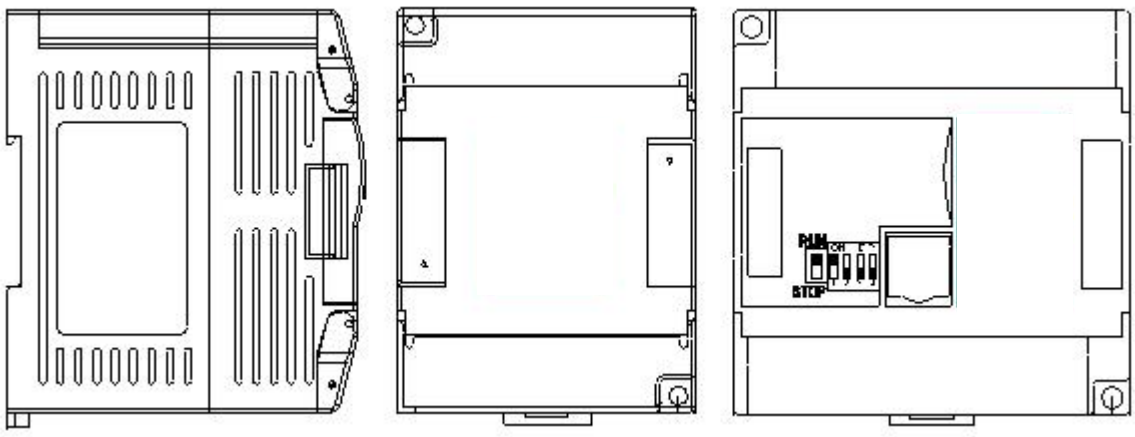
HNC PLC User Manual

Remote Analog Module User Manual & Application Case

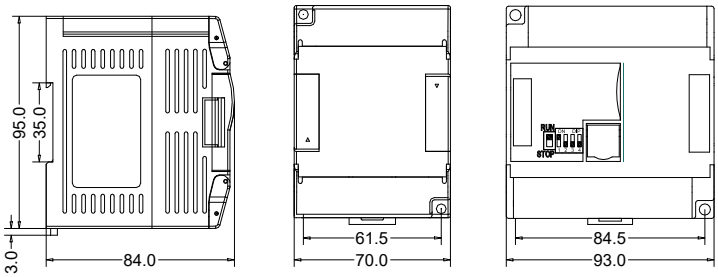


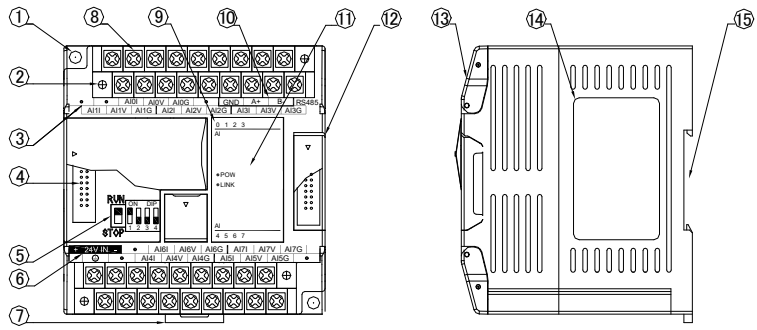
Contents

Analog Module User Manual

1. Product Model List and Dimension

Ethernet Model	24VDC	Model	24VDC	Dimension
		TE-4AD	0.07A	70×95×82mm
		TE-4DA	0.15A	
		TE-2AD2DA	0.1A	
TE-8AD-e	0.11A	TE-8AD	0.08A	93×95×82mm
TE-8DA-e	0.25A	TE-8DA	0.22A	
TE-4AD4DAe	0.18A	TE-4AD4DA	0.15A	





1.	Fixed hole	8.	Removable terminal
2.	Removable terminal screw	9.	Analog input channel indicator
3.	Terminal definition	10.	RS485 communication port
4.	Module expansion port	11.	PWR power indicator, LINK module communication indicator
5.	DIP switch（4-channel module without DIP switch）	12.	Module expansion port
6.	External power supply terminal	13.	Transparent cover of module terminal
7.	Guide rail buckle	14.	Module nameplate
		15.	35mm DIN guide rail

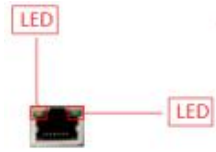
2. Indicator Description

① **PWR**: power indicator. green, constant light -Power normal; Not light - Power abnormal.
② **LINK**: multi-status indicator . three colors (Red. Yellow. Green), as follow:

Reference processing mode	Module bus state	LINK indicator state
Normal	No communication of module	No light
	MPU has identified the module but no communication	Constant light in green
	Serial or parallel port in communication	Green jitter: indicator on 30ms and off 30ms
Parallel power supply not enough, must connect to external power supply	Without serial or parallel port in communication	Yellow flicker: indicator on 0.5s and off 0.5s
	With serial or parallel port in communication	Yellow is darkened and jitter alternately: indicator off 0.5s and jitter 0.5s
Firmware upgrade failed, reupgrade the module firmware	Without serial or parallel port in communication	Red flicker: indicator on 0.5s and off 0.5s
	With serial or parallel port in communication	Red is darkened and jitter alternately: indicator off 0.5s and jitter 0.5s
Hardware failure and maintenance	Without serial or parallel port in communication	Constant light in red
	With serial or parallel port in communication	Red jitter quickly: indicator on 30ms and off 30ms

③ **RJ45 Ethernet indicator:** there are two Ethernet LEDs, green and yellow, as shown on the picture:

Color	Status description
Green light is long bright	Physical connection of TCP module and external device is normal;
Green light goes out	TCP module fails to connect with external device or the module itself is abnormal
Yellow light blinks	TCP module is connected to an external device normally, and blinking frequency indicates the data transmission speed. When speed is fast, human eye is not easy to distinguish, at this time, yellow light is long bright.
Yellow light goes out	No data transmission communication of TCP module and external device



3. Power Supply Specification

Item	DC Power Supply
Power supply voltage	24VDC -15%~+20%
Power supply frequency	——
Instantaneous surge	MAX 20A 1.5ms @24VDC
Power loss time	10ms or less
Fuse	0.3A, 250V
24V Output voltage (for input and expansion)	None
Isolation Type	No Electrical isolation
Power Protection	DC input power polarity reverse, over voltage protection

