〖Please read the installation instruction before installing and using the product 〗

TCMK5269 Dual Input Module

Installation and operation instruction

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Version	Date	Writer	Remark
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Summerize

TCMK5269 Dual Input Module （Hereinafter referred to as module）.It is used to receive normally open or normally closed switch signal input by fire linkage equipment, and transmit linkage information back to fire alarm controller (linkage type).It is mainly used to connect various active equipment such as water flow indicator, pressure switch, position switch, signal valve and external linkage equipment which can send back switch signal, etc. After the operation of these devices, the output action signals can be sent by the module to the fire alarm controller through the signal bus to generate an alarm, and the fire alarm controller can be used to linkage the actions of other related devices.

Characteristics

1. The module has two input terminals, respectively input 1 and input 2, respectively corresponding to two addresses;
2. The input line has the function of checking the line, and when the line breaks down, the fault information will be reported；
3. The address code is electronic code, which can be written in advance by the electronic encoder, so the engineering debugging is simple and reliable.
4. Using microprocessor to realize signal processing, using digital signal to communicate with the controller, the work is stable and reliable, and has a good ability to restrain electromagnetic interference

Technical characteristics

1. Working voltage ：
2. Rated operational voltage：DC24V permissible range：DC18V～ DC28V
3. Woring current：
   Monitoring current ≤0.25mA
   Single input alarm current ≤1.3mA
   Dual input alarm current≤2.4mA

4..Indicator light: red ，flashes during normal condition and duration bright during action condition

5.The encoding method：Electronic encoding method,，Occupying 2 bus coding points ，the coding range can be set arbitrarily between 1 and 255

6. Wiring system：Connected to the non-polar signal bus of the fire alarm controller

7 Input Method :The circuit is broken when the line is normally opened (short circuit is an action signal);

8.Operating environment：Temperature ：-10℃～+55℃ Relative humidity : ≤95%，no condensation

9..Boundary dimension：86mm×86mm×38mm（with base）

10.Shell material and color：ABS，white

11.Weight ：around 110g（with base）

12.Mounting distance ：60mm

13..Executive standard ：EN54-18

Structure characteristics and working principle

1. The outline diagram of the module is shown in Figure 1
2. Working principles :

The embedded processor is responsible for judging the logic state of the input signal and processing the logic state, which is transmitted to the controller in the form of normal, action and fault respectively..

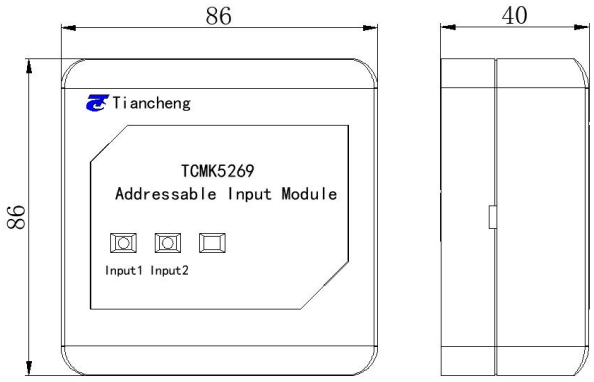

Figure 1. Outline diagram

Installation and wiring arrangement

Warning ：

1.Before installing the equipment, please cut off the power supply of the circuit and make sure that all the bottom shells are securely installed and the connecting wires of each bottom shell are correct.

2.The input terminal of the module is set as the input state of "normally open to check line". The terminal of the input line of the module (far away from the terminal of the module) must be connected in parallel with a terminal resistor of 10K Ω (see application method for specific wiring method).

3.Before installation, check whether the shell is intact and the mark is complete.

4.The module is installed in an open way, and the plug structure is used between the bottom shell and the module. When installing, the module is only required to unplug the module, and the cable is inserted into the wire hole of the bottom shell and connected to the corresponding terminal, and then the module can be installed.

