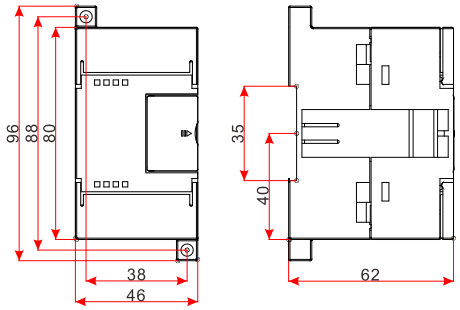
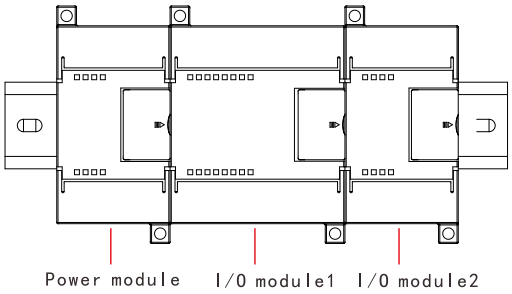
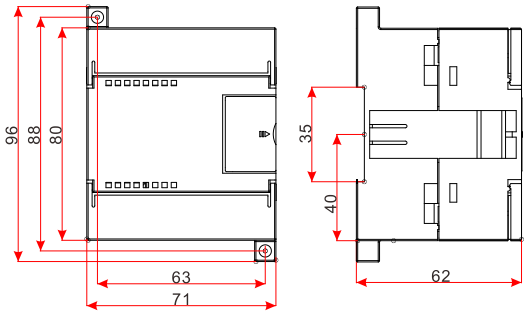
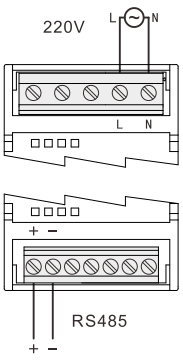
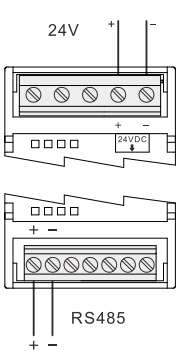
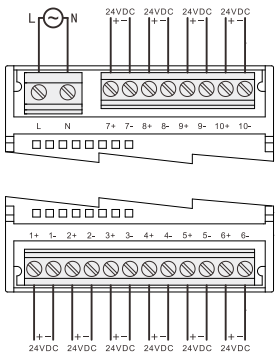
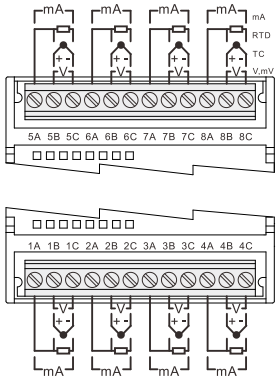
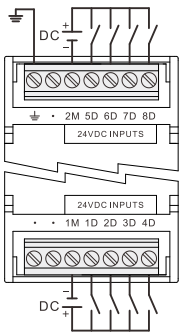
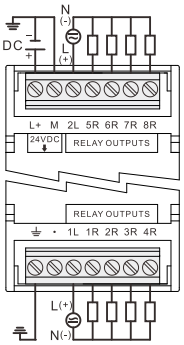
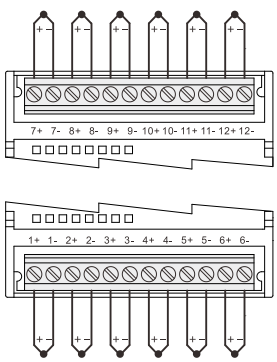
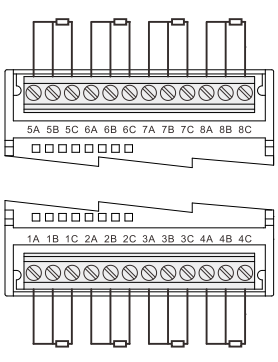
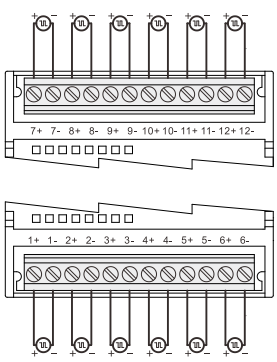
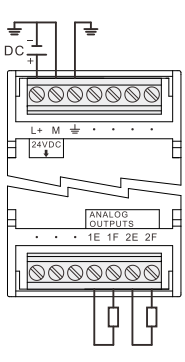
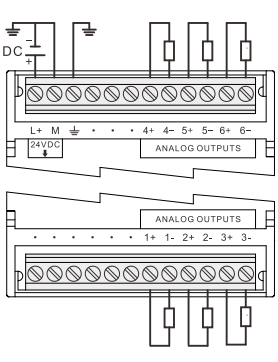
Operation manual

1. Installation

Power module Switching value input module Current output module Relay output module		
Universal analog input module Thermocouple input module RTD input module Frequency input module		1. The module is installed with standard 35mm DIN rail. It is recommended to use rail plug to prevent unstable installation of the module. 2. The first module must be power module, and the subsequent I / O modules have no sequence. 3. Please plug the bus plug of each I / O module into the socket of the left module. The power module has no bus plug. 4. 8 I / O modules can be connected at most.

