

Qoltec[®]



USER MANUAL

SMART CARBON MONOXIDE (CO)

DETECTOR

Model: 52644

Introduction

Thank you for choosing the Qoltec Smart Carbon Monoxide (CO) 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

The detector is suitable for installation in residential properties. It can continuously monitor carbon monoxide concentrations indoors. When the concentration reaches the alarm threshold, the device will emit an audible and visual alarm, allowing you to take swift action to prevent fire, explosion or poisoning.

Features:

- Electrochemical CO sensor
- Digital temperature compensation
- Low battery indicator
- Automatic sensor fault detection
- Protection against reverse battery polarity and electrolyte leakage, enhancing safety in use
- Complies with standard EN 50291-1:2018+AC:2021

Safety instructions

1. Do not install the device in locations exposed to moisture, condensation or direct contact with water.
2. The device must be installed out of reach of children and unauthorised persons.
3. Do not install the sensor near high-voltage sources, equipment generating strong electromagnetic fields, or in locations exposed to electromagnetic interference.
4. It is forbidden to dismantle, modify or tamper with the device yourself. Unauthorised tampering may damage the sensor and compromise its protective functions.
5. The device is designed to detect dangerous concentrations of carbon monoxide and to reduce the risk of acute CO poisoning. The detector does

not provide complete protection for people with respiratory or circulatory conditions or other health problems. If in doubt, consult a doctor.

6. Do not silence the alarm signal by covering the device, pressing down on it with heavy objects or using other methods to reduce the alarm sound.
7. Do not drop the device and protect it from strong mechanical impacts, which may affect the sensor's proper functioning.
8. A carbon monoxide detector is not a smoke detector and must not be used as a fire or smoke detection device.
9. If the device operates for a long period in extreme environmental conditions, its service life may be reduced.

Battery installation instructions

1. Open the battery compartment as indicated on the device's casing.
2. Insert 2 x 1.5V AA alkaline batteries (LR6), taking particular care to ensure the correct polarity of the '+' and '-' terminals.
3. Once the batteries are correctly installed, the device will automatically enter initialisation mode.
4. Close the battery compartment cover and ensure it is securely fastened.
5. Press the TEST button to check that the device and the alarm are functioning correctly.
6. If the low battery indicator appears, replace the entire set of batteries with new ones immediately.
7. It is recommended that you use only high-quality AA (LR6) alkaline batteries. Do not mix new and used batteries, or batteries of different types or from different manufacturers.

Installation instructions

Note: The sensor is intended for indoor use only.

1. The device should be installed in accordance with the manufacturer's instructions.
2. Ensure that the alarm signal can be heard in all bedrooms. If only one carbon monoxide detector is used, it is recommended that it be installed near a bedroom rather than in the cellar. The recommended installation height is at least 1.8 m above floor level.
3. In multi-storey buildings, it is recommended that at least one detector be installed on each floor. The device should not be installed in areas with

restricted air circulation, such as ceiling cavities or roof ridges. Installation should also be avoided in areas exposed to strong draughts, near fans, doors and open windows.

4. It is recommended to maintain a distance of 1 to 3 metres from fuel-burning appliances and heat sources, which allows for effective detection of CO concentrations and easier viewing of the LED indicators.
5. The carbon monoxide detector should be installed away from dusty, dirty or greasy areas, such as kitchens, garages or boiler rooms. Dust, grease and chemicals can adversely affect the detector's proper functioning.
6. Do not install the device in areas with high humidity, such as bathrooms, or in areas exposed to aerosols. The detector should not be installed at temperatures below -10°C or above 40°C. Do not install the device behind curtains, furniture or other obstacles that restrict the free flow of air. Carbon monoxide must be able to reach the detector unimpeded.
7. Installing a CO detector does not replace the correct installation, operation and maintenance of fuel-burning appliances, including adequate ventilation and efficient flue gas extraction systems.

Fitting the device

1. Slide the mounting plate downwards. Then remove the transparent protective film from the batteries and insert 2 AA batteries, ensuring correct polarity.
2. Drill 4 mm diameter holes in the wall, spaced 62 mm apart, then insert the wall plugs into the holes. Align the holes in the mounting plate with the plugs and screw it in place until it is firmly attached to the wall. You may also use adhesive tape.
3. Press the self-test button to ensure that the device is working correctly and that it triggers an audible and visual alarm. The device should carry out a self-test once a week.
4. Align the holes on the back of the device with the mounting plate and install the device.

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1. Once the batteries have been installed, the device enters the pre-heating mode. The sensor requires 120 seconds to warm up before normal operation begins. During this time, a 120-second countdown is shown on the LCD display, and the green LED flashes every 2 seconds.

