

# **JT-HD2000 Household Combustible Gas Detector**

## **User Manual**

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## **User Notice**

Welcome to the use of the JT-HD2000 Household Combustible Gas Detector developed by Ningbo Zhengcheng Refrigeration and Air Conditioning Co., Ltd. (hereinafter referred to as the "detector"). Please read this manual carefully before using the product.

Keep this manual in a safe place for future reference and support.

## **Caution**

- Do not test the detector with high concentrations of gas to avoid sensor damage.
- Keep the detector clean to prevent grease from blocking the air intake holes.

## **Technical Support**

Please ensure you fully understand the installation and operation requirements of the device. If in doubt, contact our company.

## **Copyright Notice**

This manual is the property of our company. It may not be copied, translated, stored in a database or retrieval system, or transmitted in any form without written permission.

Our company is committed to continuous product improvement. We reserve the right to modify the product without prior notice.

While every effort has been made to ensure the accuracy of this manual, we cannot guarantee the absence of errors. Please contact us if you notice any issues. In case of discrepancies, the interpretation by our technical department shall prevail.

We are not liable for any consequences arising from unauthorized installation or component replacement.

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## **User Service Guide**

1. Before using the product, please check the product package, accessories, certificate of conformity, and warranty card. Contact the dealer or manufacturer if anything is missing.
2. Within twelve months from the date of sale, the user is entitled to free repair for product quality issues caused under proper storage, transport, and use, with a valid warranty card.
3. Damages caused by non-compliance with the manual, unauthorized repairs, or force majeure events will be repaired for a fee.
4. Always present the warranty card for maintenance. Lack of a warranty card will be treated as paid repair.

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5. For questions or dissatisfaction regarding our products or services (technical, quality, installation, service attitude, or charges), please contact us promptly. We will handle your feedback appropriately.

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## 1. Product Overview

The detector uses a high-precision gas sensor with excellent sensitivity and repeatability. It can be installed in kitchens or near gas pipelines and will emit audible and visual alarms when gas leaks are detected, ensuring personal and property safety.

**Standard Compliance:** GB15322.2-2019 "Household Combustible Gas Detector"

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## 2. Key Features and Technical Specifications

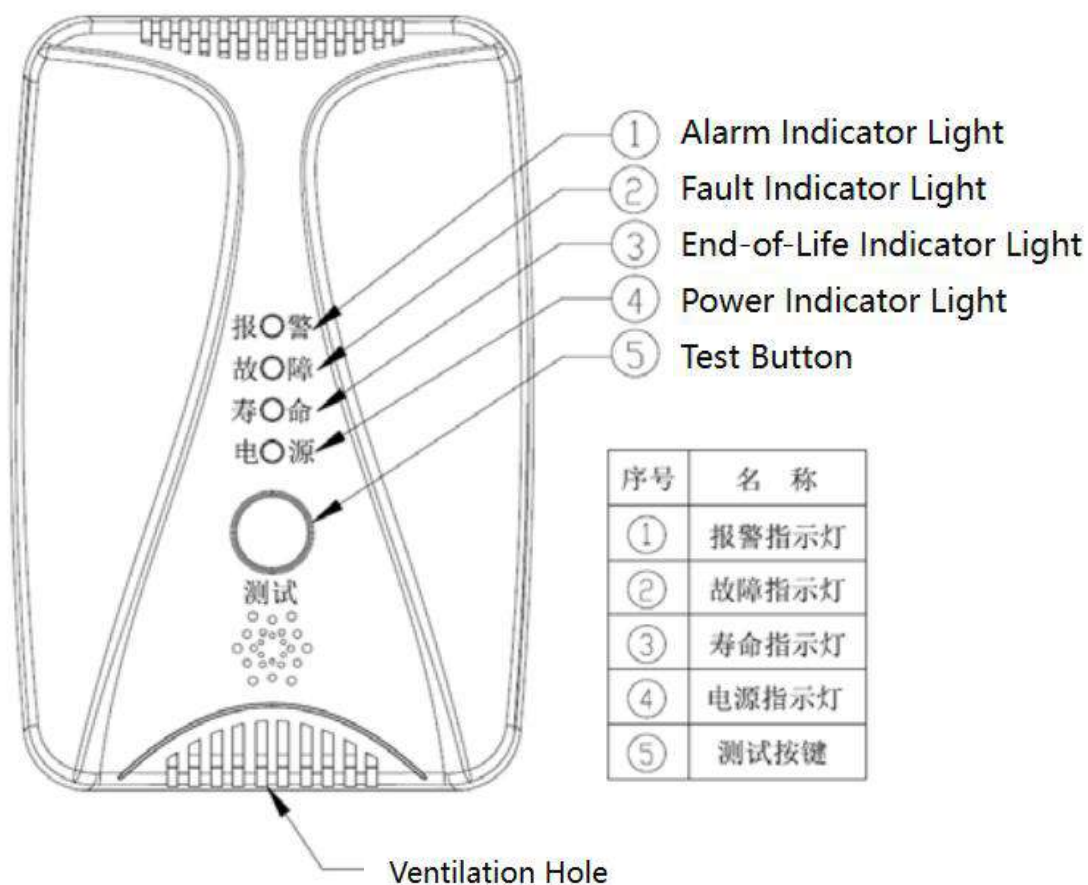
**Key Features:** – High-performance digital processor for high reliability – High-sensitivity gas sensor – Fast warm-up and response time – SMT technology circuit board enhances product reliability – Automatic storage of power-on/off, alarm, recovery, and fault history – Sensor fault detection and end-of-life alert – Gas sensor lifespan: 5 years

