

## 1. Production Overview

This product is a smart residential gas detector with high reliability, to detect gas leakage such as natural gas and liquefied petroleum gas. It is widely used in home, hotel, apartments and other places, avoiding fire and explosion accidents because of gas leak.

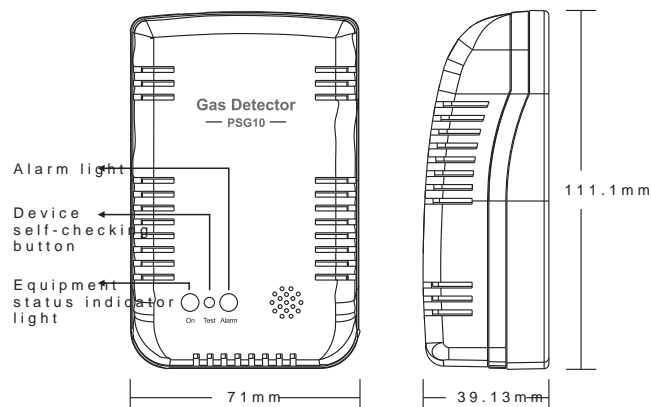
This product design, manufacture and verification comply with national standards GB 22222-2003 and GB 15322-2003. It is a Combustible Gas Detector with Measurement Range of 0~100%LEL.

## 2. Main functions and features

- Gas sensors with high reliability
- Modular sensor which is easy for change, maintenance and calibration.
- Fast response, zero drift, high precision, and low power consumption.
- Controlled by microprocessor and it has the rapid response and low failure rate.
- Sound and light alarm at the scene.
- Cooperate with smart gateway to realize remote control alarm.
- linkage output with gas shut-off

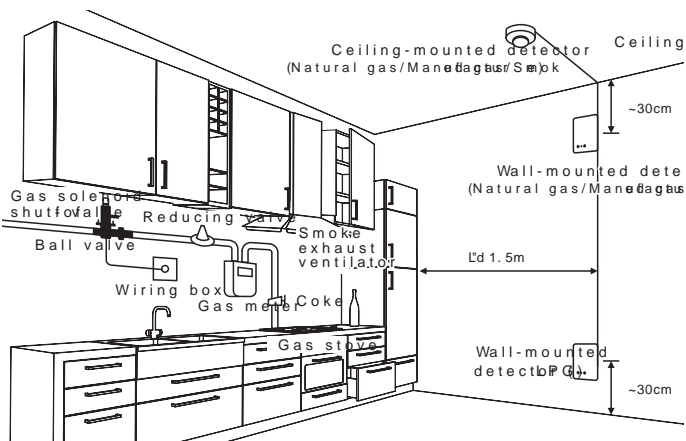
## 3. Dimension and Function Instruction

Size, Buttons and Light layout



## 4. Installation and Instructions

### (1) Gas detector installation location



The detector installation position should be specifically analyzed based on actual situation of used gas and the location of the used fuel gas appliances. But it should follow the following principles:

(1) Places where detector can not be placed

- Directly affected by exhaust gas, steam and oil-smoke produced by the combustion apparatus.
- The cupboard or beneath it.
- Wet or humid place.
- The temperature of places or outdoors is below 0°C.
- Detector and gas equipment are isolated.
- Near the doors and Windows or any place that is a base of fan or porosity
- Dirt or dust can accumulatively block detector and prevent it from working.
- Vulnerable to collide, damage or casually moved

### (2) Places where detector can not be placed

- Places where detector can not be placed
- Directly affected by exhaust gas, steam and oil-smoke produced by the combustion apparatus.
- The cupboard or beneath it.
- Wet or humid place.
- The temperature of places or outdoors is below 0°C.
- Detector and gas equipment are isolated.
- Near the doors and Windows or any place that is a base of fan or porosity
- Dirt or dust can accumulatively block detector and prevent it from working.
- Vulnerable to collide, damage or casually moved

