

Gas Safety Products

Merlin CO2 Detector C1

4500PPM



Installation, operating and maintenance



Read these instructions carefully before operating or servicing



The unit should be installed by a competent person only.



The expected life time of the detector/sensor element is more than 5 years.



The unit should be stored in cool, dry conditions.



We do recommend that this product is serviced annually.



If the unit is found to be damaged – Contact us.

Table of contents

| | | |
|----------|---|----------|
| 1 | General information | 3 |
| 2 | Installation | 3 |
| 2.1 | Mounting the CO2 detector..... | 3 |
| 2.2 | Mains Supply..... | 3 |
| 2.3 | Alarm Relay..... | 3 |
| 3 | Operation Instructions | 3 |
| 3.1 | How to turn the system on and off | 3 |
| 4 | Specifications | 3 |
| 4.1 | Explanation of LED status..... | 4 |
| 4.1.1 | Low (Green) LED | 4 |
| 4.1.2 | Medium (Amber) LED | 4 |
| 4.1.3 | High (Red) LED..... | 4 |
| | Merlin CO2 Detector C1 Wiring Diagram..... | 4 |

1 General information

The Merlin CO2 detector has a traffic light colour system indicating the carbon dioxide levels in the area.

The Merlin CO2 detector can be used independently or can work in conjunction with one of our Merlin gas control systems. If the CO2 reaches alarm level the Merlin CO2 detector would illuminate 'High' and also send a signal to the Merlin gas control system which will in turn close the gas solenoid valve.

2 Installation

2.1 Mounting the CO2 detector The detector is designed for surface mounting using 2 mounting screws. Removing the back plate gives access to the circuit board. Do not attempt to remove the PCB.

2.2 Mains Supply A 230-volt electrical supply should be supplied to the panel. This should be externally fused at 3 Amps using a fused spur and should be connected to the terminals marked "LN Power"

2.3 Alarm Relay This will switch over should the level of Co2 rise above 4500ppm, and automatically switch back once the levels have dropped below 4450ppm.

Note: all low voltage connections should be made using a screened cable to avoid electrical interference.

3 Operation Instructions

3.1 How to turn the system on and off

1. To turn on the Merlin CO2 detector, you need to supply 230V into the "L & N POWER" terminal.
2. To turn off the Merlin CO2 detector, you need to turn the power supply to the panel off or disconnect the fuse spur.

4 Specifications

| | |
|----------------------------------|--|
| Power supply | 230VAC, 50Hz (Max. 2VA) |
| Gas Sensor | Carbon Dioxide: Non-Dispersive Infrared Detector (NDIR) ABC Logic Self Calibration |
| CO2 measuring range | 0~5000ppm (resolution 1ppm) |
| Accuracy @ 25°C (77°F) | ±100ppm +6% reading |
| Warm up time for each turning-on | 1 minute |
| LED Operation | Green - Good air quality, CO2 <1000ppm Yellow - Moderate air quality, 1000ppm < CO2 <2800ppm Red - Poor air quality CO2 >2800ppm |
| Switch over relay output | 240VAC 1A, 30VDC 2A switching current (resistive load) CO2 Alarm, >4500ppm - relay On, <4450ppm - relay Off |
| Storage conditions | -40~70°C (-40~158°F); 0~95%RH, non condensing |
| Operation conditions | 0~50°C (-32~122°F); 0~95%RH, non condensing |
| Net weight/Dimensions | 190g/135mm(W)x95mm(H)x38mm(D) |
| Installment standard | Wall mountable |
| Standard Approval | CE |

4.1 Explanation of LED status

4.1.1 Low (Green) LED

Green - Good air quality, CO₂ <1000ppm

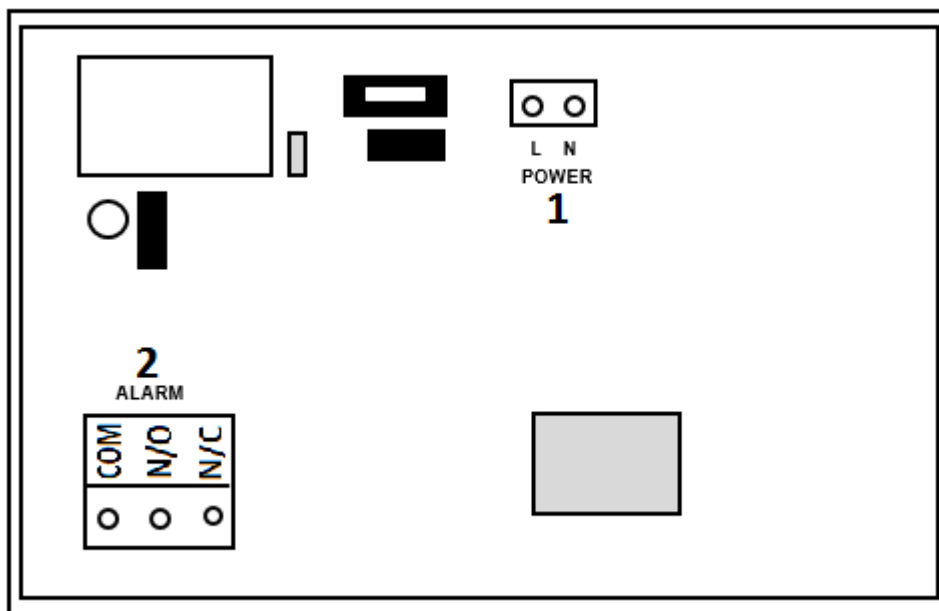
4.1.2 Medium (Amber) LED

Yellow - Moderate air quality, 1000ppm > CO₂ <2800ppm

4.1.3 High (Red) LED

Red - Poor air quality CO₂ >2800ppm

Merlin CO2 Detector C1 Wiring Diagram



1. Mains Input 230V, L & N
2. Alarm relay, volt free connection to Merlin system. Common, Normally Open and Normal Closed.

Please note, Mains wires and low voltage wires should not be run in the same conduit as per the **LOW VOLTAGE DIRECTIVE**

**INFORMATION ON WASTE DISPOSAL FOR CONSUMERS OF ELECTRICAL & ELECTRONIC EQUIPMENT**

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.

CONTACT US:**S&S Northern Head Office**

Tel: +44(0) 1257 470 983

Fax: +44(0) 1257 471 937

www.snsnorthern.com

info@snsnorthern.com

**South East Division**

Tel: +44(0) 1702 291 725

Fax: +44(0) 1702 299 148

south@snsnorthern.com

S&S Northern is the owner of this document and reserves all rights of modification without prior notice.