

Please read the installation instructions before installing and using the product.

TC-ZJH5008 Loop Extender

Installation instructions

Liaoning Yingkou Tiancheng Fire Protection device Co., Ltd

I. Overview

TC-ZJH5008 loop extender (hereinafter referred to as loop extender) is powered by DC24V, and the input and output of bus signals are electrically isolated, which can enhance the anti-interference ability of the whole system and has the function of extending the communication distance of the detector bus.

II. Characteristics

1. Built-in isolated power supply with strong interference capability;
2. And the bus and the DC24V power line are non-polar connected;
3. Raise bus voltage and extend bus communication distance;
4. With output short circuit detection function;
5. Up to 255 devices can be attached;
6. Plug-in structure, convenient and reliable installation;

III. Technical Specifications

1. Operating voltage:
Rated working voltage of signal bus: DC24V range: DC17V~DC28V
Power supply rated working voltage: DC24V range: DC18V~DC36V
2. Operating current:
Monitoring current $\leq 0.3\text{mA}$
3. Output capacity: 400mA
4. Load capacity and compatibility: 1 ~ 255 bus devices can be connected, compatible with all detector bus devices.
5. Bus extension distance: 1000m
6. Indicator: There is an answer indicator (red). The indicator does not light when it is normal, and the indicator flashes when the detector answers; With an overload indicator (yellow), the indicator is not on when it is normal, and it is always on when the loop extender output is short-circuited.
7. Environment:
pressure: 86 kPa ~ 106 kPa
Temperature: 0°C ~ +55°C
Relative humidity $\leq 95\%$, no condensation.
8. Dimensions: 86mm×86mm×40mm (with cover)
9. Material and color: ABS, porcelain white
10. Weight: about 147g (with cover)
11. Mounting hole distance: 60mm
12. Implementation standard: GB 16806-2006

IV. Structural characteristics and working principle

1. The outline diagram of the module is shown in Figure 1;

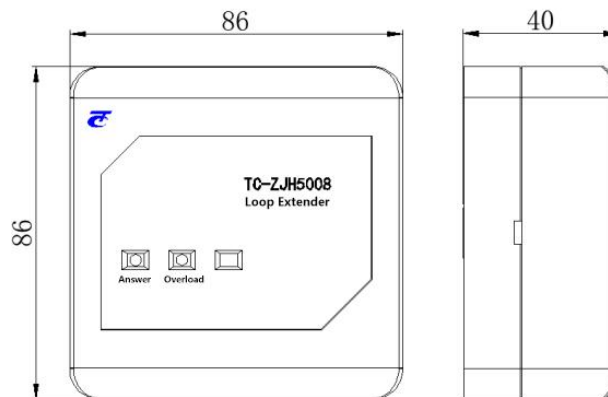


Fig. 1 outline diagram of loop extender

2. principle of operation

It consists of a loop extender bus code receiving circuit, a bus code sending circuit and an isolated power supply. The loop extender communicates with the fire alarm control panel through a loop bus. When any detector at the output end of the loop extender gives an alarm, the loop extender can upload the alarm signal to the fire alarm control panel.

V. Installation and Wiring

Warning:

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

1. Before installation, check whether the shell is in good condition and the identification is complete.
2. The module is installed in the surface mounting mode, and the bottom shell and the module are installed in the plug-in structure. When installing, just unplug the module, thread the cable through the wire inlet hole of the bottom shell and connect it to the corresponding terminal, and then plug in the module to complete the installation. The mounting hole distance of module bottom shell is 60mm.
3. Schematic diagram of module terminal is shown in Figure 2:

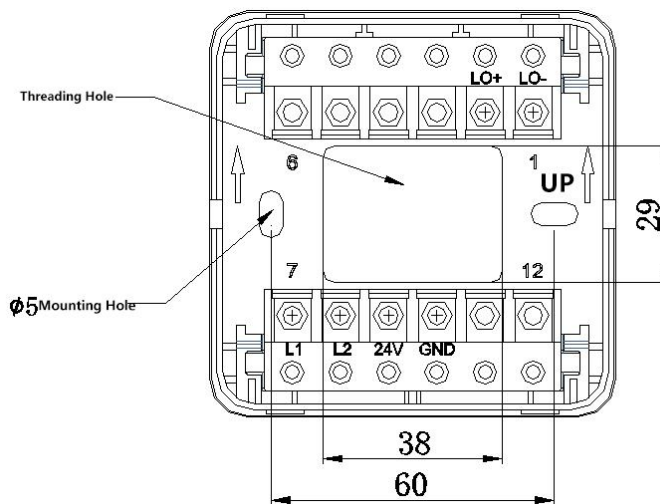


Fig. 2 terminal schematic diagram

4. Wiring instructions are as follows:

L1, L2: input of two total non-polarized lines of signals

24V, GND: non-polarized input of DC4v power supply

LO+, LO-: bus output with polarity signal

5. Wiring requirements:

Non-polarized signal bus adopts RVS twisted pair with cross-sectional area $\geq 1.0\text{mm}^2$, and DC24V power line adopts RVS twisted pair with cross-sectional area $\geq 2.5\text{mm}^2$.

6. loop extenders can be used with the following and newer versions of circuits. The version number list is as follows:

TC5109-LOOP circuit substation board V1.0-002.002 T5160-XZB addressing board V1.0-001.009 TC5120-XZB addressing board V1.0-001.010 QTC5015-XZB addressing board 1.0-

VII. General troubleshooting

Fault phenomenon	cause	solution
device can't register normally.	Poor contact between input and output terminals of loop extender	<ol style="list-style-type: none"> 1. The loop extender input terminal is reconnected with the fire alarm control panel. 2. The loop extender output is reconnected with the detector.
There is no voltage at loop extender output.	The DC24V power supply is damaged or the voltage is lower than 18V	<ol style="list-style-type: none"> 1. Adjust the voltage between DC18V~DC36V 2. Return to the manufacturer for repair
Overload indicator is on.	Output bus short circuit	Discharge short circuit point

Eight, the accompanying documents and warranty instructions

1. Packing documents: 1) Packing list: 1; 2) Instructions: 1 copy
2. Warranty description: Our company is responsible for the warranty of this product. If you find any problem, please contact the technical service department of our company in time. Users are not allowed to disassemble or repair it by themselves, otherwise they will bear the consequences.
3. Maintenance contact information is as follows:

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