

# Bacharach® Single-Zone Refrigerant Monitor



Precision Monitoring for Low-level Refrigerant Leak Detection for Small to Medium Size Facilities



## DESCRIPTION

The MSA Bacharach® Single-Zone delivers the best refrigerant leak 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 Single-Zone is the ideal tool for early detection of leaks from specific target areas such as chiller rooms and mechanical rooms. The low MDL enables detection of leaks that other instruments can't find, enhances effective refrigerant management and delivers cost savings through reduced refrigerant recharge and enhanced energy efficiency. Communication interfaces are available 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
Over 50 different refrigerants accurately detected	Select from a wide range of refrigerant calibration to meet project needs
Infrared sensor technology	Accurate, precise measurement unaffected by other gases, temperature or humidity
High performance sampling pump	Fast response times, including extended sample lines
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

Measurement	Unit	Description
GAS LIBRARY	HGM-SZ	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-SZ	Ammonia (NH <sub>3</sub> ), R717
	CO <sub>2</sub> -SZ	Carbon Dioxide (CO <sub>2</sub> ), R744
MEASURING RANGE	HGM-SZ	All gases 0 to 10,000 ppm
	AGM-SZ	Ammonia 10 to 10,000 ppm
	CO <sub>2</sub> -SZ	Carbon Dioxide 0 to 8,000 ppm
ACCURACY	HGM-SZ	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-SZ	±10 ppm ±10% of reading from 0 to 10,000 ppm
	CO <sub>2</sub> -SZ	±5 ppm ±5% of reading from 0-1,000 ppm, ±10% of reading from 1,000 to 4,000 ppm, ±15% of reading 4,000 to 8,000 ppm
TEMPERATURE DRIFT	HGM-SZ	±0.8% (R-134a) of reading per degree C between purge cycles
	AGM-SZ	1.5 ppm per degree C between purge cycles
	CO <sub>2</sub> -SZ	Less than 1 ppm per degree C between purge cycles

# Bacharach® Single-Zone Refrigerant Monitor



Product Attributes	Description
<b>SENSOR</b>	Proprietary non-dispersive infrared (NDIR) technology
<b>DISPLAY RESOLUTION</b>	1 ppm
<b>DIMENSIONS</b>	13.7" x 7.7" x 3.6" (347.98 mm x 195.58 mm x 91.44 mm)
<b>WEIGHT</b>	7 lbs (3.175 kg)
<b>USER INTERFACE</b>	Front panel w/3 indicator lights: Green - power on, normal; Yellow - fault; Yellow Flashing - system fault; Red Flashing - point has exceeded alarm set
<b>ALARMS</b>	3 SPDT, 3 amp, 250 VAC rated alarm relays and 1 SPDT, 3 amp, 250 VAC rated system fault relay, plus a digital display with dedicated 4-20 mA DC analog output (floating ground)
<b>SYSTEM NOISE</b>	Less than 40dB at 10 ft (3m)
<b>RESPONSE TIME</b>	9 to 90 seconds, depending on sample length tube
<b>SAMPLING MODE</b>	Automatic or manual (hold)
<b>RE-ZERO</b>	Every 5 minutes or on 0.5 degree C internal temperature change
<b>MONITORING DISTANCE</b>	1,200 ft max (500 ft for NH <sub>3</sub> ) for combined length of sample and exhaust tubing (each zone)
<b>POWER SAFETY MODE</b>	Fully automatic system reset. All programmed parameters retained
<b>OPERATING TEMPERATURE</b>	32° to 122° F (0 to 50° C)
<b>AMBIENT HUMIDITY</b>	5% to 90% RH non-condensing
<b>ALTITUDE LIMIT</b>	6,562 ft (2,000 m)
<b>POWER</b>	100 to 240 VAC, 50/60 Hz, 20 W
<b>APPROVALS</b>	UL 61010-1, CAS 22.2 No. 61010-1, EN 14624, CE Mark

Note: This Bulletin contains only a general description of the products shown. While product uses and performance capabilities are generally described, the products shall not, under any circumstances, be used by untrained or unqualified individuals. The products shall not be used until the product instructions/user manual, which contains detailed information concerning the proper use and care of the products, including any warnings or cautions, have been thoroughly read and understood. Specifications are subject to change without prior notice. MSA is a registered trademark of MSA Technology, LLC in the US, Europe, and other Countries. For all other trademarks visit <https://us.msasafety.com/Trademarks>.

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