

MT1000 series remote I/O module

User 's Manual

Rev: B

Smacq

Smacq Technologies. Co., Ltd

Smacq.com

Smacq.cn

Statement

Copyright

© 2019 Smacq Technologies. Co., Ltd. All rights reserved

Without prior consent and written permission, no content of this manual may be copied, modified, or deleted.

Trademark information

Smacq It is a registered trademark of Smacq Technologies. Co., Ltd.

The other products and company names mentioned in this document are trademarks or business names of their respective companies.

Other statements

- The information provided in this document may be modified and updated in subsequent versions without prior notice.
- Smacq Technologies. Co., Ltd. does not provide any express or implied warranties with respect to this document and the information contained therein, including but limited to implied warranties of the marketability and suitability for a particular purpose of the product.
- Smacq Technologies. Co., Ltd. shall not be liable for any errors or inaccurate descriptions that may be contained in this document, or for any incidental or consequential damages resulting from the information and functions provided in the manual, or from the use of this document.
- Smacq Technologies. Co., Ltd. reserves the right to change product specifications, prices, and decide whether to discontinue production.

Contact us

If you have any questions or need assistance while using this product or this document, please contact us via:

Phone: (86-10) 52482802

E-mail: service@smacq.com

Website: <http://www.smacq.com>
<http://www.smacq.cn>

Safety requirements



Warning: Only connect voltage within the specified range. If the voltage exceeds the specified range, it may cause equipment damage and even affect personal safety. The voltage range that can be connected to each port is detailed in the product specification section.



Warning: Do not attempt to operate the device in any other way not mentioned in this document. Incorrect operation of equipment may pose a danger. When the equipment is damaged, the internal security protection mechanism will also be affected.



Warning: Do not attempt to replace device components or modify the device using other methods not mentioned in this document. Do not repair the product yourself when it malfunctions.



Warning: Do not use the equipment in environments where explosions may occur or in the presence of flammable smoke. If necessary for such environments, please place the device in a suitable enclosure.



Warning: During the operation of the warning device, all chassis covers and filling panels must be closed.



Warning: For equipment with exhaust vents, do not insert foreign objects into the vents or block the air flow through the vents.

Measurement category



Warning: This device can only be used in measurement category I (CAT I).
Do not use this device to connect signals or perform measurements in
measurement categories II/III/IV.

Measurement category description

Measurement Category I (CAT I) refers to measurements taken on circuits that are not directly connected to the main power supply. For example, measuring circuits that are not derived from the main power source, especially circuits derived from protected (internal) main power sources. In the latter case, the instantaneous stress will change. Therefore, users should understand the instantaneous tolerance of the device.

Measurement Category II (CAT II) refers to measurements taken on circuits directly connected to low-voltage equipment. For example, measuring household appliances, portable tools, and similar devices.

Measurement Category III (CAT III) refers to measurements conducted in building equipment. For example, measurements are taken on distribution boards, circuit breakers, circuits (including cables, busbars, junction boxes, switches, sockets) in fixed equipment, as well as industrial equipment and certain other devices (such as fixed motors permanently connected to fixed installations).

Measurement category IV (CAT IV) refers to measurements taken at the source of low-voltage equipment. For example, measurements taken on electricity meters, primary over Current protection equipment, and pulse control units.

Environment

| | |
|------------------|------------------------------|
| Temperature | |
| Operation | 0°C~55°C |
| Storage | -40°C~85°C |
| Humidity | |
| Operation | 5% RH~95% RH, non-condensing |
| Storage | 5% RH~95% RH, non-condensing |
| Pollution level | 2 |
| Highest altitude | 2000m |

Pollution level description

Pollution level 1: No pollution, or only dry non-conductive pollution occurs. This pollution level has no impact. For example, a clean room or an air-conditioned office environment.

Pollution level 2: Generally only dry non-conductive pollution occurs. Sometimes temporary conduction may occur due to condensation. For example: general indoor environment.

Pollution level 3: Conductive pollution occurs, or dry non-conductive pollution becomes conductive due to condensation. For example, an outdoor environment with a canopy.

Pollution Level 4: Permanent conductive pollution caused by conductive dust, rainwater, or snow. For example: outdoor places.

