



USER MANUAL

METHANE GAS DETECTOR (WI-FI)

ZB-DG02



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Thanks for choosing JT-ZL2010Z ZigBee Wireless household combustible gas detector. To ensure your personal and system safety and realize the best product performance, please read this manual carefully and completely before installing, using or repairing this device, and the Warnings and Notes in this manual should be paid special attention to.

Warnings:

- Please read this User Manual carefully before using this device!
- Please keep the circuit open before installing and connecting wires to prevent electric shock!
- Non-professionals should not connect electric wires!

1.Product Description

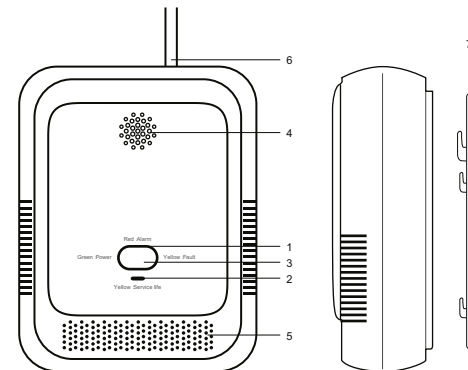
The JT-ZL2010Z ZigBee Wireless household combustible gas detector (detector) adopts high quality gas sensor; It is made with high performance MCU and advanced electronic elements as well as sophisticated technologies; Its software and hardware technologies enable it to monitor sensor failure simultaneously when detecting gas leak concentration, which, at the same time, brings high degree of safety and reliability. This detector is suitable for installing in residential houses with potential gas leakage, it can consecutively monitor indoor

combustible gas concentration, when the gas concentration reaches its alarming value, it will send out sound and light alarm, and push the gas leak alarm to the mobile phone via ZigBee. It will help you to take immediate action to prevent fire, blast and injury accidents from happening.
Standard implemented: EN 50194-1:2023

2.Technical Parameters

Model	JT-ZL2010Z
Operating Voltage	AC 100 V - 240 V 50 Hz - 60 Hz
Operating Environment	Temp.: 0 °C - +55 °C Relative Humidity: <95% (non-condensation) Ambient Pressure: 86 kPa - 106 kPa
Storage Temperature	-25 °C - +55 °C
Sampling Method	Free diffusion
Applicable for	Methane (CH ₄)
Sensor Type	Semi-conductor
Sensor Life	5 years (typical value)
Alarming Value	7%LEL ± 3%LEL

3. Structure and Function Indication

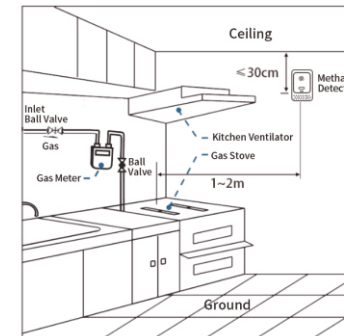


Alarming Mode	Sound + light; Mobile message tips
Alarming Sound Level	≥85dB (1 meter ahead)
Installation	Wall-mounted
Size (L*W*H)	112 mm * 86 mm * 33.5 mm
Standard	EN 50194-1:2023

- | | |
|---------------------------|-----------------------|
| 1 Status indicator | 5 Gas detection holes |
| 2 Service life indication | 6 Power supply cable |
| 3 Button | 7 Mounting baseplate |
| 4 Sound alarm holes | |

4. Installation Instruction

4.1 This detector is suitable for indoor environment only, please install it at places with potential gas leakage or gathering, and it should be installed horizontally 1 m - 2 m from the gas appliance and vertically >0.3 m from the ceiling. Users could choose install the detector according to below diagram based on actual situation.



4.2 Avoid areas as below

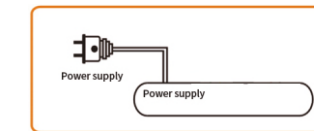
- Areas of ventilation inlet/outlet, exhaust fan, doors/windows with strong air flow.
- Areas with moisture and water drops.
- Areas right above heat source or water steam.
- Areas above gas appliances.
- Areas easy to be polluted.
- Areas covered by obstacles.

If the room is to be painted or refurbished, please install the detector after the refurbishment or painting work.

4.3 Installation Method

1. Choose a place on the wall suitable for installing the detector.
2. Slide the mounting plate down.
3. Use expansion screws to fix the installation baseplate.
4. Power on the detector and check to ensure it works normally; If external devices such as solenoid valve, please connect the wires correctly.
5. Install the detector by hanging it onto the baseplate.

4.4 Wiring Diagram



Notes:

The power supply cable is with a plug, please directly connect to a correct socket.

5. Operating Instruction

5.1 Wireless Connection Instruction

- 1. Connect the detector to the power supply, press and hold the button for 3 seconds during the preheating process, and release the button when the yellow service life light flashes quickly, then it means the alarm is under networking mode.
- 2. Open Tuya Smart or Smart Life app, make sure ZigBee hub/gateway and cellphone are connected to the same router. Add the ZigBee hub/gateway to the App. Then click on the “My Home” menu and open the ZigBee hub/gateway already added. Click on the “Add Device” to add your first device.
- 3. Make sure ZigBee hub/gateway and cellphone are connected to the same router. Add the ZigBee hub/gateway to the App. Then click on the “My Home” menu and open the ZigBee hub/gateway already added. Click on the “Add subdevice” to add your first device
- 4. Click [LED already blink]
- 5. When networking is completed, the indicator will stop quick flashing, the device will appear on “My Home” interface.
- 6. After network completed successfully, press the testing button for several seconds, App will show" Gas alarm", pls wait a moment, it will become normal status.

