



# User Instruction Manual

## GAS Extinguisher Control Panel

### Extinguisher Control Panel



Standards: EN54-2 & EN54-4 & EN12094-1

Please read this manual carefully, use it correctly, and keep it properly.

[WWW.NAJDGHIER.SA](http://WWW.NAJDGHIER.SA)

# Panel Installation Mounting

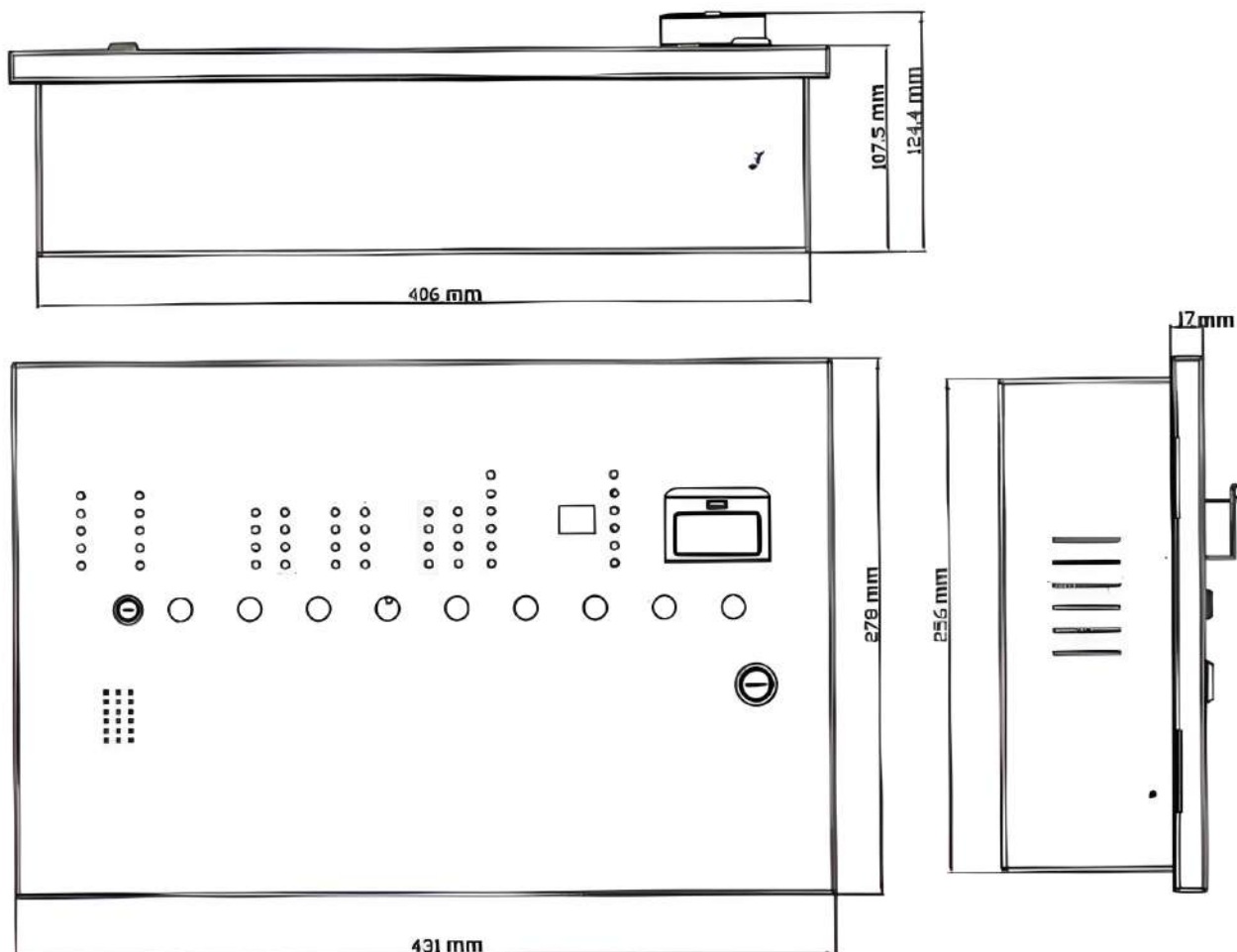
The panel shall be mounted on a dry, flat wall, maintained at sight height to ensure external chassis balance. The panel should be fixed by 3 pcs of M6mm screws properly.

