

CWT-MB307R

Modbus I O Module

manual

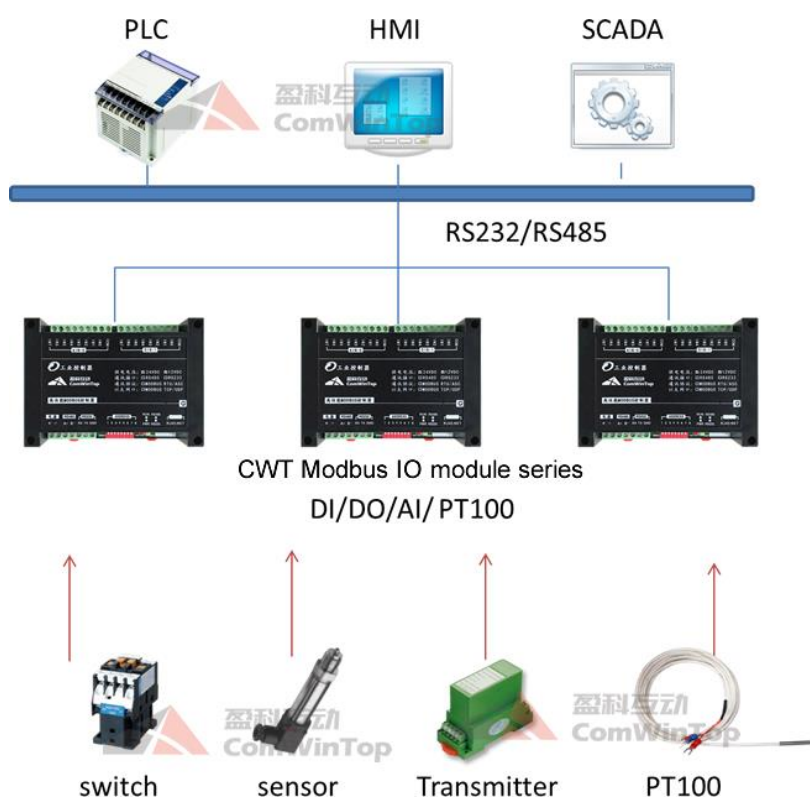
CONTENTS

- 1 OVERVIEW3
 - 1.1 SYSTEM PARAMETER3
- 2 INSTALL4
 - 2.1 SIZE.....4
 - 2.2 WIRING.....5
- 3 CONFIGURATION.....6
 - 3.1 RS232/RS4856
 - 3.2 CONFIGURATION SOFTWARE7
- 4 DESCRIPTION OF IO CHANNEL8
 - 4.1 ANALOG OUTPUT8
 - 4.2 DIGITAL OUTPUT.....9




