

CellarAlarm



Is your cellar safe?

Is your dispensing system a
TOXIC DANGER
to your staff and customers?

Is your cellar OH&S compliant?
(AS 5034-2005)

PolyGard CO₂ sensing CellarAlarm

EVERY cellar is required by
OH&S to have CO₂ alarms
before the end of 2007

Background:

AS 5034-2005 (excerpts): Accidents have occurred in dispensing of beverages due to lack of understanding of the potential damage high pressure inert gases can cause. High pressure cylinders in the supply systems for beverage dispensing can supply pressures up to 24000 kPa. Due to all gas systems being under pressure, it is possible that the system and equipment connection may develop leaks, causing a build up of inert gases in cellars and low level areas with the real possibility of asphyxia (oxygen deficiency) leading to collapse and death of personnel working in these areas.

Compliance to OH&S Regulation:

- Compliance monitoring, as per Australian Standards AS 5034-2005, of CO₂ (optional O₂ for inert gas system) in beverage dispensing establishments (Cellar rooms, cool rooms, ready to drink dispensing, hotels, pubs, casinos, restaurants)
- Generation of audio-visual alarm and control of ventilation fans (including VSD fans) in case of excessive build up of CO₂ leaks or oxygen deficiency due to inert gas leaks.
 - Pre-warning at 1.5 % Vol CO₂
 - Alarm (final Warning) at 3 % Vol CO₂
 - Optional Oxygen Deficiency Alarm at < 19% Vol O₂
 - Optional hand held instruments for CO₂ and O₂

- Meets AS 5034-2005 Standards (for Beverage Dispensing)
- CO₂ Compliance Monitoring (optional O₂ for Inert Gases)
- CO₂ Pre-Warning Alarm: 1.5 % Vol, Final Alarm: 3% Vol
- TWA CO₂: 0.5 % Vol
- O₂ Deficiency Alarm: < 19% Vol
- Bottled wine dispensing, draught beer and ready to drink kegs
- FCB (frozen carbonated beverages)
- Postmix, Ready to drink (pre-mix) beverages

Applications/Benefits:

- Safety for personnel to enter or work in the cellar room or rooms where CO₂ is Stored
- Safety for personnel to enter or work in:
 - Fermentation rooms,
 - CO₂ filling rooms (beverage industries),
 - Laboratories and hospital,
 - Warehouse storage areas handling or storing CO₂
 - Breweries, wineries and beverage filler rooms

Toxicity of CO₂:

- Effects: Rapid suffocation, nausea, dizziness & headache
- First Aid: Remove to fresh air
 - give artificial respiration if not breathing
 - give oxygen if breathing difficulty is observed
- Special Safety: Gas Alarm for CO₂ and optional Oxygen Deficiency alarm < 19% Vol
- TWA: 5,000 PPM CO₂ (9000 mg/m³) 8 hour shift, (STEL: 30,000 PPM CO₂)

GasAlarm

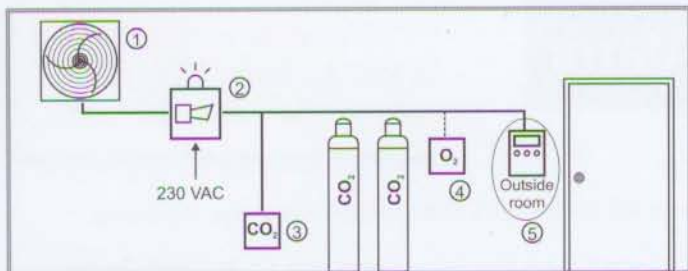
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Description:

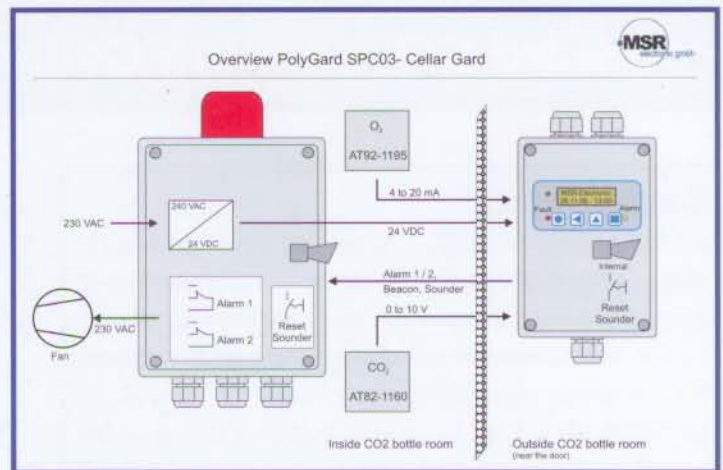
MSR PolyGard CELLAR ALARM consists of a 2 channel main control unit SPC-03 (24 V AC/DC operation) having gas concentration display, fault LED (red), alarm LEDs (Lo-orange, Hi-red), status / power LED (green), 2 relays (30 V, 1 A) with built in internal buzzer. The main control unit needs to be installed near the entry door of the cellar room (outside) to warn people before entering the cellar room in case of any toxic build-up inside the cellar room. Inside the cellar room (gas leak risk area) there will be the MSR PolyGard gold-plated infra-red based CO₂ (carbon dioxide) sensor, installed 300-600 mm above floor level, which will be connected to the main control unit SPC-03. There is also a provision for connecting a mains power supply unit (240 VAC – 24 V DC) inside the cellar with integral RED flasher and buzzer to warn people inside the cellar to escape in case of gas leak beyond pre-set limit and to drive the main control unit SPC-03. The main power supply unit will have built in power relays (240 V, 5 A) to control the ventilation

fans of the cellar room (dissipate the toxic build-up). As an option, there is also a provision to install an oxygen sensor (inside the cellar room – risk area, at human breathing nose level) to the SPC-03 main control unit to monitor for any oxygen deficiency in case inert gases like CO₂, nitrogen, argon are stored

MSR PolyGard CELLAR ALARM will provide continuous monitoring of any leaking CO₂ (optional oxygen deficiency) and will warn people entering the cellar room, or escape from cellar room, in case of excessive build up of toxic CO₂ (optional oxygen deficiency < 19 % Vol O₂) beyond pre-set limits (1.5 % - Lo, 3 % Vol – Hi CO₂ set limits). Further the relay outputs of the CELLAR ALARM can be used for activating audio-visual alarms, shut-off gas supply solenoid valves or start ventilation fans to dissipate the toxic build-up.



1. Ventilation fan
2. Power supply (240 VAC), A-V alarm, relay unit, optional emergency battery backup
3. CO₂ sensor / transmitter
4. O₂ sensor / transmitter
5. Cellar alarm main controller SPC-03 (outside entry door)



Specifications (subject to change)

- Range: 0 - 4% Vol CO₂ (Oxygen 0 - 25 % Vol, optional extra)
- Concentration readout display, fault LED (red), alarm LEDs (orange, red), power/status LED (green)
- Controller Input: 4 – 20 mA (for O₂ transmitter), 0 - 10V (for CO₂)
- Controller comes with display, keypad, relays for A-V alarms
- Portable hand held instruments for CO₂ and O₂ (optional)
- CO₂ IR : Gold plated maintenance free IR CO₂ sensor with ABC (Automatic Background Calibration)
- Power: 24 V AC/DC (240 VAC power supply and 1 hour emergency back up optional extra)
- Controller output: 2 x relays, SPDT, 30 V, 1 A, potential free (set at 1.5% and 3 % CO₂), power supply / alarm unit relays 5 A, 240 V

GasAlarm

Gas Alarm Systems

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