4. Environmental Specifications for Product

Item	Environment Specification
Temperature/Humidity	Operating temperature:0~+55℃ Storage temperature:-25~+70℃ Humidity: 5~95%RH, No condensation
Vibration Resistance	10~57 HZ, amplitude=0.075mm, 57HZ~150HZ acceleration=1G, 10 times each for X-axis, Y-axis and Z-axis
Impact Resistance	15G, duration=11ms, 6 times each for X-axis, Y-axis and Z-axis
Interference Immunity	DC EFT:±2500V Surge:±1000V
Over Voltage Resistance	1500VAC/1min between AC terminal and PE terminal, 500VAC/1min between DC terminal and PE terminal
Insulation Impedance	Between AC terminal and PE terminal @500VDC,>=5MΩ ,all input/output points to PE terminal @500VDC
Operating environment	Avoid dust, moisture, corrosion, electric shock and external shocks

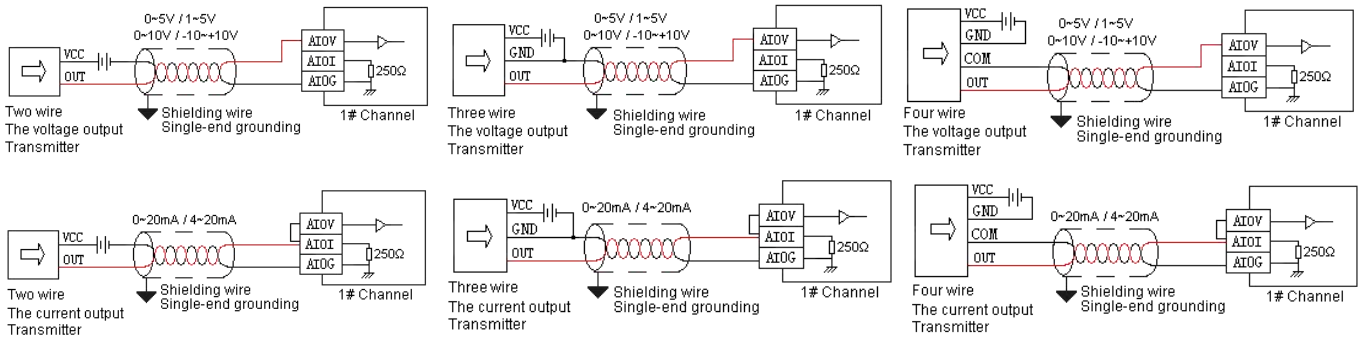
5. Analog Input (AI) Specification

Item	Voltage input				Current input
Input range	-10V~+10V	0V~+10V	0V~+5V	1V~+5V	0~20mA 4~20mA
Resolution	5mV	2.5mV	1.25mV	1.25mV	5μA
Input impedance	6MΩ				250Ω
Maximum input range	±13V				±30mA
Input indication	LED light ON means normal ,OFF means external disconnect				
Response time	5ms/4 Channel				
Digital input range	12 bits,Code range:0~32000(H series module 16 bits A/D convert)				
Precision	0.2% F.S				
Power supply	MPU use internal power supply, extend module use external power supply 24VDC ±10% 5VA				
Isolation mode	Optoelectronic isolation,Non-isolation between Channels, between analog and digital is optoelectronic isolation				
Power consumption	24VDC ±20%,100mA(maximum)				

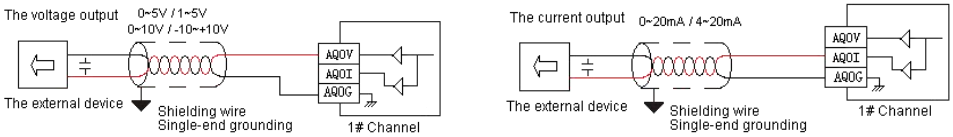
6. Analog Output (AQ) Specification

Item	Voltage output				Current output	
Output range	-10V~+10V	0V~ +10V	0V~+5V	1V~+5V	0~20mA	4~20mA
Resolution	5mV	2.5mV	1.25mV	1.25mV	5uA	5uA
Output load impedance	1KΩ@10V		≥500Ω@10V		≤500Ω	
Output indication	LED ON means normal					
Drive capability	10mA					
Response time	3ms					
Digital output range	12 bits,Code range:0~32000(H series module 16 bits D/A convert)					
Precision	0.2% F.S					
Power supply	MPU use internal power supply, expansion modules use external power supply 24VDC ±10% 5VA					
Isolation mode	Optoelectronic isolation,Non-isolation between Channels ,between analog and digital is optoelectronic isolation					
Power consumption	24VDC ±20%,100mA(maximum)					