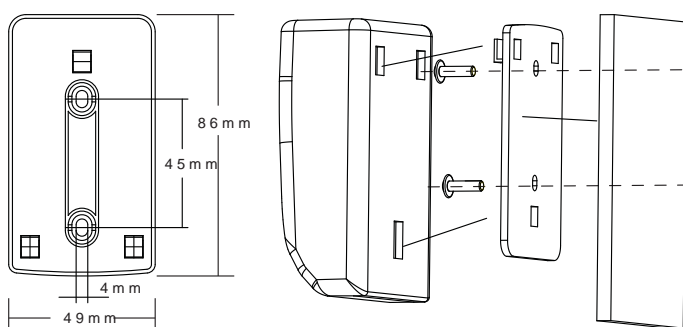
### (3) In which room Detector is installed?

- Ideally, it is suggested that a detector is installed in every room with a fuel utensils. But if there are more than a burner and detector number is limited, when determining the position, the following needs to be considered:
- If the bedroom has a burner, the bedroom need to install a detector inside.
- If a room has a burner with a chimney or ordinary flue type, you need to install a detector in the room.
- If in a room often used such as living room has electric appliances, you need to install a detector in the room.
- In a bedroom and a living room, the detector needs to stay away from the bed, sofa, and sleeping place as much as possible.

## 5. Installation Methods

- Please follow the steps shown in figure 3 for installation accordingly
- (1) Hang the detector on the wall.
- (2) Press the back of the grooves of detector into fixed hook of guarantee the firm is not loose.

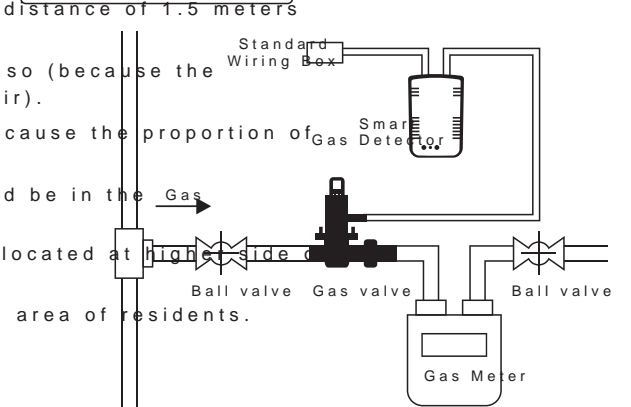
Detector Installation Diagram



## 6. Wiring instructions

The detector with solenoid valve needs to be connected into the circuit according to requirements. Shown in connection diagram

Equipment Wiring Diagram



The output connector of gas detector has positive and negative poles. It should be matched with Poer standard solenoid valve to joint the butts. When using a third-party valve, please confirm the following issue:

- Solenoid valve must be with rated voltage DC 12V and current 1.0A-1.8A, pulse time >1s.
- Pay attention to the correct polarity of the output connector.



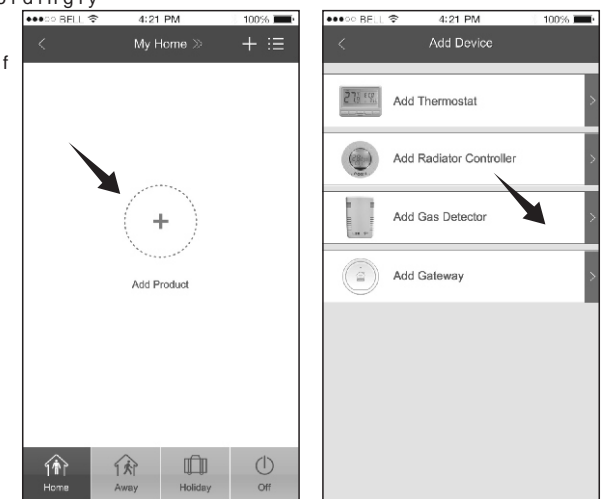
## 7. Gas Detector Operation Instructions

- (1) Power on detector: The detector is connected with power supply (if you need gas valve and other electrical appliances, you must first connect the circuit).
- (2) RF signal pairing between detector and traditional gateway: (2-1) Automatic pairing by mobile phone
- (2-1.1) Open the app which already connected with gateway P gateway App. please refer to smart valve for details and choose Detector from the interface.