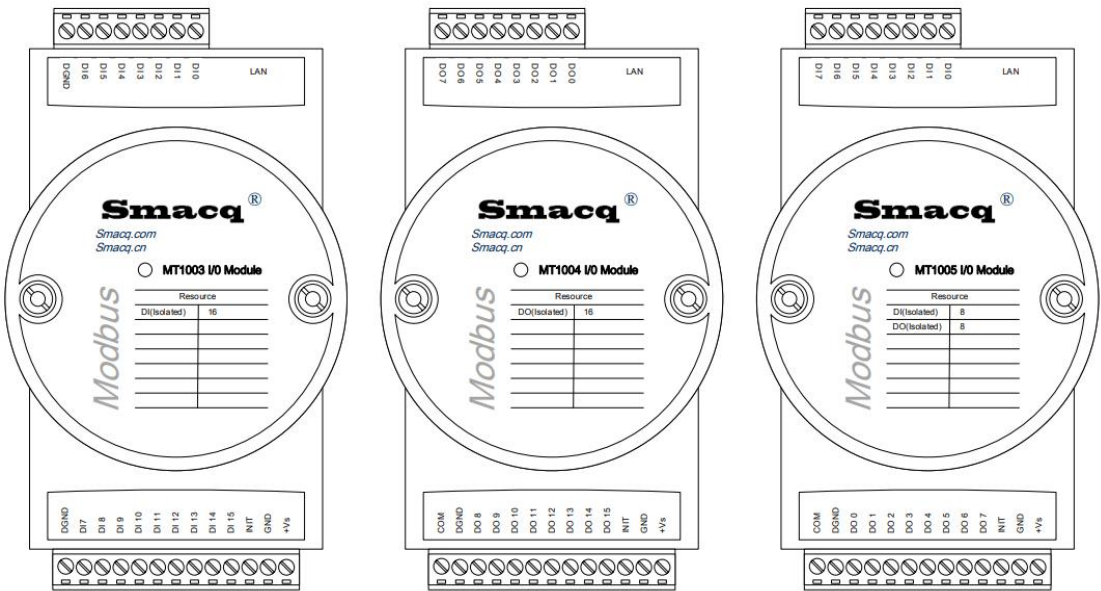
Recycling precautions



Warning: Some substances contained in this product may be harmful to the environment or human health. To avoid releasing harmful substances into the environment or endangering human health, it is recommended to recycle this product using appropriate methods to ensure that most materials can be reused or recycled correctly. For information on handling or recycling, please contact local professional organizations.

1.Product Introduction

1.1. Overview



Overview

The MT1000 series remote I/O module is a set of computer interface modules based on Modbus TCP. MT1000 is remotely controlled through the standard Modbus TCP protocol, with isolated digital inputs and relay driven digital outputs.

Feature point

- Using standard Modbus TCP protocol
- Built-in Watchdog Timer will automatically reset the module in case of system failure
- Digital output can reach up to 50V
- 9-24V power supply voltage range
- DIN-Rail Mounting and Piggyback Stack

Applications

- Remote data acquisition
- Process monitoring
- Industrial process control
- Energy management
- Monitor
- Safety system
- Laboratory automation
- Building automation
- Product testing
- Direct digital control

1.2. Product specifications

Common Specifications

| | |
|------------------|--|
| Connection | |
| Interface | 10/100M Ethernet Adaptive (RJ45) |
| Network Mode | TCP SERVER (Default), TCP CLIENT, UDP |
| Protocol | Modbus TCP |
| Watchdog Timer | 1s |
| Power Supply | |
| Input Voltage | 9-30 VDC |
| Electric Current | MT1003: 60mA (Max) @ 24V MT1004: 60mA (Max) @ 24V MT1005: 60mA (Max) @ 24V |



MT1003 Wiring Definition

MT1003 Product Specification

| | |
|-------------------|-------|
| Digital Input | |
| Channels | 16 |
| Max Input Voltage | 70V |
| Logic High Level | 3~70V |
| Logic Low Level | 0~2V |
| Isolation voltage | 1500V |



MT1005 Wiring Definition

MT1005 Product Specification

| | |
|-------------------|-----------------------|
| Digital Input | |
| Channels | 8 |
| Max Input Voltage | 70V |
| Logic High Level | 5~70V |
| Logic Low Level | 0~3V |
| Isolation voltage | 1500V |
| Digital Output | |
| Channels | 8 |
| Output Type | Darlington Transistor |
| Voltage range | 5-50VDC |
| Current range | 500mA |

2. Product unpacking and packing list

2.1. Product unboxing

To prevent equipment damage from electrostatic discharge (ESD), please note the following:

- Please wear a grounded wristband or touch a grounded object first to ensure that the human body is grounded.
- Before removing the equipment from the packaging, please first place the anti-static packaging in contact with a grounded object.
- Do not touch the exposed pins of the connector.
- Please place the device inside an anti-static rod when not in use.

If the product is damaged after unpacking, please contact us promptly.

