Installation Manual IOM0080- ModbusRTU

Packing List

IOM0080 Expansion Module (1 piece) User Manual (1 piece) Certificate of Compliance (1 piece)

1.Product parameters

Tis product adopts the mainstream ARM core 32-bit microprocessor and supports the Modbus RTU protocol, which can realize the fast expansion of the I/O module of the controller.

Processor: 32-bit, clock frequency: 72MHz

Memory: 64KB flash memory, 20KB random access memory

Power supply: AC/DC 12~24V

Communication: Modbus RTU (Default: 9600, 8, 1, None, Address 1)

Analog Input: 14-bit resolution, support 0-10V and 0-20mA input

2.Model Description

	BI/DI	BO/DO	Al	AO
IOM0080	0	0	8	0

3.Register Definition Explanation

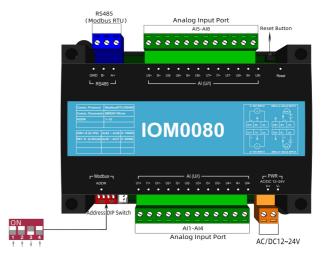
Al---Input Register(0x03)

Al Port	Voltage Register address	Voltage corresponding value	Current Register Address	Current corresponding value	
1	40022	0~10V=0~10000	40030	0~20mA=0~20000	
2	40023	0~10V=0~10000	40031	0~20mA=0~20000	
3	40024	0~10V=0~10000	40032	0~20mA=0~20000	
4	40025	0~10V=0~10000	40033	0~20mA=0~20000	
5	40026	0~10V=0~10000	40034	0~20mA=0~20000	
6	40027	0~10V=0~10000	40035	0~20mA=0~20000	
7	40028	0~10V=0~10000	40036	0~20mA=0~20000	
8	40029	0~10V=0~10000	40037	0~20mA=0~20000	

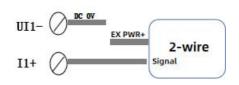
AO---Holding Register(0x03/0x06)

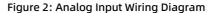
AO Register address	AO Port	Description	
40001		Device Address: 1 (1~15)	
40002		BDT: 9600 (2.4K/4.8K/9.6K/19.2K/115.2K)	
40003		Check bit: None (0-none,1 - odd, 2 - even)	

4. Wiring Instructions



Taking Channel 1 as an Example:





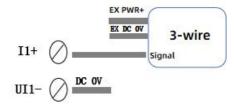


Figure 3: Analog Input Wiring Diagram

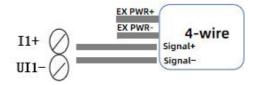


Figure 4: Analog Input Wiring Diagram

5.Installation method: Rail-mounted

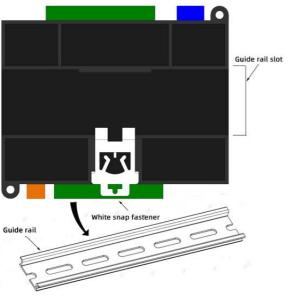
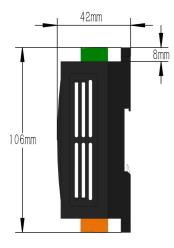


Figure 5: Pull down the white snap of the product and insert it into the rail strip. Then press the white snap upwards as shown in the figure to fix it.

6.Product dimensions



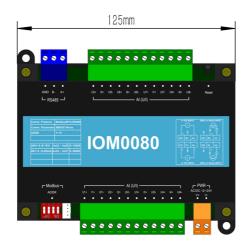


Figure 6: Product dimensions: 125mm * 106mm * 42mm (L × W × H). Weight: 200g

7.FAO

Q(1): What is the default communication parameter of the module?

A①: The default communication parameters of the ModbusRTU module: bautrate 9600, data-bit 8, stop-bit 1, no parity, and device ID is 1.

Q②: How to modify the communication parameter of the module?

A②: Use third-party software Modbus Poll, follow chapter "3.0 Description of Definition for Registers", Read the data from registers 40001 and 40002, which represent device addresses (1-15) and communication baud rate of 9600. Modify the module communication parameters according to the description in the "Instructions" column. After power failure and restart, the set parameters take effect. (Station number 40001 displays the station number set by the current dip switch. If software is required to set the station number, the dip switches 1/2/3/4 must be placed in the OFF position.)

Q③: How to modify the device ID?

A3: How to modify the device ID (device address)?

Refer to the table below for the internal dial of the hardware (binary dial code). The dip switch has 4 bits, each representing a numerical value. When pushed to the OFF position, it is set to 0. When turned ON, it represents 1, 2, 4, and 8 in sequence. When turned ON, it represents the sum of numerical values, which equals the address code of the device. If the device ID is set to "11", dialing codes 1, 2, and 4 will push it to the ON position, and dialing code 3 will push it to the OFF position, which is equivalent to 1+2+8=11. Note: The maximum address code is 15.

Device ID	1	2	3	4	5	6	7	8
Dial	1	2	1+2	3	1+3	2+3	1+2+3	4
Device ID	9	10	11	12	13	14	15	
Dial	1+4	2+4	1+2+4	3+4	1+3+4	2+3+4	1+2+3+4	

Q@: How to forcibly reset the baud rate of this I/O module to its default value?

A(a): Activate the module's hardware reset button (typically labeled Reset). This action immediately restores the baud rate to 9600, ensuring rapid reset of the communication link to its initial state.

The free software: BACnetScan scanning software, OPC2WEB software, X2OPC_Free software,MBus scanning tools, Lumiscan green rice smart home scanning tools.

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