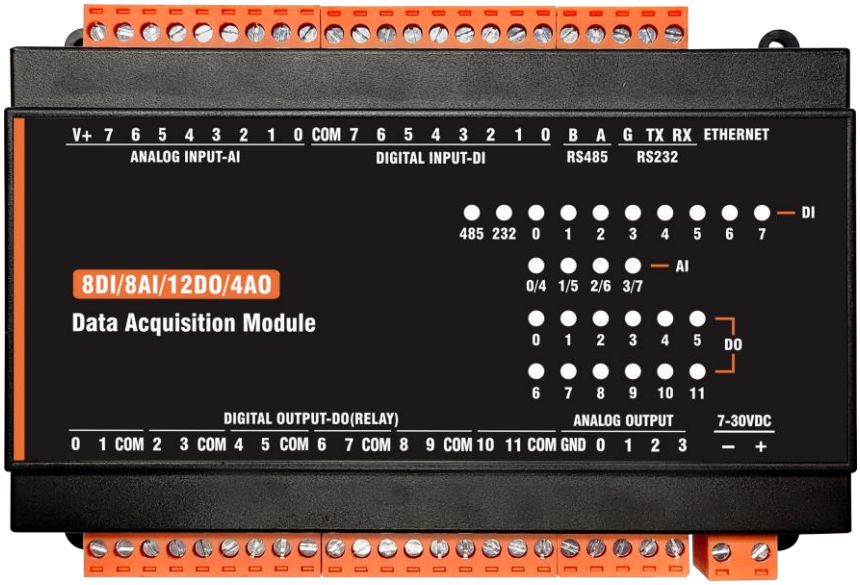
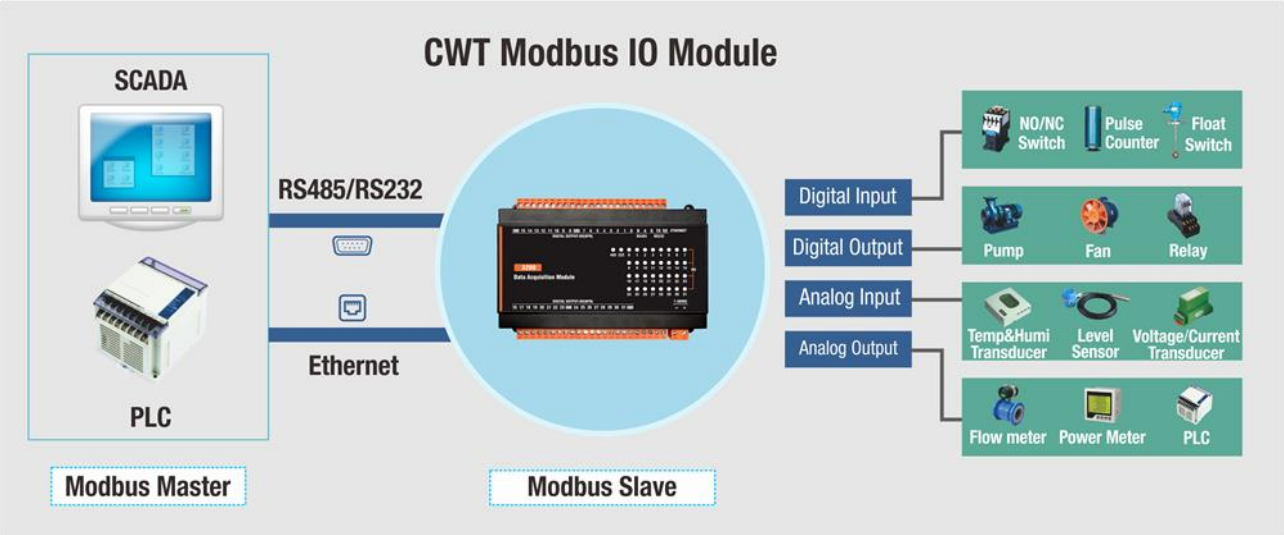
盈科互动 ComWinTop

CWT-MB308V(II) Modbus I O Module manual



1 OVERVIEW

CWT-MB308V(II) Modbus IO module with 8Di 8Ai 12Do 4AO, RS485 RS232 and Ethernet communication ports performs MODBUS RTU and TCP protocol, can be directly connected with the various types of PLC, DCS system, operator panel and a variety of configuration software.