2.2. Packing list

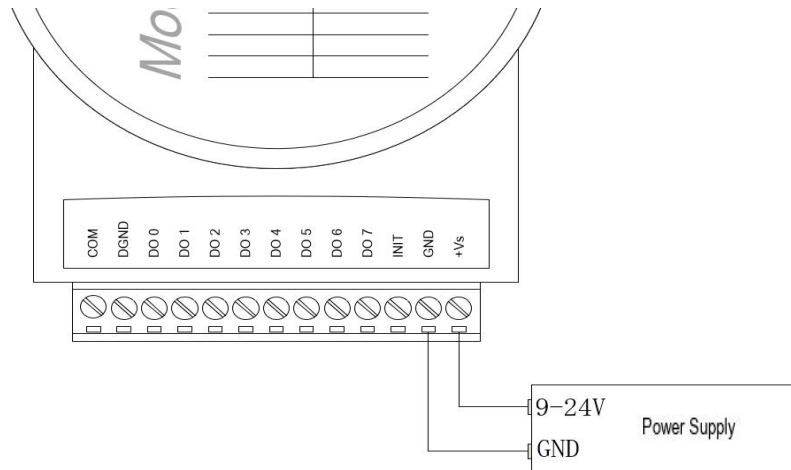
| Name | Specification Description | Quantity |
|----------------------------|---------------------------|----------|
| MT1000 | MT1000 Remote I/O Module | 1 |
| Include Attachments | | |
| Wiring terminals | 13 Pin/Green/3.81 | 1 |
| Wiring terminals | 8 Pin/Green/3.81 | 1 |

3. Installation and simple testing

3.1. Hardware install

Before installation and debugging, the following equipment needs to be prepared:

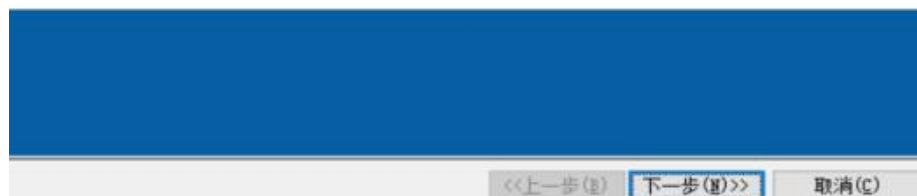
- MT1000 Remote I/O Module
- A Windows series computer with Ethernet interface
- A DC Power Supply (9-24V)



Power Connection Diagram

3.2. Software installation

We provide an application for configuring, detecting, and easy-to-use MT1000 series remote I/O modules, which can only be installed on the Windows desktop operating system. Double click to run setup. exe for installation.



Software installation diagram

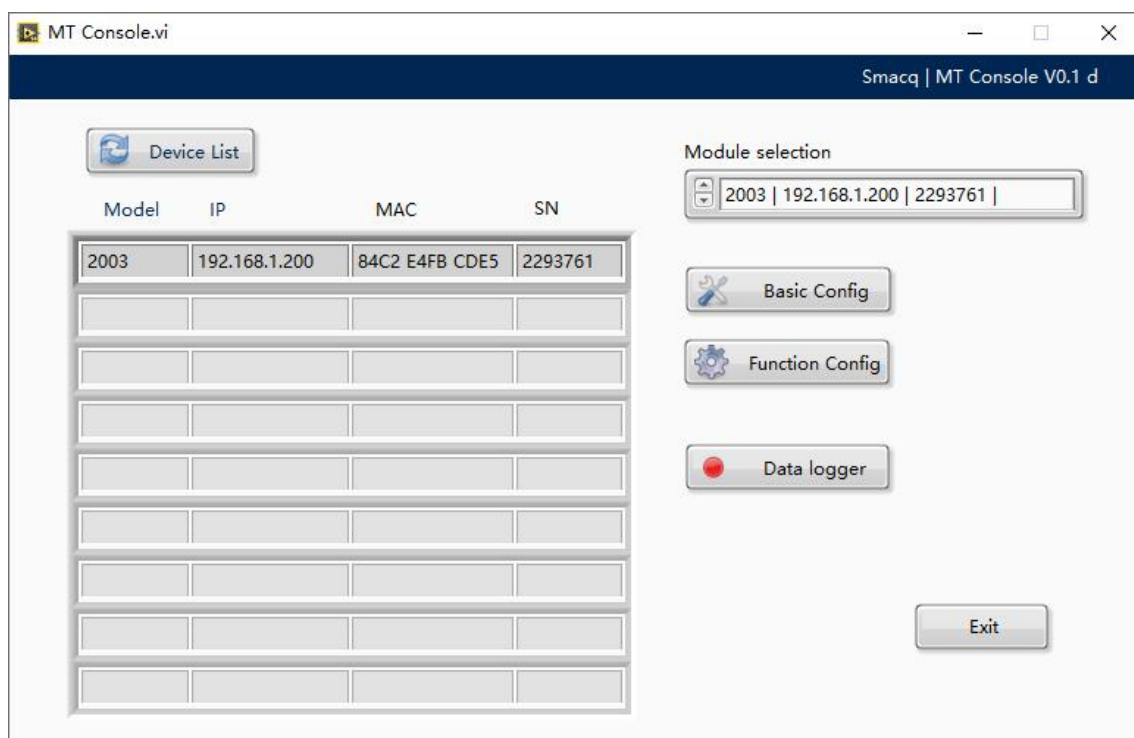
3.3. Simple testing

The MT1000 series remote I/O module is set to its initial value before leaving the factory, as shown in the table below. If the settings of the MT1000 series remote I/O module have been modified and the settings have been forgotten, a wire can be used to connect the Initiate and GND terminals, and then the power of the MT1000 can be turned on. The LED indicator of the MT1000 will flash three times at a frequency of 1Hz, and then disconnect the connection between the Initiate and GND. At this time, the MT1000 remote I/O module will be restored to its factory default values.