The panel should not be installed in a sealed environment or near an over heat source.

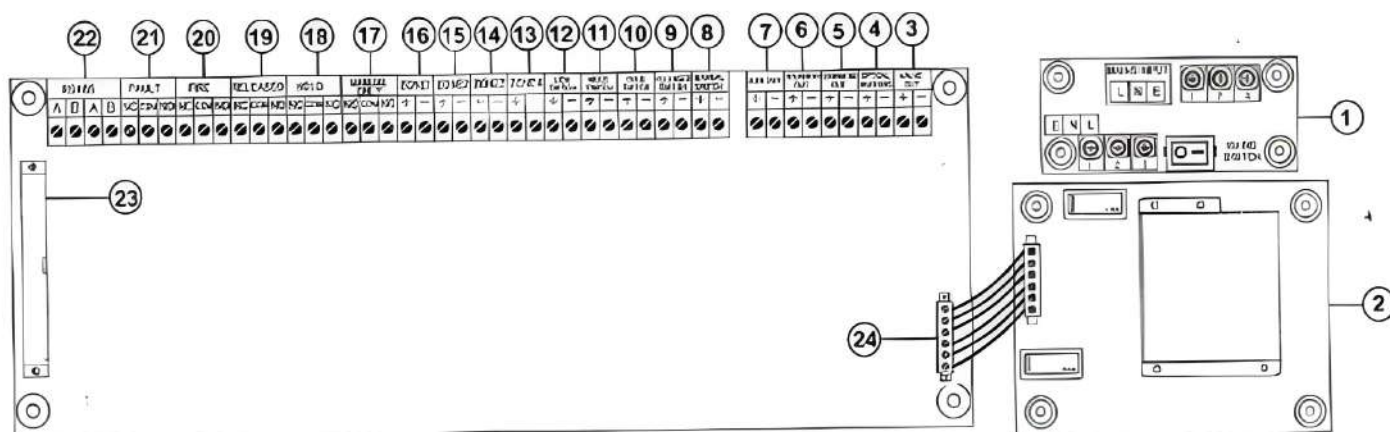
Suitable insulated cables should be used in the corresponding position.

If additional cable entry points are required, all chips and debris generated by drilling must be removed before the panel is energized.

## View and Internal Structure Diagram



# Interface Board

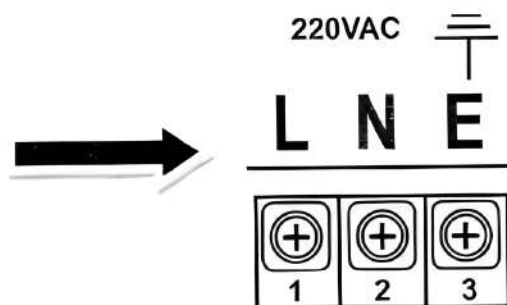


- |                  |                   |                          |
|------------------|-------------------|--------------------------|
| ① 220V AC input  | ⑨ Released switch | ⑰ Manual only status     |
| ② Power supply   | ⑩ Hold switch     | ⑱ Hold status            |
| ③ Valve output   | ⑪ Mode switch     | ⑲ Released status        |
| ④ Optical output | ⑫ Low switch      | ⑳ Fire relay             |
| ⑤ Sounder1 out   | ⑬ Zone 4          | ㉑ Fault relay            |
| ⑥ Sounder2 out   | ⑭ Zone 3          | ㉒ RS485                  |
| ⑦ Aux power      | ⑮ Zone 2          | ㉓ Main board connection  |
| ⑧ Manual switch  | ⑯ Zone 1          | ㉔ Power board connection |

Note: before wiring, please ensure that all power is disconnect to prevent electric shock!

