Operation Instructions for QM-ZSD-02E Gas Release Alarm

------ Please read the operation instruction carefully before product installation and use. -----

I. Brief introduction

QM-ZSD-02E gas release alarm (hereinafter referred to as the gas release alarm) is a product used in conjunction with the fire alarm controller/gas fire extinguishing controller produced by our company. The gas release alarm is controlled by the microprocessor, can communicate with the controller in real time, and receive the control command sent by the controller. After receiving the start-up command of controller, the gas release alarm will be actuated, and "DO NOT ENTER! WHILE RELEASING GAS!" is displayed, and the harsh audible alarm signal will remind the field personnel not to enter the protective area.

The gas release alarm is used as a sound alarm and flash alarm device in a gas fire-extinguishing protection area, and can be widely applied to places such as high-rise residential buildings, public places, hotels, entertainment places, factories, shopping malls, hospitals, schools, office buildings, stock exchanges and the like, and particularly suitable for places with low visibility or smoke generation.



Figure 1

II. Product features

- ✓ Full-electronic coding, the addresses can be written by the encoder on the site;
- ✓ MCU control flash and sound alarm drive, stable and reliable;
- ✓ The luminous display adopts a plurality of ultra-bright red light-emitting diodes as a light source, and has the advantages of striking appearance, low power consumption and long service life;
- ✓ The upper and lower cover structural design is characterized by simple and convenient installation, debugging and maintenance.

III. Technical parameters

1. Executive standard: GB 26851-2011
2. Operating voltage: Bus 24V (pulse modulation) + DC24V
3. Working current: static state: bus consumption current ≤ 500uA; in case of alarm: bus consumption current ≤ 4mA, DC24V consumption current ≤ 150mA
4. Service environment: temperature: 0℃ ~ +55℃ (±3℃), relative humidity: ≤ 95% (no condensation at 40℃ ± 2℃)
5. Flash frequency: 1Hz~2Hz; light-emitting font surface brightness: 50cd/m^2 ~300cd/m^2; lighting and non-lighting time ratio: ≥ 3: 2
6. Acoustic pressure level: 75dB ~120dB; modulation period: 0.2S ~ 5S
7. Weight: approximately 435 g,
8. Application place: indoor (non-residential)
9. Coding mode: electronic coding
10. Line system: four-wire system, no polarity signal two buses (L1, L2) +DC24V power line (no polarity-free during wiring)

IV. Product appearance and dimensions (Unit: mm)

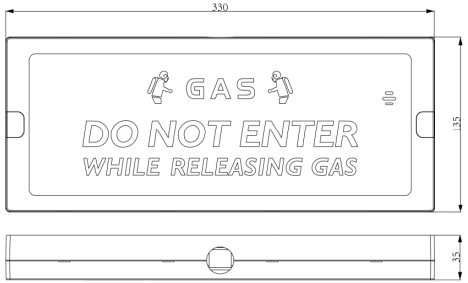


Fig. 2 Product appearance and dimensions

V. Product use and engineering application

1. The gas release alarm is connected in four-wire system, as shown in Fig. 3: pin1 and 2 of J10 wiring terminal are respectively connected with the controller signal bus L1 and L2 (polarity-free during wiring); and the pin 3 and 4 are respectively connected with + 24V and GND of DC24V power supply (polarity-free during wiring).

Note: Definition of JP10 wiring terminal:

1---Bus input terminal L1 2--- Bus input terminal L2 3--- 24V input terminal D1 4--- 24V input terminal

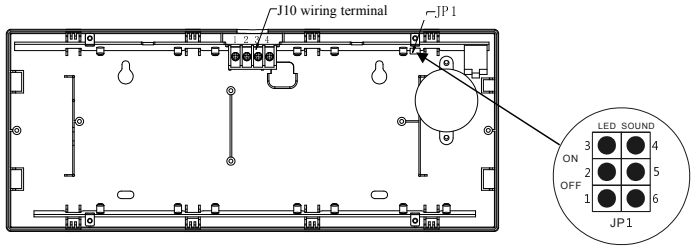
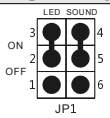
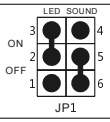
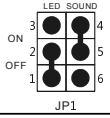


Fig. 3 Diagram of terminal and jumper

2. Acousto-optic selection: Refer to the jumper description and select the output mode of gas release alarm.

Jumper setting	Functional description
	Acousto-optic (default setting)
	Warning blinker (no sound)
	Audio alarm (no flash)

⚠ **Warning: The output mode of gas release alarm during action can only be selected in combination as described above, and other combinations are not allowed.**

3. Figure 3 is a system wiring diagram:

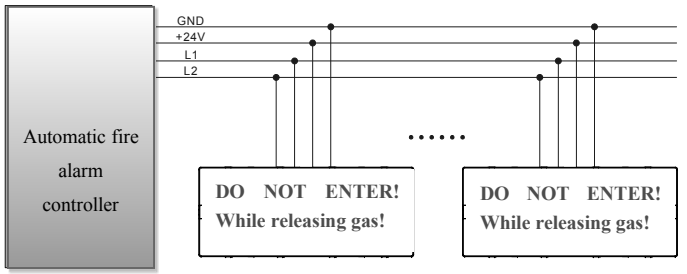


Fig. 4 System wiring diagram

4. Address coding: Clamp pin 1 and 2 (L1, L2) of J10 wiring terminal of the gas release alarm with two alligator clips on the encoder connection line, adjust the encoder to the encoding function, and input the correct address, press the "Execute" key to complete the address encoding (Note: Refer to the encoder specification for detailed operation).
5. Use: When the gas release alarm address has been set and confirmed correctly connected with the controller, the controller power supply can be turned on. After successful automatic login, the green status indicator (patch) in the gas release alarm housing flashes about 12 seconds, indicating that the device has started working; when the gas release alarm receives the action signal, the status indicator light is always on, the gas release alarm sounds, and the light alarm signal is emitted. After the system is reset, the gas release alarm will stop the output of acousto-optic alarm signal, and the status indicator will resume the flashing state.