Table 1 Default Value List

| Parameter | Default value |
|-------------------|---------------|
| IP address | 192.168.1.200 |
| Gateway | 192.168.1.1 |
| Subnet mask | 255.255.255.0 |
| DHCP | CLOSE |
| Network mode | TCP SERVER |
| Local port | 502 |
| Random Local Port | CLOSE |
| Target IP | 192.168.1.100 |
| Target Port | 1000 |

Run the MT Console configuration software, in the figure below. Please refer to the “MT Console Quick Use Guide” for software operations.

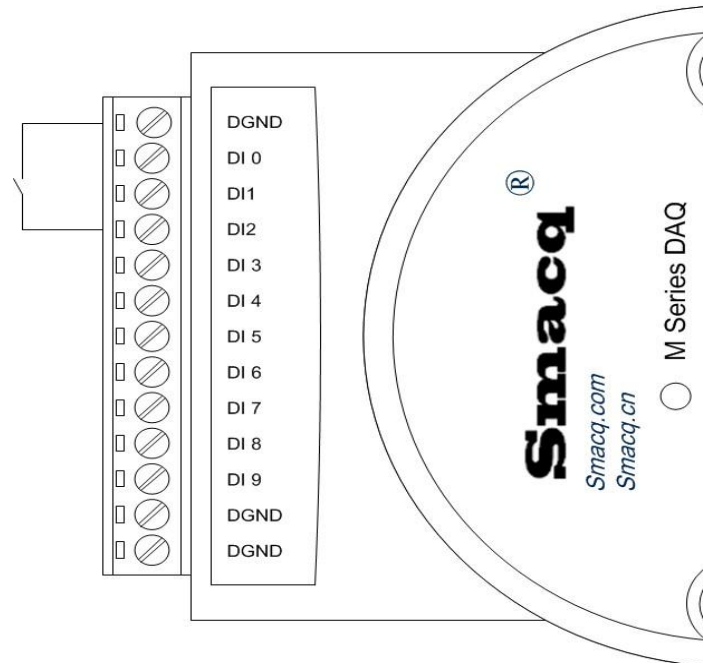


MT series DAQ setting software

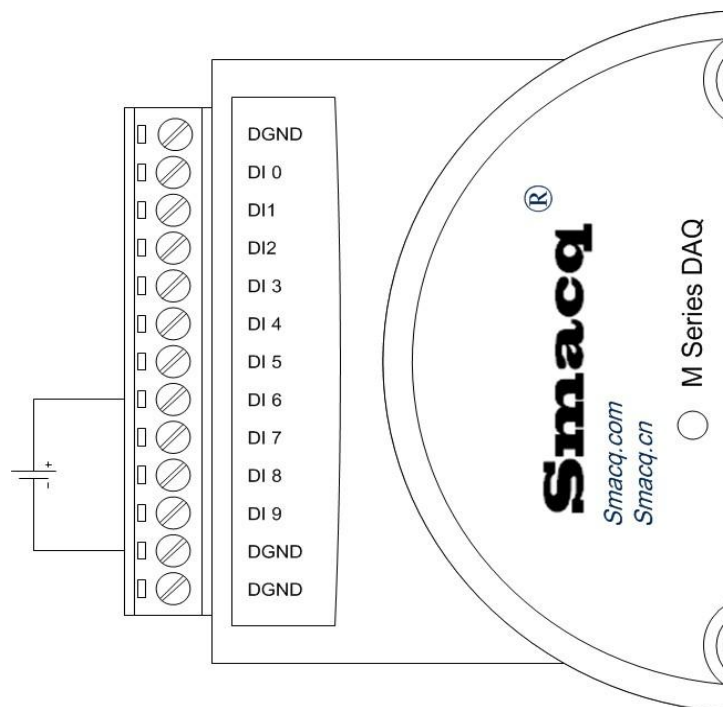
4. Digital input

4.1. Isolate digital input

In the MT1000 series remote I/O module, MT1003 and MT1005 are equipped with isolated digital input channels. The isolated digital input channels are suspended at a high level and can connect Dry and Wet contact.