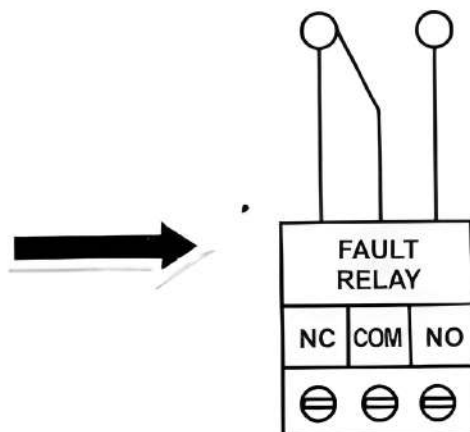
## AC Power Connection

Connecting the AC power cable to the panel, pay attention to the order of L/N/E, insert it into three pin terminals (5mm apart) and screw up. Wires must be between 0.75 and 2.5 mm<sup>2</sup> in diameter.



## Fault Relay

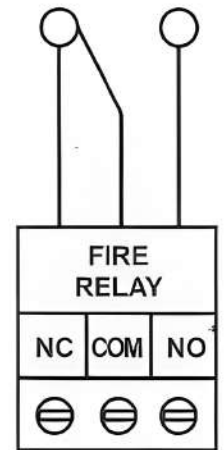
This terminal output the signal of fire relay switch. This terminal is normally open under normal condition, it would be closed when there is a fault.



## Fire Relay

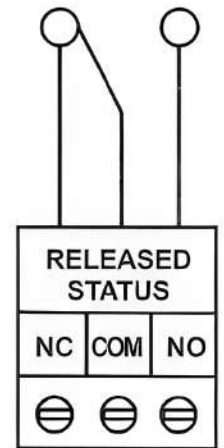


This terminal output the signal of fire relay switch. This terminal is normally open under normal condition, it would be closed when there is a fire.



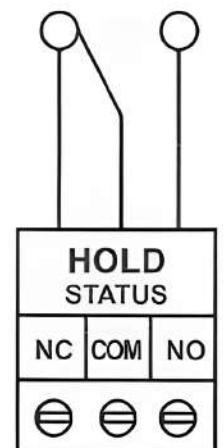
## Released Status

This terminal output a release condition signal to indicate whether the gas was released. This terminal is normally open under normal condition, it will be closed after the gas released.



## Hold Status

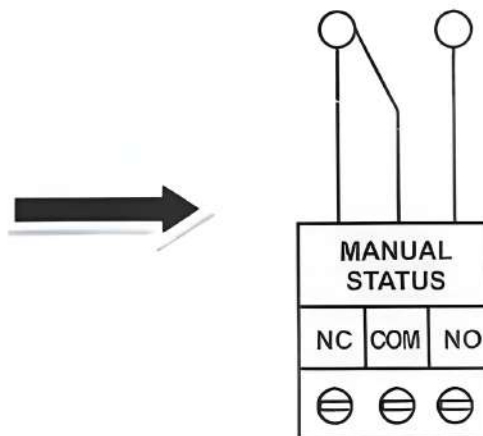
This terminal output the signal of the "HOLD" working condition. This terminal is normally open under normal condition, when the [hold] button or the external abort switch devices be pressed, this terminal will be closed.



