成品尺寸：360*200mm

Smart Gas and Carbon Monoxide Alarm User Manual

Model: JKD-816COM-Z

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PLEASE READ CAREFULLY AND SAVE!
Thank you for purchasing this Gas and Carbon Monoxide Compound Alarm equipped with digital LCD display! please read this instruction carefully before using this device. retain this information in a safe and easily accessible place for future use and maintenance.

PRODUCT INTRODUCTION
Gas and Carbon Monoxide Alarm(Combo alarm), use of high quality electrochemical sensors, combined with advanced electronic technology and sophisticated technology made of a stable work, long life and other advantages. can be placed on the wall and other installation methods, simple installation, easy to use.
Where combustible gas and carbon monoxide gas is present, once the concentration of combustible gas or carbon monoxide gas reaches the alarm setting value, the detector will emit an audible and visual alarm signal to remind you to quickly take effective measures to effectively avoid the occurrence of fire, explosion, suffocation, death and other malignancies.
WARNING
Exceeding the temperature and humidity allowable range may reduce or lose the detection function.

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1. What is Carbon Monoxide(CO)

Carbon monoxide (CO) is a highly poisonous gas that has no taste, colour or smell and therefore very difficult to detect with the human sense. CO kills hundreds of people each year and injuries many more. It binds to the hemoglobin in the blood and reduces the amount of oxygen being circulated in the body. In high concentration, CO can kill in minutes. CO is produced from poorly burning appliances, such as:

- Wood-burning stoves
- Gas boilers and Gas heater
- Oil and coal burning appliances
- Blocked flues and chimneys
- Waste gas from car garages
- Barbecues

Symptoms Indicated by Carbon Monoxide Concentration Poisoning

CO Concentration	Rough inhalation time and symptoms developed
50ppm	Maximum concentration bearable in 8 hours for healthy adults
200ppm	Light headache, weak, dim eyesight and nausea after 2-3 hours
400ppm	Forehead pain in 1-2 hours, threaten life after 3 hours
800ppm	Dim eyesight, nausea and spasm in 45 minutes, lose consciousness in 2 hours, death in 2-3 hours
1600ppm	Headache, dim eyesight and nausea in 20 minutes, death in 1 hour
3200ppm	Headache, dim eyesight and nausea in 5-10 minutes, death in 25-30 minutes
6400ppm	Headache, dim eyesight and nausea in 1-2 minutes, death in 10-15 minutes
12800ppm	Death in 1-3 minutes

2. What is Combustible Gas(CH4)

Combustible Gas is a general term for gaseous fuels, which are capable of burning and emitting heat for use by urban residents and industrial enterprises. Gas includes artificial gas (commonly known as town gas), liquefied petroleum gas (LPG), natural gas and so on.
Methane (CH4): the main component of natural gas. Methane is physiologically harmless to humans, but has an asphyxiating effect. when its concentration in the air reaches 10%, it can suffocate people to death. Natural gas (methane) can explode when exposed to an ignition source when its content in the air reaches 5-15 per cent.

The possibility of smelling gas prior to the apparatus giving an alarm.

3. Function and Indicators

No.	Function indicate
1	Green power indication
2	Yellow fault indication
3	Red alarm indication
4	Sound volume
5	Concentration display
6	Testing button

WARNING
Demolition, replacement, damage to parts, collisions, may reduce or lose the detection function

4. Where to Locate the Gas and Carbon Monoxide Alarm

Install the alarm in the kitchen/bedrooms or common activity places, or places where you think may generate leak gas or carbon monoxide. It's suggested to install at least one alarm in each floor of a multistory building to ensure everyone can hear the alarm in sleeping.
Ideally, it is advisable to install a detector in every room that has a fuel-use appliance. however, if there are more than one burning appliances and the number of detectors is limited, the following points need to be considered when determining the location:
• If the bedroom has a burning appliance, you need to install a detector in the bedroom.
• If there is a chimney-free or common flue gas appliance in the room, a detector must be installed in the room.
• If there is an electric appliance in a more-used room, such as a living room, a detector needs to be installed in the room.
• In a bedroom and living room, the detector should be as far away from cooking appliances and sleeping areas as possible.
• If the appliance in an infrequent room, such as a boiler room, the detector need to be installed outside the room so that the alarm sound can be heard easily.