2. Once preheating is complete, the device enters normal standby mode. '0 ppm' appears on the LCD display, and the green LED flashes once every 40 seconds.
3. In either warm-up mode or normal standby mode, you can test the device by holding down the test button. '000ppm' will appear on the LCD display, the green and yellow LEDs will light up simultaneously, the red LED will start flashing, and the buzzer will sound.
4. If, during warm-up mode or normal standby mode, the carbon monoxide concentration exceeds 30 ppm, the LCD display will show the current CO concentration, and the green LED will flash once every 40 seconds.

Alarm mode

When the alarm is triggered, the buzzer emits a signal four times in succession. The green and yellow LEDs go out, and the red LED flashes. At the same time, the LCD display shows the current concentration, the 'Alarm' symbol, 'PPM' and the battery symbol.

Alarm thresholds

CO concentration	Alarm response
30 ppm	No alarm within 120 minutes
50 ppm	Alarm within 60–90 minutes
100 ppm	Alarm within 10–40 minutes
300 ppm	Alarm within less than 3 minutes

When the carbon monoxide concentration exceeds the alarm level, the device will automatically switch to continuous alarm mode. Once the alarm has been triggered, it can only be switched off once the carbon monoxide concentration has fallen below 30 ppm.

NOTE: This product does not have an alarm mute function.

In this situation, you should:

- Close the gas valve immediately.
- Open the windows immediately and ensure the room is well ventilated.
- Notify the relevant emergency services or qualified personnel to identify and remove the source of the hazard.

- If, after checking, the alarm turns out to be a false alarm, check that the detector has been installed in the correct location.

Yellow LED

The yellow LED flashes twice every 40 seconds and the buzzer emits two beeps when a fault occurs. The message 'Err' will appear on the LCD display. At this point, press and hold the self-test button — the error message interval will change to 1 second and the device will emit a single warning beep.

The yellow LED flashes once every 40 seconds and the buzzer emits a single beep when the battery is low. A low-battery symbol will appear on the LCD display — replace the batteries immediately.

If the LCD backlight is constantly on, 'End' appears on the display, the yellow LED is lit continuously, and the buzzer emits 3 beeps every 60 seconds — this indicates that the device has reached the end of its service life and can no longer function properly.

Never ignore an alarm signal. If in doubt, assume that the alarm has been triggered by a dangerous concentration of carbon monoxide and leave the building immediately. Failure to respond appropriately to the alarm may result in serious injury, poisoning or death.

Risks associated with carbon monoxide poisoning

Carbon monoxide is a toxic, colourless, odourless and tasteless gas, which is why it is easy to ignore and become poisoned. It has a paralysing effect on the human central nervous system. Severe cases of poisoning can lead to suffocation or death. The maximum concentration that a healthy adult can tolerate for 8 hours is 50 ppm.

Symptoms of carbon monoxide poisoning:

Mild: mild headache, weakness, tightness in the chest

Severe: severe headache, nausea, impaired limb movement, irritability, confusion, blurred vision, muscle weakness, dizziness

Very severe: convulsions, loss of consciousness, coma, collapse, death

Technical specifications

Standard	EN 50291-1:2018+AC:2021
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Operating voltage	AC 100V–240V
Standby current	<20 μ A
Alarm current	<45 mA
Sensor type	Electrochemical (CO)
Sensor service life	10 years
Alarm volume	$\geq$ 85 dB/3 m
Alarm mode	Sound + light
Power supply	DC 2 $\times$ 1.5V AA LR6 alkaline batteries
Battery life	2 years (replaceable)
Installation	Wall-mounted using screws or 3M adhesive
Operating environment	Temperature: -10 $^{\circ}$ C to 40 $^{\circ}$ C Relative humidity: <95% (non-condensing)
Dimensions	140 mm $\times$ 70 mm $\times$ 28 mm

Troubleshooting

1. Problem: The yellow LED flashes once every 40 seconds and the buzzer emits a single beep when the battery is low. A low battery symbol appears on the LCD display.

Solution: Replace the batteries immediately.

2. Problem: The LCD backlight remains on continuously, the message ‘End’ appears on the display, the yellow LED stays lit, and the buzzer emits 3 beeps every 60 seconds.

Solution: This indicates that the device has reached the end of its service life and the detector must be replaced.

3. Problem: The yellow LED flashes twice every 40 seconds, and the buzzer emits two beeps. The message ‘Err’ appears on the LCD display, indicating a sensor fault.

Solution: Contact your retailer or the manufacturer.

4. Problem: The detector does not respond when the test button is pressed.

Solution: Check that the batteries have been fitted correctly. If the batteries are fitted correctly and the device still does not work, contact your retailer or the manufacturer.

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.