## Manual Status

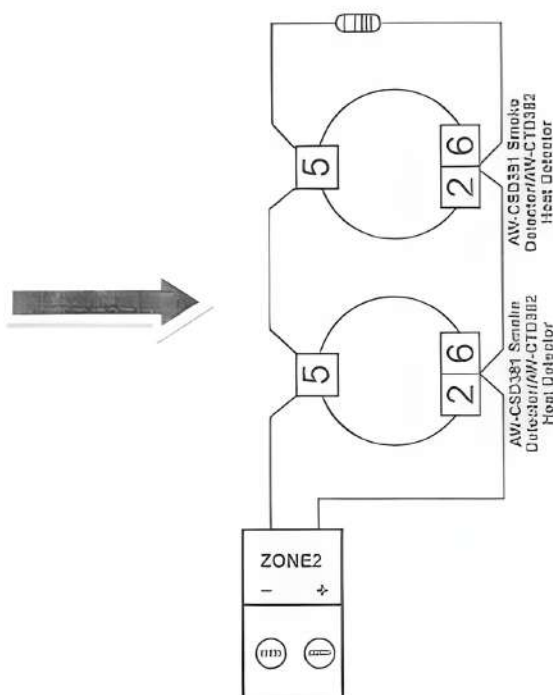


This terminal output a signal of the gas release operation mode setting. It is normally open when the gas release mode is automatic / manual, and when the gas release mode is set to manual mode only, it will be closed.



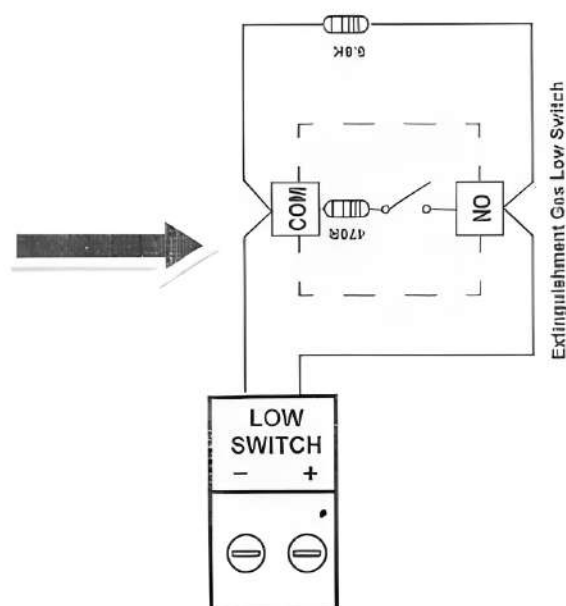
## Zones

There are four alarm zones for the alarm signal input from external devices.  
Pay attention to the polarity of the terminal when wiring, and paralleled connect a 6.8 K $\Omega$  / 1W resistor in the end of input circuit.  
Each zone could be connected 10 detectors in maximum.



## Low Switch

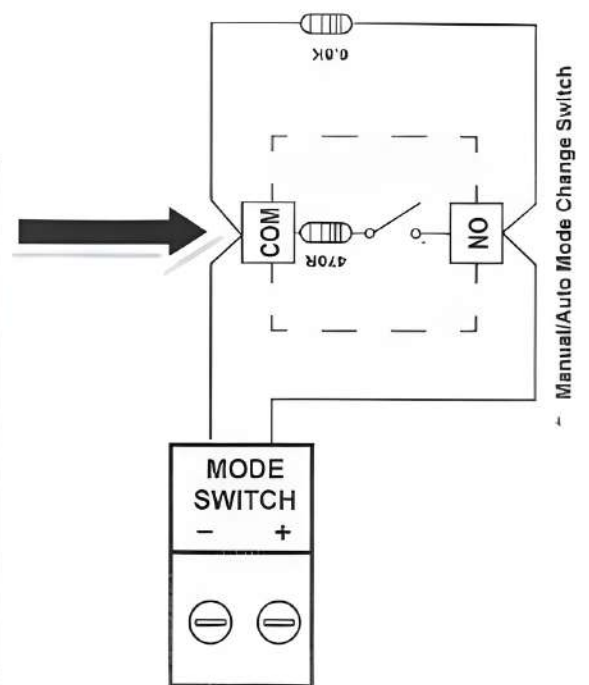
This terminal wiring to the low-pressure switch of gas cylinders. Pay attention to the polarity of the terminal when wiring, and paralleled connect a  $6.8\text{K}\Omega/1\text{W}$  resistor in the end of the output circuit. A  $470\Omega/1\text{W}$  resistor shall be series connected in the switch. The switch is normally open when the pressure of gas cylinder under normal condition, the switch will be closed when the cylinder under low-pressure condition.



