

Merlin CO₂ Monitor Advanced Indoor Air Quality Sensing Technology



Key Features

- Clear digital readings of the CO₂ levels.
- Wall mounted in architecturally neutral enclosure.
- Traffic light warning system for clear, straightforward recognition.
- Can work independently or in conjunction with Merlin Gas Interlock System.
- Available in 24vac or 110/120vac.
- Easy Installation.

Overview

The Merlin CO₂ Monitor is a wall mounted CO₂ and temperature monitor that provides precise, easy to read measurements in a single device. Using relays and 0-10vdc outputs the unit can interface with all modern BAS systems. The continuous CO₂ self-recalibration feature eliminates the need for routine maintenance. Available in 24vdc or 110 /120vdc models with industrial grade electronics we can ensure exceptional accuracy and long term reliability. The Merlin CO₂ monitor gives a clear LCD display reading to show the occupant a precise ppm CO₂ level and the ambient room temperature.

A unique “traffic light” color code system gives a clear representation of the air quality in the room. The Merlin CO₂ monitor can be used independently or in conjunction with one of the Merlin range of Gas Safety Systems. An audible alarm can be employed where required. A simple dip switch on the circuit board is used to turn the audible alarm on or off. Relays can activate ancillary devices at set alarm points and a 0-10vdc output in direct relation to the CO₂ concentration can signal the BMS.

Application

- Precise CO₂ sensing for integration in modern BAS systems.
- Control ventilation.
- Monitor and Control CO₂ concentrations.
- Commercial Kitchens, School Classrooms, Dormitories / Multi occupancy dwellings.
- Commercial Garages, Mechanical rooms, manufacturing plants.



Gas Safety Systems

Utility Control

Technical Specifications

Power Supply	110/120v, Integral power supply powered by external 110/120vac (±10%) source
CO ² Sensor –	Non Dispersive Infrared (NDIR), gold plated, diffusion sampling, self-calibration technology.
CO ² Range	0-9999ppm (resolution 1ppm)
CO ² Accuracy	(77°F-25°C) ±100ppm +6% reading
Temperature Measuring Range	0-50°C (32-122°F) resolution 0.5°C, Temperature Accuracy - ±1°
Switch Over Relay Output	>40vac 1A, 30vdc 2A (resistive load).
Temp Alarm	>30°C (86°F) relay "ON" <29°C 85°F) relay "OFF"
CO ² Pre-Alarm	>1000ppm relay "ON" <2800ppm relay "OFF"
CO ² Alarm	>2800ppm relay "ON" <2800ppm relay "OFF"
Analogue Output	0-10vdc (1v per 1000ppm)
LED Operation	Green – Good Air Quality - <1000ppm Yellow – Moderate Air Quality - >1000ppm <2800ppm Red – Poor Air Quality - >2800ppm
Audible Alarm	CO ² >2800ppm
Operating Temperature	0-50°C (32°F-122°F)
Operating Humidity	0-95% RH, noncondensing
System Diagnostics	On-board LED status display
Net Weight	240g/8.47oz
Dimensions	135mm x 95mm x 38mm
Enclosure	Modern low profile wall mounted enclosure
Limited Warranty	AGS standard 3yr warranty, other warranties available upon request.



- 1) Phase and Neutral power supply from 3A fuse spare to power sensor. This could also be taken from our "mains in" terminal when used in conjunction with any of our Merlin range of systems.
- 2) Dip switch to activate and de-activate audible alarm.
- 3) Alarm relay, this will switch over should the level of CO₂ rise above the pre-set limit, and automatically switch back once the levels have dropped below this.
- 4) Pre-alarm relay, this will switch over should the level of CO₂ rise above the pre-set limit, and automatically switch back once the levels have dropped back below this.
- 5) Temperature relay, this will switch over should the sensor detect the temperature rise above 86°F(30°C) and switch back once the temperature drops back below 84°F(29°C)
- 6) 0-10V Output, the voltage will change in relation to the amount of CO₂ detected at any time. This could be used to open/close an electronic window accordingly etc. (1v/1000ppm)

PLEASE NOTE

All the relays are capable of breaking anything up to and including 230V (3A). However they will normally use in conjunction with N/C volt free contacts on our Merlin range of systems.



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