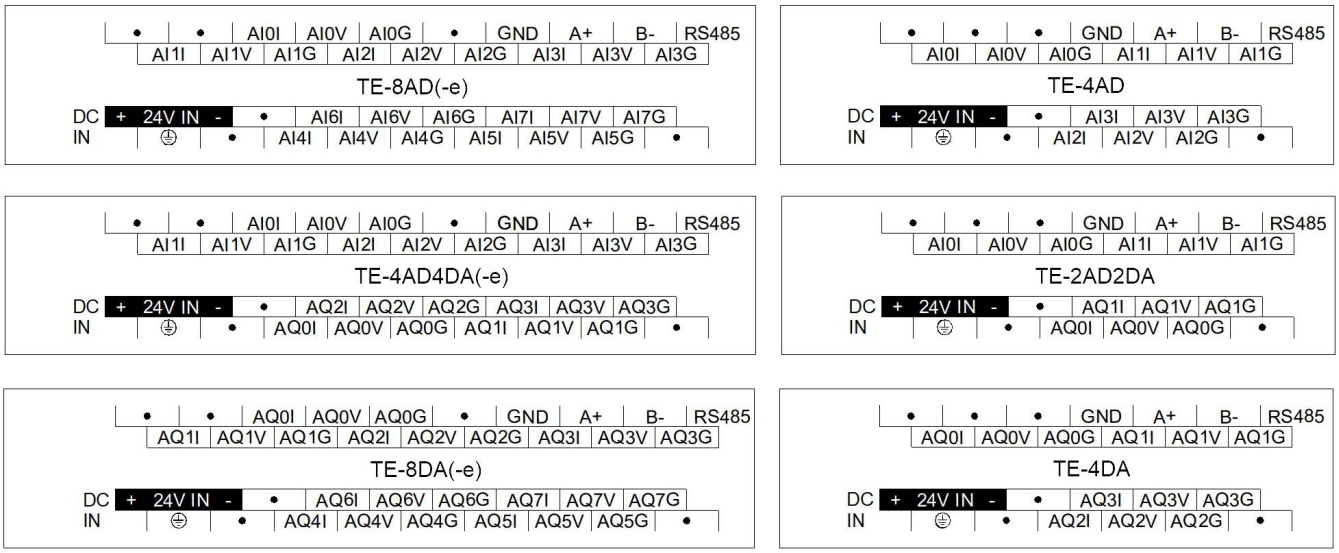
7. Analog Input (AI) Wiring Diagram



8. Analog Output (AQ) Wiring Diagram



9. Terminal Wiring Diagram



10. Module Parameter Table (CR code is corresponding to the Modbus register address)

4-channel analog module parameter table

Note: CR code is corresponding to the Modbus register address, the ray parts are read-only ,the white parts are readable and writable.

CR code	Function description		
	TE-4AD	TE-4DA	TE-2AD2DA
00H	Low byte for module code, and high byte for module version number.		
01H	Communication address		
02H	Communication protocol: The low 4-bit of the low byte: 0 - N,8,2 For RTU, 1 - E,8,1 For RTU, 2 - O,8,1 For RTU, 3 - N,7,2 For ASCII, 4 - E,7,1 For ASCII, 5 - O,7,1 For ASCII, 6 - N,8, 1 For RTU The high 4-bit of the low byte: 0 – 2400, 1 – 4800, 2 – 9600, 3 – 19200, 4 – 38400, 5 – 57600, 6 - 115200		
03H~06H	Module name		
07H~08H	Default IP address: 192.168.1.111		
09~0AH	Reserve		
0BH	High byte subnet mask (b3~b0,1 indicates 255, 0 indicates 0, for example subnet mask 255.255.255.0, b3~b0=1110), low byte reserved		
0CH-0EH	Reserve		
0FH	Error code: 0-Normal, 1-Illegal firmware identity, 2-Incomplete firmware, 3-System data access exception, 4-No external 24V power supply		
10H	channel 1 input value	channel 1 output value	input channel 1 input value
11H	channel 2 input value	channel 2 output value	input channel 2 input value
12H	channel 3 input value	channel 3 output value	input channel 1 signal type, note 2
13H	channel 4 input value	channel 4 output value	input channel 2 signal type, note 2
14H	channel 1 signal type, note 2	channel 1 signal type, note 2	Use the engineering value mark, note 6
15H	channel 2 signal type, note 2	channel 2 signal type, note 2	input channel 1 engineering lower limiting value
16H	channel 3 signal type, note 2	channel 3 signal type, note 2	input channel 2 engineering lower limiting value
17H	channel 4 signal type, note 2	channel 4 signal type, note 2	input channel 1 engineering upper limiting value
18H	Use the engineering value mark, note 6	Use the engineering value mark, note 6	input channel 2 engineering upper limiting value
19H	channel 1 engineering lower limiting value	channel 1 engineering lower limiting value	input channel 1 sampling frequency, note 1
1AH	channel 2 engineering lower limiting value	channel 2 engineering lower limiting value	input channel 2 sampling frequency, note 1
1BH	channel 3 engineering lower limiting value	channel 3 engineering lower limiting value	input channel 1 zero point correction value
1CH	channel 4 engineering lower limiting value	channel 4 engineering lower limiting value	input channel 2 zero point correction value
1DH	channel 1 engineering upper limiting value	channel 1 engineering upper limiting value	Channel 1~2 input disconnection alarm, note 5
1EH	channel 2 engineering upper limiting value	channel 2 engineering upper limiting value	output channel 1 output value
1FH	channel 3 engineering upper limiting value	channel 3 engineering upper limiting value	output channel 2 output value
20H	channel 4 engineering upper limiting value	channel 4 engineering upper limiting value	output channel 1 signal type, note 2
21H	channel 1 sampling frequency, note 1	power-off output mark, note 8	output channel 2 signal type, note 2
22H	channel 2 sampling frequency, note 1	channel 1 power-off output value	Use the engineering value mark, note 6
23H	channel 3 sampling frequency, note 1	channel 2 power-off output value	output channel 1 engineering lower limiting value
24H	Channel 4 sampling frequency, note 1	channel 3 power-off output value	output channel 2 engineering lower limiting value
25H	channel 1 zero point correction value	channel 4 power-off output value	output channel 1 engineering upper limiting value
26H	channel 2 zero point correction value	Channel indicator status, note 7	output channel 2 engineering upper limiting value
27H	channel 3 zero point correction value	Reserve	power-off output mark, note 8
28H	channel 4 zero point correction value		output channel 1 power-off output value
29H	Channel 1~4 input disconnection alarm, note 5		output channel 2 power-off output value
2AH	Reserve		output channel indicator, note 7
2BH~2FH			Reserve

8-channel analog module parameter table

Note: CR code is corresponding to the Modbus register address, the gray parts are read-only, the white parts are R/W.