Options

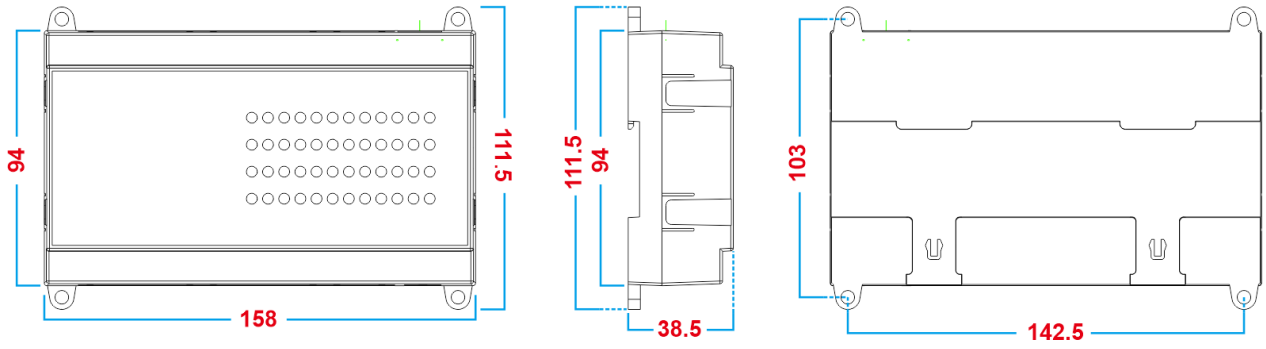
Model	IO Port	Communication Port	Protocol
CWT-MB308V(II)-S	8DI+8AI +12DO (relay)+4AO	RS485+RS232	Modbus RTU
CWT-MB308V(II)-SE	8DI+8AI +12DO (relay)+4AO	RS485+RS232 Ethernet	Modbus TCP Modbus RTU

System Parameter

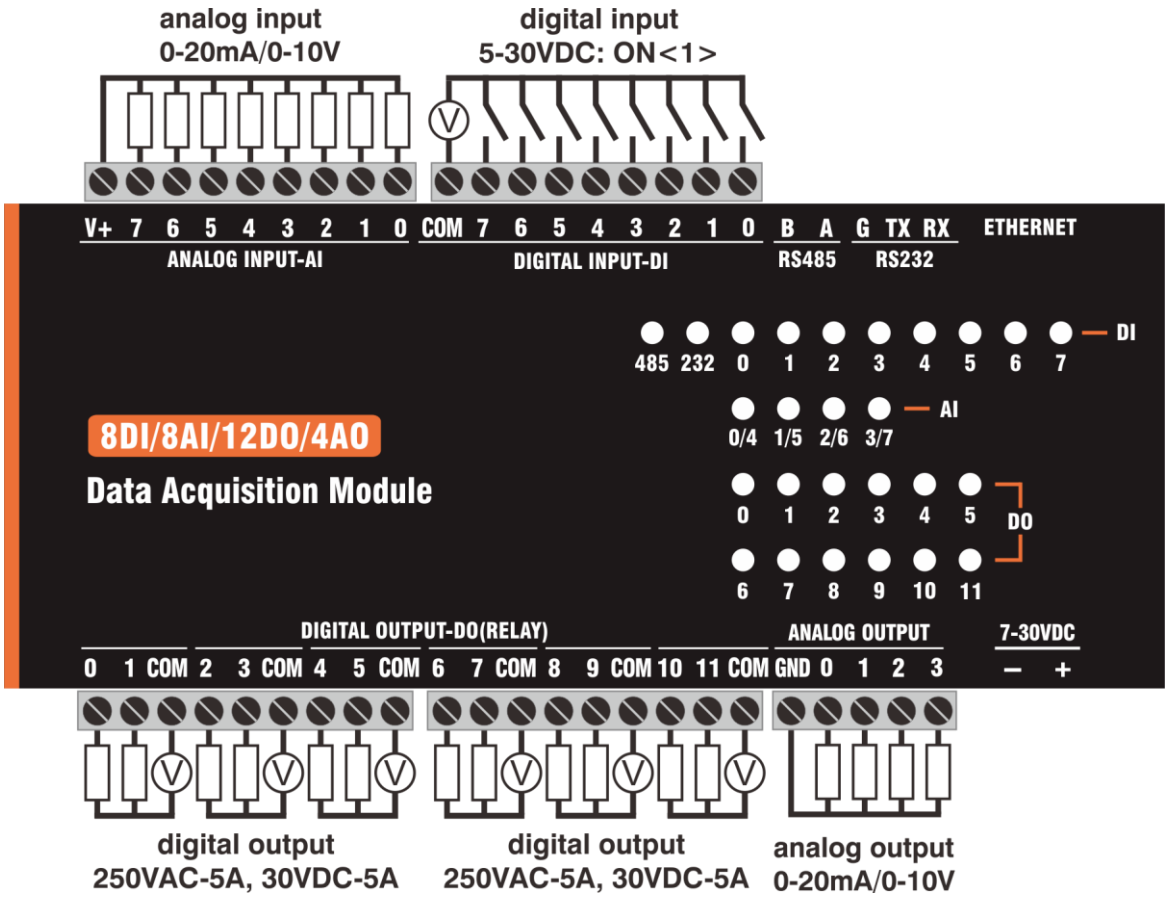
CPU	STM32 F407, 168MHZ
Power	7-35VDC @2W, power supply reverse protection, isolation design
Installation	DIN rail mounting or screw fixing
Working Environment	-40℃～85℃，5%～95%RH(non-condensing)
Protection	IP20
Dimension	158*111.5*38.5mm
Weight	440G

