

Qoltec®



USER MANUAL

SMART NATURAL GAS AND CARBON
MONOXIDE LEAK DETECTOR

52654

Introduction

Thank you for choosing the Qoltec Smart Natural Gas (CH₄) and Carbon Monoxide (CO) Leak Detector. To ensure personal and system safety and to achieve the best performance from the device, please read this manual carefully and thoroughly before installing, using or repairing this device. Please pay particular attention to the warnings and notes contained in the manual.

About the product

This domestic combustible gas detector utilises a high-quality gas sensor. The device is manufactured using a high-performance single-chip microcomputer, advanced electronic components and modern technology. Thanks to its hardware and software, the detector is capable of detecting sensor failure whilst monitoring gas concentrations, ensuring a high level of safety and reliability.

The detector is suitable for installation in residential homes where there is a risk of gas leaks. It can continuously monitor the concentration of flammable gases indoors. When the gas concentration reaches the alarm threshold, the device will emit an audible and visual alarm, allowing for swift action to prevent fire, explosion or poisoning.

Sensor design

Figure 1 in the appendix to the manual

- 1 Status indicator
- 2 Lifespan indicator
- 3 Button
- 4 Audible alarm ports
- 5 Gas detection ports
- 6 Power cable
- 7 Solenoid valve cable
- 8 Relay cable
- 9 Mounting plate

Note: If the product has a solenoid valve and relay function, please take the following information into account. If not, you may disregard it.

Installation method

Note: The detector is intended for indoor use only. It must be installed in areas where gas leaks or accumulation may occur. The detector should be mounted horizontally at a distance of 1 m to 4 m from the gas appliance and vertically at a distance of 0.3 m to 1 m from the ceiling. Users may select the installation location in accordance with the diagram below, adapting it to the actual conditions.

1. Select a suitable location on the wall for mounting the detector;
2. Use wall plugs to secure the mounting plate;
3. Switch on the detector and check that it is working correctly;
4. Install the detector by hanging it on the mounting plate.

Figure 2 in the appendix to the manual

Note:

1. The power cable is fitted with a plug; please connect it directly to a suitable socket.
2. The solenoid valve is polarised — the red wire is the positive terminal, the black wire is the negative terminal; connect them according to the markings.
3. The relay is non-polarised and does not require polarity distinction when connecting — it can be connected directly.
4. If the product has both a solenoid valve and a relay, please take the above points into account. Otherwise, they may be disregarded.

AVOID Installation:

- Near ventilation inlets/outlets, extractor fans, doors or windows with strong air flow,
- Places with high humidity or exposed to water droplets,
- Directly above sources of heat or steam,
- Above gas appliances,
- Places prone to dirt,
- Areas obstructed by obstacles.

Note: If the room is to be painted or refurbished, please do not install the detector until the renovation or painting work has been completed.

User manual

1. Connect the detector to a power source. The green power LED will flash during the 3-minute warm-up period, during which gas detection is disabled. After the warm-up, the green LED will remain lit and the detector will switch to normal detection mode.
2. When the concentration of both gases reaches the alarm threshold, the red LED will flash and the detector will emit 4 beeps, repeated until the alarm ends.
If only carbon monoxide reaches the alarm threshold, the red LED flashes and the detector emits 3 repeated beeps.
If only methane reaches the alarm threshold, the red LED will flash and the detector will emit 2 repeated beeps.

In the event of an alarm, immediately shut off the gas supply, open the windows, do not use any electrical appliances (including mobile phones) and move to a well-ventilated area. If necessary, contact a gas specialist.

3. The alarm will switch off automatically when the gas level falls below the safe limit. The audible and visual signal indicates that the gas concentration has exceeded the limit.
4. If the yellow LED is lit continuously and the siren sounds every 10 seconds:
 - 3 beeps — both sensors (CO and methane) are faulty,
 - 2 beeps — methane sensor faulty,
 - 1 beep — carbon monoxide sensor faulty.

In this case, the detector is not working properly. Contact the service centre or distributor.

5. To perform a self-test, press the button once. The siren will sound 4 beeps, and the yellow, red, yellow and green LEDs will flash in sequence (1 cycle). The detector will return to normal monitoring. If the self-test fails, contact the service centre or the manufacturer.
6. If the yellow LED is flashing and the siren emits 3 beeps every 10 seconds, briefly press the button to perform a self-test:

- If the green LED is lit continuously and the siren is silent, this indicates that the CO sensor has reached the end of its service life.
- If the yellow LED continues to flash and the siren emits 3 beeps every 10 seconds, this indicates that both sensors – methane and CO – have reached the end of their service life.

