

# MGS-460 Gas Detector

For Safety Compliance in Mechanical Equipment Rooms, Freezers and Cold Rooms




## DESCRIPTION

Bacharach's MGS-460 Gas Detector makes compliance with mechanical equipment rooms and refrigeration safety codes simple and easy, saving time and money on equipment and installation. The remote sensor allows for gas detection to be installed in hard-to-reach areas with a conveniently located electrical and communication interface. 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-460 sensor can trigger additional audio-visual alarms and act as a standalone gas detection system, or integrate easily into a BMS / BAS or with Bacharach's optional MGS-408 Gas Detection Controller.

## FEATURES

## BENEFITS

<b>Mobile App Interface</b>	Quick, easy and intuitive commissioning, configuration and maintenance requires no special training. No tools required to set alarm levels and behavior.
<b>Pre-calibrated Sensors</b>	Fast and easy sensor maintenance. Eliminates need for calibration gas.
<b>Semi-automated Calibration</b>	Easy calibration process with mobile app. Generate calibration certificates for documentation.
<b>Remote Sensor</b>	Locate the sensor element in hard-to-reach areas and the base unit where convenient for electrical and communication wiring.
<b>Low Temperature Performance</b>	Mitigates false alarms and optimizes accuracy in refrigeration applications. Suitable for use in cold rooms and freezers down to -40° F/C.
<b>Digital Communications</b>	Integrate with third-party BMS/BAS via Modbus RTU.
<b>Analog Outputs</b>	For current or voltage output to legacy systems. 4 to 20 mA, 0 to 5 V, 0 to 10 V, 1 to 5 V, 2 to 10 V
<b>Relay outputs</b>	3 relays available for alarm and fault events to active horn/strobes and ventilation.
<b>Audio &amp; Visual Alarms</b>	On-board alarm notification supports compliance with ASHRAE 15 / EN 378.
<b>Multiple Cable Entries and Terminals</b>	Quick and easy installation of all wiring; daisy-chain power and digital communications.

## HOW TO CONTACT US:

US Customer Service: +1 724 334 5000  
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## FOR MORE INFO:

Scan the QR code to learn more about the MGS-460 and other Bacharach products.



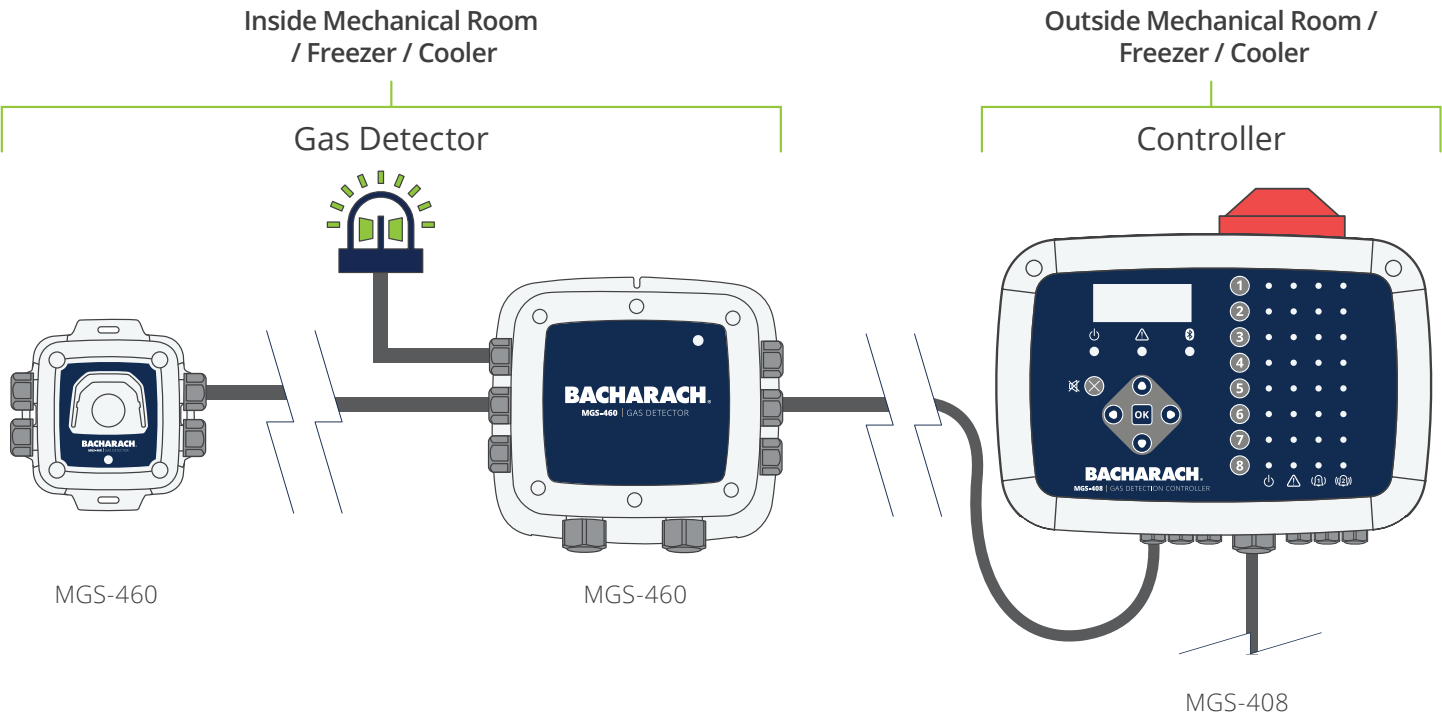
[mybacharach.com](http://mybacharach.com)

