

MGS-450 Gas Detector

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




IP41

Integrated audio /
visual alarms



IP66

DESCRIPTION

Bacharach's MGS-450 Gas Detector makes compliance with mechanical equipment rooms and refrigeration safety codes simple and easy, saving time and money on equipment and installation. 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-450 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

Rugged Enclosure Options	Choose from IP41-rated or IP-66 rated enclosures to protect from dust and water ingress in...
Mobile App Interface	Quick, easy and intuitive commissioning, configuration and maintenance requires no special training. No tools required to set alarm levels and behavior.
Pre-calibrated Sensors	Fast and easy sensor maintenance. Eliminates need for calibration gas.
Semi-automated Calibration	Easy calibration process with mobile app. Generate calibration certificates for documentation.
Low Temperature Performance	Mitigates false alarms and optimizes accuracy in refrigeration applications. Suitable for use in cold rooms and freezers down to -40° F/C.
Digital Communications	Integrate with local BMS / BAS via Modbus RTU.
Analog Outputs	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
Relay outputs	3 relays available for alarm and fault events to active horn/strobes and ventilation.
Audio & Visual Alarms	On-board alarm notification supports compliance with ASHRAE 15 / EN 378.
Multiple Cable Entries and Terminals	Quick and easy installation of all wiring; daisy-chain power and digital communications.

HOW TO CONTACT US:

US Customer Service: +1 724 334 5000
 EU Customer Service: +353 1 284 6388
 CAN Customer Service: +1 905 882 8985

FOR MORE INFO:

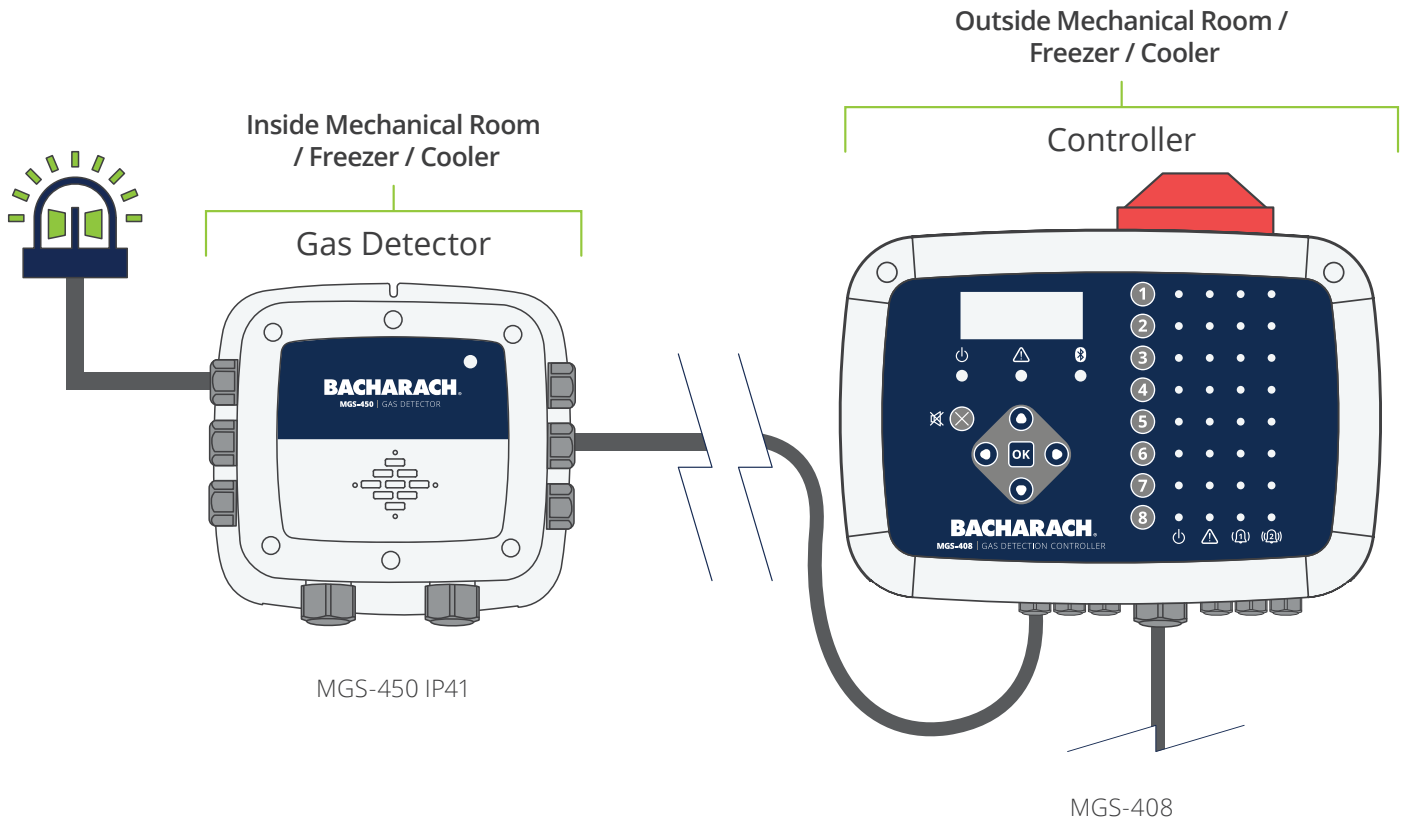
Scan the QR code to learn more about the MGS-450 and other Bacharach products.