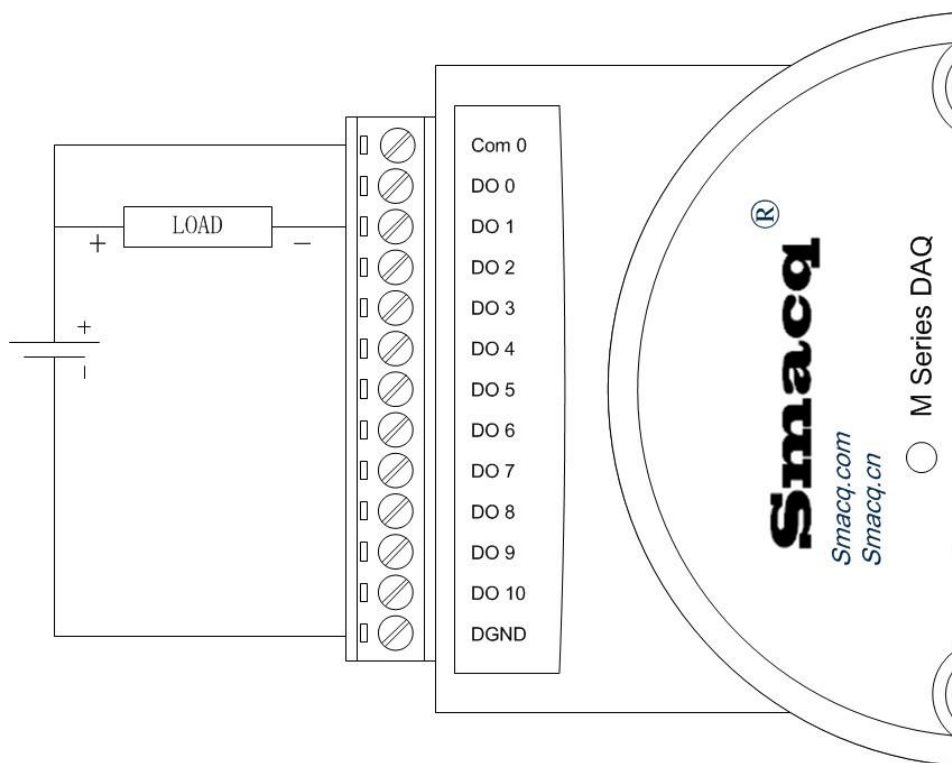
Isolation type digital input channel connected to Dry contact



Isolation type digital input channel connected to Wet contact

5. Digital output

In the MT1000 series remote I/O module, MT1004 and MT1005 are equipped with isolated digital output channels.



Isolation type digital output wiring diagram

6. Programming instructions

The MT1000 series remote I/O module is a set of computer interface modules based on Modbus TCP, and its programming rules follow The relevant conventions of Modbus TCP protocol.

MODBUS TCP Command Message Description

For the convenience of users who are using the Modbus TCP protocol for the first time, several commonly used Modbus command messages are briefly illustrated here. If you are already familiar with the Modbus TCP protocol, you can directly view the following mapping table.

01 Function code

Used to read the status of the coil (DO)

To read the status of 8 coils starting from address 1 of a module, the host **sends** the following command:

| Fixed message header* | Remaining bytes | Module address** | Function code | Coil address | Number of coils |
|-----------------------|-----------------|------------------|---------------|--------------|-----------------|
| 0x 0000 0000 00 | 0x06 | 0x01 | 0x01 | 0x0000 | 0x0008 |

The module **returns** the following data:

| Fixed message header* | Remaining bytes | Module address** | Function code | Coil address | Number of coils |
|-----------------------|-----------------|------------------|---------------|--------------|-----------------|
| 0x 0000 0000 00 | 0x05 | 0x01 | 0x01 | 0x01 | 0x05 |

The state of each coil corresponds to one bit of data, and 8 coils correspond exactly to one byte of data. If 9-16 coils of data are read at a time, the byte count is 2, and so on. The binary representation of data 0x05 is 00000101, indicating that DO0 and DO2 states are 1, and the remaining DO states are 0.

02 Function code

Used to read discrete quantity (DI) states

To read the 8 discrete states of a module starting from address 10001, the host **sends** the following command:

| Fixed message header* | Remaining bytes | Module address** | Function code | Coil address | Number of coils |
|-----------------------|-----------------|------------------|---------------|--------------|-----------------|
| 0x 0000 0000 00 | 0x06 | 0x01 | 0x02 | 0x0000 | 0x0008 |

The module **returns** the following data:

| Fixed message header* | Remaining bytes | Module address** | Function code | Coil address | Number of coils |
|-----------------------|-----------------|------------------|---------------|--------------|-----------------|
| 0x 0000 0000 00 | 0x05 | 0x01 | 0x02 | 0x01 | 0x05 |

Each discrete state corresponds to one bit of data, and 8 coils correspond to exactly 1 byte of data. If 9-16 coils of data are read at a time, the number of bytes is 2, and so on. The binary representation of data 0x05 is 00000101, indicating that DI0 and DI2 are in the 1 state, and the remaining DO states are in the 0 state.

