

CWT-MB308U

Modbus I O Module

manual

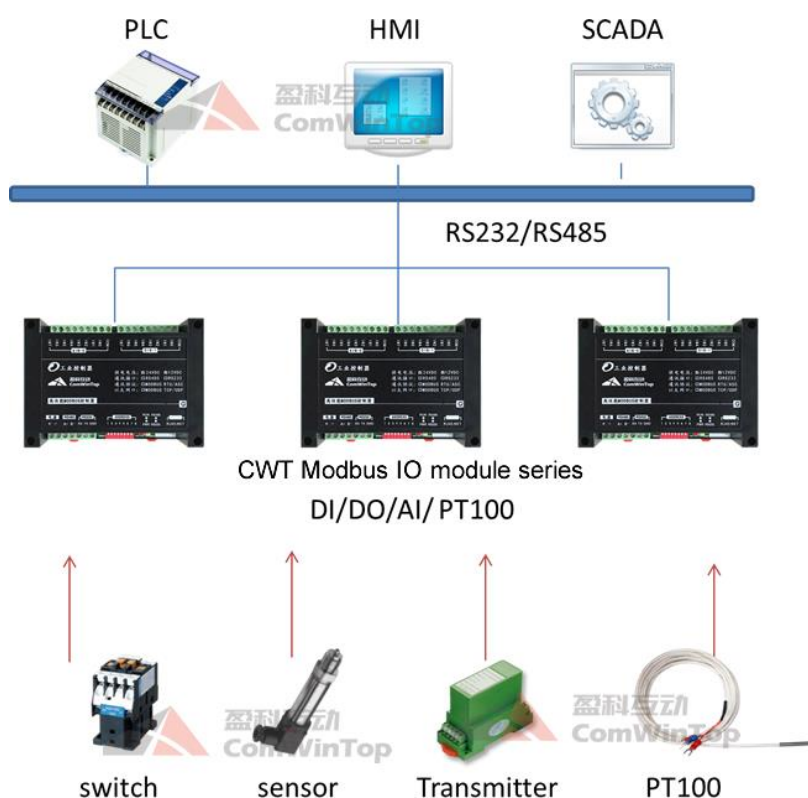
CONTENTS

- 1 OVERVIEW.....3
 - 1.1 SYSTEM PARAMETER3
- 2 INSTALL4
 - 2.1 SIZE.....4
 - 2.2 WIRING5
- 3 CONFIGURATION6
 - 3.1 ETHERNET7
 - 3.2 RS232/RS485.....6
 - 3.3 CONFIGURATION SOFTWARE7
- 4 DESCRIPTION OF IO CHANNEL.....8
 - 4.1 ANALOG INPUT8
 - 4.2 DIGITAL INPUT.....9




1 OVERVIEW

| Model | Options | IO Port | Communication Port | Protocol |
|------------|---------------|----------------------------|----------------------|------------------------|
| CWT-MB308U | I-V-485 | 16AI (4-20mA/0-10V) + 16DI | RS485 | Modbus RTU |
| | I-V-485-232 | 16AI (4-20mA/0-10V) + 16DI | RS485+RS232 | Modbus RTU |
| | I-V-E | 16AI (4-20mA/0-10V) + 16DI | Ethernet | Modbus TCP |
| | I-V-E-485 | 16AI (4-20mA/0-10V) + 16DI | Ethernet+RS485 | Modbus TCP, Modbus RTU |
| | I-V-E-485-232 | 16AI (4-20mA/0-10V) + 16DI | Ethernet+RS485+RS232 | Modbus TCP, Modbus RTU |