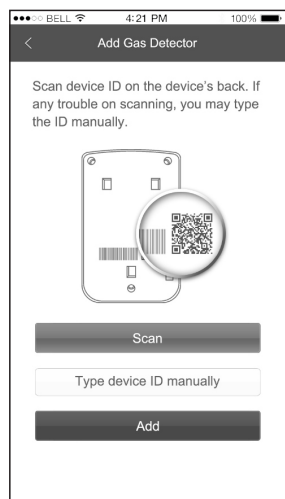
Normally and it shows ON, then the detector has no detection. When the detector flashes, detector enters into the normal working state.

### (2-1) Automatic pairing by mobile phone

Normally and it shows ON, then the detector has no detection. When the detector flashes, detector enters into the normal working state.



2.1.2 Scan bar code on the PSG10 back body for getting S/N of device. If scanning failed, may type the S/N manually



2.1. After successfully get S/N, to be preparing gas detector PSG10 with gateway adding successfully will long ring, meanwhile, Green LED is blinking quickly. HOME APP displays newly added device.



(2-2) Manually pairing smart gas detector with gateway.

2.2.1 Plug in the gateway for power supply and add gateway to a gateway app please refer to gateway for details)

2.2.2 Long press smart gateway until the LED lights, blinking slowly the gateway gets into the pairing mode.

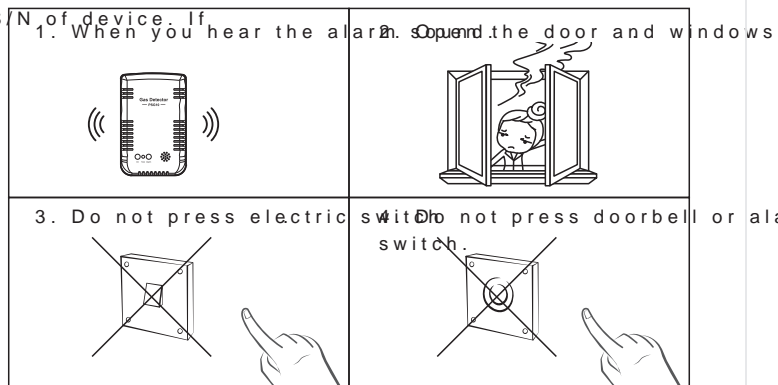
2.2.3 Gas detector send pairing code and long press smart gateway long ring means Green LED is blinking quickly. HOME APP displays newly added device once it pair successfully; Detector Red LED will blink quickly if pairing failed, in this case, please shorten distance between gateway and detector and try again.

2.2. After the success of the pairing, please long press the smart gateway icon, enabling the gateway to exit the pairing mode.

(3) Device self-checking: Test button for 3 seconds. At this time, the light normally on, buzzer alarms, meanwhile, gas valve shuts, and the mobile phone will receive notification.

(4) When detected gas concentration in environment reaches set point of detector enters into Alarm state. At this time, the light is normally same time, a buzzer rings, and drive gas valve shuts of

(5) When the detector alarm, please first to close the window and it is strictly prohibited to open and close any electrical appliances (including telephone and other communications equipment). Quickly ask gas professionals to come to eliminate leakage problems.



(6) After the ventilation, measured gas concentration in detector when it reduces below alarm set value, alarm status automatically recovers to monitoring state.

### 8. Maintenance of Detector

(1) After long term storage and long-distance transportation, when this product is first used, it needs to be electrified for 24 hours to achieve the best performance.

(2) Please use a clean soft brush or dry cloth to wipe and clean the detector shell, ensuring that the holes in front of detector haven't been blocked by dirt or dust and do not use detergents, bleach, or polish.

(3) Don't fault the detector power supply, please use the steady power supply for the detector.

(4) This product is designed for indoor use, please avoid the detector to expose to rain or moisture, at the same time, avoid the detector to be painted or change the detector otherwise it may lead to the failure.

(5) Please avoid to heavily use hair gel, perfume, alcohol, paint, thinner and other items in the detector attachment. If false positives are caused due to these, ventilation should be timely done to make the detector return to normal detection state.