1 OVERVIEW

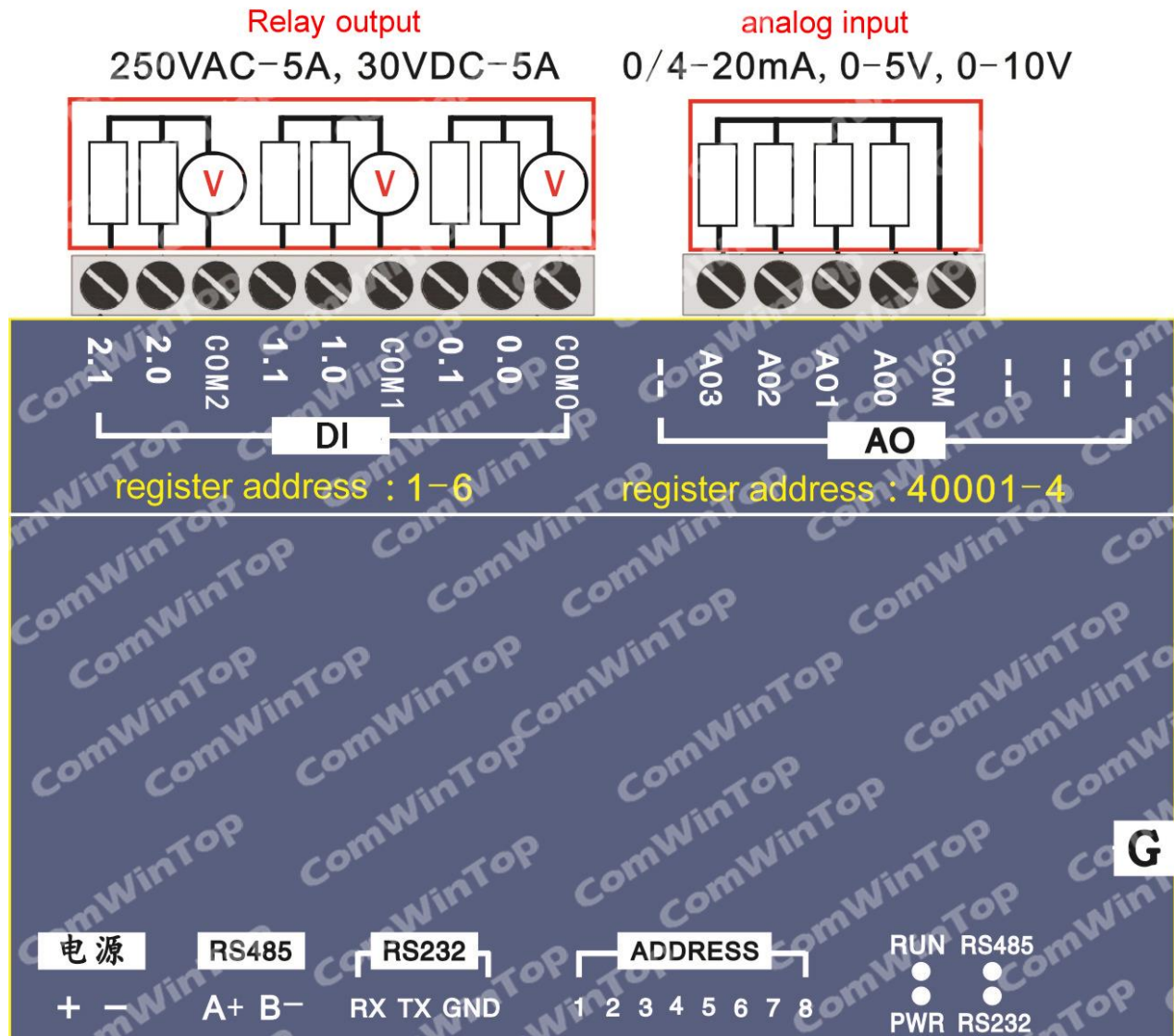
MODEL	AO	DO (relay output)	RS232	RS485
CWT-MB307R	4	6	1	1



