

# Multi-Zone Refrigerant Gas Monitor

## Precision Refrigerant Monitor for Emissions Reduction



### DESCRIPTION

Bacharach's Multi-Zone delivers the best refrigerant monitoring available, with industry-leading MDL of 1 ppm for halogenated gases, the fastest sampling frequency and the widest range of refrigerants accurately detected. The large graphic LCD display and LED status indicators provide a system-wide overview at a glance.

The Multi-Zone enhances effective refrigerant management, detecting leaks early to enable cost savings by reducing refrigerant recharge, enhancing energy efficiency and reducing risk of refrigeration failure and produce loss. A variety of communication interfaces are available, including Modbus, BACnet and LonWorks, allowing easy integration into BMS/BAS systems and remote monitoring solutions.

### FEATURES

### BENEFITS

1 ppm Minimum Detectable Level	Detects leaks that other instruments can't
Early detection of refrigerant leaks	Mitigate refrigerant loss, protect produce, enhance energy efficiency
Monitors up to 16 remote areas, expandable to 48 monitoring points	Ideal solution for grocery store refrigerant monitoring
Over 50 different refrigerants accurately detected	Monitor multiple refrigerant circuits with a single detection system
Infrared sensor technology	Accurate, precise measurement unaffected by other gases, temperature or humidity
High performance sampling pump	Industry-leading cycle times for monitoring all zones with greater frequency
Minimal maintenance and no calibration required	Low cost of ownership
Halogen, CO <sub>2</sub> and NH <sub>3</sub> versions available	Suitable for a variety of refrigerant monitoring applications

### HOW TO CONTACT US:

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### FOR MORE INFO:

Scan the QR code to learn more about the Multi-Zone and other Bacharach products.



**mybacharach.com**

SPECIFICATIONS	DESCRIPTION	
Coverage	Zones: 4, 8, 12 and 16 zone systems available	
Sensor	Proprietary non-dispersive infrared (NDIR) technology	
Dimensions	12.23" x 13.7" x 4.96" (21.0642 cm x 34.7980 cm x 12.5984 cm)	
Weight	15 lbs (6.8 kg)	
User Interface	Front panel with 3 indicator lights: Green - power on, normal; Yellow - fault; Yellow Flashing - system fault; Red Flashing - 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	Four SPDT alarm contacts are provided rated 2A at 250 VAC (inductive), 5A at 250 VAC (resistive). Three assigned to ppm level alarms, one assigned to system faults	
Conditioned Signal	Optional dual 4-20 mA DC isolated outputs. Channel 1 = zone area, Channel 2 = ppm	
System Noise	Less than 40dB at 10 ft (3m)	
Cycle Time	5 to 315 seconds per zone - depending on air line length and number of zones	
Sampling Mode	Automatic or manual (hold)	
Monitoring Distance	1,200 ft max (500 ft for NH <sub>3</sub> ) for combined length of sample and exhaust tubing (each zone)	
Power Safety Mode	Fully automatic system reset. All programmed parameters retained	
Operating Temperature	Multi-Zone Unit	32° to 122° F (0 to 50° C)
	Aspirated Sampling Points	-58° to 122° F (-50 to 50° C)
Ambient Humidity	5% to 90% RH non-condensing	
Altitude Limit	6,562 ft (2,000 m)	
Power	100 to 240 VAC, 50/60 Hz, 20 W	

MEASUREMENT	UNIT	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, H1233ZDE, N4710, R448A, R449A, R513A, R452A, R452B, R514A, H1336E, H1336Z, N5110, R454A, R454B, R454C, R455A, HFO1224YDz, FC3284
	AGM-MZ	Ammonia (NH <sub>3</sub> ), R717
	CO <sub>2</sub> -MZ	Carbon Dioxide (CO <sub>2</sub> ), R744
Measuring Range	HGM-MZ	All gases 0 to 10,000 ppm
	AGM-MZ	Ammonia 10 to 10,000 ppm
	CO <sub>2</sub> -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 0-1,000 ppm (most gases) ±1 ppm ±2% of reading with field calibration (most gases) ±10 ppm ±15% of reading from 0-1,000 ppm (R-11, R-21, R-32, R-113)
	AGM-MZ	±10 ppm ±10% of reading from 0-10,000 ppm
	CO <sub>2</sub> -MZ	±5 ppm ±5% of reading from 0-1,000 ppm, ±10% of reading from 1,000-4,000 ppm, ±15% of reading from 4,000-8,000 ppm
Temperature Drift	HGM-MZ	±0.8% (R-134a) of reading per degree C between purge cycles
	AGM-MZ	1.5 ppm per degree C between purge cycles
	CO <sub>2</sub> -MZ	Less than 1 ppm per degree C between purge cycles

