Gas Safety Products

Merlin CO2 Detector C1

2800PPM

S&S NORTHERN

Installation, operating and maintenance

23/08/2016

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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/Dimentions	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, CO_2 <1000ppm

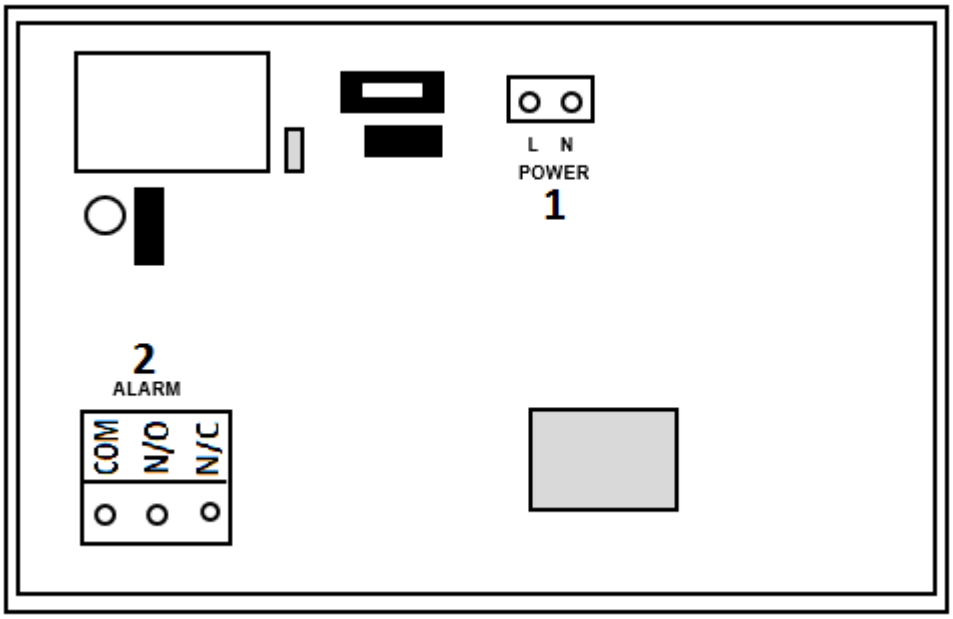
4.1.2 Medium (Amber) LED

Yellow - Moderate air quality, 1000ppm> CO_2 <1500ppm

4.1.3 High (Red) LED

Red - Poor air quality CO_2 >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**

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Rev	Date	Author	Description
02	23/08/2016	S&S Northern BT	Merlin CO2 Detector C1 2800PPM Product Data Sheet – Second issue