

# 10 YEAR CARBON MONOXIDE ALARM

Battery Powered Long-Life CO Detection Alarm

Product Code: OT01468

## Introduction

The Defender CO Alarm is designed to offer long-term detection of Carbon Monoxide (CO). Meeting recognised BSI standards under BS EN50291-1:2018 the alarm is accredited for use in domestic environments and contains a 10 year lifespan sensor. The alarm issues warnings for both high and low CO levels, as well as for faults and low battery life.

## What is Carbon Monoxide

Carbon Monoxide (CO) is an extremely poisonous gas. Invisible and odourless, inhaling it can be highly dangerous depending on exposure and circumstance, with symptoms ranging from mild headaches and nausea, to severe illness and even death. Early warning and action is vital.

## What To Do

Your alarm will indicate the levels of CO detected (see table overleaf); depending on the severity either ventilate all rooms immediately, turn off all gas supplies and then seek fresh air, or evacuate the property/ seek help immediately. In either case, consider calling the National Gas Emergency Service on 0800 111 999. If you suspect possible CO poisoning seek medical help immediately.

## Batteries and First Time Use

The alarm uses 3 x AA batteries and a set is provided with your purchase. To insert the batteries first remove the rear mounting cover; with the alarm's LCD screen facing you, slide the rear cover to your right until it detaches. Insert your batteries, noting correct polarity and pressing the red pins down before inserting. Your alarm will be in ready-state within 20 seconds,

**NOTE: On correct battery insertion the unit will beep once and the front lights will flash.**

Replace the rear cover by sliding it back into place until it is secure.

The alarm has an audible low battery alert, plus an indicator on the LCD screen (more below); when required, replace with fresh AA batteries by repeating the above steps.

**NOTE: The 10 Year aspect relates to the CO sensor lifespan within the alarm, not the batteries.**

The lifespan begins at the manufacturing date and once complete the alarm should be replaced. See the bottom of your alarm for your replacement date.

## Alarm Layout

Your alarm has an LCD screen and multiple function display lights to give you maximum convenience and peace of mind. These are briefly explained below, **with full details on alarm states shown on the table overleaf.**

### LCD screen

*Visual display of multiple states, including concentration of CO detected and battery power icon.*

### Power Indicator

*Shows that power is active within the unit. If so, will flash green approximately every 45 seconds.*

### Fault Indicator

*Yellow light that that indicates either low battery or a problem with the sensor.*

### Alarm Indicator

*Red light that indicates CO detection and requires action.*

### Test Button

*Used to test the alarm, plus to temporarily silence the alarm in the event of low-mid CO detection.*

## Specification

Operating Temperature	-10-45 Celsius 0-93% Humidity
Quiescent Current	<30uA
Alarm Current	<65mA
Alarm Volume	>85dBs
Accuracy of PPM	30PPM +/-6PPM 50PPM +/-10PPM 100PPM +/- 15% 300PPM +/-15%
Sensor Lifetime	10 Years

## Detection Levels

CO Concentration (PPM)	No Alarm Before	Alarm Before
A) 30PPM	120 Minutes	--
B) 50PPM	60 Minutes	90 Minutes
C) 100PPM	10 Minutes	40 Minutes
D) 300PPM	--	3 Minutes

### What is PPM?

Parts Per Million indicates the concentration of CO within an area. Based on the above:

A = Very Low / B & C = Low-Medium / D+ = **High**

*Anything over 550PPM is extremely dangerous.*

## Operation Table

State	Action	Explanation
Power-Up	1 beep, all 3 front indicator lights flash, LCD screen reads "EN".	The unit has power and is ready for use.
Normal Operation	1 Green flash on Power Indicator every 45 seconds, LCD screen displays a "000" PPM figure.	The unit is operating as usual with no dangerous CO detected.
Low Battery Warning	1 beep and 1 Yellow flash on Fault Indicator every 60 seconds, the LCD screen's battery icon shows as low.	The unit's batteries should be replaced as soon as possible.
Fault Warning	2 beeps and 2 Yellow flashes on Fault Indicator every 60 seconds, LCD screen reads "ERR".	There is a fault within the unit or circuit. Contact the source of your purchase for advice. Do not open or attempt repair.
End-of-Life Warning	3 beeps and 3 Yellow flashes on Fault Indicator every 60 seconds, LCD screen reads "END".	The unit's lifespan is complete and it should be replaced.
High CO Detection Warning	5 beeps and 5 Red flashes on Alarm Indicator 3 times every 10 seconds, LCD screen shows a PPM reading, or "Hco" if >550.	The unit is in alarm condition and there is a high/dangerous concentration of CO detected.
Low CO Detection Warning	4 slower beeps and 4 Red flashes on Alarm Indicator every 3 minutes, LCD screen shows a PPM reading.	The unit is in alarm condition and there is a low/lower concentration of CO detected.
Alarm Silence	During alarm condition, press and hold TEST button. Beeps will be silenced but Alarm Indicator still flashes. Press TEST to cancel.	Action can be taken without constant beeping. Silence state only works for 10 minutes AND when PPM <200.
Testing	During normal operation, press Test button once and all indicator lights flash with beeping. LCD screen shows "---".	Manual testing of alarm. If no beeps and flashes, a fault may have occurred.

## Installation and Maintenance

The alarm can be mounted using the rear installation plate. Remove the plate and, using the holes, mark 2 dots on your wall or ceiling. You can now affix the plate and slide the alarm in when complete.

The alarm is also suitable for free standing on any flat surface, meaning it can be moved around or taken with you when travelling.

Keep your alarm clean by wiping with a slightly damp cloth and dusting. Do not spray with cleaning agent. Do not paint. Do not disassemble. Test the alarm regularly.

Contact us:  
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