(6) If failure happens, please don't yourself to deal with it, please contact the dealer or service providers for inspection on a regular basis.

(7) Please don't use unknown concentration gas to test the detector, high concentration gas will not only shorten the detector's service life, but also endanger human body health.

(8) This product may not be stored or used in environments containing corrosive gas (such as chlorine, etc.).

(9) Test in normal environment, the service life of the semiconductor sensor is 5 years. When life expires, the detector must be replaced.

(10) To protect your security, the product should be tested once every six months by using corresponding gas. When detection, product should be able to send out alarm and start linkage function (If it has linkage setting). During testing, the detector and smart gateway should be able to send out alarm and start the linkage, and it can entrust a qualified agency or return to manufacturer to calibrate this product.

(11) Installation of the machine must be strictly in accordance with the instruction content and comply with local and national electrical installation regulations, or it may lead to unpredictable verification results. You are advised to use qualified gas-related equipment and ensure the safety of the gas.

### 9. Product specification

Model No.	PSG10
Sensor type	Semiconductor SnO2
Gas detected	Natural Gas or LPG (Butane, Propane)
Main power supply	230 A/C (-15%+10%) 50/60 Hz
Operational environment	Temperature: 0~40°C Humidity: 95%RH, no condensation
Storage temperature	-20C ~ 50C
Pressure limit	86kPa ~ 106kPa
Power consumption	3 W
Starting time	2 min. 30 sec.
Response time	"d30s automatic recovery
Sample mode	Natural spread
Alarming range	2% - 20% LEL.
Alarm zone	9% LEL (Lower Explosive Limit)
Type of alarm	Acoustic and light alarm
Alarm volume	70dB
RF transmission	433M/868M visual range is 100m
LED indicators	<ul style="list-style-type: none"> <li>Power supply ON: green LED blink quickly</li> <li>Prepare heating: green LED keep light</li> <li>Alarm: green LED blink slowly</li> <li>Pairing success: green LED blink quickly</li> <li>Pairing failed: red LED blink quickly</li> <li>RF communication good with gateway: green LED blink slowly</li> <li>RF communication bad with gateway: green LED blink quickly</li> <li>Audible alarm: Buzzer min. 85 dB at 1m</li> </ul>
Lifetime of the detector	5 years
Degree of protection	IP42
Housing material	ABS, ULV0
Operation place	indoor
Weight	About 270g
Dimension	L x W x H: 116 x 71 x 48 (back) plate
Gas detection device	Gas solenoid valve

### 10. Common Faults and Solutions

Fault phenomenon	Cause analysis of fault	Treatments
The power indicator light is not bright machine itself.	The power cord doesn't connect well.	Connect the power cord
Press the "self-check" key silent alarm light.	The power light is pad.	Contact the dealer or manufacturer to maintain
Smart gateway power is abnormal or it is not pairing mode.	Circuit fault	Contact the dealer or manufacturer to maintain
No response on detected gas.	Preheat is not finished.	Wait the preheat to be finished
Smart gateway power is abnormal or it is not pairing mode.	Circuit fault	Contact the dealer or manufacturer to maintain
Smart gateway power is abnormal or it is not pairing mode.	Circuit fault	Contact the dealer or manufacturer to maintain
Smart gateway power is abnormal or it is not pairing mode.	Network anomalous	Check the network and home router
Smart gateway power is abnormal or it is not pairing mode.	Smart gateway anomalous	Contact the dealer or manufacturer to maintain
After the warm-up of turning on, detector alarms all the time.	smoking, drinking alcohol or using perfume, gasoline, banana oil, paint and other volatile organic compounds	Move to clean air and test whether it is normal
After the warm-up of turning on, detector alarms all the time.	Storage time is too long	Electrify and age for 2 hours
After the warm-up of turning on, detector alarms all the time.	Circuit fault	Contact the dealer or manufacturer to maintain

### 11. Product configuration

Standard configuration	gas detector PSG10, a set of accessories, product instruction
Optional configuration	Gas cut-off valve PSV10, gateway PTG10