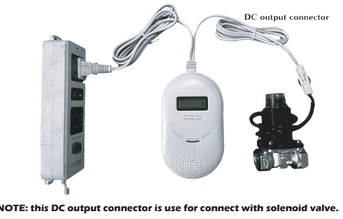
Detectors and fuel use appliances should be located in the same room.
If the detector is mounted on a wall, its height should be higher than any window or door, but it must be at least 150mm from the ceiling.
The detector is at least 1m to 3m away from the potential gas source.
If there is a partition in the room, the detector should be on the same side of the partition as the source of potential gas.
The detector should be located very close to the area that the occupants often breathe.

WARNING
Drop, collision, may or complete loss of detection function.

Please avoid the following places unsuitable to install an alarm to avoid the damage or unnecessary false alarm or no alarm.
• Do not install the alarm behind drape or furniture.
• Do not install the alarm in a path of air discharged from a furnace or air conditioning vent or ceiling fan.
• Do not install the alarm in places that the temperature can easily drop to -10˚C or rise to over 55˚C.
• Do not install the alarm in places with much lampblack or dust, which will easily block its sensor.
• Do not install the alarm in too moist places.
• Do not install the alarm directly above a sink or cooker.

5. Installation Diagram

WARNING
• Be sure to test the product to ensure that the detector is functioning properly.
• Water mist or drip may cause electric shock and reduce the detection function.
• Cut off the power supply will not be able to play the detection function.



NOTE: this DC output connector is use for connect with solenoid valve.

6. How to Install the Gas and Carbon Monoxide Alarm

This Gas and CO alarm is powered by AC 100-240V power supply. make sure the alarm can be heard from all sleeping areas or place several alarms.
Install the alarm in places easy to test and operate. choosing the suitable position to install the alarm according to the gas specific gravity.
detecting the gas heavier than air: Installation height from floor, 0.3-1.0 meter, semi-diameter to gas source < 1.5m.
detecting the gas lighter than air: Installation height from celling 0.3-1.0 meter, semi-diameter to gas source < 1.5m.
Wall mounting installation steps:
1) Having established the mounting location ensure that there is no electrical wiring or pipe work in the area adjacent to the mounting surface.
2) Mark the two mounting hole locations in a wall and drill holes in the marked position, insert wall plugs into the holes.
3) Lock the mounting bracket with the screws, tighten the screws properly.
4) Connect the alarm to 100-240V AC power supply. after a beep, the alarm enter in the 180-second countdown to warm up, then enter the standby state, and then test whether the alarm is functioning properly by press the "TEST" button on the detector to make sure it is normal functioning.
5) Clip in the alarm into the mounting bracket.

CAUTION
For safety of the user the CO alarm cannot be mounted without its batteries. When replace the battery, test the alarm to make sure it is normal functioning.

WARNING!
This apparatus should be installed by a competent person.

7. Operation Instructions

1) Connect the alarm to 100-240V AC power supply, the buzzer emits a "beep" sound and the detector starts to warm up for 180s. the LCD screen displays the count down, at this time, the detector has no detection function. after 180s, the detector enters the normal monitoring state and the LCD screen shows "0". When the measured value of the CO gas over than 20ppm or Combustible gas over than 4%LEL(2000ppm) in the air, the LCD displays the real-time concentration of the measured gas in the environment.
2) When the concentration of the measured gas in the environment reaches the alarm setting value, the detector emits an audible and visual alarm indication.
3) Green power indicator, always on, indicating that the detector is normal working, in standby state.
4) Red alarm indicator
When the detector detected CO gas and enters the alarm state, the red alarm indicator flashes rapidly and the buzzer sounds at the same time. the alarm of the alarm signal makes four cycles, then turn off for 2 seconds until the CO concentration drops below the alarm setting value(30ppm).
When the detector detected Combustible Gas and enters the alarm state, the red alarm indicator flashes rapidly and the buzzer sounds at the same time, the alarm of the alarm signal will go on continuously, buzzer sounds two times and red light flashes two times per 1 secounds, until the Gas concentration drops below the alarm setting value(4.0%LEL).
5) This Gas and CO alarm has an automatic self-test function to detect any failure of hardware.
Fault: Yellow fault indicator flashes 2 tims, LCD display "Err", the buzzer sounds 2 times per 40 second, indicating that the sensor has failed, at this time, there is no detection alarm function, please contact dealer for repair.
End of Life: The sensor max life is 5 years, when the life of the sensor ends, it will have a prompt, the buzzer sounds 3 times and yellow indicator flashes 3 times per 10 seconds, and LCD display "End". Please change a new detector.