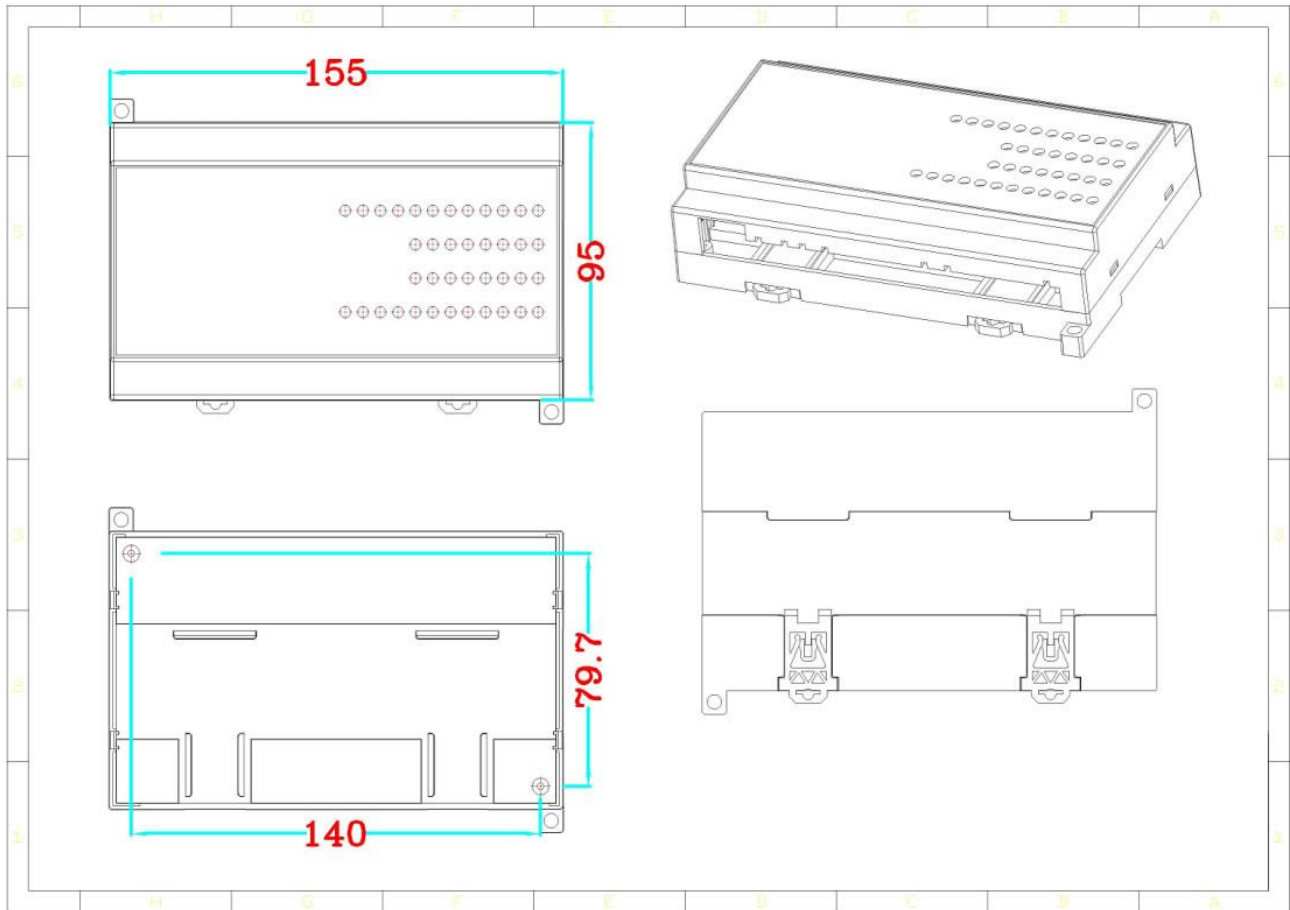


1.1 System Parameter

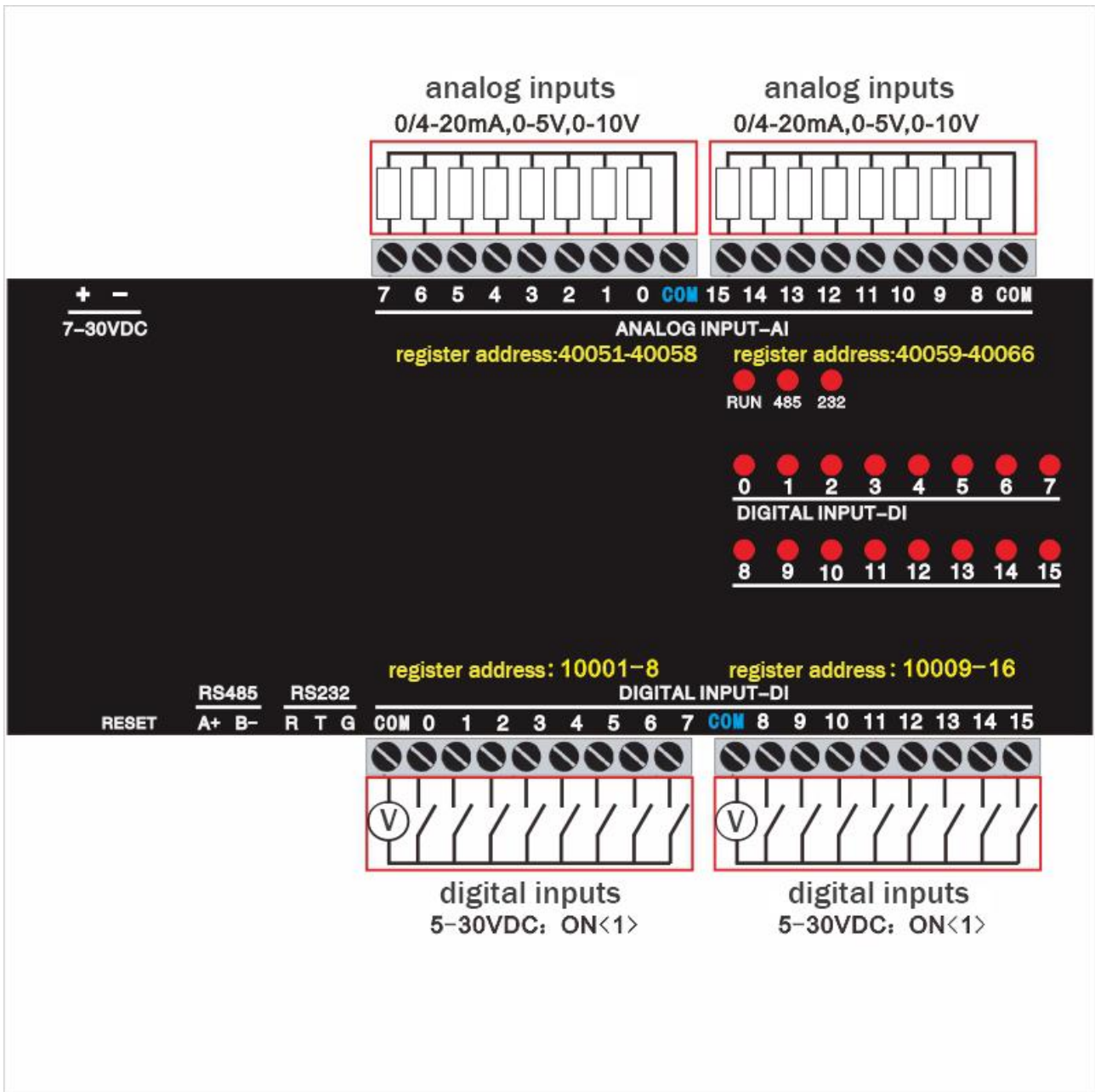
| | |
|---------------------|--|
| CPU | 32-bit ATMEL ARM, 72MHZ |
| OS | GCOS, 10ms scheduling mechanism |
| Power | 7-35VDC @2W, power supply reverse protection, isolation design |
| Installation | DIN rail mounting or screw fixing  |
| Working Environment | -40℃～85℃, 5%～95%RH(non-condensing) |
| Protection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