CR code	Function description		
	TE-8AD(e)	TE-8DA(e)	TE-4AD4DA(e)
00H	Low byte for module code, and high byte for module version number.		
01H	Communication address		
02H	Communication protocol: The low 4-bit of the low byte: 0 - N,8,2 For RTU, 1 - E,8,1 For RTU, 2 - O,8,1 For RTU, 3 - N,7,2 For ASCII, 4 - E,7,1 For ASCII, 5 - O,7,1 For ASCII, 6 - N,8, 1 For RTU The high 4-bit of the low bytes: 0 – 2400, 1 – 4800, 2 – 9600, 3 – 19200, 4 – 38400, 5 – 57600, 6 - 115200		
03H~06H	Module name		
07H~08H	Default IP address: 192.168.1.111		
09~0AH	Reserve		
0BH	High byte subnet mask(b3~b0,1 indicates 255,0 indicates 0 , for example, subnet mask 255.255.255.0, b3~b0=1110), low byte Reserved		
0CH~0EH	Reserve		
0FH	Error code: 0-Normal, 1-Illegally firmware identity, 2-Incomplete firmware, 3-System data access exception, 4-No external 24V power supply		
10H	channel 1 input value	channel 1 output value	input channel 1 input value

CR code	Function description		
	TE-8AD(e)	TE-8DA(e)	TE-4AD4DA(e)
11H	channel 2 input value	channel 2 output value	input channel 2 input value
12H	channel 3 input value	channel 3 output value	input channel 3 input value
13H	channel 4 input value	channel 4 output value	input channel 4 input value
14H	channel 5 input value	channel 5 output value	input channel 1 signal type, note 2
15H	channel 6 input value	channel 6 output value	input channel 2 signal type, note 2
16H	channel 7 input value	channel 7 output value	input channel 3 signal type, note 2
17H	channel 8 input value	channel 8 output value	input channel 4 signal type, note 2
18H	channel 1 signal type, note 2	channel 1 signal type, note 2	Use the engineering value mark, note 6
19H	channel 2 signal type, note 2	channel 2 signal type, note 2	input channel 1 engineering lower limiting value
1AH	channel 3 signal type, note 2	channel 3 signal type, note 2	input channel 2 engineering lower limiting value
1BH	channel 4 signal type, note 2	channel 4 signal type, note 2	input channel 3 engineering lower limiting value
1CH	channel 5 signal type, note 2	channel 5 signal type, note 2	input channel 4 engineering lower limiting value
1DH	channel 6 signal type, note 2	channel 6 signal type, note 2	input channel 1 engineering upper limiting value
1EH	channel 7 signal type, note 2	channel 7 signal type, note 2	input channel 2 engineering upper limiting value
1FH	channel 8 signal type, note 2	channel 8 signal type, note 2	input channel 3 engineering upper limiting value
20H	Use the engineering value mark, note 6	Use the engineering value mark, note 6	input channel 4 engineering upper limiting value
21H	channel 1 engineering lower limiting value	channel 1 engineering lower limiting value	input channel 1 sampling frequency, note 1
22H	channel 2 engineering lower limiting value	channel 2 engineering lower limiting value	input channel 2 sampling frequency, note 1
23H	channel 3 engineering lower limiting value	channel 3 engineering lower limiting value	input channel 3 sampling frequency, note 1
24H	channel 4 engineering lower limiting value	channel 4 engineering lower limiting value	input channel 4 sampling frequency, note 1
25H	channel 5 engineering lower limiting value	channel 5 engineering lower limiting value	input channel 1 zero point correction value
26H	channel 6 engineering lower limiting value	channel 6 engineering lower limiting value	input channel 2 zero point correction value
27H	channel 7 engineering lower limiting value	channel 7 engineering lower limiting value	input channel 3 zero point correction value
28H	channel 8 engineering lower limiting value	channel 8 engineering lower limiting value	input channel 4 zero point correction value
29H	channel 1 engineering upper limiting value	channel 1 engineering upper limiting value	Channel 1~4 input disconnection alarm, note 5
2AH	channel 2 engineering upper limiting value	channel 2 engineering upper limiting value	output channel 1 output value
2BH	channel 3 engineering upper limiting value	channel 3 engineering upper limiting value	output channel 2 output value
2CH	channel 4 engineering upper limiting value	channel 4 engineering upper limiting value	output channel 3 output value
2DH	channel 5 engineering upper limiting value	channel 5 engineering upper limiting value	output channel 4 output value
2EH	channel 6 engineering upper limiting value	channel 6 engineering upper limiting value	output channel 1 signal type, note 2
2FH	channel 7 engineering upper limiting value	channel 7 engineering upper limiting value	output channel 2 signal type, note 2
30H	channel 8 engineering upper limiting value	channel 8 engineering upper limiting value	output channel 3 signal type, note 2
31H	channel 1 sampling frequency, note 1	power-off output mark, note 8	output channel 4 signal type, note 2
32H	channel 2 sampling frequency, note 1	channel 1 power-off output value	Use the engineering value mark, note 6
33H	channel 3 sampling frequency, note 1	channel 2 power-off output value	output channel 1 engineering lower limiting value
34H	channel 4 sampling frequency, note 1	channel 3 power-off output value	output channel 2 engineering lower limiting value
35H	channel 5 sampling frequency, note 1	channel 4 power-off output value	output channel 3 engineering lower limiting value
36H	channel 6 sampling frequency, note 1	channel 5 power-off output value	output channel 4 engineering lower limiting value
37H	channel 7 sampling frequency, note 1	channel 6 power-off output value	output channel 1 engineering upper limiting value
38H	channel 8 sampling frequency, note 1	channel 7 power-off output value	output channel 2 engineering upper limiting value
39H	channel 1 zero point correction value	channel 8 power-off output value	output channel 3 engineering upper limiting value
3AH	channel 2 zero point correction value	Channel indicator status, note 7	output channel 4 engineering upper limiting value
3BH	channel 3 zero point correction value	Reserve	power-off output mark, note 8
3CH	channel 4 zero point correction value		output channel 1 power-off output value
3DH	channel 5 zero point correction value		output channel 2 power-off output value
3EH	channel 6 zero point correction value		output channel 3 power-off output value
3FH	channel 7 zero point correction value		output channel 4 power-off output value
40H	channel 8 zero point correction value		output channel indicator, note 7
41H	Channel 1~8 input disconnection alarm, note 5		Reserve
42H~4FH	Reserve		

Note:

1. Sampling frequency:0 - 2 times, 1 - 4 times, 2 - 8 times, 3 - 16 times, 4 - 32 times, 5 - 64 times, 6 - 128 times, 7 - 256 times
2. Signal type: 0 - [4,20]mA, 1 - [0,20]mA, 2 - [1,5]V, 3 - [0,5]V, 4 - [0,10]V, 5 - [-10,10]V
3. Disconnection alarm:Each bit indicates 1 channel, 0-normal, 1-disconnection
4. Use the engineering value mark:Each bit indicates 1 channel, 0-No, 1-Yes
5. Channel indicator status:Each bit indicates 1 channel, 0-off, 1-on
6. Power-off output mark:Each bit indicates 1 channel, 0-No, 1-Yes