03 Function code

Used for reading and holding registers

To read the status of three registers starting from address 40201 in a module, the host **sends** the following command:

| Fixed message header* | Remaining bytes | Module address** | Function code | Coil address | Number of coils |
|-----------------------|-----------------|------------------|---------------|--------------|-----------------|
| 0x 0000 0000 00 | 0x06 | 0x01 | 0x03 | 0x00C8 | 0x0003 |

The module **returns** the following data:

| Fixed message header* | Remaining bytes | Module address** | Function code | Coil address | Number of coils |
|-----------------------|-----------------|------------------|---------------|--------------|---------------------|
| 0x 0000 0000 00 | 0x09 | 0x01 | 0x03 | 0x06 | 0x0001 0023 0005 |

0x0001 represents the data of register 40201, 0x0023 represents the data of register 40202, and 0x0005 represents the data of register 4020 For the specific meaning of the data, please refer to the Modbus mapping table.

04 Function code

Used for reading input registers

To read the status of the three registers starting from address 30101 in a module, the host **sends** the following command:

| Fixed message header* | Remaining bytes | Module address** | Function code | Register address | No.of registers |
|-----------------------|-----------------|------------------|---------------|------------------|-----------------|
| 0x 0000 0000 00 | 0x06 | 0x01 | 0x04 | 0x0064 | 0x0003 |

The module **returns** the following data:

| Fixed message header* | Remaining bytes | Slave address** | Function code | Byte count | Data |
|-----------------------|-----------------|-----------------|---------------|------------|---------------------|
| 0x 0000 0000 00 | 0x09 | 0x01 | 0x04 | 0x06 | 0x0001 0023 0005 |

0x0001 is the data of register 30101, 0x0023 is the data of register 30102, and 0x0005 is the data of register 30103 For the specific meaning of the data, please refer to the Modbus mapping table.

05 Function code

Used for writing a single coil (DO)

To control the coil status of address 1 in a module, the host **sends** the following command:

| Fixed message header* | Remaining bytes | Module address** | Function code | Coil address | Coil status |
|-----------------------|-----------------|------------------|---------------|--------------|--|
| 0x0000 0000 00 | 0x06 | 0x01 | 0x05 | 0x0000 | 0xFF00 (set to 1) 0x0000 (set to 0) |

The module **returns** the same data as the **sent** content.

06 Function code

Used for writing and holding registers

If it is necessary to write register data with address 40201 to a module, the host **sends** the following command:

| Fixed message header* | Remaining bytes | Module address** | Function code | Register address | Data |
|-----------------------|-----------------|------------------|---------------|------------------|--------|
| 0x0000 0000 00 | 0x06 | 0x01 | 0x06 | 0x00C8 | 0x001C |

The module **returns** the same data as the **sent** content.

15 (0x0F) Function code

Used for writing multiple coils (DO)

To read the status of the 8 coils starting from address 1 of a module, the host **sends** the following command:

| Fixed message header* | Remaining bytes | Module address* * | Function code | Coil address | Number of coils | Byte count | Data |
|-----------------------|-----------------|-------------------|---------------|--------------|-----------------|------------|------|
| 0x0000 0000 00 | 0x06 | 0x01 | 0x0F | 0x0000 | 0x0008 | 0x01 | 0x05 |

The module **returns** the following data:

| Fixed message header* | Remaining bytes | Slave address** | Function code | Byte count | Data |
|-----------------------|-----------------|-----------------|---------------|------------|--------|
| 0x0000 0000 00 | 0x05 | 0x01 | 0x0F | 0x0000 | 0x0008 |

The state of each coil corresponds to one bit of data, and 8 coils correspond exactly to one byte of data. If data is written to 9-16 coils at a time, the byte count is 2, and so on. The binary representation of data 0x05 is 00000 101, indicating that DO0 and DO2 states are 1, and the remaining DO states are 0.

16 (0x10) Function code

Used to write multiple hold registers

If you need to read the data from two registers of a module starting from address 40201, the host **sends** the following command:

| Fixed message header* | Remaining words Number of sections | Module address** | Function code | Register address | Register quantity | Byte count | Data |
|-----------------------|---------------------------------------|------------------|---------------|------------------|-------------------|------------|-------------|
| 0x0000 0000 00 | 0x06 | 0x01 | 0x10 | 0x00C8 | 0x0002 | 0x04 | 0x0001 0023 |

The data of each register corresponds to 2 bytes of data, and the data of 2 registers is 4 bytes, and so on. 0x0001 is the data of register 40101, and 0x0023 is the data of register 40102.

The module **returns** the following data:

| Fixed message header* | Remaining bytes | Slave address** | Function code | Register address | Number of registers |
|-----------------------|-----------------|-----------------|---------------|------------------|---------------------|
| 0x0000 0000 00 | 0x05 | 0x01 | 0x10 | 0x00C8 | 0x0002 |

*The header of Modbus TCP generally uses a fixed set of five 0X00 bytes, which can also represent specific meanings. You can refer to the Modbus TCP protocol manual by yourself, and detailed explanations will not be provided here.