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PRODUCT CONFIGURATIONS	
Enclosure Rating	IP41, 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	Integrated
Size	IP41: 6.5" × 6.5" × 3.0" (165 × 165 × 77 mm)
	IP66: 6.5" × 6.5" × 3.4" (165 × 165 × 87 mm)
Weight (Approx)	1lb, 1oz (480 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



MKTG00199 | Rev0 | Marketing Communications | Subject to Modifications | © Bacharach Inc



MGS-450 Sensor Specifications

PART NUMBER IP41	PART NUMBER IP66	REPLACEMENT SENSOR	TARGET GAS	SENSOR TECHNOLOGY ¹	FULLSCALE RANGE	ALARM RANGE	LOW ALARM	HIGH ALARM	ACCURACY (% OF RANGE)	TEMPERATURE RANGE
6302-1003	6302-2003	6302-9003	O ₂	EC	30% Volume	4.5%-30% Vol	19.5% Vol	23% Vol	±5%	-20°C to 50°C
6302-1026	6302-2026	6302-9026	NH ₃	EC	100ppm	15-100ppm	50ppm	90ppm	±5%	-40°C to 40°C
6302-1028	6302-2028	6302-9028	NH ₃	EC	1,000ppm	150-1,000ppm	500ppm	900ppm	±5%	-40°C to 40°C
6302-1029	6302-2029	6302-9029	NH ₃	EC	300ppm	10-300ppm	25ppm	150ppm	±5%	-40°C to 40°C
6302-1037	6302-2037	6302-9037	NH ₃	EC	5,000ppm	750-5,000ppm	2,500ppm	4,500ppm	±5%	-20°C to 40°C
6302-1040	6302-2040	6302-9040	CO	EC	500ppm	20-500ppm	25ppm	100ppm	±5%	-40°C to 50°C
6302-1041	6302-2041	6302-9041	NO ₂	EC	20ppm (20,000 ppb)	3,000-20,000ppb	5,000ppb	10,000ppb	±5%	-20°C to 40°C
6302-1052	6302-2052	6302-9052	R-600	IR	100% LEL (1.4% Vol)	15-100% LEL	50% LEL	90% LEL	±5%	-40°C to 50°C
6302-1053	6302-2053	6302-9053	R-50	IR	100% LEL (4.4% Vol)	15-100% LEL	50% LEL	90% LEL	±5%	-40°C to 50°C
6302-1054	6302-2054	6302-9054	R-290	IR	100% LEL (1.7% Vol)	15-100% LEL	50% LEL	90% LEL	±5%	-40°C to 50°C
6302-1069	6302-2069	6302-9069	NH ₃	CT	0-3% Volume	1 - 3.0% Vol	1% Vol	2% Vol	±5%	-40°C to 50°C
6302-1070	6302-2070	6302-9070	NH ₃	CT	0-100% LEL (15% Vol)	15 - 100% LEL	25% LEL	50% LEL	±5%	-40°C to 50°C
6302-1090	6302-2090	6302-9090	CO ₂	IR	5,000ppm	750-5,000ppm	2,500ppm	4,500ppm	±5%	-40°C to 50°C
6302-1091	6302-2091	6302-9091	CO ₂	IR	10,000ppm	1,500-10,000ppm	5,000ppm	9,000ppm	±5%	-40°C to 50°C
6302-1092	6302-2092	6302-9092	CO ₂	IR	20,000ppm	3,000-20,000ppm	10,000ppm	18,000ppm	±5%	-40°C to 50°C
6302-1093	6302-2093	6302-9093	CO ₂	IR	30,000ppm	4,500-30,000ppm	15,000ppm	27,000ppm	±5%	-40°C to 50°C
6302-1094	6302-2094	6302-9094	CO ₂	IR	40,000ppm	6,000-40,000ppm	20,000ppm	36,000ppm	±5%	-40°C to 50°C
6302-1095	6302-2095	6302-9095	CO ₂	IR	50,000ppm	7,500-50,000ppm	25,000ppm	45,000ppm	±5%	-40°C to 50°C
6302-1101	6302-2101	6302-9101	R-134a	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1103	6302-2103	6302-9103	R-404A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1105	6302-2105	6302-9105	R-407A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1107	6302-2107	6302-9107	R-410A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1109	6302-2109	6302-9109	R-22	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1111	6302-2111	6302-9111	R-507A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C

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



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6302-1123	6302-2123	6302-9123	R-407C	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1126	6302-2126	6302-9126	R-407F	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1152	6302-2152	6302-9152	HFO1234ze	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1155	6302-2155	6302-9155	R-32	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1156	6302-2156	6302-9156	R-448A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1157	6302-2157	6302-9157	R-452A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1158	6302-2158	6302-9158	R-513A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1159	6302-2159	6302-9159	R-434A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1160	6302-2160	6302-9160	R-450A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1161	6302-2161	6302-9161	HFO1234yf	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1163	6302-2163	6302-9163	R-452B	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1164	6302-2164	6302-9164	R-454A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1165	6302-2165	6302-9165	R-422A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1166	6302-2166	6302-9166	R-422D	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1167	6302-2167	6302-9167	R-427A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1169	6302-2169	6302-9169	R-449A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1170	6302-2170	6302-9170	R-454C	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1171	6302-2171	6302-9171	R-454B	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1172	6302-2172	6302-9172	R-455A	SC	1,000ppm	150-1,000ppm	500ppm	900ppm	-10%/+15%	-40°C to 50°C
6302-1301	6302-2301	6302-9301	R-290	SC	5,000ppm	750-5,000ppm	800ppm	2,500ppm	-10%/+15%	-40°C to 50°C
6302-1310	6302-2310	6302-9310	R-290	SC	2,500ppm	400-2,500ppm	1,000ppm	2,000ppm	-10%/+15%	-40°C to 50°C

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