**Technical Parameters:** – Detected Gas: Methane – Detection Method: Natural diffusion – Operating Voltage: AC 220V  $\pm$ 15% – Range: 0~20% LEL – Alarm Threshold: 8% LEL – Alarm Mode: Audible and visual – Electromagnetic Valve Interface: DC 9V~12V – Alarm Sound Level:  $\geq$ 85 dB – Response Time:  $\leq$ 30 s – Operating Temperature:  $-10^{\circ}\text{C} \sim 55^{\circ}\text{C}$  – Operating Humidity:  $\leq$ 95% RH (non-condensing) – Installation: Indoor use – Dimensions: 120mm(L)  $\times$  80mm(W)  $\times$  45mm(H)

*Note: LEL = Lower Explosive Limit; %LEL = percentage of the LEL*

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### 3. Product Appearance



### 4. Operation Guide

**4.1 Power-On Self-Test:** Upon powering on, all indicator lights flash three times, and the buzzer beeps to indicate self-test.

**4.2 Warm-Up Function:** Warm-up lasts about 90 seconds. During this time, only the power light stays on steadily, others flash in sequence.

**4.3 Manual Self-Test:** Press and hold the button for 3 seconds during normal monitoring to initiate a self-test.

**4.4 Alarm Function:** When gas concentration exceeds threshold, the red light flashes and the buzzer sounds (beep-beep). After 3 seconds of continuous alarm, the detector activates connected devices such as an electromagnetic valve.

**4.5 History Record Storage:** The detector logs events like power-on/off, alarms, recoveries, faults, and sensor failures.

No.	Record Name	Max Records	No.	Record Name	Max Records
1	Power-on Records	50	5	Fault Records	100
2	Power-off Records	50	6	Fault Recovery Records	100
3	Alarm Records	200	7	Sensor Failure Records	1
4	Alarm Response Records	200			

**4.6 Network Output Function:** Supports MODBUS RTU protocol for status monitoring (normal, fault, alarm, sensor life). Serial settings: 1 start bit, 8 data bits, even parity, 1 stop bit, CRC check, 4800 baud rate, read-only (0x03).

No.	Address	Function	Command	Notes
1	0x66	Combustible Gas - Status	0x03	0: Fault 1: Normal Monitoring 2: Alarm
2	0x10D	Sensor Life Expiry Status	0x03	0: Not Expired 1: Expired

