

# Bacharach® MGS-450 Gas Detector

For Safety Compliance in Refrigeration Applications



IP66



IP41

## DESCRIPTION

The MSA Bacharach® MGS-450 Gas Detector makes compliance with refrigeration safety codes simple and easy, saving time and money on equipment and installation. Using the MGS-400 App, users can intuitively use, commission and maintain their gas detection system without the need for specialty training or tools. Pre-calibrated sensor modules simplify maintenance, take minutes to exchange and do not require the use of calibration gas.

The MGS-450 can trigger additional audio-visual alarms and act as a standalone gas detection system, or integrate easily into a BMS / BAS or with the MSA Bacharach® optional MGS-408 Gas Detection Controller.

## REFRIGERANT GAS DETECTOR FOR HALOGENATED AND NATURAL REFRIGERANTS WITH DIGITAL AND ANALOG COMMUNICATIONS

### Features

Mobile App Interface

Simple Configuration via App

Pre-calibrated Sensors

Semi-automated Calibration

Temperature-compensated Measurement

Analog and Digital Communications

On-board Relays

Audible and Visual Alarms

Multiple Cable Entries and Terminals

Low-temperature Performance

### Benefits

Quick, easy and intuitive commissioning, configuration and maintenance requires no special training

No tools required to set alarm behavior and alarm levels

Save time and money on maintenance procedures

Easy process with no potentiometers or volt meters

Mitigates false alarms and optimizes accuracy in refrigeration applications

Integrates with BMS / BAS control systems via Modbus and / or analog outputs

Trigger additional alarm beacons and mechanical ventilation in the event of a refrigerant leak

Comply with ASHRAE 15 / EN 378 - no additional hardware

Quick and easy installation of all wiring; daisy-chain power and digital communications

Suitable for use in all refrigeration applications from machinery rooms to freezers



Uw distributeur

**Hitma B.V.**

Vragen over gasdetectie:  
[www.hitma-gasdetectie.nl](http://www.hitma-gasdetectie.nl)



## MORE INFORMATION:

Scan the QR code to learn about the MGS-450 and other MSA Bacharach® products.

SAFEGUARDING  
**PEOPLE, PLACES, & PLANET**

# Bacharach® MGS-450 Gas Detector



Product Attributes	Description		Definition
GASES AND RANGES	Refrigerants		1,000 ppm
	CO <sub>2</sub>		5,000 / 10,000 / 20,000 / 30,000 / 40,000 / 50,000 ppm
	NH <sub>3</sub>		100 / 1,000 / 5,000 / 100% LEL
	O <sub>2</sub>		30 Vol%
	CO		500
	Combustible gases - Semiconductor (R-290, R-600, R-50, R-600a, HC-12a, R-717)		5,000 ppm
	Combustible gases - NDIR (R-600, R-50, R-290)		100% LEL
	Combustible gases - Catalytic (R-600, R-50, R-290, R-717)		100% LEL
	NO <sub>2</sub>		20 ppm
STATUS INDICATOR	Single tri-color LED (green, red, orange)		
BUZZER	72dB @ 10 cm		
OUTPUT	Single configurable analog output	4 to 20 mA, 0 to 5 V, 0 to 10 V, 1 to 5 V, 2 to 10 V	
	Digital	Modbus RTU via RS 485	
POWER SUPPLY	24V AC or DC (auto selecting), 4W (max)		
RELAY	Three relays, SPDT, fixed low / high fault alarms		
	Rating 1 A @ 30 VDC		
ENCLOSURE	IP41, IP66		
SIZE (W×H×D) APPROX.	IP41	6.5" × 6.5" × 3.0" (165 × 165 × 77 mm)	
	IP66	6.5" × 6.5" × 3.4" (165 × 165 × 87 mm)	
WEIGHT APPROX.	1lb, 1oz (480 g)		
APPROVALS	CE, UL / CSA / IEC EN 61010-1		
AMBIENT CONDITIONS	Temperature	Semiconductor	-40 to 122°F / -40 to +50°C
		Electrochemical	NH <sub>3</sub> 100 / 1,000 ppm: -40 to 40°C
			NH <sub>3</sub> 5,000 ppm: -20 to 40°C
			CO 500 ppm: -40 to 50°C
			NO <sub>2</sub> 20 ppm: -20 to 40°C
			O <sub>2</sub> 30% Volume: -20 to 50°C
		Infrared	-40 to 122°F / -40 to +50°C
	Catalytic Bead	-40 to 122°F / -40 to +50°C	
	Humidity	5 to 90 % RH, non condensing	
Pressure	23.6 to 32.5 inch Hg / 800 to 1,100 mbar		

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>.

MSA operates in over 40 countries worldwide. To find an MSA office near you, please visit [MSAsafety.com/offices](https://us.msasafety.com/offices).