The schematic diagram of module terminals is shown in Figure 3

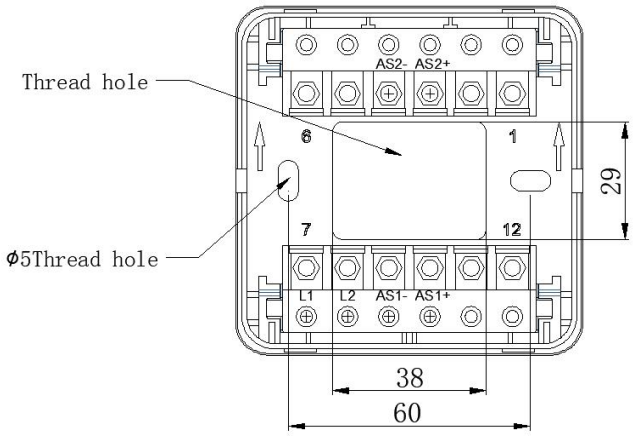

Fig. 3 Schematic diagram of terminal

Wiring instructions are as follows ：

L1（7）、L2（8）: Non-polar signal bus input terminal

AS1-（9）、AS1+（10）、AS2+（3）、AS2-（4）:Passive input, connected with the passive normally open contact of the device (equipment action closed alarm type);It can also be set as normally closed input by electronic encoder

Wiring system ：Signal bus L1 and L2 use RVS twisted pair, cross-sectional area ≥1.0mm2;RV lines are used for AS1+, AS2-, AS1- and AS2+, and the cross-sectional area is ≥1.0mm2.The length of the connecting wire should be limited to the single bus resistance ≤20Ω, otherwise, the wire diameter should be increased.

Testing

1. Modules must be tested at least annually after installation or while in use。
2. Before the module is tested, the relevant management department should be notified, and the controller should be properly handled to prevent the occurrence of unexpected alarm linkage.

Test: when the registration is completed and the module is in normal condition under the monitoring state, let the device connected with the module send action signal or input a simulated action signal to the module. The module can correctly receive and transmit the action information to the fire alarm controller, and the input indicator light is on；When the action signal is withdrawn, the input indicator light goes off, and the module reports the normal information；When the module input setting parameter is set to "normally open check line" input, the module can report the fault information when the input line is broken； When the module input setting parameter is set to "normally closed check line" input, the module can report the fault information when the input line is open fault；If all the above conditions are normal, it means that the module works normally.

3. After the test, through the fire alarm controller reset module, and inform the relevant management department that the system is recovery to normal
4. The unqualified module in the test process shall check whether its connecting wire is normal, and then carry out the test. If it still fails to pass the test, it shall be returned for maintenance。

Use and operation

1.The encoding operation：The encoding method of this module is electronic encoding, which is simple and fast. The field encoding can be carried out by using the TCBM5023 electronic encoder produced by our company. When encoding, the electronic encoder and the bus terminal of the module can be connected (regardless of polarity), that is, the address code can be written and read out

Encoding method: firstly, press the No. 2 key to select "(2) Mode Settings" from the main "Operation Menu" of the encoder, and then enter the sub-menu for selection

"(1) TC5000", you can also press "(5), (6), (7)" to select increment code, normal code and decrement code for easy use (Note: the default is TC5000, normal code). After selection, you can press "Clear key/Page key" to directly enter the addressing interface ， you can also press the exit key to return to the main operation menu, press the No. 1 key to select "(1) reading-writing address ", and then connect the encoder to the bus terminal L1 and L2 of the module. In standby state, input the address code of the module (1-255), press the "writing address " key, and the code will display "success" if successful, and "failure" if unsuccessful. The module is a dual-input module, encoding two addresses at a time. The first encoding is 1, and 1 and 2 are actually written. The maximum address is 254, and 254 and 255 are actually written.

Application method

1.The connection method between the module and a field device with normally open passive contacts is shown in Figure 4.Module input setting parameter is set to normally open check line mode.

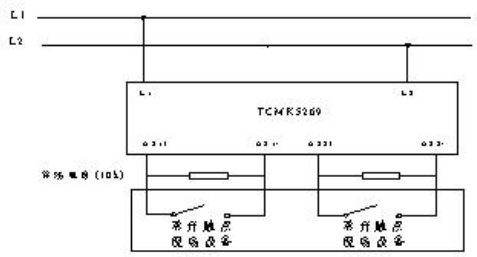

Fig. 4 Schematic diagram of connection between module and field device with normally open passive contacts

Common faults and inspection methods

Common faults	Inspection methods
The action of the device connected with the module is informed by the action	1.Checking for short circuit between AS1+ and AS1- or AS and AS2- inputs. 2.The module is set to normally closed checking line
Input fault reported after registration	The 10K resistor is not connected to the input

Random documentation and Maintenance instructions

1、The document in the carton：1）User manual：1 pc 2） Packing list：1pc 3）Resistor RJ-1/4W-10K: 2 pcs

2、Maintenance instruction：Our company is responsible for the maintenance of this product. If any problem is found, please contact our technical service department in time. Users are not allowed to disassemble or repair the product by themselves, otherwise the consequences will be borne by them。

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