

Gas Safety Products

Merlin CO2 Detector C1

2800PPM



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.

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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 2800ppm, and automatically switch back once the levels have dropped below 2750ppm.

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
CO ₂ 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, CO ₂ <1000ppm Yellow - Moderate air quality, 1000ppm < CO ₂ <1500ppm Red - Poor air quality CO ₂ >1500ppm
Switch over relay output	240VAC 1A, 30VDC 2A switching current (resistive load) CO ₂ Alarm, >2800ppm - relay On, <2750ppm - 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

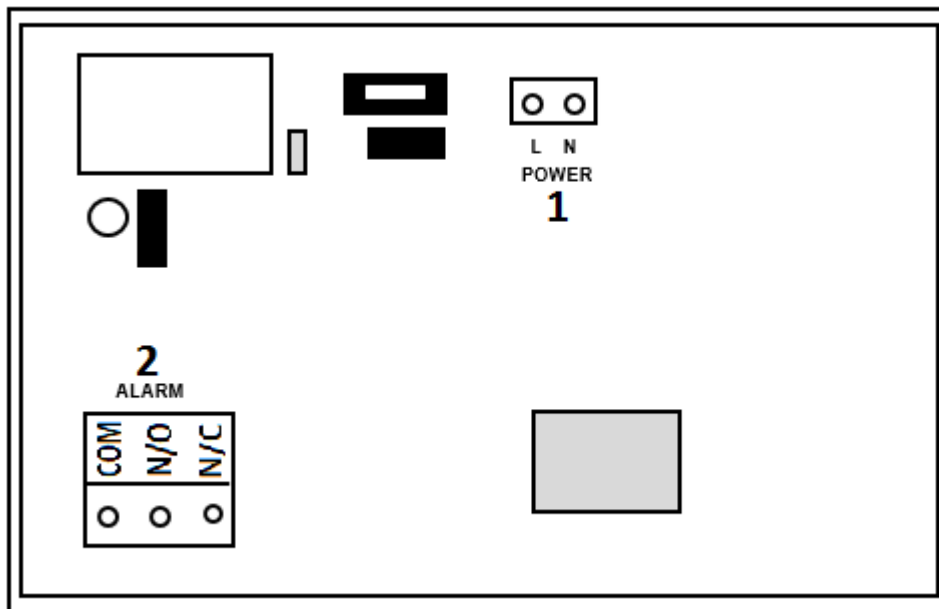
4.1.2 Medium (Amber) LED

Yellow - Moderate air quality, 1000ppm > CO₂ <1500ppm

4.1.3 High (Red) LED

Red - Poor air quality CO₂ >1500ppm

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.

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