

▶ HGM-MZ

Multi zone refrigerant gas monitor



Technical specifications

Power supply: 100 to 240 VAC, 50/60 Hz, 20W

Coverage: 4,8,12 and 16 zone systems available

Sensor: Proprietary non-dispersive infrared (NDIR) technology

Dimensions: 21 x 34,8 x 12,6 cm / weight : 6,8 kg

User Interface:

- LCD back-lit display
- Front panel with 3 indicators:
 - Green: power-on, normal
 - Yellow: fault, flashing yellow : system fault
 - Flashing red: point has exceeded alarm set

Communications: Full 2-way communication with MZ-RD display module or building management system via RS-485 Serial Interface. RS-232C Comm. Port Standard00

Alarms: 4 SPDT alarm contacts are provided rated 2A at 250 VAC (inductive), 5A at 250 VAC (resistive). 3 assigned to ppm level alarms, 1 assigned to system faults

Conditioned signal: optional dual 4-20 mA DC isolated output. Channel 1 = Zone, Channel 2 = ppm

System noise: less than 40dB at 3 m

Response time: 5 to 315 seconds per zone, depending on air line length and number of zones

Sampling mode: automatic or manual

Monitoring distance: 365 m max (152m for NH3) for combined length of sample and exhaust tubing (each zone)

Operating conditions:

- Temperature: 0 to 50°C
- Humidity: 5% to 90% RH (non condensing)
- Altitude limit: 2000 m

Certifications:

- UL 61010-1
- CAN/CA 22.2 No.61010-1
- EN61010-1, EN61326, EN14624

Product description

The **Bacharach multi-zone HGM-MZ controller** is a multi-point vacuum system which offers a very wide range of refrigerant gas detection. Large graphic LCD display and LED status indicators provide a system overview at a glance.

This controller measures gas based on infrared absorption. The gas sample enters a measuring sensor inside the cabinet and is then exposed to infrared rays. The energy absorbed by the gas sample is then proportional to the gas concentration. This measurement principle thus makes it possible to detect gases quickly, selectively and with very high precision (1 ppm for halogenated gases).

The **multi-zone HGM-MZ controller** effectively improves refrigerant gas management and guarantees compliance with standards and regulations relating to refrigeration systems and heat pumps such as EN 378-2000 for Europe or ASHRAE 15 for the United States. With a sampling speed guaranteeing leak detection very quickly, this multi-zone controller allows substantial savings in recharging expensive refrigerant gases while reducing the refrigeration systems breakdown risk.

This controller can manage up to 16 different zones, expandable up to 48 measurement points. Alarm relays are available for control systems and signaling of leaks. For easy integration into BMS / BAS systems and remote monitoring solutions, the **HGM-MZ multi-zone control** panel has several communication interfaces such as Modbus, BACnet and LonWorks.

▶ Main advantages

- Infrared sensor technology with a high reliability level
- High performance sampling pump for quick response time of refrigerant gas leaks
- Very low minimum detection threshold (1 ppm)
- Monitors up to 16 remote areas, expandable to 48 monitoring points
- Over 50 different accurately detected refrigerants
- Minimal maintenance and no required calibration
- Refrigeration installation (additional gas and intervention requests) maintenance cost reduction
- Reduced energy consumption caused by lack of refrigerant

