Gas Transmitter Series
MGS·150

Ideal for Commercial and Industrial Refrigeration, Food Storage and Food Processing Facilities, Supermarkets, Parking Garages, Wastewater Treatment Facilities, Hospitals and Universities.

Features & Benefits:

- Infrared, semiconductor and electrochemical sensor options to meet almost any gas detection need - at the most affordable cost.

- User-selectable analog outputs: 4-20 mA, 0-5V, 0-10V, 1-5V, 2-10V featuring 12/24 VAC/VDC operation

- Fast-response sensors detect leaks quickly, which protect personnel and minimize refrigerant gas usage and environmental impact.

- Long-life semiconductor sensors for detection of all refrigerants, ammonia, halocarbons, combustible gases & VOCs

- Robust design and remote sensor options allow units to be placed directly in areas where detection is needed.

- Available in a variety of housings, including IP66 and duct mount, for placement in the toughest of environments.

MGS Standard Housing

MGS Controller

Continuous Monitoring For Most Types of Gases

Bacharach's MGS-150 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, and toxic gases. It comes standard with user-selectable analog and digital outputs that can be set for 4-20 mA, 0-5V, 1-5V, 0-10V, or 2-10V; allowing them to connect directly to most BMS, SCADA or control systems. Alarm indicators include an onboard alarm LED and audible buzzer, in addition to an alarm relay for connection to external audible/visual alarms or a BMS system.

The product's alarm threshold value is pre-set to factory defaults but is also field programmable. A variety of housing options are available (shown below), from standard IP41 enclosures to IP66 water resistant housings, which allow the MGS-150 Series gas sensors to be placed in the toughest of conditions.

| IP66 Housing | Airflow / Duct Mount | IP66 with Splash Guard | IP66 with Remote Head | IP66 with Exd Remote Head | IP66 with PRV | Exd (ATEX only) |

MGS-150 Technical Specifications

Power Supply:	12/24 VAC/VDC operation
Power Consumption (12V):	NDIR: 140 mA • SC: 160 mA • EC: 60 mA
Power Monitoring:	Green LED
Visual Alarm:	Red LED
Audible Alarm:	Buzzer, enabled/disabled
Fault Monitoring:	Red LED (On) • Green LED (Off)
Fault States:	0-1 V / 0-2 mA outputs
Analog Outputs:	4-20 mA, 0-5 V, 0-10 V, 1-5 V, 2-10 V
Relay Output (Volt-free):	1 relay, 1 amp 24 VAC/VDC
Alarm Delay:	Selectable: 0, 1, 5 or 10 minutes
IP Rating:	IP41 (standard) • IP66 (optional)
Dimensions & Weight - enclosures types:	Standard IP41: 3.35"x5.59"x2.09" • 6.3oz. / 86 x 142 x 53mm • 180g
	IP66: 6.89"x6.5"x3.29" • 1lb. 6oz. / 175 x 165 x 82mm • 629g
	IP66 w/Splash: 6.89"x8.9"x3.29" • 1lb. 8.7oz. / 175 x 225 x 82mm • 700g
	IP66 / Remote: 6.89"x6.1"x3.29" • 1lb. 11oz. / 175 x 155 x 82mm • 790g
	IP66 / EXd: 6.89"x6.1"x3.29" • 2lb. 10oz. / 175 x 155 x 82mm • 1185g
	PRV / IP66: 6.89"x6.1"x3.29" • 2lb. 0.3oz. / 175 x 155 x 82mm • 916g
	Airflow / Duct: 6.89"x4.9"x3.29" • 1lb. 4oz. / 175 x 125 x 82mm • 578g
	EXd (ATEX only): 5.12"x6.3"x3.54" • 9lb. 4oz. / 130 x 160 x 90mm • 4200g
Approvals:	CE • IEC 61010 (pending) • EXd • UL CSA (pending)

MGS-150 Sensor Information

	Infrared (NDIR)	Semiconductor (SC)	Electrochemical (EC)
Temperature Range:	-4° F to 122° F (Stand. housing) -20° C to 50° C (Stand. housing) -40° F to 122° F (IP66 housing) -40° C to 50° C (IP66 housing)	-4° F to 122° F (Stand. housing) -20° C to 50° C (Stand. housing) -40° F to 122° F (IP66 housing) -40° C to 50° C (IP66 housing)	-4° F to 122° F (Stand. housing) -20° C to 50° C (Stand. housing) -40° F to 122° F (IP66 housing) -40° C to 50° C (IP66 housing)
Humidity (non-condensing):	0 - 95%	0 - 95%	0 - 95%
Sensor Life:	8 years, typical	5 - 8 years, typical	2 - 5 years, typical
Time to Alarm (T50):	25 seconds, typical	20 seconds, typical	80 seconds, typical
Time to Alarm (T90):	90 seconds, typical	50 seconds, typical	220 seconds, typical
Recovery Time:	210 seconds, typical	900 seconds, typical	600 seconds, typical

