



Fixed Gas Monitors

Gas Transmitter MGS-350



Ideal for Industrial and Commercial Chiller Plants, Food Storage/Processing Facilities, Parking Garages, Schools and Hospitals, Maintenance Facilities, Grocery/Convenience Stores

Features & Benefits:

- Detects refrigerants (CFCs, HFCs, HCFCs), TVOCs, combustible gases/hydrocarbons, O₂, NH₃, CO, H₂S, H₂, NO, NO₂, SO₂, Cl₂, and O₃
- Utilizes long-lasting infrared, semiconductor, catalytic bead and electrochemical sensor options for effective leak detection - at the most affordable cost.
- Integrated visual LED alarm
- Two onboard alarm relays (low and high).
- Available in a variety of housings, including IP 66 and duct mount, for placement in diverse environments.
- Analog outputs: 4-20 mA, 0-5V, 0-10V, featuring 12/24 VAC / 12-30VDC operation



Standard IP30 Enclosure

Continuous Leak Detection In Diverse Environments

Bacharach's MGS-350 Series Gas Transmitter is a feature-rich gas detection system with a wide range of sensor options to provide real-time monitoring of refrigerant, combustible, TVOC and toxic gases. It comes standard with analog and digital outputs including 4-20 mA, 0-5V, 0-10V and Modbus (RS485), allowing them to connect directly to most BMS, SCADA or control systems. An onboard visual LED alarm indicator alerts area personnel when levels have exceeded the desired limit. The MGS-350 also features alarm relays (high and low) for connection to external audible/visual alarms or a BMS or BAS system.

MGS-350 Gas Transmitters, combined with the MGS Controller, can provide facility owners with a customized and complete low-cost gas-detection system. A variety of housing options are available (shown below), from standard IP30 enclosures to IP66 water resistant housings, which allow the MGS-350 units to be placed in many environments.



MGS Controller



MGS-350 Technical Specifications

Power Supply:	12-24 VAC/12-30 VDC
Power Consumption (12V):	5W maximum
Power Monitoring:	Green LED
Visual Alarm:	Red LED
Audible Alarm:	Buzzer (internal)
Fault Monitoring:	Yes [Red LED (On) • Green LED (Off)]
Analog Outputs:	0-1 V / 0-2 mA outputs
Digital Outputs:	Modbus (RS485), serial data
Relays:	2 relays, ea. rated 1A @ 125 VAC (resistive load)
Alarm Delay:	Selectable: 0, 1, 5 or 10 minutes
IP Rating:	IP30 (standard) • IP66 (optional)
Approvals:	CE • IEC/EN 61010-1 (pending) • UL/CSA 61010-1
Dimensions & Weight - enclosures types:	Standard 5.7" x 7.3" x 3.1" • 1.9 lb. IP30: 145 x 185 x 80mm • 850 g
	IP66: 6.9" x 6.5" x 3.2" • 1.5 lb. 175 x 165 x 82mm • 660 g
	IP66 w/Splash: 6.9" x 8.9" x 3.2" • 1.7 lb. 175 x 225 x 82mm • 756 g
	IP66 / Remote: 6.9" x 6.1" x 3.2" • 2 lb. 175 x 155 x 82mm • 917 g
	IP66 / Exd: 6.9" x 6.1" x 3.2" • 2.7 lb. 175 x 155 x 82mm • 1240 g
	PRV / IP66: 6.9" x 6.1" x 3.2" • 2 lb. 175 x 155 x 82mm • 900 g
	Airflow / Duct: 6.9" x 4.9" x 3.2" • 1.4 lb. 175 x 125 x 82mm • 643 g
	Exd (ATEX only): 5.1" x 6.9" x 3.5" • 8.8 lb. 130 x 175 x 90mm • 4003 g

MGS-350 Common Configurations

Infrared Sensor - Common Configurations	
6500-1090	CO ₂ IR: 0 - 5,000 ppm • Standard Housing
6500-8091	CO ₂ IR: 0 - 10,000 ppm • Duct Mount
6500-2051	Combustibles IR: 0 - 100% LEL • IP66 Housing
Electrochemical Sensor - Common Configurations	
6500-1018	CO: Parking Garage • Standard Housing
6500-2018	CO: Parking Garage • IP66 Housing
6500-3031	NH ₃ : 0 - 500 ppm • IP66 w/Splash Guard
6500-4030	NH ₃ : 0 - 100 ppm • IP66 w/Remote Sensor
6500-2001	CO: 0 - 1,000 ppm • IP66 Housing
6500-1019	NO ₂ : Parking Garage • Standard Housing
6500-2019	NO ₂ : Parking Garage • IP66 Housing
6500-2015	O ₃ : 0-2 ppm • IP66 Housing
Semiconductor Sensor - Common Configurations	
6500-7118	NH ₃ : 0 - 10,000 ppm • IP66 w/PRV Sensor
6500-2101	R134a: 0 - 1,000 ppm • IP66
6500-1105	R407a: 0 - 1,000 ppm • Standard Housing
6500-4101	R134a: 0 - 1,000 ppm • IP66 w/Remote Sensor
6500-2120	Ethylene: 0 - 2,000 ppm • IP66
6500-2121	VOC: 0 - 2,000 ppm • IP66
6500-9107	R410a: 0 - 1,000 ppm • Remote Sensor with Faceplate
6500-4119	H ₂ : 0 - 2,000 ppm • IP66 w/Remote Sensor
Catalytic Bead Sensor - Common Configurations	
6500-7020	NH ₃ : 0 - 30,000 ppm • IP66 w/PRV Sensor
6500-2021	H ₂ : 0 - 20,000 ppm • IP66
6500-6022	CH ₄ : 0 - 100% LEL • Exd Remote
6500-7023	LPG/Propane: 0 - 100% LEL • IP66 w/Remote Sensor
MGS Controller - Common Configurations	
6700-0300	MGS Controller • 1 Sensor / 1 Alarm • 110VAC
6700-0370	MGS Controller • 6 Sensors / 2 Alarm • 110VAC
6700-0301	MGS Controller • 1 Sensor / 1 Alarm • 220VAC
6700-0371	MGS Controller • 6 Sensors / 2 Alarm • 220VAC
6700-0352	MGS Controller • 4 Sensors / 2 Alarm • 12VDC