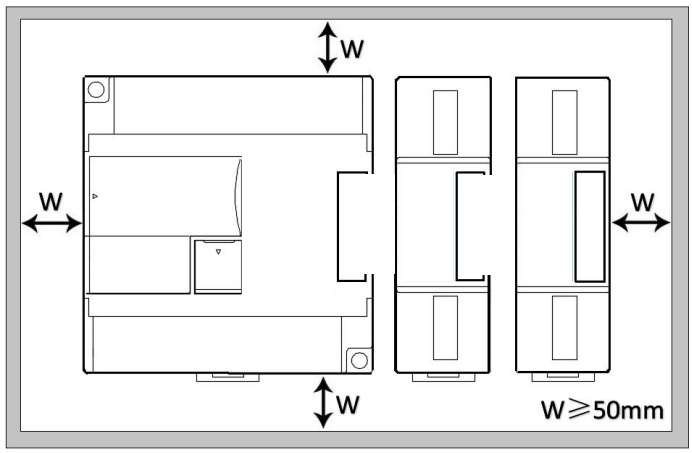
11. Mounting and installation

The PLC should be secured to an enclosed cabinet while mounting. For heat dissipation, make sure to provide a minimum clearance of 50mm between the unit and all sides of the cabinet. (See the figure.)

Rail Mounting: Use standard 35 mm rail.

Screw Mounting: Each MPU or expansion module has two positioning screw holes, the diameter of the hole is 4.5mm. Please refer to the dimension figure for the location of the positioning holes and their spacing.

To avoid over temperature and for a better heat dissipation, do not mount PLC to a position near to the bottom/top of the cabinet. Do not mount PLC in vertical direction.



Analog Module Application Case

1. Module used as remote IO

HNC TE series remote module is built-in one RS485 communication port (Some models with Ethernet communication port), which supports serial bus(Use the RS485 communication port of module networking with communication port of host PLC, and host PLC controls the remote module by communication instructions), when using the serial bus to expand (that is, remote IO module), it doesn't have expansion limit of system points and can be distributed installation.

Distributed installation is very important for the system which needs to collect and monitor a large number of decentralized digital or analog signals(temperature, humidity, differential pressure, blowing rate, flow, fan speed, valve opening, etc.), it can easily achieve distributed installation control and unlimited points of expansion, greatly improving the control system configuration flexibility and future control expansion capabilities, reducing the number of signal wiring, also reducing the interference problem of too long analog signal line, saving the project investment costs.

The following will introduce the operation key points and techniques.

1.1. Module power supply

When the module is used as remote IO, there are two optional models of 24VDC.If the module is powered normally, the PWR indicator will light.

1.2. Communication port introduction

① All analog modules are built-in RS485 port.

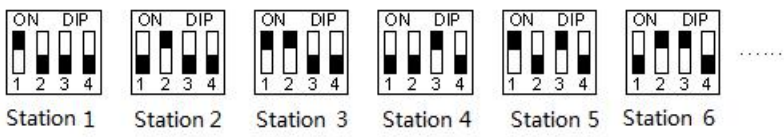
② As for 8-channel analog module, you can choose the Ethernet port.

③ RS485 communication port and Ethernet port can be used at the same time, for example, the RS485 of module communicates with PLC, Ethernet port can also communicates with multiple host computers (up to 6).

1.3. Communication protocols and default parameters

RS485: Support standard Modbus RTU / ASCII protocol, it can communicate with the configuration, touch screen, text, PLC and other third-party host computer, which must support standard Modbus protocol. Among them:

- **Address:** 1 ~ 254 can be set; module address is divided into soft address and hard address, hard address has the highest priority.
- **Soft address**: The address set through programming software - remote tool, address range 1-254;
- **Hard address**: The address set through the 4-bit DIP switch of module hardware, address range 1-15. Hardware address setting example:



Baud rate: 2400, 4800, 9600, 19200, 38400, 57600, 115200 optional;

Data format : N, 8, 2 RTU, E, 8, 1 RTU, O, 8, 1 RTU, N, 8, 1 RTU, E, 7, 1 ASCII, O, 7, 1 ASCII, N, 7, 2 ASCII optional.

RS485 default parameter: 19200, N 8 2 RTU, station number is 1.

Ethernet +: Support the standard Modbus TCP protocol, it can communicate with the configuration, touch screen, PLC and other third-party host computers, which must support Modbus TCP protocol. Among them:

Ethernet default parameters:

IP: 192.168.1.111

Subnet mask: 255.255.255.0

Gateway: 192.168.1.1

1.4. Module parameter configuration method introduction, when the module is used as remote IO

There are three ways to configure remote IO parameters:

① It can be configured via programming software - tools - remote modules (recommended);

② It can be configured via MODW instructions through the serial communication.

1.5. Parameter configuration example: The module is configured by programming software remote module tool

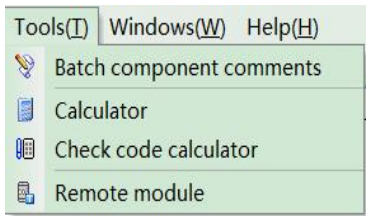
Hardware connection

① Through the RS485 communication port (the terminals of A +,B- on the module) connection: If the computer has a serial port, you can use the converter of 232 to 485 connecting with the module; if it has one USB interface, you can use the converter of USB to 485 connecting with the module.

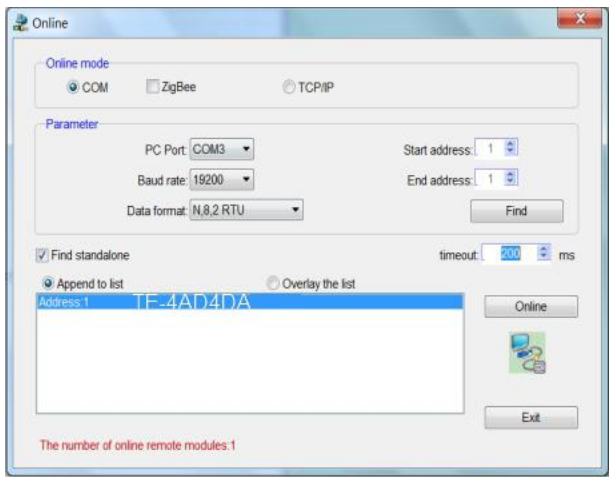
② Through the connection of Ethernet + communication interface: You can connect the module with the computer's network port directly by the standard network cable, or take the computer and module connected to the switch.

