



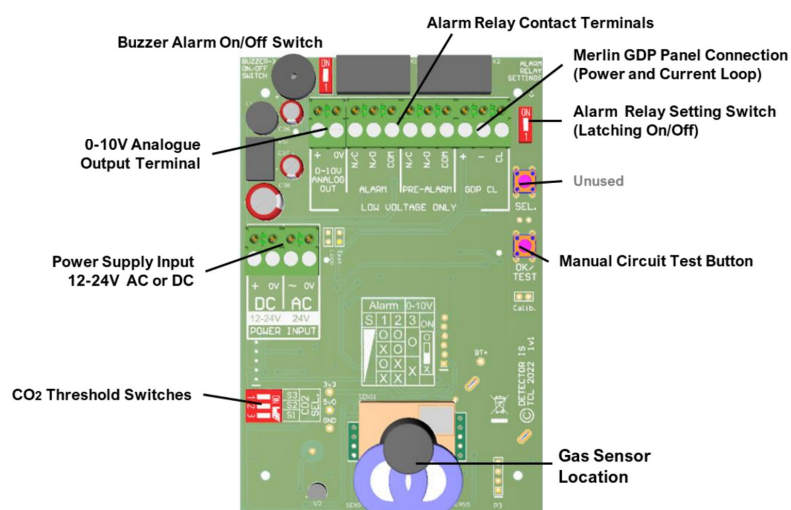
Features

- 24VDC Power Input
- Traffic Light Indicator Display Changes Color Dependent On Gas Levels
- Modern & Compact Design
- Plug & Play Installation
- Meets Code of NFPA 55, IFC Chapter 53, and NBIC Supplement 3
- Alarm Relay Dry Contact
- In-Built Audible Alarm
- BMS/BAS Communications

Product Overview

The Merlin CO2iS-50k, featuring a NDIR sensor, can be used as a standalone detector for industrial and commercial indoor applications. The most common application seen will be for beverage dispensers. The CO2iS-50k meets the code requirements from the NFPA 55, IFC Chapter 53, as well as NBIC Supplement 3. The compact, modern, and digital design makes the units aesthetically pleasing and easy to install.

Circuit board Diagram

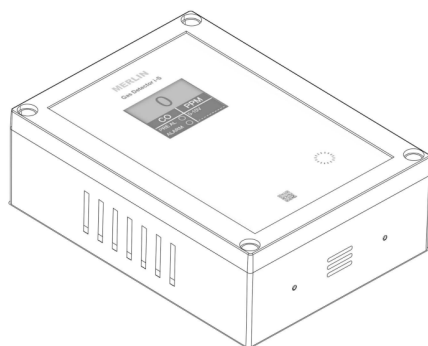


Typical Applications



Technical Specifications

General							
Model:		Detector i-S 50k					
Target Gas		CO ₂					
Size: (H x W x D)		5.95 x 4.37 x 1.97" (151 x 111 x 50mm)					
Housing Material:		ABS PA765. Flame Retardant UL 94V-1					
Mounting:		Safe Zone - Indoor use - Wall Mounted					
Weight:		212g					
User Interface							
Display:		1.8" TFT					
Screen Brightness:		Non-Adjustable					
Visual Indicators:		Gas Level (Green: Normal; Yellow: Pre-Alarm; Red: Alarm) 0-10V Output: Relay Output					
Audible Alarm:		>65dB @ 3.28ft (1m). Quiet conditions. Every 10s at Pre-Alarm and Continuous at Alarm					
Language:		English					
Power Supply							
Max. Power Consumption:		1.45 W					
Power Rating:		12-24V AC or DC					
Relays							
Volt Free BMS relay outputs:		1A switching current (resistive load) @ 24V AC/DC					
Environmental							
Ingress Protection (IP):		Not Formally Evaluated					
Operating:		-10 ~ 50°C / 14 ~ 122°F / 20 ~ 90% RH (non-condensing)					
Storage:		0 ~ 50°C / 32 ~ 122°F / 30 - 80% RH (no condensation)					
Altitude Rating:		2000m					
Wiring							
Typical		Min. 2.5mm ² / 75°C min / Tinned copper.					
Approvals							
Electrical Safety		CE / UKCA					
Electromagnetic Compatibility		BS EN 61010-1:2010 + A1:2019. & BS EN 50270.					
Sensor Specification							
Gas Sensor	Measuring Range	Steps	Response (t90)	Recovery (t10)	Pre-Alarm:	Alarm:	*EOL (Years)
NDIR. Intelligent Infrared CO2 Module. ABC Logic Auto Calibration							
Carbon Dioxide (CO ₂)	0-50,000PPM	1PPM	<60s	<60s	▲ 5,000PPM	▲ 30,000PPM	10



Areas of coverage

Consider the coverage required and function of the area. Emphasis should be placed on airflow patterns and correct placement, not perceived detecting ranges.

The CGSCO2iS-50k monitor should be installed approximately 12" from the ground level.