

Qoltec[®]



USER MANUAL

SMART NATURAL GAS AND CARBON
MONOXIDE LEAK DETECTOR

Model: 52578

Introduction

Thank you for choosing the Qoltec Smart Natural Gas and Carbon Monoxide Leak Detector. To ensure your 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 this 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 a sensor failure whilst monitoring gas concentrations, ensuring a high level of safety and reliability.

The detector is suitable for installation in residential properties where there is a risk of a gas leak. 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, enabling swift action to be taken to prevent fire, explosion or poisoning.

Figure 1 in the appendix

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

Note: If the product is fitted with a solenoid valve and a relay, please take note of the information below. If not, you may disregard it.

IMPORTANT SAFETY INFORMATION

1. Before installing and using the device, please read the user manual carefully.
2. The device should be installed by a competent person, in accordance with the user manual and the requirements regarding the location and method of installation.
3. The detector is designed to detect carbon monoxide (CO) and natural gas, in accordance with the manufacturer's intended use.
4. Do not use the device to detect other gases, smoke or fire unless this function has been explicitly specified by the manufacturer.
5. The detector must only be installed in the location and at the height specified in the user manual. Incorrect positioning may reduce the effectiveness of hazard detection.
6. Do not cover or block the sensor's vents.
7. Do not paint, stick labels on, cover or modify the device.
8. Do not install the detector in locations exposed to direct contact with water, steam, strong draughts, excessive dust, grease or corrosive chemicals, unless the instructions for the specific model state otherwise.
9. Do not use aerosols, solvents or strong cleaning agents in the immediate vicinity of the sensor.
10. Do not dismantle or repair the device yourself.
11. Do not test the sensor using an open flame, vehicle exhaust fumes, a lighter or by deliberately releasing gas.
12. Check the device's operation regularly using the TEST function, in accordance with the instructions in the user manual.
13. Do not ignore fault signals, low battery warnings or indications that the sensor has reached the end of its service life.
14. Once the stated service life has elapsed, the device must be replaced.

IMPORTANT:

The sensor does not replace the correct installation, use and periodic inspection of gas appliances, heating systems and room ventilation.

The device is an additional component of the safety system. You should regularly inspect the gas installation, fuel-burning appliances, flues and the ventilation system to ensure it is unobstructed.

Incorrect installation, obstruction of the detector or failure to check its operation regularly may reduce its effectiveness in detecting hazards.

WARNING REGARDING CARBON MONOXIDE:

“This device is designed to protect people from the serious effects of carbon monoxide exposure. However, it cannot fully protect people with specific health conditions. If in doubt, consult a doctor.”

Installation method

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

1. Select a suitable spot on the wall for mounting the detector;
2. Secure the mounting plate using wall plugs;
3. Switch on the detector and check that it is working correctly;
4. Fit the detector by hanging it on the mounting plate.

Figure 2 in the appendix

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 to be distinguished when connecting — it can be connected directly.
4. If the product features 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 water vapour,

- Above gas appliances,
- Places prone to dirt accumulation,
- Areas obscured by obstacles.

Please 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.

Figure 3 in the appendix

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. Once the warm-up is complete, the green LED will remain lit and the detector will enter normal detection mode.

In the event of a natural gas leak alarm

Treat the alarm as a warning of a potential hazard.

- 1) Do not use naked flames or smoke.
- 2) Do not switch lights or electrical appliances on or off.
- 3) Do not plug appliances into or unplug them from electrical sockets.
- 4) Do not use any appliances that could produce a spark.
- 5) If it is safe to do so, shut off the main gas supply valve.
- 6) If it is possible to do so without compromising safety, open doors and windows to ventilate the room.
- 7) Leave the affected room.
- 8) From a safe location, contact the relevant emergency services.
- 9) Do not return to the room until the cause of the leak has been identified and rectified.

In the event of a carbon monoxide alarm

Carbon monoxide (CO) is a colourless and odourless toxic gas, so its presence cannot be detected by sight or smell.

If the alarm sounds:

- 1) Do not ignore the alarm.
- 2) If you can do so quickly and safely, open doors and windows to ventilate the room.

