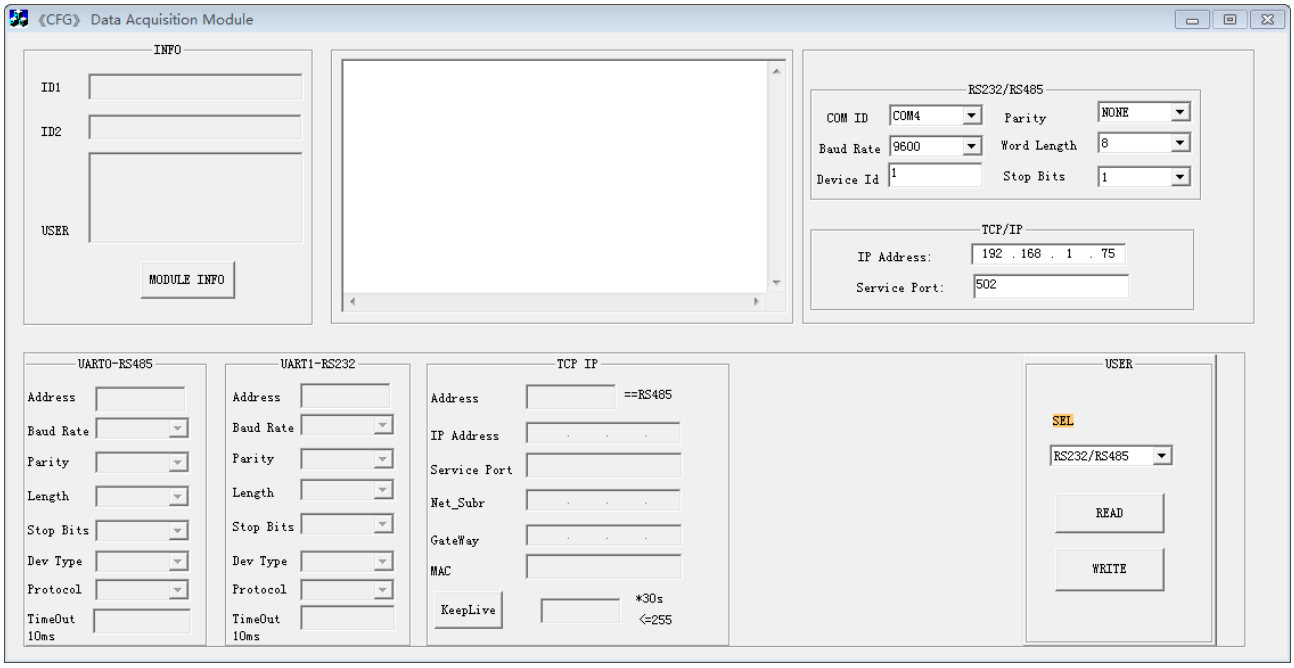
3.1 RS232/RS485

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



Set salve ID, default is 1

3.1 Ethernet

Port type	RJ45
Communicate protocol	MODBUS TCP、MODBUS UDP
Communicate rate	1000 times/s
bandwidth	10M/100Mbps
IP address	192.168.1.75
Port	502

4 DESCRIPTION OF IO CHANNEL

4.1 Analog input

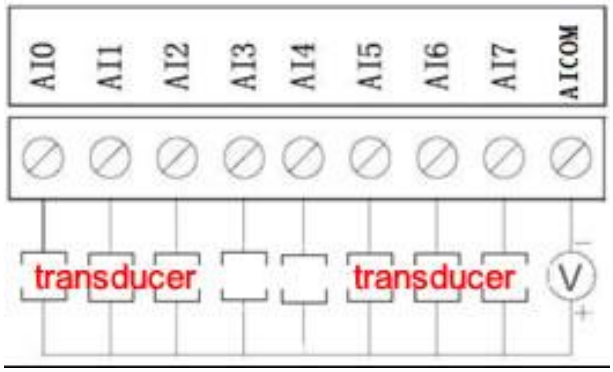
Input type	**4～20mA<default>**， support: 0～20mA/0～5/1～5/0～10V **(need open housing to jumper)**
Precision	0.1%，16 bit
Refresh rate	0.01m

Modbus Register map

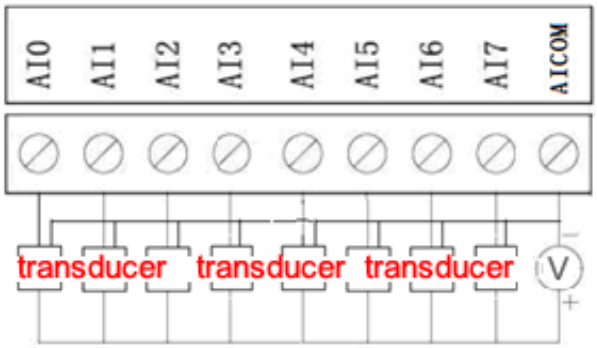
channel	Register address	Function code	Format	Scaling	
AI0-AI3	30004-30008	04	UINT16	0.0004	4-20mA
				0.0004	0-20mA
				0.0001	0-5V
				0.0002	0-10V

AI wiring diagram

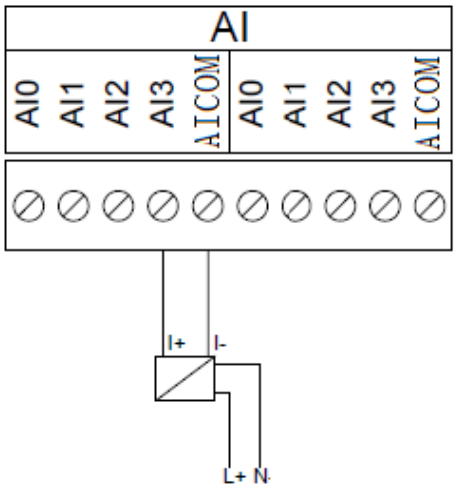
two-wire



three-wire



Four-wire



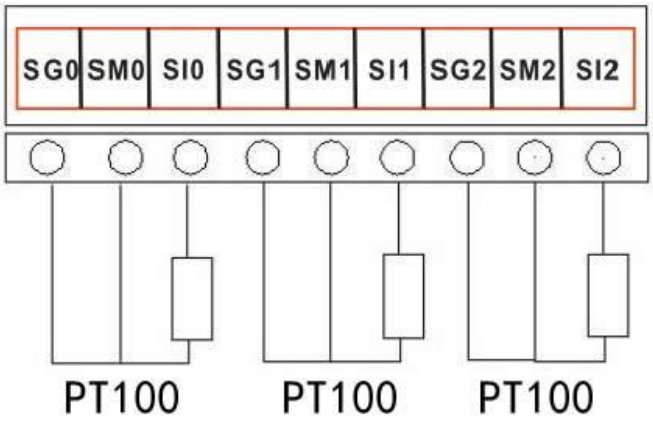
4.2 PT100 Input

Input type	PT100
Precision	0.1°C
Measurement range	-200°C～220°C

Modbus Register map

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

Three wire



Two wire