2 INSTALL

2.1 Size



2.2 wiring



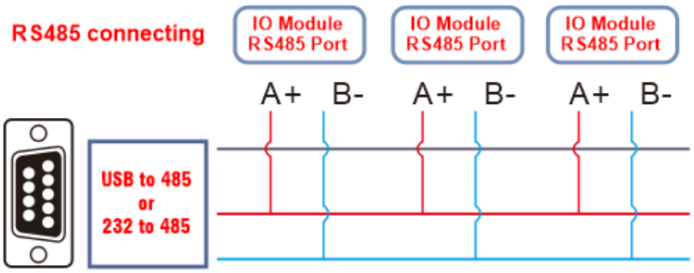
2.3 Description of indicator light

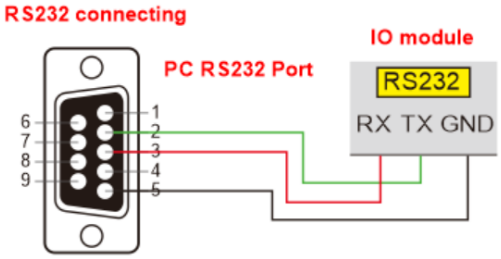
485	Flashes when RS485 communicating
232	Flashes when RS232 communicating
DI	Light up when each channel is closed
AI	Flashes when Ai channel is connected，0/4 mean channel 0 and 4 Share this indicator
DO	Light up when each channel is closed

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 Ethernet

Port type	RJ45
Communicate protocol	MODBUS TCP、MODBUS UDP
Communicate rate	1000 times/s
Bandwidth	10M/100Mbps
IP address	192.168.1.1
Port	502

4 DESCRIPTION OF IO CHANNEL

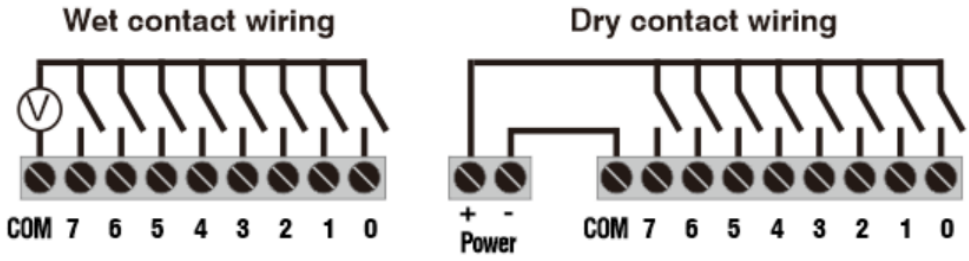
4.1 Digital input

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	Function code
DI0-DI7	10001-10008	02

DI wiring diagram



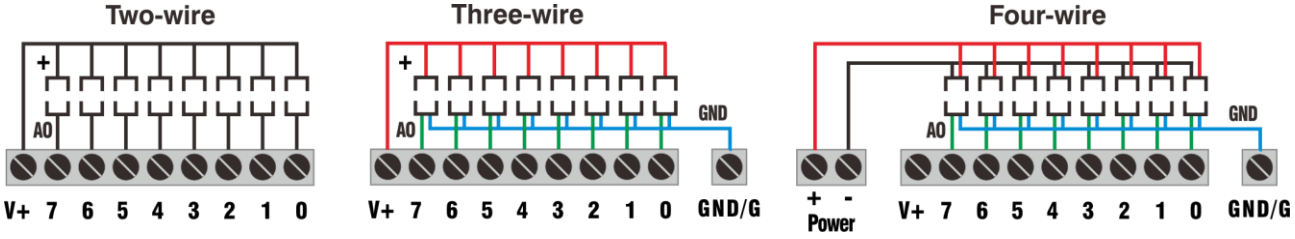
4.2 Analog input

Input type	0~20mA (default) / 0~10V (open casing to change jumper)
Precision	0.1%，16 bit
Refresh rate	0.01m
Sampling rate	10hz
Internal resistance	0~20mA: 110Ω 0~10V: 150KΩ

Modbus Register map

channel	Register address	Function code	Format	Scaling
AI0-AI7	40051-40058	03	INT16	0.001

AI wiring diagram



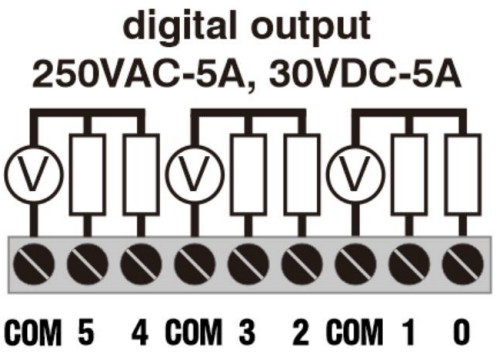
4.3 Digital output

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	Function code
Do0-Do11	00001-00012	05, 15

DO wiring diagram



4.4 Analog output

Modbus address	42401~42403 Function code: -- Write multiple: 16 -- Write single: 06 -- read multiple: 03
Output type	Current output: 0~20mA **<default>** Voltage output: 0~10V **(open casing to move jumper)**
Output Precision	Current output: 12-bits Voltage output: 15-bits
Load resistor	current output: load R≤650Ω voltage output: load R≥2KΩ
Range	0～20mA corresponding to 00000~20000 0～10V corresponding to 00000~10000

AO wiring diagram