Single-Zone (SZ)

High Precision Refrigerant Monitor

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_2 and NH_3 versions available	Suitable for a variety of refrigerant monitoring applications

The Most Effective Refrigerant Monitor in the Industry

DESCRIPTION

Bacharach's 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.


COMMERCIAL


INDUSTRIAL


REFRIGERATION

TECHNICAL DATA

PRODUCT ATTRIBUTES	DESCRIPTION
Sensor	Proprietary non-dispersive infrared (NDIR) technology
Display Resolution	1 ppm
Dimensions	13.7" x 7.7" x 3.6" (347.98 mm x 195.58 mm x 91.44 mm)
Weight	7 lbs (3.175 kg)
User Interface	Front panel w/3 indicator lights: Green - power on, normal; Yellow - fault; Yellow Flashing - system fault; Red Flashing - point has exceeded alarm set
Alarms	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)
System Noise	Less than 40dB at 10 ft (3m)
Response Time	9 to 90 seconds, depending on sample length tube
Sampling Mode	Automatic or manual (hold)
Re-Zero	Every 5 minutes or on 0.5 degree C internal temperature change
Monitoring Distance	1,200 ft max (500 ft for NH_3) for combined length of sample and exhaust tubing (each zone)
Power Safety Mode	Fully automatic system reset. All programmed parameters retained
Operating Temperature	32° to 122° F (0 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
Approvals	UL 61010-1, CAS 22.2 No. 61010-1, EN 14624, CE Mark

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
	AGM-SZ	Ammonia (NH_3), R717
	CO_2-SZ	Carbon Dioxide (CO_2), R744
Measuring Range	HGM-SZ	All gases 0 to 10,000 ppm
	AGM-SZ	Ammonia 25 to 10,000 ppm
	CO_2-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	±20 ppm ±10% of reading from 25 to 1,000 ppm
	CO_2-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_2-SZ	Less than 1 ppm per degree C between purge cycles