**The MT1000 series remote I/O module has a fixed slave address of 0x01 and does not involve any other addresses, so the protocol will not be explained in detail.

MT1000 Series Remote I/O Module Universal Function Modbus Mapping Table

| Address 4X | Function | Explain | Attribute | Command |
|-------------|----------------|---------|-----------|---------|
| 40201 | Model number | | Read | 0x03 |
| 40202 | Serial number | | Read | 0x03 |
| 40203-40204 | Version number | | Read | 0x03 |

MT1003 Series Remote I/O Module Modbus Mapping Table

| Address 1X | Channel | Function | Attribute | Command |
|------------|---------|---------------|-----------|---------|
| 10001 | 0 | Digital input | Read | 0x02 |
| 10002 | 1 | Digital input | Read | 0x02 |
| 10003 | 2 | Digital input | Read | 0x02 |
| 10004 | 3 | Digital input | Read | 0x02 |
| 10005 | 4 | Digital input | Read | 0x02 |
| 10006 | 5 | Digital input | Read | 0x02 |
| 10007 | 6 | Digital input | Read | 0x02 |
| 10008 | 7 | Digital input | Read | 0x02 |
| 10009 | 8 | Digital input | Read | 0x02 |
| 10010 | 9 | Digital input | Read | 0x02 |
| 10011 | 10 | Digital input | Read | 0x02 |
| 10012 | 11 | Digital input | Read | 0x02 |
| 10013 | 12 | Digital input | Read | 0x02 |
| 10014 | 13 | Digital input | Read | 0x02 |
| 10015 | 14 | Digital input | Read | 0x02 |
| 10016 | 15 | Digital input | Read | 0x02 |

MT1004 Series Remote I/O Module Modbus Mapping Table

| Address 0X | Channel | Function | Attribute | Command |
|------------|---------|----------------|-----------|----------------|
| 00001 | 0 | Digital output | Read | 0x01,0x05,0x0F |
| 00002 | 1 | Digital output | Read | 0x01,0x05,0x0F |
| 00003 | 2 | Digital output | Read | 0x01,0x05,0x0F |
| 00004 | 3 | Digital output | Read | 0x01,0x05,0x0F |
| 00005 | 4 | Digital output | Read | 0x01,0x05,0x0F |
| 00006 | 5 | Digital output | Read | 0x01,0x05,0x0F |
| 00007 | 6 | Digital output | Read | 0x01,0x05,0x0F |
| 00008 | 7 | Digital output | Read | 0x01,0x05,0x0F |
| 00009 | 8 | Digital output | Read | 0x01,0x05,0x0F |
| 00010 | 9 | Digital output | Read | 0x01,0x05,0x0F |
| 00011 | 10 | Digital output | Read | 0x01,0x05,0x0F |
| 00012 | 11 | Digital output | Read | 0x01,0x05,0x0F |
| 00013 | 12 | Digital output | Read | 0x01,0x05,0x0F |
| 00014 | 13 | Digital output | Read | 0x01,0x05,0x0F |
| 00015 | 14 | Digital output | Read | 0x01,0x05,0x0F |
| 00016 | 15 | Digital output | Read | 0x01,0x05,0x0F |

| Address 3X | Channel | Function | Attribute | Command |
|------------|---------|----------------------------------|-----------|---------|
| 30101 | 0 | Digital output count low bit | Read | 0x04 |
| 30102 | 0 | Digital output counting high bit | Read | 0x04 |
| 30103 | 1 | Digital output count low bit | Read | 0x04 |
| 30104 | 1 | Digital output counting high bit | Read | 0x04 |
| 30105 | 2 | Digital output count low bit | Read | 0x04 |
| 30106 | 2 | Digital output counting high bit | Read | 0x04 |
| 30107 | 3 | Digital output count low bit | Read | 0x04 |
| 30108 | 3 | Digital output counting high bit | Read | 0x04 |
| 30109 | 4 | Digital output count low bit | Read | 0x04 |
| 30110 | 4 | Digital output counting high bit | Read | 0x04 |
| 30111 | 5 | Digital output count low bit | Read | 0x04 |
| 30112 | 5 | Digital output counting high bit | Read | 0x04 |
| 30113 | 6 | Digital output count low bit | Read | 0x04 |
| 30114 | 6 | Digital output counting high bit | Read | 0x04 |
| 30115 | 7 | Digital output count low bit | Read | 0x04 |
| 30116 | 7 | Digital output counting high bit | Read | 0x04 |
| 30117 | 8 | Digital output count low bit | Read | 0x04 |
| 30118 | 8 | Digital output counting high bit | Read | 0x04 |
| 30119 | 9 | Digital output count low bit | Read | 0x04 |
| 30120 | 9 | Digital output counting high bit | Read | 0x04 |
| 30121 | 10 | Digital output count low bit | Read | 0x04 |
| 30122 | 10 | Digital output counting high bit | Read | 0x04 |
| 30123 | 11 | Digital output count low bit | Read | 0x04 |
| 30124 | 11 | Digital output counting high bit | Read | 0x04 |
| 30125 | 12 | Digital output count low bit | Read | 0x04 |
| 30126 | 12 | Digital output counting high bit | Read | 0x04 |
| 30127 | 13 | Digital output count low bit | Read | 0x04 |
| 30128 | 13 | Digital output counting high bit | Read | 0x04 |