## Mode Switch

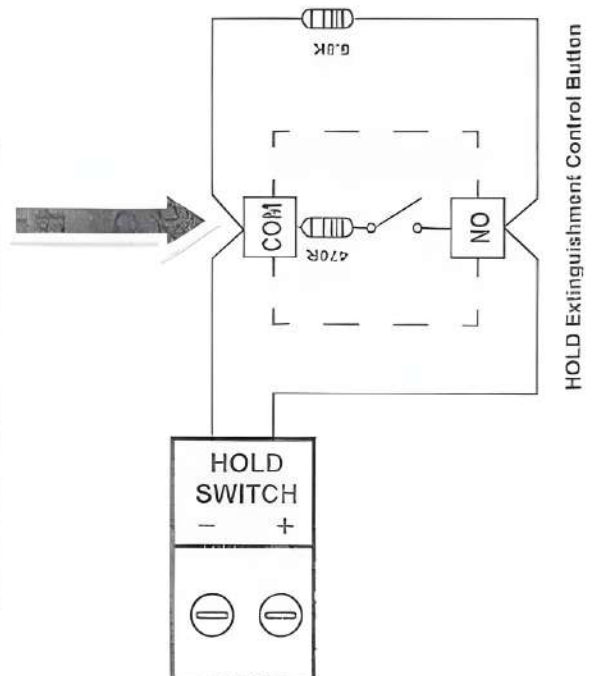


This terminal wiring to external switch device for selecting the gas release signal input with different mode. Pay attention to the polarity of the terminal when wiring, and paralleled connect a 6.8K $\Omega$ /1W resistor in the end of the output circuit. A 470 $\Omega$ /1W resistor shall be series connected in the switch. When the gas release mode in automatic/manual state, the switch is normally open, when the gas release mode in manual only mode, the switch will be closed.



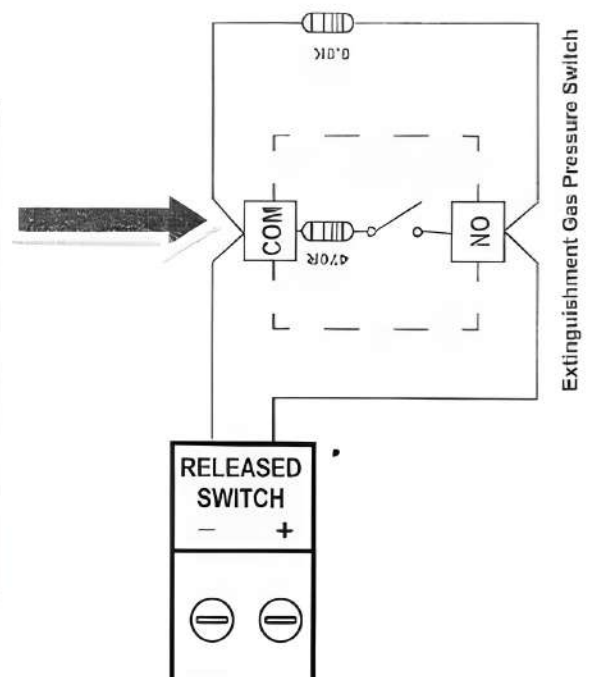
## Hold Switch

This terminal wiring to external switch device for the gas release abort signal input. Pay attention to the polarity of the terminal when wiring, and paralleled connect a 6.8K $\Omega$ /1W resistor in the end of the output circuit. A 470 $\Omega$ /1W resistor shall be series connected in the switch. The gas release under normal condition the switch is normally open, yet, the output of the valve would be abort when the switch closed.



