PANTHERGAS DIRECT LTD

CARBON DIOXIDE DETECTOR - 360

INSTALLATION & OPERATIONS MANUAL

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CARBON DIOXIDE DETECTOR -MODEL: 360

OPERATION & INSTALLATION MANUAL

Detectors must be installed by competent persons.
Isolate electrical power before starting installation.
Electrical wiring must be carried out properly in accordance with current electrical regulations.

1.0 INTRODUCTION

The Model 360 has been designed to detect Carbon Dioxide in Air and to signal an alarm event above the level defined on the calibration certificate (normally 0.5% by volume in Air).

The Model 360 utilizes a highly sensitive solid electrolyte sensor which is operated and monitored by microprocessor. The unit is constructed from high quality electronic components which ensure trouble free operation during its expected life time.

2.0 APPLICATIONS

The detector has been designed to protect people from the risk of C02 build up. This can be caused by leaks from cylinders, supply lines, industrial, vehicle emissions and biological sources.

Beer cellars are generally classed as a confined space and therefore covered by the Confined Spaces Regulations 1997. This means that an employer or manager is responsible for the health and safely of their employees and must take into account the risk of:
the loss of consciousness or asphyxiation of any person at work arising from gas, fumes,vapour or the lack of oxygen.

This is a legal requirement.

3.0 SITING THE DETECTOR

First site the detector, Carbon Dioxide is a constituent of Air, however in isolation is heavier than air (by a factor of 1.5). therefore the unit should be sited not more than 4 metres from the potential leak source and 0.5 metres from ground level.
Site the unit where it can be easily seen and heard.

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4.0 INSTALLATION

The detector should be wall mounted by first fixing the mounting bracket to the wall with the screws and rawl plugs provided.
The unit is fixed to the bracket by locating the holes in the back of the case onto the lugs ofthe bracket and sliding downwards to secure.
We recommend that the power cable supplied with the detector is fitted to an un-switched 3amp fused spur.
WIRING:
240V circuit. LNE: Brown
NEUTRAL: Blue
SWITCHING CIRCUIT: Black/Grey

5.0 THE DETECTOR OPERATION

When the unit is first powered up the green LED will flash for up to two hours, while the unit is stabilising.
Once the green LED has stopped flashing and is constantly lit, the detector is operational.
The detector will alarm as the level of Carbon Dioxide rises above the alarm set point (calibrated at the factory).
The red LED will light, the internal sounder will operate and the alarm relay will change state(if fitted).
If a repeater unit is supplied it will start to flash and the sounder will operate while the detector is in an alarm condition and resets with the detector.
In gas-free conditions the detector can be set to auto reset or push button. Once reset the red LED will extinguish, the sounder will stop operating the relay and repeater(if fitted) will change back to their original state.

Note: The detector will not reset when in alarm condition.

6.0 SPECIFICATION -Model 360

- Carbon Dioxide Detector

Power Supply Mains driven or DC
AC version: 230V or 11OVDC version: 12V or 24V
Power 6 Watts quiescent
Alarm relay (volt free SPCO) IOAmp 250V ac 10 Amp 30V dc
Sensor Solid electrolyte controlled by microprocessor -(expected life span 5 years)
Alarm level Standard calibrated to alarm above 0.5%
Volume- (if a different alarm level required please state when ordering)
Operating temperature: -10º C - + 40ºC
Sound level: -100 C to +400 85 decibels (dB) at 3m
Alarm indicators Unit stabilizing -Green LED flashingUnit operating correctly –Green LED
Light Unit in Alarm –Red LED
Dimensions (mm) 110 x 110 x 57
Detector 1 year warranty (expected life 10 years)

GUARANTEE
We guarantee your new gas detector for one year from the date of purchase by the purchaser, to be free from defects in materials and workmanship under normal use and service. We will, at our discretion, repair, replace or refund the price of any part of the detector which is found to be defective in either materials or workmanship under normal use and service during the guarantee period. We shall be under no obligation to repair, replace or refunded the price of units which are found to be defective in any way due to damage, neglect, unreasonable use or have been dismantled.

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CO_2 Detection and Protection

Protection from Carbon Dioxide in confined spaces

Carbon Dioxide Risks

Carbon Dioxide (CO_2) is used extensively in the pub and catering industries. Leaks from equipment can build up in confined areas. It also can build up in other industries where it can occur including chemical industries, plant growing and fermentation.

Build up of CO_2 can be very dangerous in confined spaces resulting in death in extreme cases. Because it is odourless and colourless a person cannot easily detect an increase in CO_2.

Legislation

The Confined Spaces Regulations of 1997 forces employers to be responsible for the health and safety of any employees who could be at risk of CO_2.

How to protect from CO_2

The Amos 360 CO_2 Detector protects by

- detecting the presence of increasing CO_2 long before it reaches unsafe levels
- sounding an alarm when a leak is detected
- triggering remote alarms to warn people not to enter the room
- switching on ventilation systems

How it works

A simple gas detector (similar in size and operation to a smoke detector) is sited in the confined space. Increased levels of CO_2 are detected well before they reach an unsafe level.

When a build up of CO_2 is detected, a red warning light comes on and an optional alarm sounds. A remote alarm (if fitted) is also triggered to warn people not to enter the premises and that ventilation must be undertaken. Other remote systems such as Building Management Systems (BMS) can also be alerted and even ventilation systems switched on.

When the gas has dispersed the alarm will automatically turn off, or this can be controlled by a push switch.

Using the detector ensures that dangerous levels of CO_2 are always detected.

Specification

Detector

Applicable legislation:
Confined Spaces Regulations 1997

Alarm trigger level: 0.5% concentration of CO_2

Alarm: Red warning light.
Audible sounder, 85 dB at 3 m

Outputs: 1 relay
240v or 12v dc powered out (for remote alarm)
Volt free (for remote signalling) (10 A at 230v ac or 30 v dc)

Reset operation:
Only permitted when gas has cleared.

Alarm reset: Automatic or push button

Size: 110 * 110 * 57 mm (4.3 * 4.3 * 2.2 inch)

Weight: 420 g (15 oz)

Power: 240v ac or 12 dc or 24 dc

Life 5 years

Model number: 360

Installation: Wall fixing on back bracket (supplied)

Remote alarm

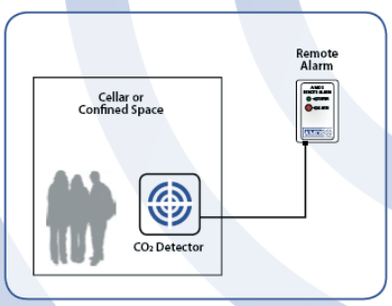
Status monitor: green light for correct operation

Alarm: Red light plus optional sounder

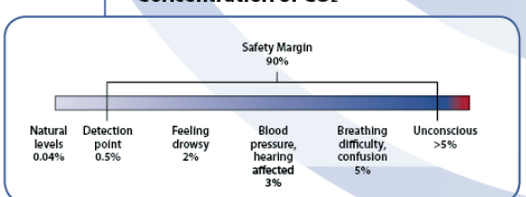
Power: low voltage from detector

Cable: 10 m

Installation



Concentration of CO_2



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