If networking failed, users need to enter networking mode again and repeat above steps.

Note: Please ensure that the home WIFI can be used normally, otherwise it will affect the normal use of this product. If the home WIFI is changed, you need to remove the added device in the mobile app, and then add the device again according to the content in 5.1.

5.2 Connect the detector to the power source, green power source indicator will flash, then the detector will enter preheat status and lasts for 3 minutes, during preheating, the detector could not detect gas leakage; 3 minutes later, the detector will enter normal detection mode, its green power source indicator will be normally on.

5.3 When the gas concentration value in the air reaches the set alarming point, the detector will enter alarming mode, its red indicator will flash, at the same time, it sends out beeping alarm, at the same time, the mobile phone will receive a gas leak alarm prompt. Then, please shut off the gas supply immediately and open the window, and do not turn on any electrical appliances (including cellphone), if necessary, please ask for gas experts to eliminate the gas leakage failure.

5.4 In the alarm state, when the gas concentration value is below the safe value, the detector will disarm the alarm automatically, if the detector sends out sound-light alarm, it means the gas concentration exceed standard.

5.5 If the ring light show yellow, on all the time, and beep all the time, it means detector faults, cannot detect correctly, please contact distributor for repairing.

5.6 For daily check, please short-press the button once, the detector will enter simulate alarming mode and it will send out sound-light alarm signal, red indicator light flash and beep, mobile phone push alarm reminder, return the normal detect state later, if the detector does not alarm normally, please contact distributor or manufacturer for repairing.

5.7 If the service life indicator flash (flash 3 times and cycle), meanwhile, beep by 3 times and cycle, that means the sensor life is due, please contact the distributor or manufacturer for repair or buying a new one.

5.8. Indicator light status

Mode	LED Ring Indicator	Service Life Indicator	Buzzer
Preheating mode	Green light flash	—	—
Normal mode	Green light on all the time	—	—
Testing state	Red light flash	—	Beep 4 times
Failure mode	Yellow light on all the time	—	Beep all the time
Alarming mode	Red light flash	—	Beep 4 times and cycle
Service life due	—	Yellow light flash	Beep 3 times and cycle

6. Troubleshooting

Failure	Possible Reason(s)	Measure(s)
Green power source indicator not on	Power source cable not connected correctly	Check and connect the power source cable correctly
	Power source indicator damaged or circuit failure	Contact distributor or manufacturer for repair
No sound and light alarm during self-check	Circuit failure	Contact distributor or manufacturer for repair
No response to detected gas	Still under preheating	Wait till preheating ends

No response to detected gas	Circuit failure	Contact distributor or manufacturer for repair
Continuously alarming after turned on and time-lapse	The environment is with large number of cigarette smoke, alcohol or volatile organic compounds like petrol, perfume, banana oil or paints	Move to clean air spaces and try it again
	Over-long storage time	Power on and wait for 2 hours or more
	Circuit failure	Contact distributor or manufacturer for repair

Notes:

For any failures cannot be resolved by yourself, do not disassemble the detector, please contact the distributor or manufacturer for guidance.

7. Notes

- 1. The large number of cigarette smoke, alcohol or volatile organic compounds like petrol, perfume, banana oil or paints inside the room may cause the detector to alarm;
- 2. Do not use gas sample without clear concentration value to test this detector, ultra-high concentration gas will not only damage shorten the detector sensor service life but also harm human health;
- 3. Please contact your distributor or manufacturer for help and use correct gas sample with correct concentration value to test

the detector once a year;

- This product cannot be used nor stored in any environment with corrosive gases (like chlorine gas);
- Please routinely clean the dust or oil contamination on the detector surface with brush or dry soft rag;
- After long-term storage or long-time transportation, please power the detector on and wait for 24 hours or more to realize optimal performance.
- Under normal operating environment, the semiconductor sensor could work for 5 years.

8. Product Maintenance

- Please clean the detector at least one time a year, make sure its gas inlet is free of dust or oil contamination;
- After cleaning, install the detector back to its baseplate and conduct function check;
- Conduct an analog alarming test each half year to make sure it works normally;
- Do not expose the detector to high concentration gas sample for long time or frequently, or it will lower its sensor sensitivity or shorten its sensor life or even damage the sensor;
- The detector should be connected to stable power source.
- When detector is found in failure status, please contact the distributor or manufacturer for repair or buy a new one.

Hereby Spacetronik Sp. z o.o. declares under its sole responsibility that the product ZB-DG02 is in conformity with following directives: RED (2014/53/UE), RoHS (2011/65/UE + 2015/863/UE). Full document (declaration of conformity) is available for download from the website www.spacetronik.store.

The WEEE symbol (the crossed-out wheeled bin) using indicates that this product is not home waste. Appropriate waste management aids in avoiding consequences which are harmful for people and environment and result from dangerous materials used in the device, as well as improper storage and processing. Segregated household waste collection aids recycle materials and components of which the device was made. In order to get detailed information about recycling this product please contact your retailer or a local authority.

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