## PRODUCT CONFIGURATIONS

Enclosure Rating	IP66
Configurable Relays	Settings: SPDT, Low (1), High (2), Fault (3)
	Rating: 1 A @ 30 VDC
Digital Communications	Modbus RTU
Analog Output	Single Configurable: 4 to 20 mA, 0 to 5 V, 0 to 10 V, 1 to 5 V, 2 to 10 V
Sensor	Remote
Size	Base Unit: 6.5" × 6.5" × 3.4" (165 × 165 × 87 mm)
	Remote Unit: 4.5" × 5.4" × 2.7" (115 × 136 × 68 mm)
Weight (Approx)	1lb, 11.7oz (758 g)

## SPECIFICATIONS

Status Indicator	Single Tri-color LED (green, red, orange)	
Audio Alarm	Buzzer, 72db @ 10cm	
Power	24V AC or DC (auto selecting), 4W (max)	
Approvals	CE, UL / CSA / IEC EN 61010-1	
Ambient Conditions	Humidity	5 to 90 % RH, non-condensing
	Pressure	23.6 to 32.5 inch Hg / 800 to 1,100 mbar



# MGS-460 Sensor Specifications

PART NUMBER	REPLACEMENT SENSOR	TARGET GAS	SENSOR TECHNOLOGY <sup>1</sup>	FULLSCALE RANGE	ALARM RANGE	LOW ALARM	HIGH ALARM	ACCURACY (% OF RANGE)	TEMPERATURE RANGE
6302-4003	6302-9003	O <sub>2</sub>	EC	30% Volume	4.5%-30% Vol	19.5% Vol	23% Vol	±5%	-20°C to 50°C
6302-4026	6302-9026	NH <sub>3</sub>	EC	100ppm	15-100ppm	50ppm	90ppm	±5%	-40°C to 40°C
6302-4028	6302-9028	NH <sub>3</sub>	EC	1,000ppm	150-1,000ppm	500ppm	900ppm	±5%	-40°C to 40°C
6302-4029	6302-9029	NH <sub>3</sub>	EC	300ppm	10-300ppm	25ppm	150ppm	±5%	-40°C to 40°C
6302-4037	6302-9037	NH <sub>3</sub>	EC	5,000ppm	750-5,000ppm	2,500ppm	4,500ppm	±5%	-20°C to 40°C
6302-4040	6302-9040	CO	EC	500ppm	20-500ppm	25ppm	100ppm	±5%	-40°C to 50°C
6302-4041	6302-9041	NO <sub>2</sub>	EC	20ppm (20,000 ppb)	3,000-20,000ppb	5,000ppb	10,000ppb	±5%	-20°C to 40°C
6302-4052	6302-9052	R-600	IR	100% LEL (1.4% Vol)	15-100% LEL	50% LEL	90% LEL	±5%	-40°C to 50°C
6302-4053	6302-9053	R-50	IR	100% LEL (4.4% Vol)	15-100% LEL	50% LEL	90% LEL	±5%	-40°C to 50°C
6302-4054	6302-9054	R-290	IR	100% LEL (1.7% Vol)	15-100% LEL	50% LEL	90% LEL	±5%	-40°C to 50°C
6302-4069	6302-9069	NH <sub>3</sub>	CT	0-3% Volume	1 - 3.0% Vol	1% Vol	2% Vol	±5%	-40°C to 50°C
6302-4070	6302-9070	NH <sub>3</sub>	CT	0-100% LEL (15% Vol)	15 - 100% LEL	25% LEL	50% LEL	±5%	-40°C to 50°C
6302-4090	6302-9090	CO <sub>2</sub>	IR	5,000ppm	750-5,000ppm	2,500ppm	4,500ppm	±5%	-40°C to 50°C
6302-4091	6302-9091	CO <sub>2</sub>	IR	10,000ppm	1,500-10,000ppm	5,000ppm	9,000ppm	±5%	-40°C to 50°C
6302-4092	6302-9092	CO <sub>2</sub>	IR	20,000ppm	3,000-20,000ppm	10,000ppm	18,000ppm	±5%	-40°C to 50°C
6302-4093	6302-9093	CO <sub>2</sub>	IR	30,000ppm	4,500-30,000ppm	15,000ppm	27,000ppm	±5%	-40°C to 50°C
6302-4094	6302-9094	CO <sub>2</sub>	IR	40,000ppm	6,000-40,000ppm	20,000ppm	36,000ppm	±5%	-40°C to 50°C