Infrared (NDIR) Sensor	Gas(es) Detected	Measuring Range(s)
	Carbon Dioxide (CO_2)	0 - 1,000 ppm / 0 - 2,000 ppm / 0 - 5,000 ppm / 0 - 10,000 ppm (0-1% vol.) / 0 - 20,000 ppm (0-2% vol.) / 0 - 5%, 0 - 10%
	Hydrocarbons (Methane, propane, etc.)	0 - 100% LEL, 0 - 100% vol.

Semiconductor Sensor	Gas(es) Detected	Measuring Range(s)
	Refrigerants - HFCs: (R134a, R404a, R407, R410a, & many more)	0 - 1,000 ppm
	Refrigerants - HFCs: (R22 & more)	0 - 1,000 ppm
	Refrigerants - CFCs (R11, R12 & more)	0 - 1,000 ppm
	Ammonia (NH_3)	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

Electrochemical Sensor	Gas(es) Detected	Measuring Range(s)
	Ammonia (NH_3)	0 - 100 ppm • 0 - 500 ppm • 0 - 1,000 ppm • 0 - 5,000 ppm
	Carbon Monoxide (CO)	0 - 100 ppm • 0 - 500 ppm • 0 - 1,000 ppm
	Chlorine (Cl_2)	0 - 20 ppm
	Chlorine Dioxide (ClO_2)	0 - 1 ppm
	Ethylene Oxide (C_2H_4O)	0 - 20 ppm
	Ethylene (C_2H_4)	0 - 20 ppm • 0 - 1,000 ppm
	Fluorine (F_2)	0 - 1 ppm
	Hydrazine (N_2H_2)	0 - 1 ppm
	Saline - Hydride (SiH_4)	0 - 5 ppm
	Hydrogen (H_2)	0 - 1,000 ppm
	Hydrogen Chloride (HCl)	0 - 50 ppm
	Hydrogen Cyanide (HCN)	0 - 50 ppm
	Hydrogen Sulfide (H_2S)	0 - 30 ppm • 0 - 200 ppm
	Nitric Oxide (NO)	0 - 100 ppm • 0 - 1,000 ppm
	Nitrogen Dioxide (NO_2)	0 - 10 ppm
	Oxygen (O_2)	0 - 30% vol.
	Ozone (O_3)	0 - 2 ppm
	Phosgene ($COCl_2$)	0 - 1 ppm
	Phosphine (PH_3)	0 - 5 ppm
	Sulfur Dioxide (SO_2)	0 - 100 ppm

MGS-150 Ordering Information

Infrared (NDIR) Sensor - Common Configurations

6300-1090	CO_2 IR: 0 - 5,000 ppm • Standard Housing
6300-8091	CO_2 IR: 0 - 10,000 ppm • Duct Mount
6300-2051	Combustibles IR: 0 - 100% LEL • IP66 Housing

Semiconductor (SC) Sensor - Common Configurations

6300-7118	NH_3: 0 - 10,000 ppm • IP66 w/PRV Sensor
6300-4101	R134a: 0 - 1,000 ppm • IP66 w/Remote Sensor
6300-1105	R407a: 0 - 1,000 ppm • Standard Housing
6300-4107	R410a: 0 - 1,000 ppm • IP66 w/Remote Sensor

Electrochemical (EC) Sensor - Common Configurations

6300-1018	CO: Parking Garage • Standard Housing
6300-2018	CO: Parking Garage • IP66 Housing
6300-3031	NH_3: 0 - 500 ppm • IP66 w/Splash Guard
6300-4030	NH_3: 0 - 100 ppm • IP66 w/Remote Sensor
6300-2001	CO: 0 - 1,000 ppm • IP66 Housing
6300-1019	NO_2: Parking Garage • Standard Housing
6300-2019	NO_2: Parking Garage • IP66 Housing
6300-2015	O_3: 0-2 ppm • IP66 Housing

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

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