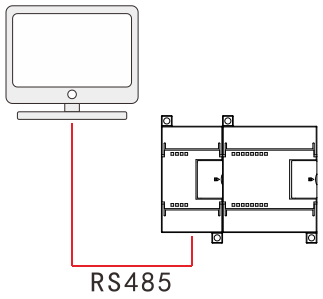
2. Electrical Connection

220V Power module	24V Power module	Power distribution module	Universal analog input module	Switching value input module	Relay output module
					

Thermocouple input module	RTD input module	Frequency input module	Current output Module (2 channel)	Current output Module (4 channel)
				

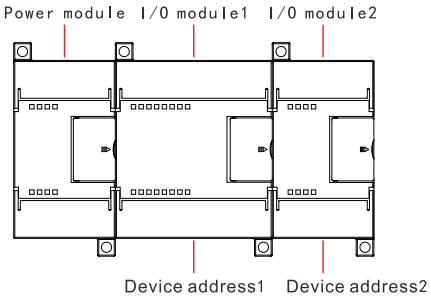
3. Configure

1. Connect computer



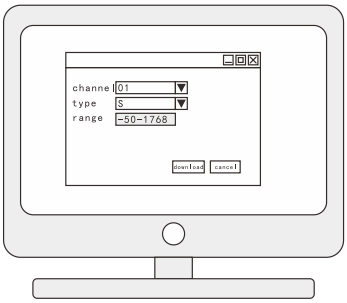
The module is connected with the computer by RS485 bus.

2. Open configuration software



The device address of the I / O module connected to the power module is 1, and each subsequent address is added with 1.

3. Set parameters



Use the configuration software to configure the module.

Communication parameters: 9600bps, 1 stop bit, no check.

4. Function

Communication parameters		
Communication protocol	Modbus-RTU	
Command code	Switching value input	02(0x02)
	Analog / frequency input	04(0x04)
	Relay output	15(0x0F)
	Analog output	16(0x10)
Data definition		
Signal type	Data range	Data definition
Voltage	-30000 ～ 30000	When there is negative voltage, -30000 corresponds to the lower limit, 0 corresponds to 0 V, and 30000 corresponds to the upper limit.
		When there is no negative voltage, 0 corresponds to the lower limit and 30000 corresponds to the upper limit.
Current/Resistance	0 ～ 30000	0 corresponds to the lower range and 30000 corresponds to the upper range.
Thermocouple/RTC	-2000 ～ 30000	The code value is equal to 10 times the temperature value in ℃. The data range is related to the signal range.
Frequency 1	0 ～ 10000	The code value is equal to the frequency value.
Frequency 2	0 ～ 10000	The code value is equal to 10 times the frequency value.

Register address	
Channel	Address
CH1	0001
CH2	0002
CH3	0003
CH4	0004
CH5	0005
CH6	0006
CH7	0007
CH8	0008
CH9	0009
CH10	0010
CH11	0011
CH12	0012

5. Parameter

Module	Signal type
Universal analog input	4-20mA/0-20mA/0-10mA/±5V/0-5V/1-5V/±10V/0-10V/±20mV0-20mV/±100mV/0-100mV/400Ω/175Ω S/R/B/K/N/E/J/T/WRE3-25/WRE5-26/F1/F2 Pt100/Cu50/Cu53/BA1/BA2
Thermocouple input	S/R/B/K/N/E/J/T/WRE3-25/WRE5-26/F1/F2
RTD input	Pt100/Cu50/Cu53/BA1/BA2/Pt1000

Type	Range	Measurable range	accuracy
DC current	4-20mA	4.00 ～ 20.00mA	±0.2%
	0-20mA	0.00 ～ 20.00mA	±0.2%
	0-10mA	0.00 ～ 10.00mA	±0.2%
DC voltage	1-5V	1.000 ～ 5.000V	±0.2%
	±5V	-5.000 ～ 5.000V	±0.2%
	±10V	-10.000 ～ 10.000V	±0.2%
	0-20mV	0.00 ～ 20.00mV	±0.2%
	±20mV	-20.00 ～ 20.00mV	±0.2%
	0-100mV	0.00 ～ 100.00mV	±0.2%
	±100mV	-100.00 ～ 100.00mV	±0.2%
Resistance	400Ω	0.0 ～ 400.0Ω	±0.2%
	175Ω	0.0 ～ 175.0Ω	±0.2%
Thermocouple	F1	600 ～ 2000	±2℃
	F2	600 ～ 2000	±2℃
	WRE3-25	0 ～ 2310	±2℃

Type	Range	Measurable range	accuracy
Thermocouple	WRE5-26	0 ～ 2310	±2℃
	S	-50 ～ 1768	±2℃
	R	-50 ～ 1768	±2℃
	B	250 ～ 1820	±2℃
	K	-200 ～ 1372	±1℃
	N	-200 ～ 1300	±1℃
	E	-200 ～ 1000	±1℃
	J	210 ～ 1200	±1℃
RTD	T	-200 ～ 400	±1℃
	Pt100	-200.0 ～ 650.0	±0.4℃
	Cu50	-50.0 ～ 150.0	±0.4℃
	Cu53	-50.0 ～ 150.0	±0.4℃
	BA1	-200.0 ～ 650.0	±0.4℃
	BA2	-200.0 ～ 650.0	±0.4℃
	Pt1000	-200.0 ～ 500.0	±0.4℃