Contact the service department or the manufacturer for repair or replacement.

7. Indicator light statuses.

Description of LED indicators:

Green LED: Power

Red LED: Alarm

Yellow LED: Fault

<i>Mode</i>	<i>LED</i>	<i>Lifespan indicator</i>	<i>Audible signal</i>
<i>Heating mode</i>	<i>Green LED flashes</i>	-	-
<i>Normal mode</i>	<i>Green LED is lit continuously</i>	-	-
<i>Self-test mode</i>	<i>Flashing in sequence: yellow, red, yellow and green (1 cycle)</i>	-	<i>4 beeps (1 cycle)</i>
<i>Fault mode</i>	<i>Yellow LED remains lit</i>	-	<i>CO+CH4: 3 beeps every 10 seconds (continuous cycle)</i>
		-	<i>CH4: 2 beeps every 10 seconds (continuous cycle)</i>
		-	<i>CO: 1 signal every 10 seconds (continuous cycle)</i>

<i>Alarm mode</i>	<i>Red LED flashes continuously</i>	-	<i>CO: 3 beeps every 2 seconds (continuous cycle)</i>
		-	<i>CH4: 2 beeps every 2 seconds (continuous cycle)</i>
		-	<i>CO+CH4: 4 beeps every 2 seconds (continuous cycle)</i>
<i>End of CO sensor life</i>	<i>Yellow LED flashes continuously</i>	-	<i>3 beeps every 10 seconds (continuous cycle)</i>
<i>End of service life of CO + methane sensors</i>	<i>Yellow LED: flashing continuously (Pressing the button does not restore normal operation.)</i>	-	<i>Audible signal: 3 beeps every 10 seconds (cyclical) (Pressing the button does not restore normal operation.)</i>

1. Network connection setup

Connect the detector to the power supply, then hold the button down for 3 seconds during the warm-up process. Release the button when the red LED starts flashing rapidly. Enable Wi-Fi and Bluetooth on your phone and connect to your home Wi-Fi network (the network must operate on the 2.4 GHz band). If the connection is not established within 2 minutes, pairing mode will switch off automatically (Figure 3 in the appendix to the manual).

- 1)
- 2) Open the Tuya Smart or Smart Life – Smart Living app.
- 3) Select the [Add Device] option. (Figure 4 in the appendix to the manual).
- 4) Your phone will automatically scan for nearby devices. The detected device will be displayed – marked with a red rectangle.
- 5) Tap [Add]. A window will appear where you must enter your Wi-Fi password, then tap [Next].
- 6) After a few seconds, the device will be successfully added.

- 7) You can also add the device manually (Bluetooth must be enabled on your phone). After entering [Add Device], select the 'Sensor' category, then 'Gas Detector (Wi-Fi)'.
- 8) After completing the previous step, a window will appear where you should enter the Wi-Fi password and click [Next].
- 9) Check the message shown in the illustration and click [Confirm the indicator is blinking].
- 10) Click [Blink Quickly].
- 11) After a few seconds, the detected gas detector will appear – click [Next].
- 12) Once the process is complete, a screen confirming the addition of the device will appear. Here, you can rename the detector as required. When finished, click [Done].

Figure 5 in the appendix to the manual

Note:

Make sure your home Wi-Fi network is working properly, otherwise you may not be able to use the device.

If you change your Wi-Fi network, you must remove the device from the app and add it again following the instructions in point 1.

Warm-up mode

Once the detector is connected to a power source, the green power LED will start flashing and the device will enter warm-up mode, which lasts approximately 3 minutes. During this time, the detector will not detect gas leaks. After 3 minutes, the device will switch to normal operating mode and the green LED will remain lit.

Alarm mode

When the concentration of gas in the air reaches the set alarm threshold, the detector will enter alarm mode:

- the red LED will flash,
- the device will emit 4 audible beeps repeated cyclically,
- the mobile app will display a gas leak notification.

In this situation, you must immediately:

- turn off the gas supply,

- open the windows,
- do not switch on any electrical appliances (including your phone),
- if necessary, contact a specialist to repair the leak.