Software operation steps

Click on the the menu bar tool of programming software- "remote module":

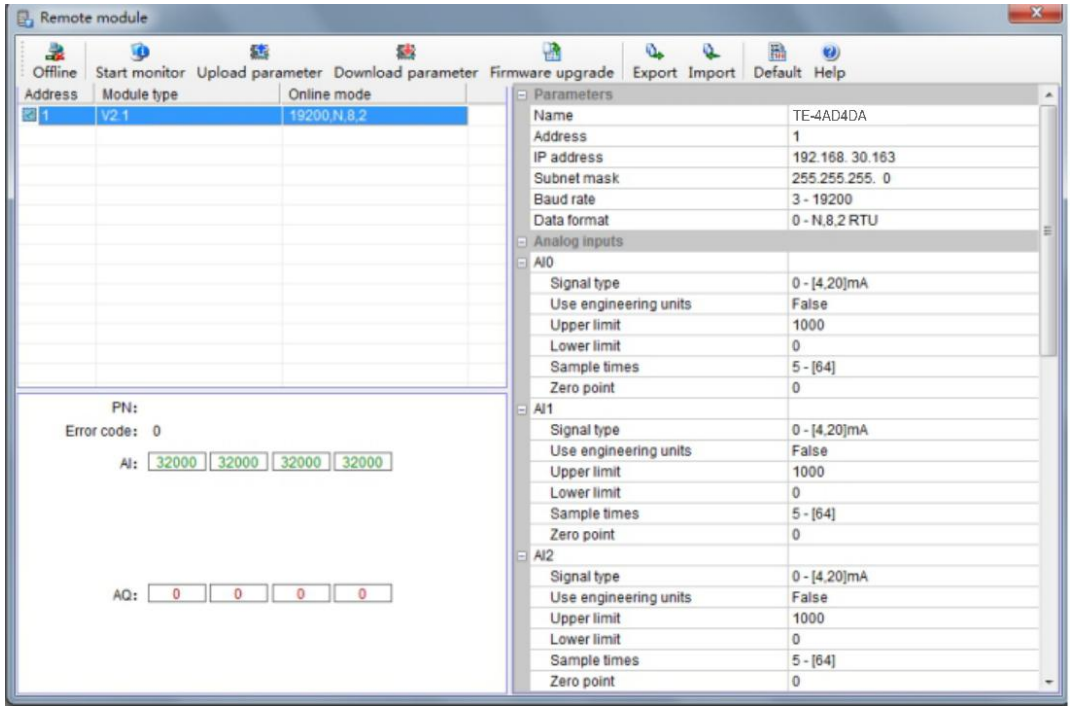


Click the button  in the pop-up window to open the "Online" window. The module default address is 1,19200, N 8 2 RTU, the online success is as follows:

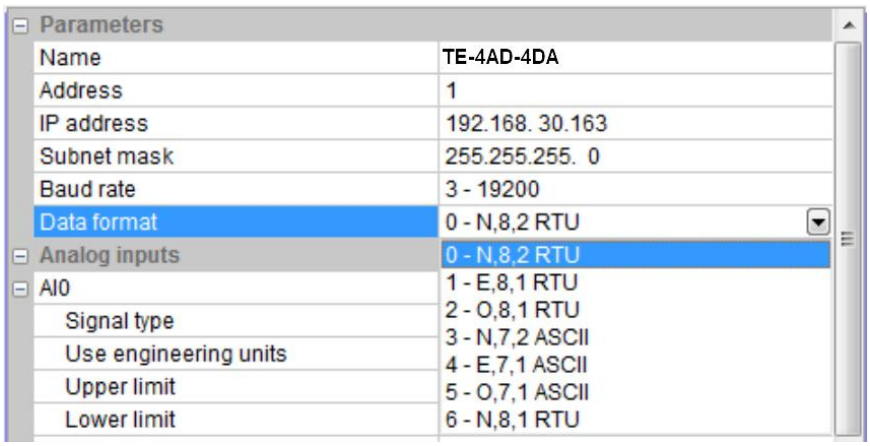


If there is only one machine connected with RS485, then check "stand-alone search"; if there are more than one, then remove the button of "stand-alone search", and set the start address and end address, so that all the machines connected with RS485 can be found and achieve parameter configuration.

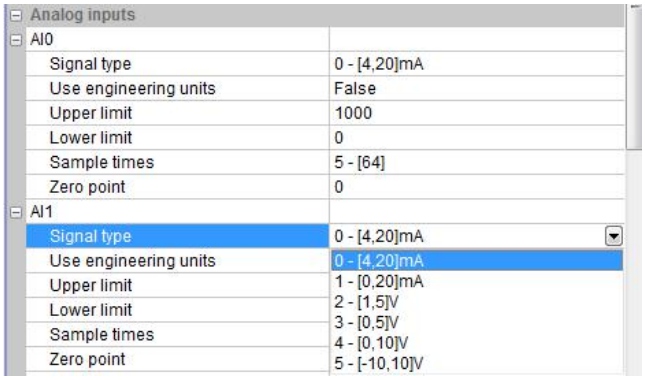
Click to exit, enter the configuration interface, as shown below:



We can change the module name, address, IP, subnet mask, baud rate, data format and other communication parameters in the communication parameter area.



In the external analog input area, we can set the signal type of each channel, choose whether to use engineering value or not, the upper and lower limits of engineering value(it can be set if you check the use of engineering value), sampling times and zero correction.



After setting, select the "parameter download" to download the parameter into the module.