6302-4095	6302-9095	CO <sub>2</sub>	IR	50,000ppm	7,500-50,000ppm	25,000ppm	45,000ppm	±5%	-40°C to 50°C
6302-4101	6302-9101	R-134a	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4103	6302-9103	R-404A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4105	6302-9105	R-407A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4107	6302-9107	R-410A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4109	6302-9109	R-22	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4111	6302-9111	R-507A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C

<sup>1</sup> EC = Electrochemical Cell, IR = Infrared, CT = Catalytic Bead, SC = Metal-Oxide Semiconductor



PART NUMBER	REPLACEMENT SENSOR	TARGET GAS	SENSOR TECHNOLOGY <sup>1</sup>	FULLSCALE RANGE	ALARM RANGE	LOW ALARM	HIGH ALARM	ACCURACY (% OF RANGE)	TEMPERATURE RANGE
6302-4123	6302-9123	R-407C	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4126	6302-9126	R-407F	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4152	6302-9152	HFO1234ze	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4155	6302-9155	R-32	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4156	6302-9156	R-448A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4157	6302-9157	R-452A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4158	6302-9158	R-513A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4159	6302-9159	R-434A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4160	6302-9160	R-450A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4161	6302-9161	HFO1234yf	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4163	6302-9163	R-452B	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4164	6302-9164	R-454A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4165	6302-9165	R-422A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4166	6302-9166	R-422D	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4167	6302-9167	R-427A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4169	6302-9169	R-449A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4170	6302-9170	R-454C	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4171	6302-9171	R-454B	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4172	6302-9172	R-455A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-4301	6302-9301	R-290	SC	5,000ppm	750-5,000ppm	800ppm	2,500ppm	-10%/+15%	-40°C to 50°C
6302-4310	6302-9310	R-290	SC	2,500ppm	400-2,500ppm	1,000ppm	2,000ppm	-10%/+15%	-40°C to 50°C

<sup>1</sup> EC = Electrochemical Cell, IR = Infrared, CT = Catalytic Bead, SC = Metal-Oxide Semiconductor



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