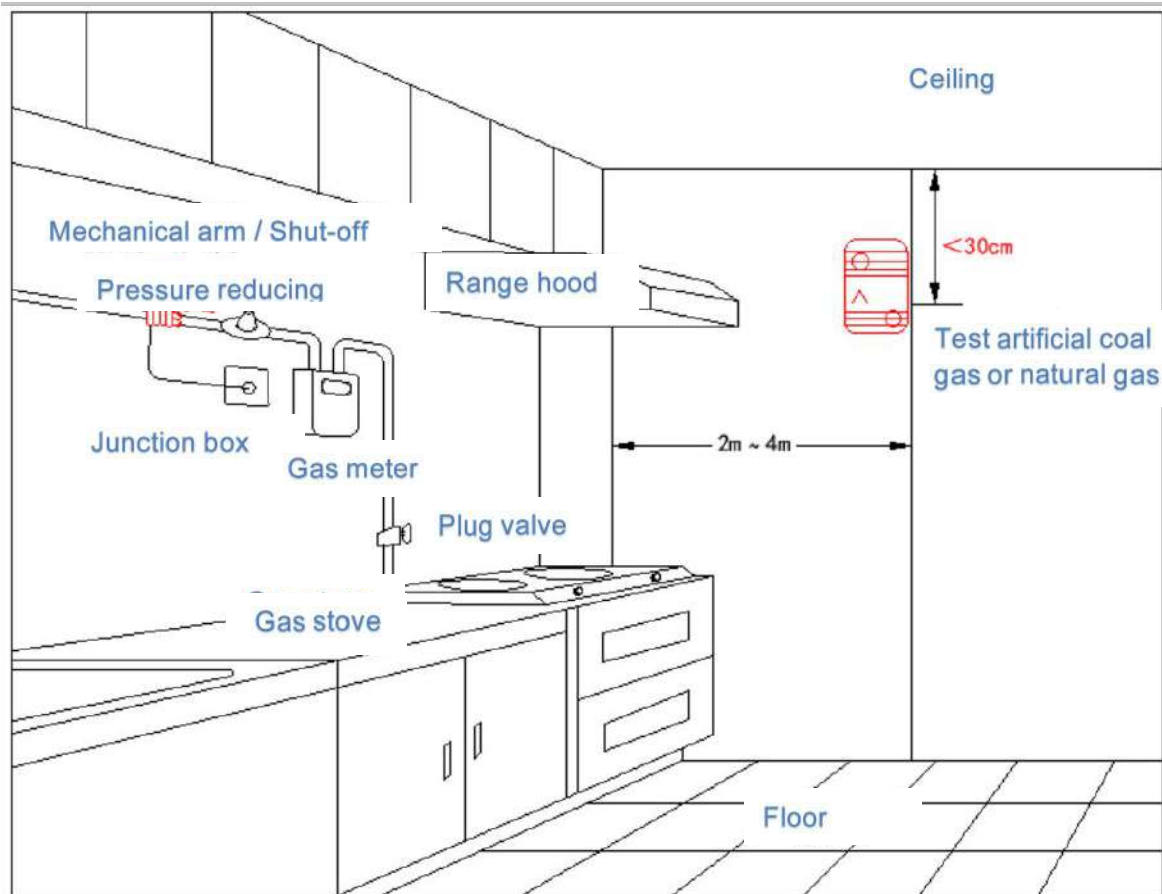
**4.7 Electromagnetic Valve Output:** Outputs a 2-second high-level pulse during alarm. Drives DC 9V-12V valves.

## 5. Installation Instructions

**5.1 Location Selection:** Install within 4 meters horizontally and at least 2 meters from gas appliances. Detector should be within 0.3 meters of the ceiling.

**5.2 Avoid Locations:** – Near windows, fans, vents – Humid or dripping areas – Above stoves or high-temperature zones – Inside cabinets or obstructed areas – Near vibrating devices (e.g., fridge, AC) – Outdoors or where temperature is below -10°C or above 55°C

**5.3 Installation Method:** – Mark and drill two mounting holes using the bracket – Insert plastic anchors and fix the bracket with screws – Align the detector with the bracket and hang securely – Connect signal wires and power on



**5.4 Installation Notes:** – Ensure renovation is complete before installation – Follow national and local electrical codes – Avoid weak walls like mud walls – Prevent dropping the detector – Do not plug/unplug with wet hands (risk of electric shock)

## 6. Maintenance and Testing

**6.1 Maintenance:** – Expected lifespan: 5 years – Clean regularly with dry cloth or soft brush – Do not use detergent or water

**6.2 Testing:** – During normal operation, expose intake to standard gas for 5–10 seconds – Buzzer and alarm light will activate – Do not use strong pressurized gas (e.g., lighter refills) to avoid damage

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## 7. Troubleshooting

<b>Fault Phenomenon</b>	<b>Possible Cause</b>	<b>Solution</b>
No response to detected gas	Delay not finished	Wait for delay to finish
	Circuit fault	Contact dealer
Alarm sounds continuously after power on	Power off time too long	Keep powered on for more than 2 hours
	Presence of large amounts of oil smoke, gasoline, paint or other volatile gases	Test in clean air environment
	Circuit fault	Contact dealer
Green power indicator light not on	Power cable not properly connected	Contact dealer
	Circuit fault	Reconnect power cable
Life indicator light flashing	Sensor life expired	Contact dealer

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## 8. Accessories

- 1 detector
- 1 user manual
- 1 certificate/warranty card
- 2 mounting screws
- Optional: 1 gas shut-off valve

## 9. Maintenance & Repairs

1. Avoid using hair spray, perfume, gasoline, insecticides, paint, or alcohol near the detector.
2. Do not disconnect power arbitrarily; allow 48h aging if unused for a long time.
3. After long storage or transport, power the detector for 48h before use.
4. Test every 6 months with the target gas. Alarms and linked devices should activate.
5. Do not store in corrosive gas environments (e.g., ammonia, chlorine).
6. Do not disassemble the detector. Contact authorized personnel.
7. For issues beyond this manual, contact our company.