Sensor activation thresholds (carbon monoxide): in accordance with PN-EN 50291-1:2018

Alarm levels and volume:

Alarm level (natural gas): 10% LEL $\pm$ 3%

Alarm level (carbon monoxide): in accordance with PN-EN 50291-1:2018

- 50 ppm – alarm after 60–90 minutes
- 100 ppm – alarm after 10–40 min
- 300 ppm – alarm $\leq$ 3 min

Alarm volume: $\geq$ 85 dB(A) at a distance of 3 m

Installation: Installation must be carried out in accordance with the instructions, by a competent person and in compliance with local regulations.

Return to normal operation

When the gas concentration falls below the alarm threshold, the device will automatically end the alarm state.

If the detector triggers the visual and audible alarm again, this means that the gas concentration has once again exceeded the safe level.

Detector fault alarm

If the yellow LED is lit continuously and you hear 3 beeps every 10 seconds, this indicates a fault with the detector. The device cannot detect gas correctly — contact your retailer for repairs.

Wi-Fi connection problem indicator

If the yellow LED is lit continuously and you hear 4 beeps every 10 seconds, you should:

- check that the router is working properly,
- verify that the Wi-Fi network is operating on the 2.4 GHz band,

- ensure that the Wi-Fi signal at the detector's installation site is stable,
- check that the Wi-Fi network name or password has not been changed.

Functionality test

As part of a routine check, press the button once.

The detector will enter self-test mode:

- the device will emit 4 beeps,
- the battery life indicator will flash 4 times,
- the LEDs: yellow, red, yellow and green will light up in sequence (1 cycle),
- your phone will receive a notification about the alarm test.

Once the test is complete, the device will automatically return to normal operating mode.

The self-test also includes triggering the solenoid valve and the relay (if connected).

If the device does not perform the self-test, contact your dealer or the manufacturer.

Sensor wear – messages

The device has two independent sensors:

CO sensor – service life 3 years,

methane (CH₄) sensor – 5-year lifespan.

If the CO sensor reaches the end of its service life but the methane sensor is still working, the device will trigger an end-of-life alert:

- the yellow service life LED flashes,
- 3 beeps are heard every 10 seconds.

Pressing the button will trigger a self-test, after which the device will return to normal operation — but pressing the button again will trigger the alert once more (as per the device's design).

This function only works when:

- the CO sensor has failed,
- the methane sensor is still operational.

If both sensors have expired, the device will not allow the end-of-life alarm to be cancelled.

Please contact your retailer or the manufacturer to arrange for repair or to purchase a new detector.

Technical specifications

Standard	EN 50291-1:2018; EN 50194-1:2023; RED 2014/53/EU
Operating voltage	AC 100V–240V / 50Hz–60Hz
Application	Methane (CH ₄) / Carbon monoxide (CO)
Sampling method	Free diffusion
Sensor type	Semiconductor (CH ₄) / electrochemical (CO)
Sensor lifetime	5 years (typical for CH ₄) 3 years (typical for CO)
Alarm volume	7% LEL ± 3% LEL (CH ₄) / 70 ± 30 ppm (CO)
Alarm mode	Audible + visual
Alarm sound level	≥85dB (1 metre in front)
Installation	Wall-mounted
Storage temperature	-20°C to 55°C
Operating environment	Temperature: -10 °C to 40 °C Relative humidity: <95% (non-condensing) Ambient pressure: 86 kPa ~ 106 kPa
Dimensions	112 mm × 86 mm × 33.5 mm

Troubleshooting

Fault	Possible cause	Solution
The green power LED is not lit	The power cable is not connected properly	Check and reconnect the power cable
	Faulty power LED or circuit failure	Contact your distributor or the manufacturer for repairs
No audible or visual alarm during the self-test	Circuit failure	Contact your distributor or the manufacturer for repair
No response to detected gas	The detector is warming up	Wait for the warm-up to complete

	System failure	Contact your distributor or manufacturer for repairs
	The power cut lasted too long	Switch on the power and wait at least 4 hours
	Gas concentration has not reached the alarm level	Wait until the gas concentration reaches the alarm threshold
Continuously alarming after turned on and time-lapse	Presence of large amounts of cigarette smoke, alcohol or volatile organic compounds (e.g. petrol, perfume, banana oil, paint)	Move to a clean, well-ventilated area and try again
	System failure	Contact your distributor or manufacturer for repairs
Wi-Fi connection error	Wi-Fi disconnection	1. Check that the router is working properly. 2. Check that the Wi-Fi signal is operating on the 2.4 GHz band. 3. Ensure that the Wi-Fi signal at the device's installation location is stable. 4. Check that the Wi-Fi network name or password has not been changed.