Please contact your Bacharach sales representative for other configurations based on your unique specifications.

MGS-350 Sensor Information

	Semiconductor (SC)	Electrochemical (EC)	Infrared (NDIR)	Catalytic Bead (CAT)
Temperature Range:	-4° F to 122° F (Std.) -20° C to 50° C (Std.) -40° F to 122° F (IP66) -40° C to 50° C (IP66)	-4° F to 104° F (Std.) -20° C to 40° C (Std.) -40° F to 104° F (IP66) -40° C to 40° C (IP66)	-4° F to 122° F (Std.) -20° C to 50° C (Std.) -40° F to 122° F (IP66) -40° C to 50° C (IP66)	-4° F to 122° F (Std.) -20° C to 50° C (Std.) -40° F to 122° F (IP66) -40° C to 50° C (IP66)
Humidity (non-condensing):	0 - 95%	0 - 95%	0 - 95%	0 - 95%
Sensor Life:	5 - 8 years	2 - 5 years	5 years	5 years
Time to Alarm (T50):	20 seconds	80 seconds	45 seconds	30 seconds
Time to Alarm (T90):	50 seconds	220 seconds	90 seconds	45 seconds
Recovery Time:	900 seconds, typical	600 seconds, typical	210 seconds, typical	600 seconds, typical
Gases Detected	Type (Symbol)	Infrared Sensor - Measuring Range(s) Available		
Carbon Dioxide:	CO ₂	0 - 5,000 ppm • 0 - 10,000 ppm • 0 - 20,000 ppm 0 - 30,000 ppm (0-3% vol.) • 0 - 50,000 ppm (0-5% vol.) 0 - 100,000 ppm (0-10% vol.)		
Hydrocarbons:	Methane, Butane, Propane, etc.	0 - 100% LEL, 0 - 100% vol.		
Gases Detected	Type (Symbol)	Semiconductor Sensor - Measuring Range(s) Available		
Refrigerants: HFCs, CFCs, HCFCs	R134a, R404a, R407a, R410a, R22, R507a, etc. R600a, R290	0 - 1,000 ppm • 0 - 3,000 ppm • 0 - 5,000 ppm • 0 - 10,000 ppm 0 - 2,000 ppm		
Ammonia:	NH ₃	0 - 100 ppm • 0-1,000 ppm • 0-5,000 ppm 0-10,000 ppm		
Hydrogen:	H ₂	0 - 2,000 ppm		
Hydrocarbons:	Methane (natural gas), Propane, Butane, LPG, Ethylene, Isobutane	0 - 2,000 ppm		
VOCs:	Acetone, Ethanol, Methanol, Trichloro-ethylene and more	0 - 2,000 ppm		
Gases Detected	Type (Symbol)	Electrochemical Sensor - Measuring Range(s) Available		
Various including:	Ammonia (NH ₃) Carbon Monoxide (CO) Industrial Chlorine (Cl ₂) Ethylene (C ₂ H ₄) Ethylene Oxide (C ₂ H ₄ O) Fluorine (F ₂) IP 41 only Hydrogen (H ₂) Hydrogen Chloride (HCl) Hydrogen Cyanide (HCN) Hydrogen Sulfide (H ₂ S) Nitric Oxide (NO) Nitrogen Dioxide (NO ₂) Oxygen (O ₂) Ozone (O ₃) Phosphine (PH ₃) Sulfur Dioxide (SO ₂)	0 - 100 ppm • 0 - 500 ppm • 0 - 1,000 ppm • 0 - 5,000 ppm 0 - 100 ppm • 0 - 500 ppm • 0 - 1,000 ppm 0 - 20 ppm 0 - 10 ppm • 0 - 1,000 ppm 0 - 20 ppm 0 - 1 ppm 0 - 1,000 ppm • 0 - 10,000 ppm • 100% LEL 0 - 50 ppm 0 - 50 ppm 0 - 30 ppm • 0 - 200 ppm 0 - 100 ppm • 0 - 1,000 ppm 0 - 10 ppm 0 - 30% vol. 0 - 2 ppm 0 - 5 ppm 0 - 100 ppm		
Gases Detected	Type (Symbol)	Catalytic Bead Sensor - Measuring Range(s) Available		
Various including:	Ammonia (NH ₃) Hydrogen (H ₂) Methane (CH ₄), LPG/Propane, Butane, all combustible gases	0 - 30,000 ppm 0 - 20,000 ppm 0 - 100% LEL		

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