In addition, we can do the following operations through the remote module tool:

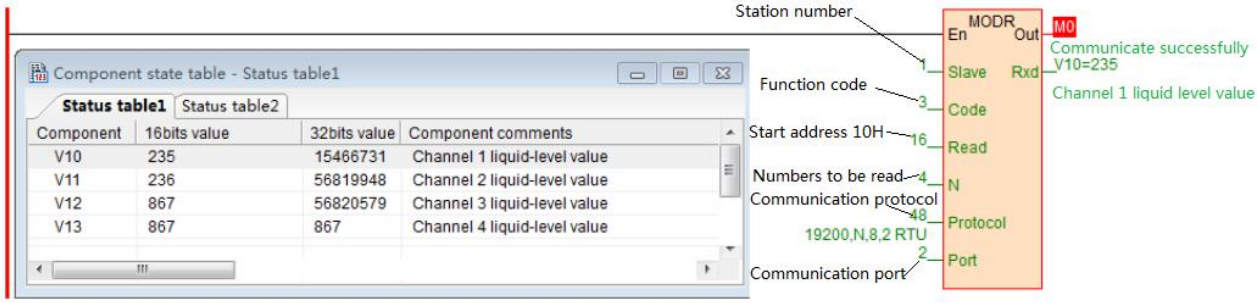
- Online monitoring the channel value of module, error code.
- Upload the module paramater, upgrade the module firmware, then make the module support new features.
- It can export the module configuration to save or import and restore the default value.

1.6. Remote IO application example(RS485 mode): The PLC read the 4 communication temperature values of TE-4AD module

① Hardware wiring: PLC connects to 485 port of module by shielded twisted pair, A + connects to A +, B- connects to B-, if the PLC connects to multiple remote IO modules, it needs to use Hand in hand way to connect.

② Modbus address: From the above 4-channel analog CR parameter table shows that, the channel 1 ~ 4 input values are stored in 10H ~ 13H of TE-4AD module.

③ PLC program: Host PLC wants to read the 4-channel liquid level values of remote IO module TE-4AD, 0 ~ 1000 indicates that 0 ~ 1.0m. In this example, TE-4AD communication is the default parameter: Station number address is 1, baud rate is 19200, data format is N 8 2 RTU. The program of PLC reads the 4-channel liquid level values is as follows:



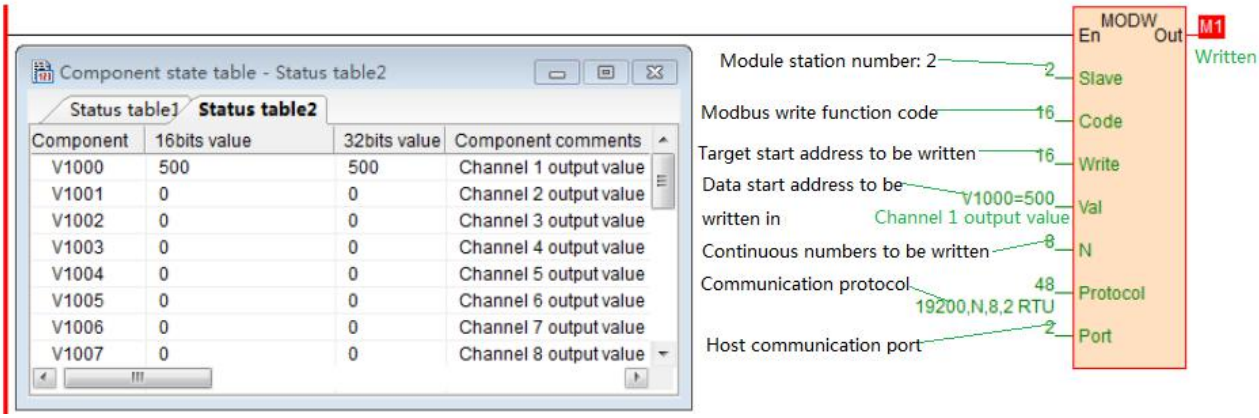
The host PLC reads the 4-channel liquid level values of TE-4AD by Modbus read instruction MODR, the start address is 10H (hexadecimal), that is, the decimal value is 16. When the communication is successful, M0 is ON, the liquid level values which are read back will be stored in V0-V3, V0=235, indicating that the actual temperature of the first channel is 0.235m, the same as V3=867, indicating that the actual temperature of the fourth channel is 0.867m.

1.7. Remote IO application example (RS485 mode): The PLC writes the 8-channel output values of TE-8DA module

① Hardware wiring: PLC connects to 485 port of module by shielded twisted pair, A + connects to A +, B- connects to B-, if the PLC connects to multiple remote IO modules, it needs to use Hand in hand way to connect.

② Modbus address: From the above 8-channel analog CR parameter table shows that, the channel 1 ~ 8 output values of TE-8DA module are stored in address 10H~17H .

③ PLC program: Host PLC wants to write the 8-channel analog output values of remote IO module TE-8DA. In this example, TE-8DA communication parameters: Station number address is 2 (set by DIP switch), baud rate 19200, data format N 8 2 RTU. The program of writing 8-channel analog output values is as follows:



Host PLC writes the 8-channel analog output values of TE-8DA by Modbus write instruction MODW, the start address is 10H(hexadecimal), that is, the decimal value is 16. When writing successfully, M1 is ON, the 8-channel values which will be written into are stored in V1000-1007.

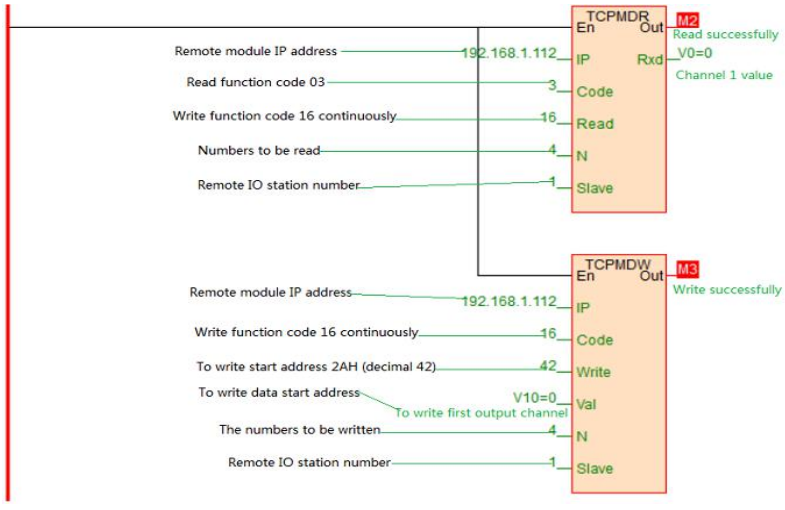
In this example, for the channel 1 of analog output, check the use of engineering value, the lower limit value is 0, the upper limit value is 3600, indicating that the valve opening is 0.0~360.0° , this case V1000=500, so the first output channel value is 500, that is, the valve opening is 50.0° .