NOTES:

In the event of a fault that you cannot resolve yourself, do not dismantle the detector. Contact your distributor or the manufacturer for assistance.

NOTES:

1. High levels of cigarette smoke, alcohol or volatile organic compounds such as petrol, perfume, banana oil or paint in the room may cause false alarms;
2. Do not use gases of unknown concentration to test the detector. Gases of very high concentration may damage the sensor, shorten its service life and be harmful to health;
3. Contact your distributor or manufacturer for assistance and use suitable gases at the correct concentration for the annual testing of the detector;
4. The product must not be used or stored in an environment containing corrosive gases (e.g. chlorine);
5. Regularly clean the surface of the detector of dust and oily dirt using a brush or a dry, soft cloth;
6. After prolonged storage or transport, switch on the detector and leave it for at least 24 hours to achieve optimum performance;
7. Under normal operating conditions, the semiconductor sensor has a service life of up to 5 years, and the electrochemical sensor up to 3 years.

Product maintenance

1. Clean the detector at least once a year, ensuring that the gas inlet is free from dust and oil;
2. After cleaning, reinstall the detector on the mounting plate and check that it is working;
3. Carry out an analogue alarm test every six months to ensure correct operation;
4. Do not expose the detector to prolonged or frequent exposure to high concentrations of gas, as this may reduce the sensitivity of the sensor, shorten its service life or damage it;
5. The detector should be connected to a stable power supply;
6. In the event of a fault, contact the distributor or manufacturer to arrange for repairs or to purchase a new unit.

Disposal

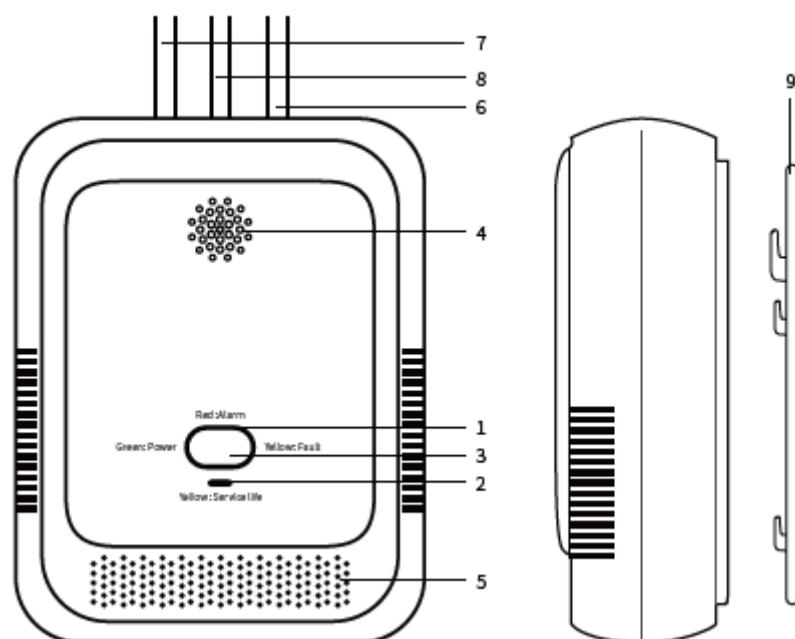
Dispose of in accordance with local regulations regarding electronic waste. Do not throw into fire or incinerate.

