space tronik

USER MANUAL

LPG GAS DETECTOR
(WI-FI)

ZB-DG03

Contents

Thanks for choosing ZB-DG03 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 ZB-DG03 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
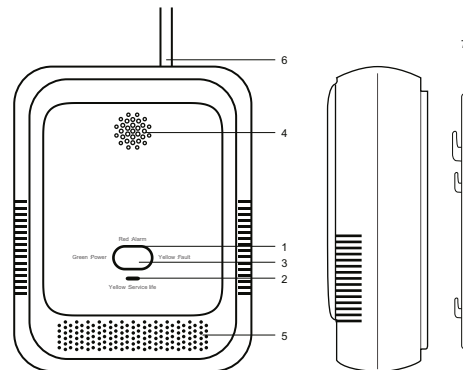
combustible gas concentration, when the gas concentration reaches its alarming value, it will send out sound and light alarm, and push the gas leak alarm to the mobile phone via ZigBee. It will help you to take immediate action to prevent fire, blast and injury accidents from happening.
Standard implemented: EN 50194-1:2023

2.Technical Parameters

Model	ZB-DG03
Operating Voltage	AC 100V - 240V 50Hz - 60Hz
Operating Environment	Tempt.: 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	LPG (Propane, Butane)
Sensor Type	Semi-conductor
Sensor Life	5 years (typical value)
Alarming Value	10%LEL ± 3%LEL

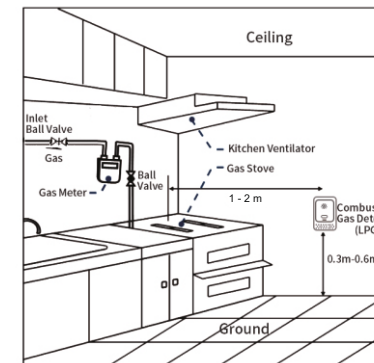| Alarming Mode	Sound + light; Mobile message tips
Alarming Sound Level	≥85 dB (1 meter ahead)
Installation	Wall-mounted
Size (L*W*H)	112 mm * 86 mm * 33.5 mm
Standard	EN 50194-1:2023

3. Structure and Function Indication

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 - 0.6 m from the ground. Users could choose install the detector according to below diagram based on actual situation.
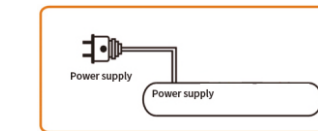
4.2 Avoid areas as below
● Areas of ventilation inlet/outlet, exhaust fan, doors/windows with strong air flow.
● Areas with moisture and water drops.
● Areas right above heat source or water steam.
● Areas above gas appliances.
● Areas easy to be polluted.
● Areas covered by obstacles.

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.
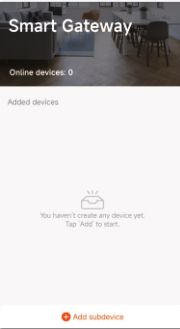
4.4 Wiring Diagram

Notes:
The power supply cable is with a plug, please directly connect to a correct socket.
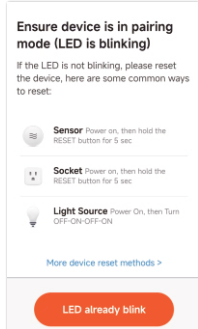
5. Operating Instruction

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 red light flashes quickly.
- 2. Open the Tuya Smart or the Smart Life - Smart Living mobile application.
- 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；
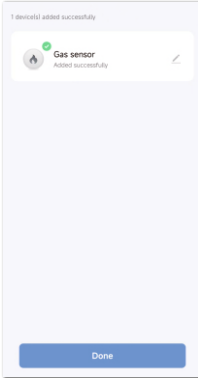
- 4. Click [LED already blink]
- 5. The mobile phone will automatically scan for nearby devices, as shown in the image below.After waiting a few seconds, you can finish adding the device, Click [DONE].
- 6. After the previous step is completed, it will enter the add success interface, where users can change the name of the gas alarm according to their needs. After the modification is completed, click [Done] to complete the device addition.

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 indicator will always be on.

5.3 When the gas concentration in the air reaches the set alarm point, the detector enters the alarm mode, its red indicator flashes 4 times, and emits 4 buzzes (repeated cycle until it exits the alarm state). at the same time, the mobile phone will receive a gas leak alarm prompt. Then, immediately turn off the gas supply and open the Windows, do not turn on any electrical appliances (including mobile phones), and ask a gas expert to troubleshoot gas leaks if necessary.

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 send out sound-light alarm, it means the gas concentration exceed standard.

5.5 If the indicator is steady yellow light and beep all the time, the detector is faulty. Cannot be detected correctly, please contact the dealer for repair.

5.6 For daily inspection, please short press the button once, the detector enters the analog alarm mode, sends out an analog sound and light alarm signal, the red light flashes, the sounds,

and then returns to the normal monitoring state. If the detector does not alarm normally, please contact the distributor or manufacturer for maintenance. For the alarm with output function, press and hold the alarm button for 15 seconds, the solenoid valve will perform the closing action, if the function is not normal, please contact the distributor or manufacturer for maintenance.

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	—	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
	Circuit failure	Contact distributor or manufacturer for repair
	The power failure time is too long	Power on and wait for 4 hours or more
	The gas concentration does not reach the alarm value	Wait for the gas concentration to reach the alarm value
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
	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;
- 4. This product cannot be used nor stored in any environment with corrosive gases (like chlorine gas);
- 5. Please routinely clean the dust or oil contamination on the detector surface with brush or dry soft rag;
- 6. After long-term storage or long-time transportation, please power the detector on and wait for 24 hours or more to realize optimal performance.
- 7. Under normal operating environment, the semiconductor sensor could work for 5 years.

8. Product Maintenance

- 1. Please clean the detector at least one time a year, make sure its gas inlet is free of dust or oil contamination;

- 2. After cleaning, install the detector back to its baseplate and conduct function check;
- 3. Conduct an analog alarming test each half year to make sure it works normally;
- 4. 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;
- 5. The detector should be connected to stable power source;
- 6. When detector is found in failure status, please contact the distributor or manufacturer for repair or buy a new one.

CE   **RoHS**
MADE IN P.R.C.