1.8. Remote IO application example(Ethernet mode): PLC read and write each channel input and output values of TE-4AD4DAe

① Hardware wiring: PLC and module Ethernet port connected with a shielded network cable, they can be connected directly or through the switch.

② Modbus address: From the above TE-4AD4DAe analog module CR parameter table shows that the input values of module input channel 1 ~ 4 are stored in the address 10H ~ 13H. The output values of module output channel 1-4 are stored in 2AH ~ 2DH.

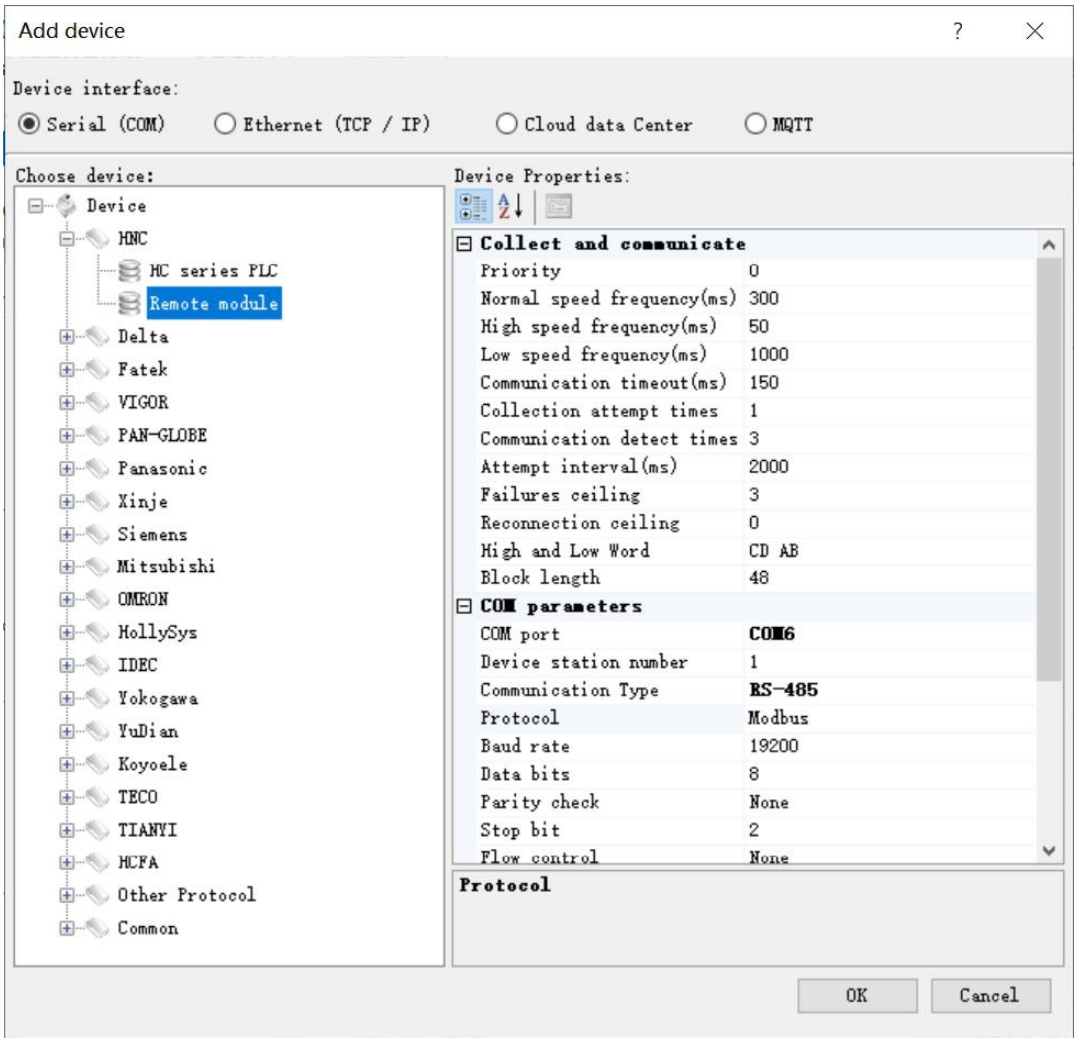
③ PLC program: Read the 4-channel measurements of remote Ethernet module TE-4AD4DAe and write the 4-channel output values of TE-4AD4DAe, if the module IP address is 192.168.1.112, station number address is 1, the read results are stored in the V0 ~ V3, the values to be written are stored in the register V10-V13. As follows:



1.9. HTCloud Desinger communicates directly with TE-8AD module example

Open the software, select the "new project", choose to add the device in the "device", then choose serial port or Ethernet according to the module which supports the Ethernet or RS485, this example for serial port, the serial port number of USB to RS485 is COM6, as shown below:

Default parameter 19200 N 8 2 RTU for the module, station number address is 1. And directly select HNC remote module driver in serial port：



Click OK, then we are prompted to start set up variables, the establishment of eight variables indicates 8 channels:

Device properties | Add | Batch add | Delete | Online | Off

	Variable name	Register type	Register address	Address length	Data type	Read-write mode	Acquisition frequency	Variable description
1	CR16	CR	16	1	Integer	Read and write	Normal	
2	CR17	CR	17	1	Integer	Read and write	Normal	
3	CR18	CR	18	1	Integer	Read and write	Normal	
4	CR19	CR	19	1	Integer	Read and write	Normal	
5	CR20	CR	20	1	Integer	Read and write	Normal	
6	CR21	CR	21	1	Integer	Read and write	Normal	
7	CR22	CR	22	1	Integer	Read and write	Normal	
8	CR23	CR	23	1	Integer	Read and write	Normal	

Then set up the screen, we can use the display primitives to bind the corresponding channel variable values. If you need to display the decimal places, it can set the corresponding decimal places on the display primitive. As shown below: