



# AS-705L / 705D Gas Detector

## User Manual

*Please read it carefully before using*

### Product Description

This product is a highly stable combustible indoor gas leak detector (hereinafter gas detector for short), for the detection of combustible gas leakage, prevent hazards of gas leakage. Gas detector adopt high stability semiconductor gas sensor, with high stability, low sensitivity drift. When the gas detector detects a combustible gas leak and reaches the alarm concentration setting by the detector, the gas detector red LED flashes and sounds an alarm.

This product is used in indoor where it is possible to occur combustible gas leak.

### Wiring Instructions

#### (1) wiring instructions of relay output type gas detector

**Red:** DC type for the DC power supply positive electrode; AC type for the AC power supply live wire

**Black:** DC type for the DC power supply negative electrode; AC type for the AC power supply neutral wire

**Orange:** The relay is always open

**White:** relay common

**Yellow:** relay normally closed

#### (2) wiring instructions of driving solenoid valve type gas detector

**Red:** DC type for the DC power supply positive; AC type for the AC power supply live wire

**Black:** DC type for the DC power supply negative; AC type for the AC power supply neutral wire

**Orange:** solenoid valve output positive

**Yellow:** solenoid valve output negative

### Product Features

- High stability semiconductor gas sensor
- Manual test / automatic reset function
- Using micro-processing control
- Automatic fault detection indication
- Alarm output sound and light alarm
- High stability, little sensitivity drift
- Manufacture using SMT process
- Detect natural gas / liquefied petroleum gas
- Using 3A / 250V high-capacity relay
- Ceiling mounting / base can be fitted with 86 boxes
- Meet GB15322.2-2003 standard

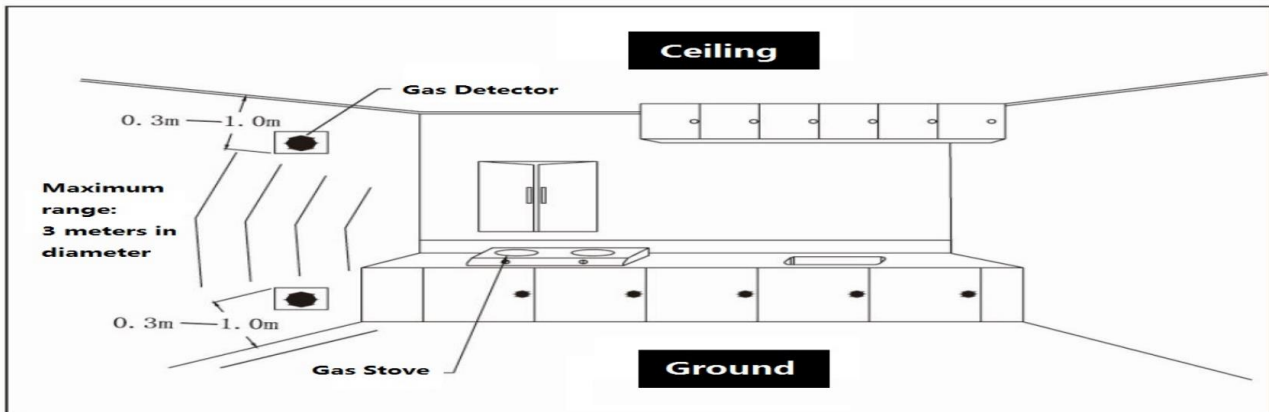
### Technical Indicators

Product type	AS-705L DC type	AS-705D AC type
Working voltage	9~24V	220V
Current consumption	Static $\leq 110\mu\text{A}$ ; alarm $\leq 160\mu\text{A}$	
Alarm output	Sound and light alarm / relay output	
Alarm concentration	6%	
Stability	$\pm 3\%$ LEL	
Sensor	High stability semiconductor sensor	
Alarm reset	When the combustible gas concentration is lower than the alarm concentration automatically reset	
Alarm sound pressure	75dB (1 meter)	
Working temperature	$-10\text{ }^{\circ}\text{C}$ - $+50\text{ }^{\circ}\text{C}$	
Ambient humidity	5% to 95% RH	
Product storage temperature	$-25\text{ }^{\circ}\text{C}$ - $+50\text{ }^{\circ}\text{C}$	
Alarm output	Relay output	Relay output or solenoid valve signal
Relay type	1C (SPDT) Contact load: 3A 250VAC / 30VDC	

<b>Product size</b>	Φ120 * 40mm
<b>Detection of gas</b>	Natural gas, liquefied petroleum gas
<b>Indicator</b>	Power: green LED is always on Alarm: red LED flashes Sensor failure: yellow LED is always on

### Installation Precautions

- 1 Firstly, find out the gas needed to detect is heavier or lighter than air. The gas heavier than the air: liquefied petroleum gas; gas lighter than the air: natural gas, artificial gas, biogas and so on.
- 2 Install the gas detector in the appropriate place according to the density of the gas. When the gas is heavier than air, the installation position must be 0.3-1.0 m above the ground and 1.5 m in the gas source radius. When the gas is lighter than the air, the installation position must be 0.3-1.0 m below the ceiling and 1.5 m in the gas source radius. See diagram below:



- 3 Fix the gas detector bracket with the screws, then hang the gas detector.
- 4 Family users should pay attention to the installation location, it can not be too close from the gas stove, to avoid false alarm or lead to air intake of the gas detector is not affluent, thus affecting the sensitivity of the gas detector. It can not be installed beside exhaust fan, doors, windows as well as bathroom with lots of water vapor.
- 5 Correct wiring according to the user manual, all the wiring installation must be complied with the safety regulations and standards. It will can not alarm normally when a gas leak occurs if the wiring is improper.

