

# GST

## C-9602LW-LPG Conventional Gas Detector



Installation and Operation Manual

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ERP:30310020

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## I Description

C-9602LW-LPG Conventional Gas Detector (the detector) is wall-mounted, designed to check and monitor liquefied petroleum gas (LPG) of leakage in such applications as houses, hotels and apartments.

## II Specification

1. Operating Voltage: 187VAC~253VAC
2. Power Consumption:  
Standby State  $\leq 3.0$  W  
Alarm State  $\leq 5.0$  W
3. Output capacity and control mode:  
Voltage contact: For 12VDC one-way pulse solenoid, whose driving capability is 1000 $\mu$ F capacitance discharge.  
Volt-free contact: Volt-free normally open contact, its capacity is 220V/1A used for controlling connected devices.
4. Alarm Set Point:  
Liquefied Petroleum Gas:  $2200 \times 10^{-6}$  (10%LEL)
5. Indicator:  
Power LED: Green, flashes in warm-up state and then constantly lights.  
Alarm/Fault LED: Dual color. It's red when the

detector goes into alarm, and yellow into fault.

6. Buzzer: It sounds twice every second in alarming, and once every three seconds in fault.

7. Self Test: Pressing *Self-Test*, the LEDs will flash in turn with the buzzer sounding three times.

8. Life of Sensor: 5 years

9. Operating Environment:

Temperature:  $-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$

Relative Humidity  $\leq 95\%$ , non condensing

10. Dimension:  $121\text{mm} \times 87\text{mm} \times 47\text{mm}$

11. Ingress Protection Rating: IP30

12. Material and Color of Enclosure:

ABS, ivory white

13. Weight: 320g

14. Mounting Hole Distance: 23mm

### **III Structure**

Appearance of the detector is shown in Fig.1.

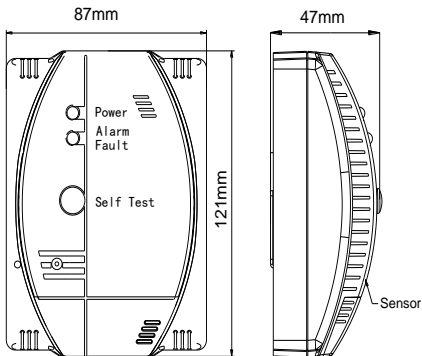


Fig. 1

## IV Mounting and Wiring

### 1. Position of Mounting

The detector is wall-mounted. Mounting position (Fig. 2) depends on where the gas stove is.

There are still some principles to follow.

- The detector and the gas stove should be placed in the same room.
- The detector should be mounted between 30cm and 60cm above the floor.

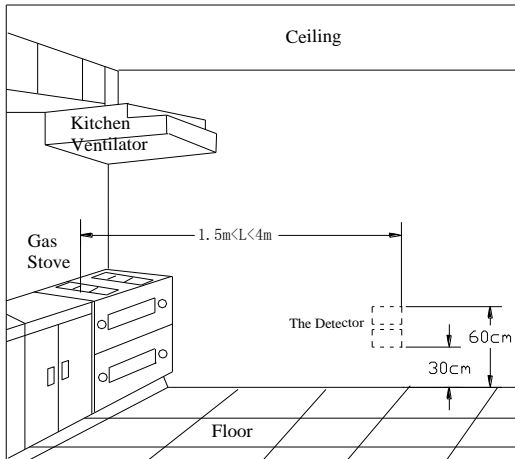


Fig. 2

➤ The detector should be within 1.5m ~4m to the gas source or the gas stove.

**To correctly use the detector and avoid any possible fault, please do not mount the detector at following locations:**

- Where affected by exhaust, steam or oil smoke from the stove.**
- Where near strong airflow, such as**

- air-inlets, fans, doors, etc.
  - c. **Where near bathroom or places with a lot of vapor.**
  - d. **Rooms for boiling water and places where power is cut at night.**
  - e. **Where temperature is below -10°C or above 50°C or outdoors.**
  - f. **Where explosion-proof measures are required.**
  - g. **Where the detector is partitioned with the gas devices.**
2. Connecting output contacts

The cover near the bottom is opened by pressing it with strong force. Then terminals for connections can be seen. Those terminals are shown in Fig. 3.