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

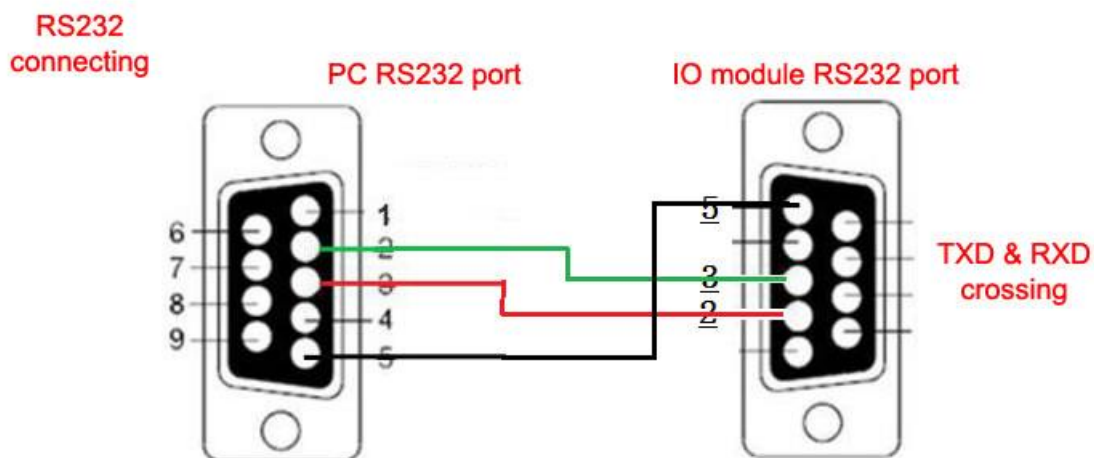
2.2 wiring



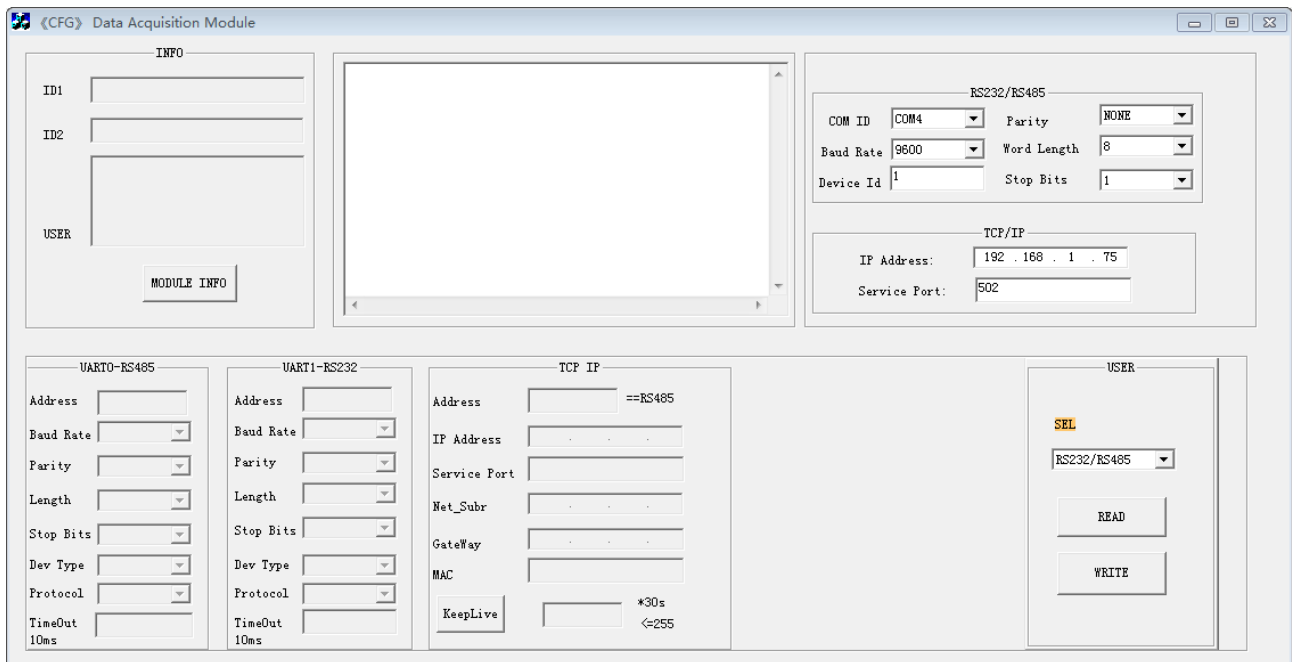
3 CONFIGURATION

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 includes sections for 'INFO' (ID1, ID2, USER, MODULE INFO), 'RS232/RS485' (COM ID, Parity, Baud Rate, Word Length, Device Id, Stop Bits), 'TCP/IP' (IP Address, Service Port), 'UART0-RS485', 'UART1-RS232', and 'TCP IP' (Address, IP Address, Service Port, Net_Subr, GateWay, MAC, KeepLive). A 'USER' section on the right has a 'SEL' dropdown set to 'RS232/RS485' and 'READ'/'WRITE' buttons.

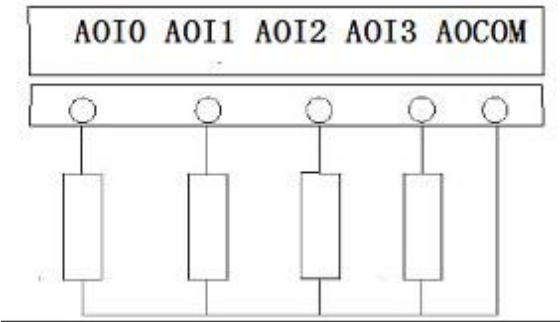
Set slave ID, default is 1

4 DESCRIPTION OF IO CHANNEL

4.1 Analog output

Modbus address	40001~40004 Function code: -- Write multiple: 16 -- Write single: 06 -- read multiple: 03
Output type	Current: 4~20mA/0~20mA <default> Option(need to open housing to jumper): Voltage: 0~5V/1~5V/0~10V
Output Precision	0.2%, 12 bit
Isolation	2500V, High speed Opt coupler isolation
Load resistor	current output: load $R \leq 750 \Omega$ voltage output: load $R \geq 2K \Omega$
Range	4~20mA corresponding 10000~50000 <unsigned 16-bit integer> 0~20mA corresponding 00000~50000 0~5V corresponding 00000~25000 0~10V corresponding 00000~50000
Calculation	4~20mA : register value * (50000 / 20) 0~20mA : register value * (50000 / 20) 0~5V : register value * (50000 / 10) 0~10V : register value * (50000 / 10) E.g. Output 6mA register value = 6mA * (50000 / 20) = 15000

AO wiring diagram



4.2 Digital output

Output type	normal open relay output
Isolation	opt coupler isolation& relay isolation
Resistive load	5A/250VAC, 5A/30VDC
Response time	≤0.01s

Modbus Register map

channel	Register address
Do0-Do5	00001-00006

DO wiring diagram