| | | | | |
|-------|----|----------------------------------|------|------|
| 30129 | 14 | Digital output count low bit | Read | 0x04 |
| 30130 | 14 | Digital output counting high bit | Read | 0x04 |
| 30131 | 15 | Digital output count low bit | Read | 0x04 |
| 30132 | 15 | Digital output counting high bit | Read | 0x04 |

MT1005 Series Remote I/O Module Modbus Mapping Table

| Address 0X | Channel | Function | Attribute | Command |
|------------|---------|----------------|-----------|----------------|
| 00001 | 0 | Digital output | Read | 0x01,0x05,0x0F |
| 00002 | 1 | Digital output | Read | 0x01,0x05,0x0F |
| 00003 | 2 | Digital output | Read | 0x01,0x05,0x0F |
| 00004 | 3 | Digital output | Read | 0x01,0x05,0x0F |
| 00005 | 4 | Digital output | Read | 0x01,0x05,0x0F |
| 00006 | 5 | Digital output | Read | 0x01,0x05,0x0F |
| 00007 | 6 | Digital output | Read | 0x01,0x05,0x0F |
| 00008 | 7 | Digital output | Read | 0x01,0x05,0x0F |

| Address 1X | Channel | Function | Attribute | Command |
|------------|---------|---------------|-----------|---------|
| 10001 | 0 | Digital input | Read | 0x02 |
| 10002 | 1 | Digital input | Read | 0x02 |
| 10003 | 2 | Digital input | Read | 0x02 |
| 10004 | 3 | Digital input | Read | 0x02 |
| 10005 | 4 | Digital input | Read | 0x02 |
| 10006 | 5 | Digital input | Read | 0x02 |
| 10007 | 6 | Digital input | Read | 0x02 |
| 10008 | 7 | Digital input | Read | 0x02 |

| Address 3X | Channel | Function | Attribute | Command |
|------------|---------|----------------------------------|-----------|---------|
| 30101 | 0 | Digital output count low bit | Read | 0x04 |
| 30102 | 0 | Digital output counting high bit | Read | 0x04 |
| 30103 | 1 | Digital output count low bit | Read | 0x04 |
| 30104 | 1 | Digital output counting high bit | Read | 0x04 |
| 30105 | 2 | Digital output count low bit | Read | 0x04 |
| 30106 | 2 | Digital output counting high bit | Read | 0x04 |
| 30107 | 3 | Digital output count low bit | Read | 0x04 |
| 30108 | 3 | Digital output counting high bit | Read | 0x04 |
| 30109 | 4 | Digital output count low bit | Read | 0x04 |
| 30110 | 4 | Digital output counting high bit | Read | 0x04 |
| 30111 | 5 | Digital output count low bit | Read | 0x04 |
| 30112 | 5 | Digital output counting high bit | Read | 0x04 |
| 30113 | 6 | Digital output count low bit | Read | 0x04 |
| 30114 | 6 | Digital output counting high bit | Read | 0x04 |
| 30115 | 7 | Digital output count low bit | Read | 0x04 |
| 30116 | 7 | Digital output counting high bit | Read | 0x04 |

6. After sales service and warranty

Smacq Technologies. Co., Ltd. promises that its products are under warranty. If the product malfunctions during normal use, we will provide free repair or replacement of parts for the user. For detailed warranty instructions, please refer to the warranty instructions inside the packaging box.

Except for the warranties mentioned in this manual and warranty instructions, our company does not provide any other express or implied warranties, including but not limited to any implied warranties regarding the merchant ability and fitness for a particular purpose of the product.

For more technical support and service details, or if you have any questions while using this product and this document, please feel free to contact us:

Phone: (86-10) 52482802

E-mail: service@smacq.com

Website: <http://www.smacq.com>
<http://www.smacq.cn>

7. Ordering information

Main Equipment

| Model | Description |
|--------|--|
| MT1003 | 16-channel Isolate digital input |
| MT1004 | 16-channel Isolate digital output |
| MT1005 | 8-channel Isolate digital input and 8-channel Isolate digital output |

Standard Accessories

| Model | Description |
|-----------|---|
| TB13-3.81 | Bolt terminal connector, 13 positions, 3.81mm |
| SDIN | DIN-Rail mounting bracket |

8. Document Revision History

| Date | Edition | Remarks |
|------------|---------|---------------------|
| 2022.04.14 | Rev: A | First release. |
| 2024.07.3 | Rev: B | Revise some errors. |