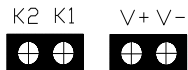


Fig. 3

K1, K2: Volt-free normally open contact, it is closed when alarming.

V+, V-: Connects with pipe solenoid or mechanical hand. When alarming for 3s~7s, there is a forward 12V pulse voltage between V+ and V-.

Put cables through the conduit under the cover, and connect them with terminals. Note: The conduits are located under the top cover. They

are not opened before leaving the factory. Therefore, it should be opened when connecting cables.

### 3. Mounting

Two mounting ways of C-9602LW-LPG detector are shown in Fig. 4.

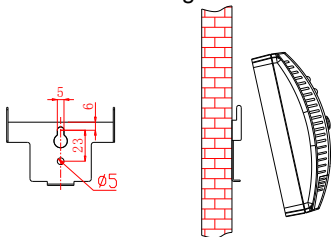


Fig. 4a

- Hang the bracket on the wall.
- Align the groove in back of the detector to the hook, press it down to fix.

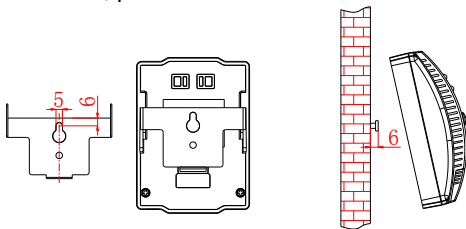


Fig. 4b



- a. Put the bracket in the groove of the detector (by default before leaving the factory).
  - b. Install a screw on the wall with head about 6mm above the wall surface.
  - c. Hang the detector with the bracket on the wall.
4. Wiring
- 0.5mm<sup>2</sup> or above Fire-resistant copper core cable for V+ and V-.
- 1.0mm<sup>2</sup> or above Fire-resistant copper core cable for K1 and K2.

## **V Application**

1. Applying power supply to the detector after wiring and checking, the green LED flashes 3~6 minutes for warm-up, and then it will light constantly for normal monitoring.
2. Alarming: When the volume ratio of liquefied petroleum gas to be monitored is above the alarm set point, the detector gives quick intermittent "Tick" sound with red LED quick flashing and K1 and K2 are closed. After alarming for 3s~7s, the detector will output a forward pulse current to close solenoid. When the volume ratio of LPG goes below the alarm set point, the detector will automatically stop audible and visual signal and K1, K2 will be self-opened. If, at this time, the solenoid has been closed, it will be kept closed, and you will

have to pull it open manually.

### 3. Fire Alarm Treatment

When the detector goes into alarm, please immediately open the windows for ventilation; Cut gas source if there isn't solenoid valve; Put out any fire; do not make new fires; Avoid switching on or off any electric appliance, find out the reason of leaking and call professional engineers.

## VI Troubleshooting

No.	Fault	Reason	Solution
1.	Alarms after power-up	Hasn't been powered for a long time or first time powered up.	It will resume normal after a period.
2.	Solenoid cannot be switched off	Polarity of the solenoid is reversed.	Wire correctly.

## VII Maintenance

1. Avoid using much hair tonic, pesticide, paint, alcohol, diluents etc near the detector, to avoid affecting normal monitoring of the sensor.

2. In case of fault, never remove or open the detector by yourselves. Inform our company or our local office for repair.

## **VIII Cautions**

1. Don't install the detector at locations with high temperature (near stoves) or too much oil smoke (near kitchen ventilator); Keep environment around the detector clean.

2. Please contact local gas company and ask a professional engineer to install a solenoid valve on the gas pipeline if it is required. The detector can only control JJ or FCR series solenoid coming with the detector. If other models are to be used, please consult us.

3. The detector should be tested every half year. The detector can be tested by a lighter. Put the lighter near the sensor (over 10cm) press its switch to turn it on and then blow off the flame. The detector should go into alarm in about 10 seconds.

4. The detector will be normal with a bit hot in operation.

5. Never cut down the power of the detector.

6. After having been stored without power, the detector will not work normally until it is

powered for a period.

## **IX Warranty Limited**

**GST** warrants that the product will be free from defects in design, materials and workmanship during the warranty period. This warranty shall not apply to any product that is found to have been improperly installed or used in any way not in accordance with the instructions supplied with the product. Anybody, including the agents, distributors or employees, is not in the position to amend the contents of this warranty. Please contact your local distributor for products not covered by this warranty.



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