### Operation Instructions

#### 1 Gas detector wiring instructions

1.1 Check the label behind the product to determine the product's working voltage and output function, DC-type working voltage is DC9-24V; AC-type working voltage is AC220V. The box is equipped with a 5PIN terminal wire,

**AC type:** red wire connect to AC power supply live wire, black wire connect to AC power supply neutral wire.

**DC type:** red wire connect to DC power supply positive electrode, black wire connect to DC power supply negative electrode.

1.2 Relay output wire connection

**White wire:** common port for relay output

**Yellow wire:** normal close port for relay output

**Orange wire:** normal open port for relay output

1.3 solenoid valve output wire connection

**Orange wire:** positive electrode for the solenoid valve signal output

**Yellow wire:** negative electrode for the solenoid valve signal output

**Note:** the gas detector can not realize relay output function and solenoid valve output function at the same time. Please check the label at back of the product before wiring, determine the output function, then wiring according to the corresponding function.

#### 2 Function description

2.1 When the gas detector is turned on, power indicator green LED will light continuously, the buzzer sound "di" at the same time, the circuit enter the warm-up state, the red LED and yellow LED alternately flash during about 3 minutes, then it will stop. It means the gas detector run normally. The gas test is forbidden during warm-up state.

2.2 When the gas detector detects the combustible gas leak and gas reach the alarm concentration, the alarm indicator red LED flashes, while the buzzer sound alarm "di - di". Relay with auxiliary output function or

solenoid valve output terminal output pulse signal to close solenoid valve.

2.3 When the sensor inside the gas detector fails, the yellow LED will light continuously, the buzzer sound "di" at the same time. Please turn off the power and contact your local dealer for service. **Do not open the gas detector by yourself to avoid the risk of electric shock.**

### 3 Product testing

3.1 This product has a self-test button, can be used to detect the gas detector LED and buzzer are able to work properly. When pressed the self-test button, the gas detector red LED and yellow LED alternately flash, the buzzer sound alarm.

3.2 Do not use the lighter directly close to the gas detector intake port to test, otherwise it will damage the sensor inside the gas detector. The lighter gas can be placed in a vacant plastic bottle, and then put the plastic bottle at the intake port of gas detector to test.

### Fault Analysis and Troubleshooting

Fault phenomenon	Cause analysis	Solution
In warm-up state continuously (LED flash continuously)	1, Power off for a long time 2, Gas test when warm-up	1, Power on for 24 hours 2, Test is prohibited when warm-up
Yellow light flash continuously, buzzer sound continuously	Sensor failure	Contact the dealer to repair
Can not close the solenoid valve	Solenoid valve output wiring is wrong	Wiring according to the instructions

### Emergency Handling

When the natural gas or liquefied petroleum gas concentration in the air reaches or exceeds the gas detector alarm concentration value, the gas detector will automatically enter the continuous alarm state. We should:

- 1 Close the pipe valve immediately.
- 2 Avoid switching a variety of electrical equipment.
- 3 Open the windows immediately and let the air flow.
- 4 Check the reasons for gas leakage, and notice the relevant departments and related professionals to deal with timely. If the detector is false after checking, please check the installation position of the gas detector whether is appropriate.

### Cautions

- 1 This product is a combustible gas detector, can not be used to detect carbon monoxide and other toxic gases.
- 2 This product must have the correct wiring and the power supply. if power is abnormal, the gas detector will not work normally.
- 3 When the gas detector work, the shell surface will fever slightly. It is a normal phenomenon.
- 4 This product must be maintained on a regular period as required by the instructions.
- 5 Absorb the dust on the surface of the gas detector with vacuum cleaner once a month.
- 6 Do not wipe the gas detector with a detergent or solvent. Chemicals are permanently damaged or transiently polluted for gas detector.
- 7 Avoid spraying air fresheners, hair spray, paint or other aerosols near the gas detector.
- 8 In order to ensure the detection sensitivity of the gas detector, the gas detector should be calibrated every year and the failure gas detector must be repaired or replaced as soon as possible.
- 9 Semiconductor sensor inside the gas detector can be used for 5 years, when gas detector is used exceed 5 years, please promptly replace it.
- 10 This product can reduce the occurrence of accidents, but can not ensure safety completely. For you and your family safety, please be vigilant and strengthen the security awareness in the daily life except using the product correctly.