Warranty

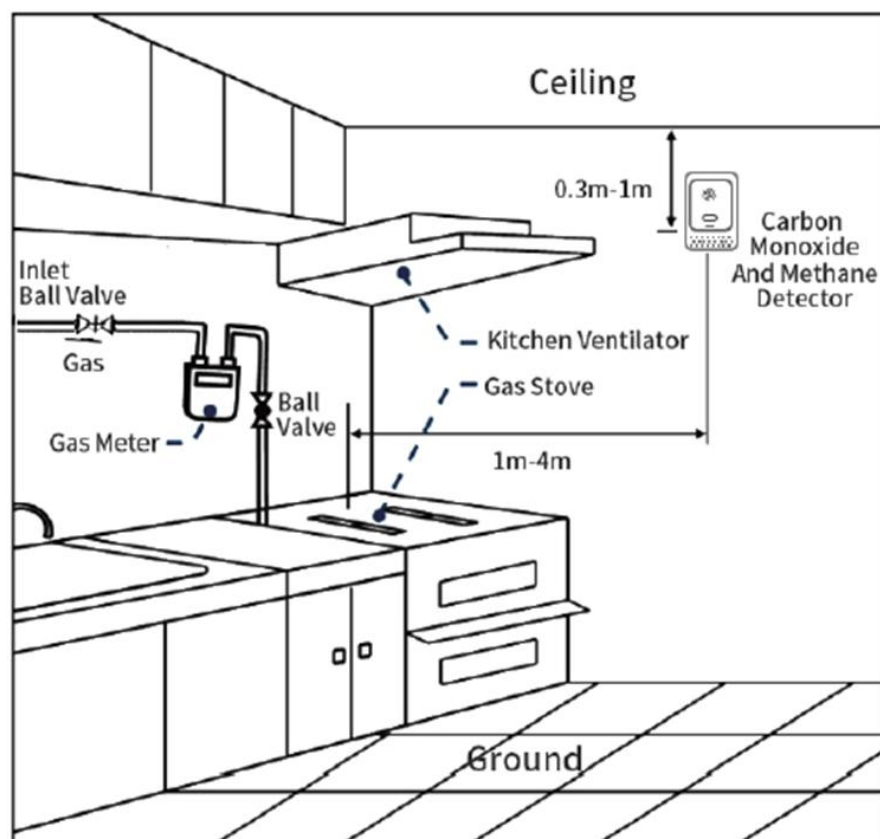
The product is covered by a 24-month manufacturer's warranty from the date of purchase. In the event of any issues, please contact customer service.

Attachment 1

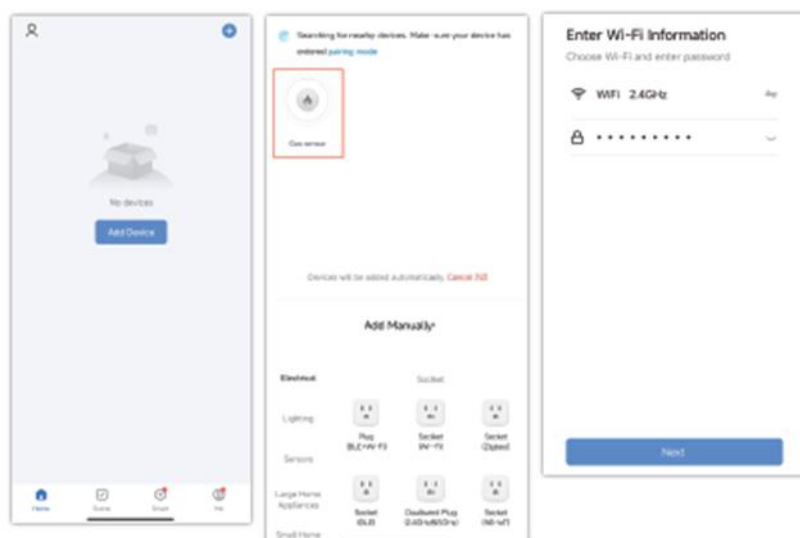
1



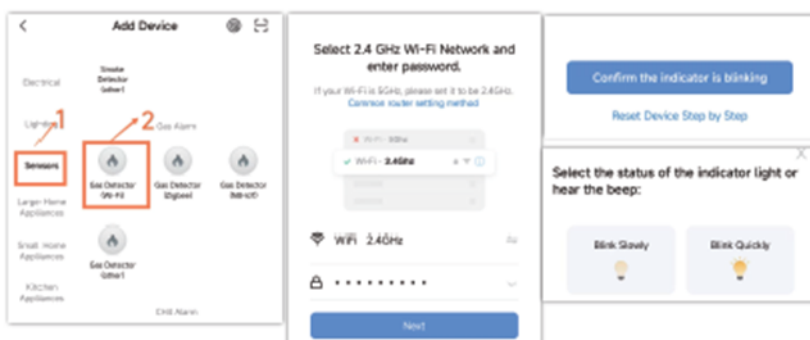
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3



4



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