- 3) If it is safe to do so, switch off any fuel-burning appliances that may be the source of the carbon monoxide.
- 4) Leave the room or building and go out into the fresh air.
- 5) Make sure that everyone else has also left the area at risk.
- 6) Contact the relevant emergency services.
- 7) Do not return to the room until the source of the carbon monoxide emission has been identified and removed.
- 8) If you experience symptoms such as headache, dizziness, nausea, weakness, confusion, shortness of breath or loss of consciousness, seek medical assistance immediately.

Alarm signalling

- 1) 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.
- 2) 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 audible signals.

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.

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 — the methane sensor is faulty,
- 1 beep — the carbon monoxide sensor is faulty. In this case, the detector is not functioning correctly. Contact the service centre or your supplier.

To perform a self-test, press the button once. The buzzer 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.

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 three 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.

Indicator light statuses

<i>Mode</i>	<i>LED</i>	<i>Service life 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>The LEDs flash in sequence: yellow, red, yellow and green (1 cycle)</i>	-	<i>4 beeps (1 cycle)</i>
<i>Fault mode</i>	<i>The 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>The 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</i>

			<i>seconds (continuous cycle)</i>
<i>Operating period</i>	<i>The yellow LED flashes continuously</i>		<i>3 beeps every 10 seconds (continuous cycle)</i>

Technical specifications

Standard	EN 50194-1:2023
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 service life	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	≥85 dB (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 correctly	Check and reconnect the power cable correctly
	Faulty power LED or circuit failure	Contact your distributor or the manufacturer for repairs
No audible or visual	Circuit failure	Contact your distributor

alarm during the self-test		or the manufacturer for repairs
No response to detected gas	The detector is warming up	Wait for the warm-up to complete
	System failure	Contact your distributor or the manufacturer for repairs
	The power cut lasted too long	Switch on the power and wait at least 4 hours
	The gas concentration has not reached the alarm threshold	Wait until the gas concentration reaches the alarm threshold
Continuously alarming after switched 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 the manufacturer for repairs

Notes:

In the event of faults that cannot be rectified by 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 the detector to trigger false alarms;
2. Do not use gases of unknown concentration to test the detector. Gases with very high concentrations may damage the sensor, shorten its service life and be harmful to health;
3. Contact your distributor or the 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 to remove 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, whilst the electrochemical sensor has a service life of 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, refit the detector onto the mounting plate and check that it is working correctly;
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 sensor's sensitivity, 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 your distributor or the manufacturer to arrange for repairs or to purchase a new unit.

Disposal

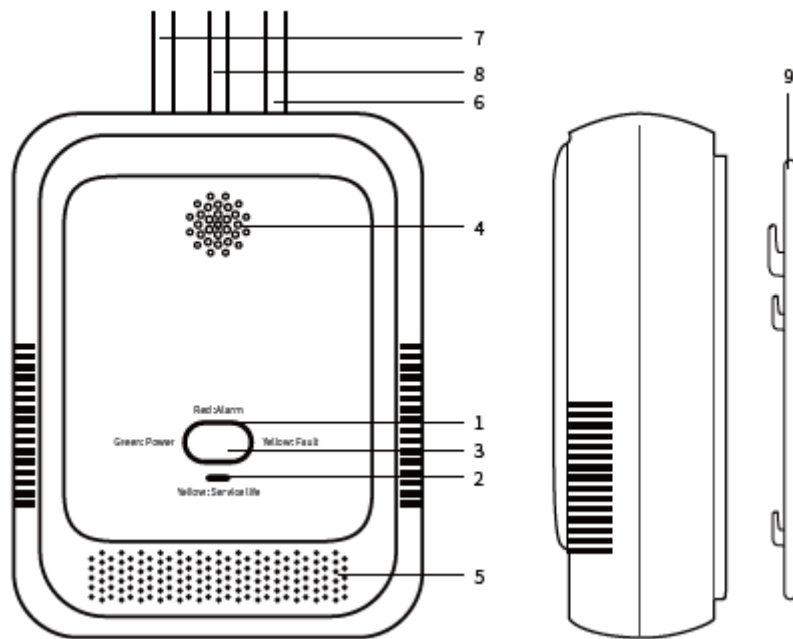
Dispose of in accordance with local regulations on electronic waste. Do not throw into a fire or burn.

Warranty

The product is covered by a 24-month manufacturer's warranty from the date of purchase. If you experience any problems, please contact customer services.

Attachment

1



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