



**CO<sub>2</sub> AVG Monitor**  
Carbon Dioxide Monitor



**User Guide**



Please read this guide carefully and retain for future use.

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## 1 General Information

Your new CO<sub>2</sub> sensor is carefully designed and tested to monitor levels of carbon dioxide (CO<sub>2</sub>) in the air and used in areas where CO<sub>2</sub> could be a concern.

Your device will also provide the average concentration of carbon dioxide over an 8 and 24 hour period also giving you the maximum concentration recorded over 24 hours. This data is refreshed every 10 minutes along with a traffic light colour system indicating the air quality in the area.

The information contained within this guide should be referenced for typical installation and operation only. For site specific requirements that may deviate from the information in this guide – contact your supplier.

### Carbon Dioxide Gas

Carbon dioxide (Chemical formula-CO<sub>2</sub>) is a colourless gas with a density about 60% higher than that of dry air. It occurs naturally in earth's atmosphere as a trace gas where the natural concentration is about 0.04% (410ppm).



## Important Warning Statements

It is recommended that this unit be commissioned upon installation and serviced annually.

The expected life time of the detector/sensor element is: 10 Years.

Do not apply lighter gas to the detector – this will cause extreme damage.

Never ignore your device when in alarm.

This device requires a continual supply of electrical power – it will not work without power.

The unit should be stored in cool, dry conditions.

Avoid Installation near any ventilation openings, i.e. vents, chimneys, windows etc.

Avoid installation near ceiling fans, windows or areas exposed to direct weather.

This unit may not fully safeguard individuals with specific medical conditions.  
If in doubt, consult a doctor/physician.

Your product should reach you in perfect condition, if you suspect it is damaged, contact your supplier.



### Information on waste disposal for consumers of electrical & electronic equipment. (EEE)

When this product has reached the end of its life it must be treated as Waste Electrical & Electronics Equipment (WEEE). Any WEEE marked products must not be mixed with general household waste, but kept separate for the treatment, recovery and recycling of the materials used.

Please contact your supplier or local authority for details of recycling schemes in your area.

## 2 Features

- ✓ Clear digital readings of the live CO2 levels.
- ✓ LED warning lights when the CO2 levels increase.
- ✓ Push button on the fascia to display the 24 hr CO2 average, which is updated every 10 minutes along with the previous 8-hr average and highest level within the last 24hrs.
- ✓ 100-240VAC mains powered.
- ✓ Terminal outputs to control mechanical air ventilation.
- ✓ Manufactured in Great Britain

## 3 Installation & Location

This device is designed for surface mounting using 2 mounting screws (not supplied) and **MUST** be installed by a competent person. Mark the location of the two holes needed on the wall using the back plate as a template.

Removing the back plate gives access to the circuit board (PCB).

**Do not attempt to remove the Circuit Board!** This will void any warranty you may hold.

### Recommended Installation Locations

Unless otherwise indicated by the manufacturer, a carbon dioxide monitor, with or without an integral detector, should be mounted between 1.4m and 1.6m above floor level. A carbon dioxide detector head (or monitor if integrated) should not be sited within 1m of the expected location of a bed-head.

During the first 24 hours of installation, the unit will continue to adjust its calibration to the ambient CO2. During this time, you may notice slight variations in the PPM readings of CO2 displayed on the monitor.

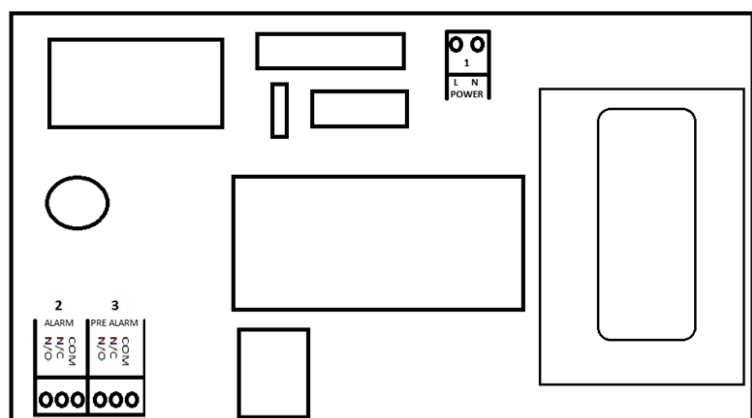
## 4 Circuit Board

### 1. POWER (LN)

A 100-240VAC electrical supply. This should be externally fused at 3 Amps.

### 2. PRE-ALARM Relay

This will switch over should the level of CO2 rise above 1000ppm, and automatically switch back once the levels have dropped below 950ppm.



### 3. ALARM Relay

This will switch over should the level of CO2 rise above 1300ppm, and automatically switch back once the levels have dropped below 1250ppm.

## 5 Power On and Off

### How to turn your device ON

To turn on the Merlin CO2 AVG monitor you need to supply mains power, this will then illuminate the blue LCD screen and initiate a 60-second countdown.

When the countdown is complete, the LCD screen will show CO2 levels in the room.

### How to turn your device OFF

Remove or Switch Off the mains power supply.

## 6 LED Status

- **Med**  
Amber - Moderate air quality, 1000 - 1300ppm
- **High**  
Red - Poor air quality, >1300ppm CO2

## 7 CO<sub>2</sub> Averages

By using the average push button located on the front fascia of the Merlin CO2 AVG, the user is able to navigate through four different display screens showing the following statistics:



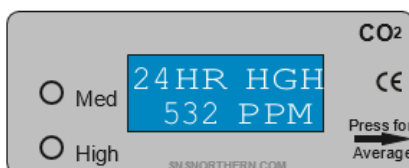
Current CO2 PPM level Reading



Average CO2 Reading over the previous 8 Hour Period



24 Hour Average CO2 Reading



Highest CO2 Reading over the previous 24 Hour Period

## **8 Maintenance**

To keep your device in good working order, you must follow these steps:

- ✓ DO carefully remove any accumulated dust from the outer enclosure once a month.
- ✘ NEVER use detergents or solvents to clean your device – this may permanently or temporarily damage the gas sensing elements.
- ✘ NEVER spray air fresheners, hair spray, paint or other aerosols near the device.
- ✘ NEVER paint the device. Paint will seal vents and interfere with the device.



## 9 Manufacturer's Warranty

### 3 Year Limited Warranty

**Warranty coverage:** The manufacturer warrants to the original consumer purchaser, that this product will be free of defects in material and workmanship for a period of three (3) years from date of purchase. The manufacturer's liability hereunder is limited to replacement of the product with repaired product at the discretion of the manufacture. This warranty is void if the product has been damaged by accident, unreasonable use, neglect, tampering or other causes not arising from defects in material or workmanship. This warranty extends to the original consumer purchaser of the product only.

**Warranty disclaimers:** Any implied warranties arising out of this sale, including but not limited to the implied warranties of description, merchantability and intended operational purpose, are limited in duration to the above warranty period. In no event shall the manufacturer be liable for loss of use of this product or for any indirect, special, incidental or consequential damages, or costs, or expenses incurred by the consumer or any other user of this product, whether due to a breach of contract, negligence, strict liability in tort or otherwise. The manufacturer shall have no liability for any personal injury, property damage or any special, incidental, contingent or consequential damage of any kind resulting from gas leakage, fire or explosion. This warranty does not affect your statutory rights.

**Warranty Performance:** During the above warranty period, your product will be replaced with a comparable product if the defective product is returned together with proof of purchase date. The replacement product will be in warranty for the remainder of the original warranty period or for six months – whichever is the greatest.

#### CONTACT US:

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