INFO

ID1

ID2

USER

MODULE INFO

RS232/RS485

COM IDCOM4ParityNONE

Baud Rate9600Word Length8

Device Id1Stop Bits1

TCP/IP

IP Address:192.168.1.75

Service Port:502

UART0-RS485

Address

Baud Rate

Parity

Length

Stop Bits

Dev Type

Protocol

TimeOut10ms

UART1-RS232

Address

Baud Rate

Parity

Length

Stop Bits

Dev Type

Protocol

TimeOut10ms

TCP IP

Address==RS485

IP Address

Service Port

Net_Subr

GateWay

MAC

KeepLive

*30s<=255

USER

SEL

RS232/RS485

READ

WRITE

Set salve ID, default is 1

3.3 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

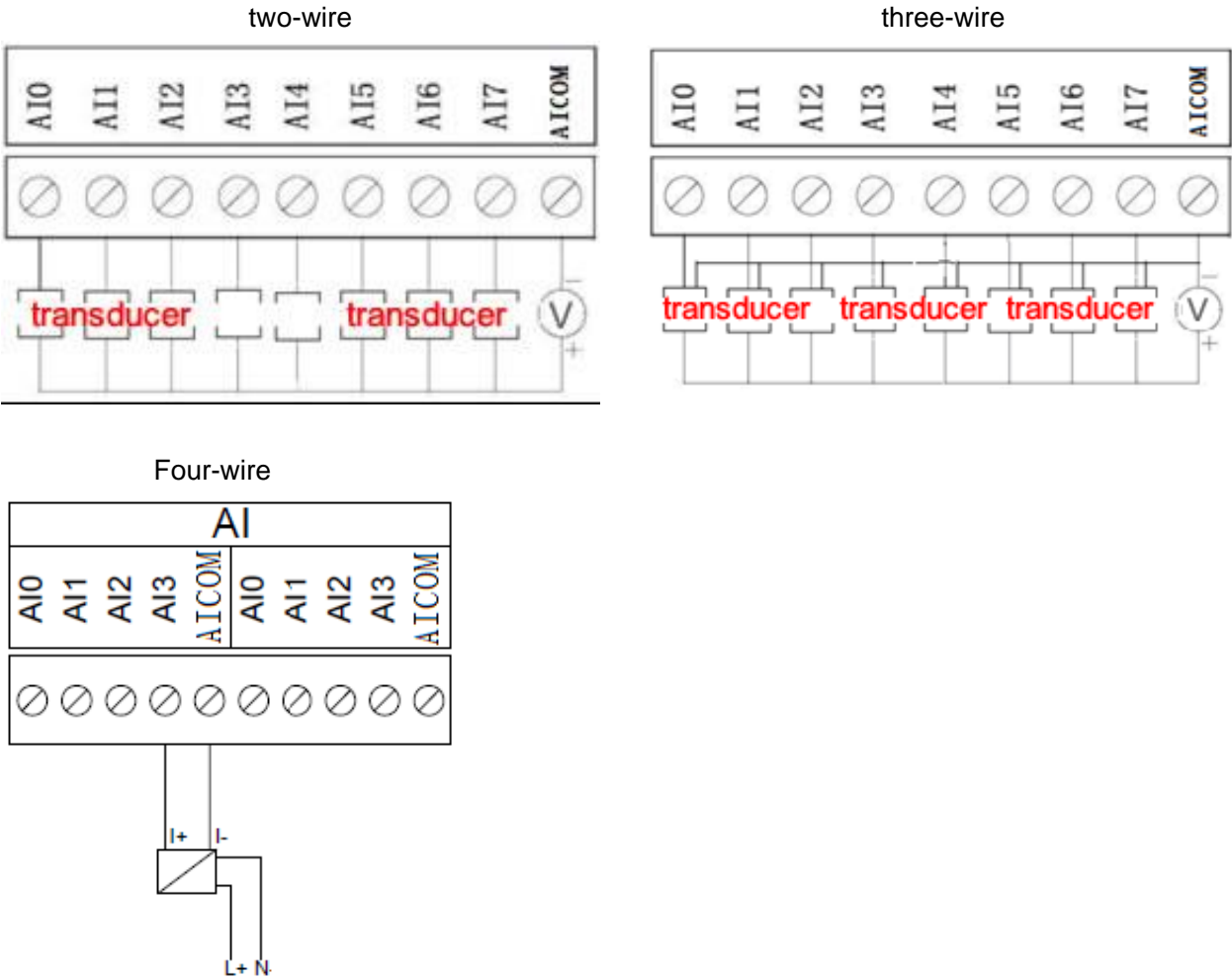
4.1 Analog input

| | |
|--------------|---|
| 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-AI15 | 40051-40066 | 03 | UINT16 | 0.001 |

AI wiring diagram



4.2 Digital input

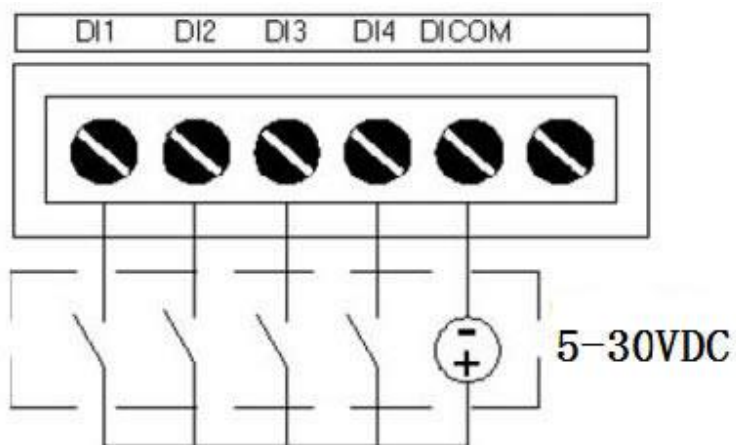
| | |
|------------------|--|
| ON signal level | 5-30VDC, 6mA@24VDC |
| OFF signal level | 0-3VDC |
| Protection | opt coupler isolation, 2500V lightning protection, overvoltage, overcurrent protection |
| Sample rate | 0.01m |

Modbus Register map

| channel | Register address |
|----------|------------------|
| DI0-DI15 | 10001-10016 |

DI wiring diagram

Wet contact wiring



Dry contact wiring