WARNING
Please stop using permanently damaged alarm! Do not make unauthorized disassembly, repairing, or delivery to those authorized service points that are not designated by the manufacturer.

6) Alarm Silence
In CO alarm state, and CO concentration is between 100-200PPM, press the test button to trigger the silencing mode, the silencing time is 10 minutes, the buzzer does not work during the silencing period. When the CO concentration exceeds 300PPM the silencing mode will be cancelled immediately.
In GAS alarm state, press the test button to trigger the silencing mode, the silencing time is 10 minutes, the buzzer does not work during the silencing period.
7) Fault Silence
Under the sensor fault state, short press the test button to trigger the fault silencing mode, turn off the buzzer beep of the sensor fault, and exit automatically after 8 hours.

NOTE: this alarm can be silence by matched remote controller, any remote silencing feature shall only be used in line of sight of the GAS/CO alarm.

8. Display, Indicate illustrate

CONDITION	OPERATION	LED	HORN
Power up	Connect to AC 100-240V power supply	All lights flash one time	One short beep
Warm-up	After power up	Green light flashs one time per 2 second	None
Stand-by condition	After warm-up, the alarm turns to standby condition	The green light always on	None
Test condition	Press TEST button	Green / yellow / red lights flash alternately	The alarm sound four beeps
Alarm condition	The presence of carbon monoxide	The red light keeps flashing.	Four beep per 3 seconds
	The presence of combustible gas	The red light keeps flashing.	The buzzer keeps sounding.
Malfunction	None	Yellow light flashs 2 times per 40 seconds	Two beeps per 40 seconds

9. Maintenance

This detector has been calibrated before leaving the factory, It is only necessary to clean its housing frequently during use, to ensure that the hole in front of the detector is not blocked by dirt or dust. basic maintenance is not required, when cleaning the detector housing, wipe it with a clean, soft-bristled or dry flannel. do not use cleaners, bleach, or polishes. Maintained properly, the Gas and CO alarm will alert you to potentially hazardous CO or Combustible gas concentration in the home, for keep the Gas and CO alarm proper working, it is recommended:
• Test your alarm every month.
• Vacuum cleaning regularly to prevent dust.
• Do not use cleaning solutions on the alarm.
• Keep away from solvents or detergents.
• Avoid spraying air-freshener, hair-spray near the alarm.
• Do not paint the alarm.

ATTENTION:
The following substances can affect the sensor and cause false alarms: Benzene, Toluene, Ethyl acetate, Iso-butane, Iso-propanol, Ethylene, Hydrogen Sulphide, Hydrogen, Sulphur Dioxide, alcohol based products, paints, thinners, solvents, adhesives, hair-sprays, aftershaves or perfumes and some cleaning agents.

CAUTION:
This alarm is designed for indoor use only, do not expose to rain or moisture, do not open or tamper the alarm as this could cause malfunction and risk of electric shock.
Coverage the alarm, improper use or maintenance may reduce or lose detection capabilities.

10. What to do in the Event of the Alarm Sound

WARNING:
Activation of the alarm indicates the dangerous CO or Combustible Gas level presence.