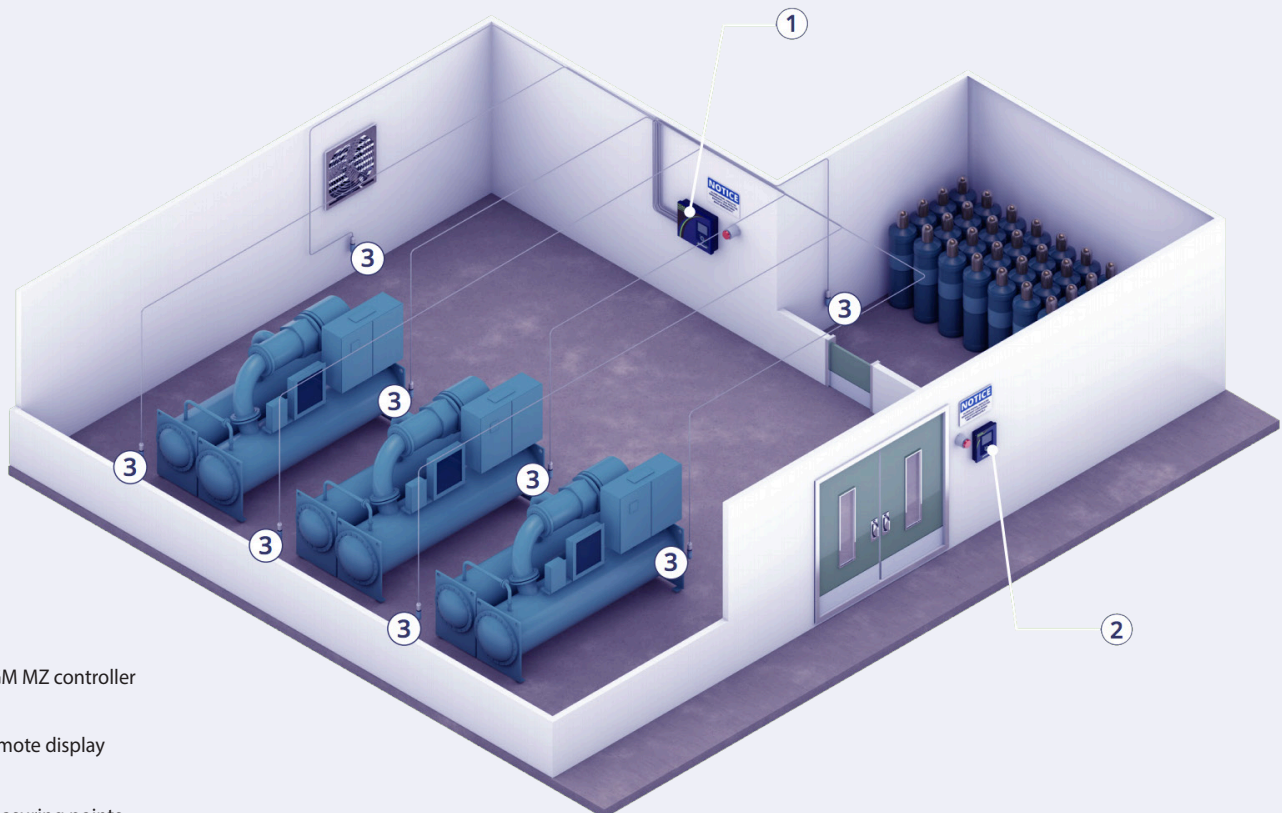
▶ Applications

- Cold rooms
- Datacenters
- Refrigeration systems in large and medium-sized stores
- Industrial cold storage
- Machinery / Mechanical equipment rooms

Technical specifications

Apparatus		Description
Gas library	HGM-MZ	FA188, FC72, H1211, H1233ZD, H1234YF, H1234ZE, H1301, H2402, HFP, N1230, N4710, N7100, N7200, N7300, N7600, R-11, R-113, R-114, R-12, R-123, R-124, R-125, R-134a, R-21, R-22, R-227, R-23, R-236fa, R-245fa, R-32, R-401A, R-402A, R-402B, R-404A, R-407A, R-407C, R-407F, R-408A, R-409A, R-410A, R-422A, R-422D, R-424A, R-426A, R-427A, R-438A, R-448A, R-449A, R-452A, R-452B, R-500, R-502, R-503, R-507, R-508B, R-513A, R-514A, R-1233zd
	AGM-MZ	Ammonia (NH ₃), R717
	CO ₂ -MZ	Carbon dioxide (CO ₂), R744
Measuring range	HGM-MZ	All gases 0 to 10 000 ppm
	AGM-MZ	Ammonia 25 to 10 000 ppm
	CO ₂ -MZ	Carbon dioxide 0 to 8 000 ppm
Accuracy	HGM-MZ	1 ppm Minimum Detectable Level (MDL) (most gases)
		± 1 ppm ± 10% of reading from 0 to 1 000 ppm (most gases)
		± 1 ppm ± 2% of reading with field calibration (most gases)
		± 10 ppm ± 15% of reading from 0 to 1 000 ppm (R-11, R-21, R-32, R-113)
	AGM-MZ	± 10 ppm ± 10% of reading from 0 to 1 000 ppm (most gases)
		± 5 ppm ± 5% of reading from 0 to 1 000 ppm, ± 10% of reading from 1 000 to 4 000 ppm, ± 15% of reading from 4 000 à 8 000 ppm

Example of us



- ① HGM MZ controller
- ② Remote display
- ③ Measuring points

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