

Bacharach® MGS-400 Series Gas Detectors



Detection for Refrigerants, Toxic and Combustible Gases



Controllers

Gas Detectors




REFRIGERANT SAFETY COMPLIANCE

made simple.




Modern refrigeration systems are designed to be efficient and leak free, but improper installation, inadvertent damage or mechanical wear can result in potentially hazardous leaks. With their rapid response time, low-temperature performance (-40 °F / 50°C) and integrated audio & visual alarms, MGS-400 Series gas detectors make compliance with safety regulations simple and easy.


- 1 Multiple Cable Gland Entries
- 2 Flush Mounted Sensors
- 3 IP41 or IP66-Rated Enclosure



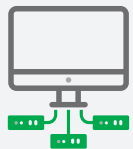
Effective Low Temperature Performance



Intuitive Installation



Bluetooth Connectivity



BMS / BAS Integration

Machinery Rooms | Walk-in Freezers & Cold Rooms | Industrial Cold Storage | Chiller Rooms

Product Selection Guide	MGS-410	MGS-450	MGS-460
ENCLOSURE RATING	IP66	IP41 OR IP66	IP66
DIGITAL COMMUNICATIONS (MODBUS COMMUNICATIONS TO BMS / BAS)	✓	✓	✓
ANALOG COMMUNICATIONS	—	✓	✓
RELAYS (CORRESPONDING TO FAULT, LOW ALARM AND HIGH ALARM)	—	3	3
REMOTE SENSOR	—	—	✓



MGS-410



MGS-450



MGS-460

MGS-410 Gas Detector

- Integrated audio & visual alarms comply with safety regulations - no additional hardware
- Maintains performance in temperatures as cold as -40° F / 50°C
- Modbus RTU interface, BMS / BAS connectivity

MGS-450 Gas Detector

- Integrated audio & visual alarms comply with safety regulations - no additional hardware
- Maintains performance in temperatures as cold as -40° F / 50°C
- IP41 and IP66 rated ABS enclosures available
- Three relays, fully configurable, correspond to alarm thresholds (High / Low) and fault status
- Modbus RTU interface, analog, BMS / BAS connectivity

MGS-460 Gas Detector

- Integrated audio & visual alarms comply with safety regulations - no additional hardware
- Maintains performance in temperatures as cold as -40° F / 50°C
- Remote sensor for monitoring for leaks in inaccessible areas
- Three relays, fully configurable, correspond to alarm thresholds (High / Low) and fault status
- Modbus RTU interface, analog, BMS / BAS connectivity



MGS-402 Controller

- LED status indication for “at-a-glance” system /alarm status
- Seamless integration of power / communications for up to two MGS-410 Gas Detectors
- Modbus RTU Master / Slave provides seamless integration from connected gas detectors to many third-party BMS / BAS
- Audible and visual alarms enable compliance with ASHRAE 15 / EN 378 - no additional hardware required



MGS-408 Controller

- Capable of powering up-to 8 gas detectors
- Displays real time data (status / gas measurement) from connected instruments
- Retains alarm & status history of connected gas detectors
- Modbus RTU interface, analog, BMS / BAS connectivity



MGS-400 Series App

The MSA Bacharach MGS-400 App allows users to configure, maintain and interface with compatible MGS-400 gas detectors:

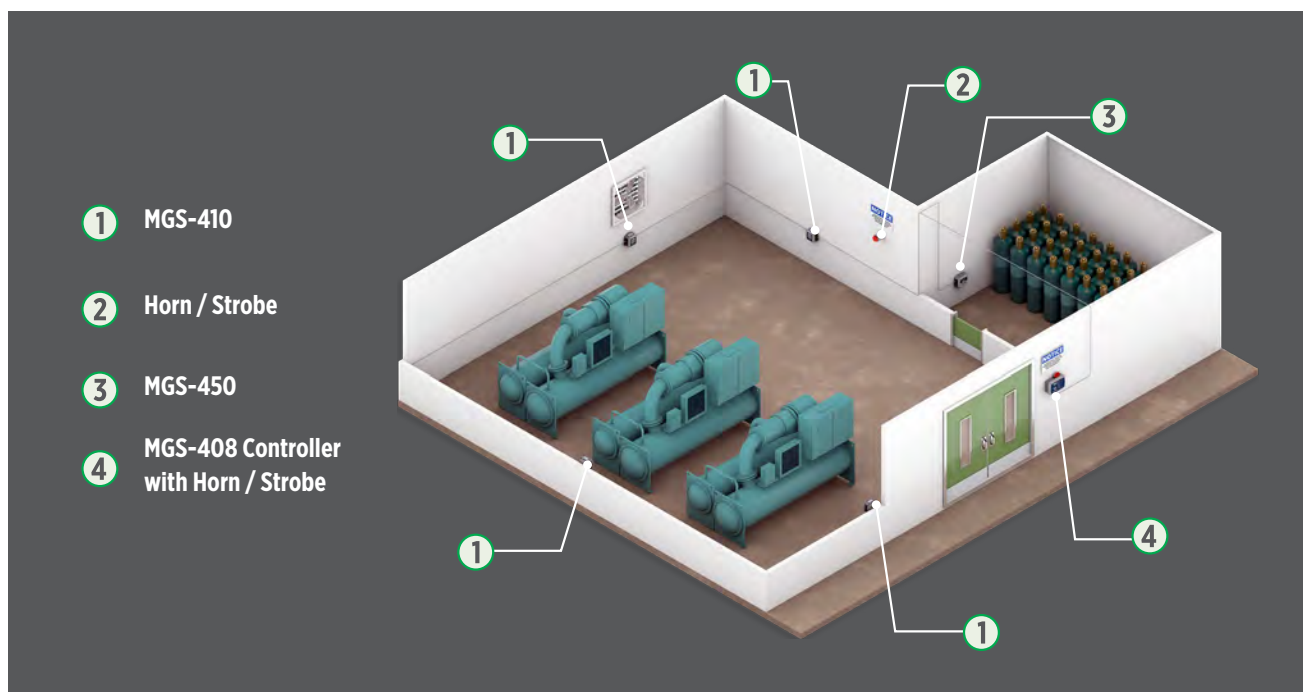
- **Configuration** (Rename device, define alarm thresholds, adjust Modbus settings, configure relay behavior and manage analog output settings).
- **Maintenance** (Test LED/buzzer function, relays, and analog output level).
- **Calibration** (View sensor type, serial number and “Calibration Due” timer and initiate zero / span calibrations with customizable field calibration certificate).
- **Intuitive Interface** (View current gas measurement and acknowledge alarm / fault status).

Gas Detection Library

- CO
- CO₂
- HF01234YF
- HF01234ZE
- R-50 (Methane)
- R-717 (Ammonia)
- NO₂
- O₂ (Low Alarm)
- R-1234yf
- R-1234ze
- R-134a
- R-22
- R-290 (Propane)
- R-32
- R-404A
- R-407A
- R-407C
- R-407F
- R-410A
- R-422
- R-422D
- R-427A
- R-434A
- R-448A
- R-449A
- R-450A
- R-452A
- R-452B
- R-454A
- R-454B
- R-454C
- R-455A
- R-507A
- R-513A
- R-600 (Butane)



Mechanical Room Configuration



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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