If the alarm sounds:
1) Immediately move to fresh air outdoor or open all doors and windows to ventilate the area and allow the noxious gas to disperse. stop using all fuel-burning appliances, if possible, ensure that they are turned off.
2) Immediately inform all other people to evacuate to safe outdoor regions with fresh air and count noses, ask for help from first-aid agencies by dialing or other means, safely ventilate the house after first-aid personnel arrives to eliminate the dangerous source. non-professional person without oxygen supply and gas defense equipment shall not enter the dangerous regions again before the alarm removes the alarm status. If someone is poisoned or suspected of having been poisoned by carbon monoxide, please turn to the emergency medical institutions for help immediately.
3) If the alarm continues to sound, then evacuate the premises, alerting other occupants of the risk. Leave doors and windows open. Do not re-enter the premises.
4) Get medical help for anyone suffering the effects of carbon monoxide poisoning.
5) Telephone the appropriate appliance servicing and maintenance agency necessary, and the relevant fuel supplier on their emergency number, so that the source of carbon monoxide emissions can be identified and corrected. Unless the reason for the alarm is obviously spurious, do not use the fuel-burning appliances again, until they have been checked and cleared for use by a competent person according to national regulations.

WARNING:
The installation of the apparatus should not be used as a substitute for proper installation, use and maintenance of fuel burning appliances including appropriate ventilation and exhaust systems.
This product cannot prevent, detect and control your gas appliance and exhaust system.

WARNING:
Gas and Carbon Monoxide Alarm could not function as a replacement of smoke alarm.
If multiple alarms occur again in 24 hours after a carbon monoxide leakage has occurred and been eliminated professionally, ask qualified agencies or professionals for troubleshooting your gas appliances and exhaust ventilation systems.

WARNING:
This detector is designed to protect individuals from the acute effects of carbon monoxide exposure. however, It may not prevent the chronic effects of carbon monoxide exposure and will not fully safeguard individuals at special risk or with specific medical conditions. If in doubt, consult a medical practitioner.

11. Common Faults and Solutions

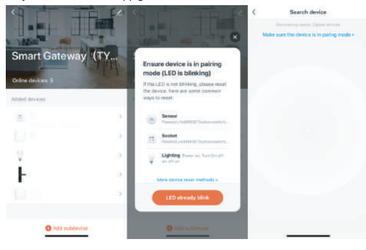
Fault phenomenon	Cause of failure	Solution
The green power indicator is off	The alarm hasn't been powered on	Connect to AC power
	The indicator lamp has failed	Contact dealer or manufacturer for repairs
No alarm when press the "Test" button	Circuit failure	Contact dealer or manufacturer for repairs
No response to the test gas	Preheating is not completed	Wait for the end of warm-up
	Circuit failure	Contact dealer or manufacturer for repairs
After the warm-up period is over, the detector continuous alarm	Smoking, drinking, or heavy use of volatile organics such as perfume, gasoline, banana water, and paint in the environment	Move to clean air and test whether its performance is normal
	Circuit failure	Contact dealer or manufacturer for repair

12. Product Specifications

Product name: Gas and Carbon Monoxide Alarm
Model No.: JKD-816COM-Z
Communication protocol: Zigbee
Supply voltage: AC 100-240V, 50Hz
Power consumption: Max 5W
Standard: EN50291-1:2018 / EN50194-1:2009
Gas detected: CH4/CO
Alarm concentration: CO: 50ppm, Alarm within 60~90min
100ppm, Alarm within 10~40min
300ppm, Alarm within 0~3min
CH4: ＞8.0%LEL(4000ppm)
Operating environment: Temperature: -10℃~55℃
Relative humidity: 95% No condensing
Atmospheric pressure: 86kPa~106kPa, Indoor use type
Sampling Method: Natural diffusion
Alarm Method: Sound, Lighting Alarm
Alarm volume: ≥85dB at 3m
Sensors: Catalytic and Electrochemical sensor
Max sensor lifetime: 5 years
Type: B
Weight: around 230g
Size: L136×W82×H39mm

13. How to Connect Your Alarms to Your Home Gateway

Step 1: Power on the gateway and use an Ethernet cable to connect it to a router.
Make sure that the mobile phone and the gateway run over the same local area network (LAN). The mobile phone must be connected to a 2.4 GHz Wi-Fi network.
NOTE: After the gateway is added, a Zigbee device that is connected to the gateway can be added.
Step 2: Use your mobile phone, go to the gateway page and tap "Add subdevice".
Step 3: Press and hold the TEST button of the Alarm for 15 seconds until the green light blinking.
Step 4: Then follow the app guide to connect it.



14. Manufacturer Information:

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