VI. Installation and commissioning

The installation dimension of gas release alarm is shown in Figure 5 (unit: mm).

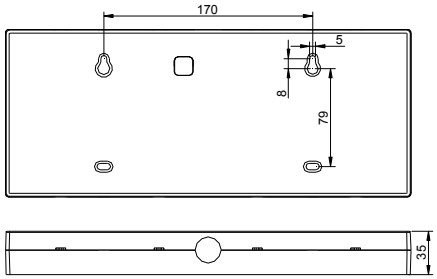


Fig. 5 Installation dimensions

Specific methods for installation and commissioning of gas release alarm:

1. Remove the screw cap as shown in Fig. 6 and remove the screw, dismantle the front and rear housing;

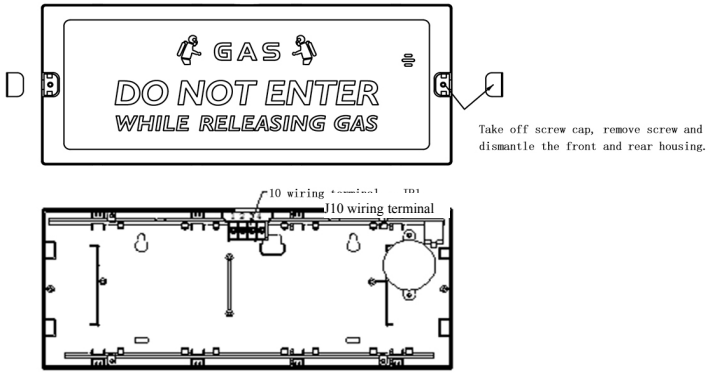


Fig. 6 Installation diagram

2. Confirm that the type of gas release alarm is matched with the type specified on the construction drawing; according to the address number marked on the construction drawing, encode the gas release alarm with the encoder;
3. Use two M4 screws (or four M4 screws, depending on the actual situation) to fix the box body to the position specified in the construction drawing through two (or four) fixing holes shown in FIG. 5, and confirm that the box body has been installed firmly;

4. Cut off the controller power supply and DC24V power supply. According to the construction drawings, connect the two buses of controller (polarity-free during wiring) and DC24V (+24V, polarity-free GND wiring) to J10 terminal of the gas release alarm correctly after passing through the over-line rubber sleeve, then install the front and rear housing (pay attention to the over-thread rubber sleeve), unscrew the screw and cover the screw cap;

Note: If a large number of gas release alarms exist in the system, the load carrying capacity of the controller power supply should be considered. At this time, it is possible to externally connect DC24V auxiliary power supply, and the construction design drawings shall prevail.

5. After all the gas release alarms are installed and confirmed to be correct, turn on the power supply of controller to perform automatic login operation;
6. The production type is output module when the gas release alarm is automatically logged in on the controller; its equipment type needs to be changed manually, and replace it with 'Gas release alarm';
7. When the gas release alarm receives the action signal sent by controller, the gas release alarm sends an acoustic and optical alarm signal, and the green status indicator light (patch) is normally bright; after the system is reset, gas release alarm will stop outputting acoustic and optical alarm signal, and the status indicator light will also be restored to the flickering state at the time of monitoring.

VII. Precautions ⚠

1. Pay attention to the terminal marking to avoid wrong connection.
2. In the same bus loop, the same address shall not be shared by many products; otherwise the system will not work properly.
3. When installing, please note that there shall be no objects in front of gas release alarm that can block the flash and the sound.
4. Installation shall comply with the provisions of GB 50166-2007 Code for Construction and Acceptance of Fire Automatic Alarm System.

VIII. Maintenance and detection

1. According to the national standard GB 50166-2007 Code for Construction and Acceptance of Fire Automatic Alarm System, the gas release alarm shall be tested at least once a quarter.
2. If, within one year from the date of delivery of the product, the gas release alarm used as specified becomes ineffective due to defects of materials or manufacturing processes, the Company shall be responsible for free maintenance or replacement. The failure of gas release alarm caused by man-made damage, improper use or self-adjustment, modification and disassembly shall not fall within the warranty scope, and the Company will not bear the relevant responsibilities.
3. The Company is responsible for the paid maintenance of the products within non-warranty scope, if paid maintenance is necessary, please contact us. Meanwhile, we'd like to get some important information about the products you want to repair, such as the case of product failure and the possible causes, so that we can find the problem in the shortest time and provide a reference for our future product development and improvement.

IX Fault analysis and solution

Faults	Cause analysis	Solution	Remark
Not emit flash or sound alarm signal	Jumper related error	Check if JP1 jumper is correct	
	Connection line related error	Check J10 terminal's connection line	
	Internal circuit error	Returned to the factory for repair	

SHENZHEN FANHAI SANJIANG ELECTRONICS CO.,LTD.

Address: 3/F., Guangcai Xintiandi Mansion,Nanshan Road, Nanshan District, Shenzhen, Guangdong, 518054, China

Tel：+86(755)86226969 Fax：+86(755)86223939 Http：//www.fhsjdz.com