## Released Switch

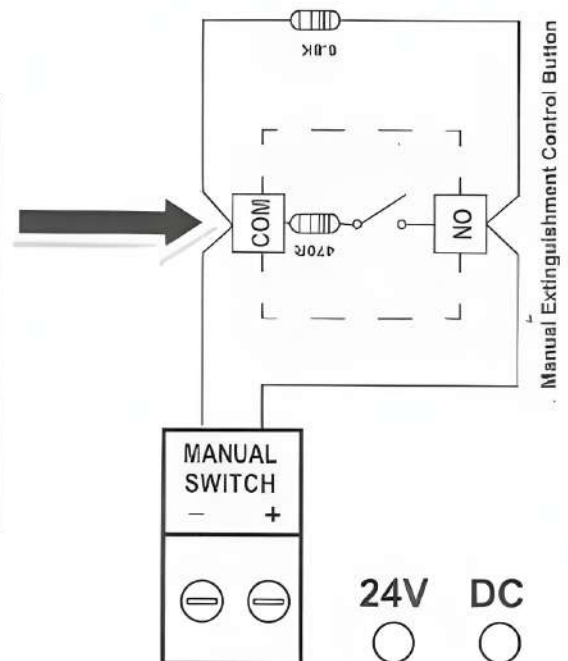
This terminal wiring to external pressure switch for detecting the signal of gas release condition. Pay attention to the polarity of the terminal when wiring, and paralleled connect a 6.8K $\Omega$ /1W resistor in the end of the output circuit. A 470 $\Omega$ /1W resistor shall be series connected in the switch, the switch is normally open when the gas under normal unreleased condition, when the gas is released, this switch would be closed.



## Manual Switch

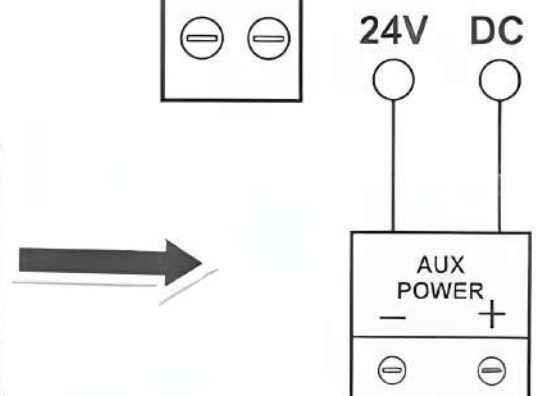


This terminal wiring to external switch device for manual release signal input. Pay attention to the polarity of the terminals when wiring, and paralleled connect a 6.8K $\Omega$ /1W resistor in the end of the circuit. A 470 $\Omega$ /1W resistor shall be series connected in the switch, the switch is normally open under normal condition, when the manual release starts operation, it would be closed.



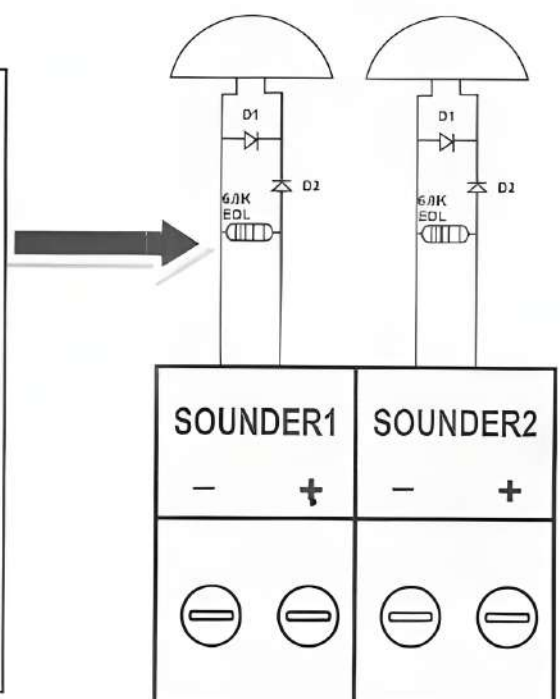
## Aux Power

This terminal output a voltage of resettable 24V DC, which maximum output current is 200mA. Pay attention to the positive and negative of the terminal when wiring.



