

# MGS-250 Infrared Gas Detector

## For Commercial and Industrial Applications

**BACHARACH**


### DESCRIPTION

Bacharach's new MGS-250 Infrared Refrigerant Gas Transmitter is the leader in performance and flexibility at an economical price. There are two versions available - a cost-effective broadband sensor used for gross leak detection or gas-particular versions that are even more distinct, pre-calibrated and characterized for response to specific refrigerants. Its simple-to-use interface gives the user the ability to set all parameters and outputs without opening the unit, moving jumpers, using multimeters or adjusting potentiometers.

The MGS-250 family is a cost effective solution for detecting a variety of refrigerants without the limitations posed by solid-state sensor technologies. The long-life, proprietary NDIR infrared sensor allows for accurate low-level leak detection (0-3,500 ppm), delivering up to 5-7 years of maintenance-free operation without the need for costly annual gas calibrations. Infrared sensing technology makes the MGS-250 immune to cross sensitivities to combustible and toxic gas as well as changes in temperature and humidity. The unit has an alpha-numeric LED display to show constant real-time readings, an on-board LED indicator for when the sensor is in an alarm state, and an audible alarm to alert personnel in the area that levels have exceeded the desired limit. An optional protective splash guard is available for use in areas with high water spray such as food and beverage facilities or chiller rooms.

### FEATURES

### BENEFITS

Infrared Sensor Technology	Minimise false alarms from cross-interference from other gases, temperature and humidity
On-board Audio-visual Alarms	Enable compliance with regulatory standards, including ASHRAE 15 and EN 378
Modbus, 4-20mA output & alarm relay	Integrate with BMS / control systems to initiate action when a leak is detected
Digital Display Screen	Easy user interface for configuration and set-up
Self-diagnostics	Enhanced troubleshooting capability
Minimal Maintenance Requirements	Low cost of ownership
Optional MGS Controller Available	Create an independent, centralised alarm system with up to 6 gas detectors



PRODUCT ATTRIBUTES	DESCRIPTION
Sensor:	Long-life Non Dispersive Infrared (NDIR); 5-7 year life
Refrigerants Detected:	Broadspectrum: CFC, HFCs, HCFC, HFOs; Specific: R-22, R-134a, R-404A, R-407A, R-407C, R-407F, R-422A, R-422D, R-452B, R-507, R-514A, R-527A, HFO-1234YF, HFO-1234ZE
Range:	0-3,500 ppm
Power Supply	24 VDC, 24 VAC 50/60 Hz, 2.5 W max
Power Monitoring:	Green LED
Display:	Red 4-digit alpha-numeric LED display
Visual Alarm:	Red 4-digit LED display
Audible Alarm:	Buzzer (audible alarm), enable / disable
Fault Monitoring:	Fault codes presented to user
Analog Outputs:	4-20 mA; 0-5 V; 0-10 V; 1-5 V; 2-10 V
Relay:	1 relay rated 1 A @ 24 VAC / VDC (0.5 A, 125 V AC UL rating)
Communication:	Modbus RTU over RS-485
Baud Rate:	9,600 or 19,200 (selectable)
Start Bits:	1
Data Bits:	8
Parity:	None, odd, even (programmable)
Stop Bits:	1 or 2, programmable
Retry Time:	500 ms (min time between retries)
End of MSG:	Silent 3-5 characters
Alarm Delay:	Selectable; 0 to 15 minutes
Response Time, T90:	5 minutes
Temperature Range:	-22 to 104°F (-30 to 40°C)
Humidity Range	5-90% relative humidity, non-condensing; 0-10,000 ft. altitude
Approvals:	CE, UL/CSA/IEC/EN 61010-1
Dimensions	4.0" x 5.5" x 1.5", 6.3 oz.
Weight	102 mm x 140 mm x 37 mm, 180g

PART NUMBERS	DESCRIPTION
6401-0500	Infrared Halocarbon Detector, Broadband Version
6401-0501	Infrared R-22 Detector
6401-0503	Infrared R-134a Detector
6401-0504	Infrared R-404a Detector
6401-0505	Infrared R-407a Detector
6401-0507	Infrared R-407f
6401-0508	Infrared R-410a
6401-0512	Infrared R-507 Detector
6401-0514	Infrared HFO1234ZE Detector