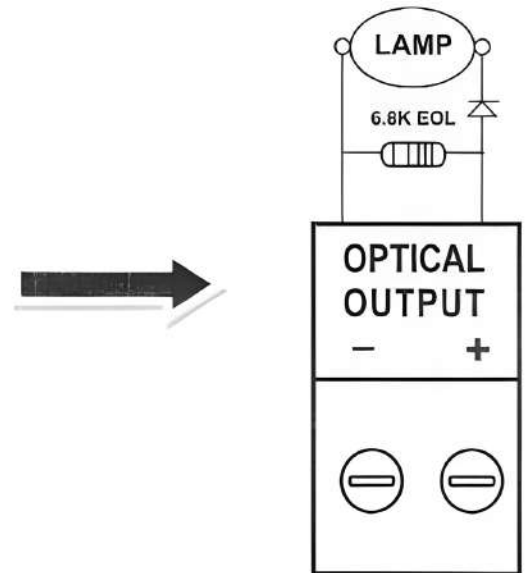
## Sounder Output

This terminal output signal of external alarm bell or strobe lights. Pay attention to the polarity of the terminal when wiring, and paralleled connect a 6.8K $\Omega$ /1W resistor in the end of the output circuit. There are two sounder outputs. The outputs of these two terminals are -12VDC under normal condition. The sounder 1 will become +24VDC when there is a fire or evacuate signal, and would activate the external alarm bell or strobe lights. The sounder 2 will become +24VDC when there are 2 or more of the 4 zones have got a fire signal or in the released condition. Note: please add D2(Must) /D1 (recommended)



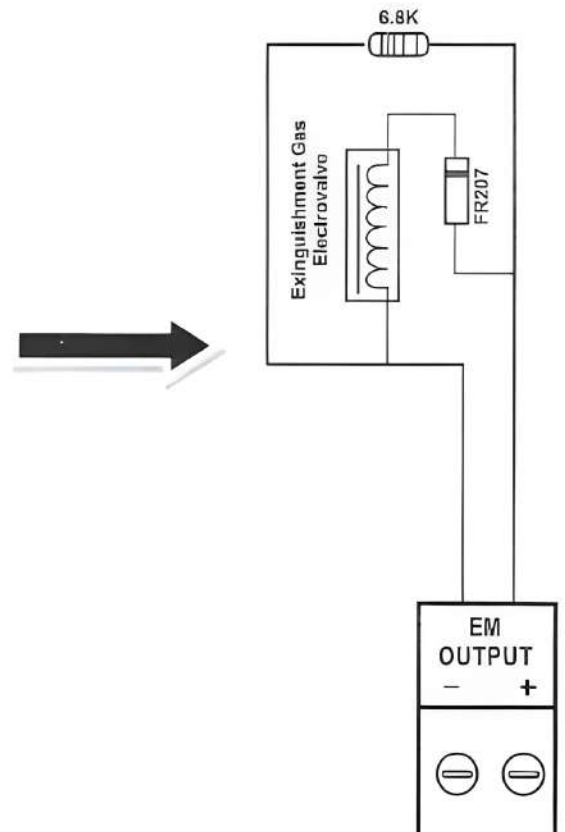
## Optical Output

This terminal wiring to the external gas release warning signage. Pay attention to the polarity of the terminal when wiring, and paralleled connect a 6.8K $\Omega$ /1W resistor in the end of the output circuit. The output of this terminal is -12VDC under normal condition. When the gas release signal be detected and activated at terminal 14, its output will become +24VDC, and the external gas release warning signage will be light up.



## Value Output

This terminal wiring to external electromagnetic valve. Please pay attention to the polarity of the terminal when wiring, and it requires series connect a FR207 diode (or equivalent diode) between the [+] pole of the terminal output and the [+] pole of the electromagnetic valve input, and paralleled connect a 6.8K $\Omega$ /1W resistor in the end of the output circuit. The terminal output current up to 1.2A, you shall pay attention not to exceed the limit current. The output of this terminal is -12VDC under normal condition, when it receive the valve activate signal, the output of it will become +24VDC and the external valve will be activated.



## Battery Connection

The panel has two build-in lead-acid batteries (12V/1.3Ah) with series-connected. Wiring the battery to the power module with the red (positive) and black (negative) wires. The batteries should be fixed in the cabinet.

