



## Gas Detection System

### MGD-100

#### FEATURES

Scalable system  
 MGD controller  
 Relay outputs  
 Infrared and semiconductor sensor types  
 Audio and visual alarms

#### BENEFITS

Configure for site-specific requirements  
 Centralize alarms from 1 - 6 detection points  
 Initiate action when leaks are detected  
 Flexibility in sensor type provides acceptable configurations for a variety of applications  
 Immediately alert personnel of potential safety risks

#### Scalable Refrigerant and Combustible Gas Detection System

#### DESCRIPTION

The MGD-100 is an affordable and scalable gas detection system used to provide real-time monitoring of refrigerants, ammonia and carbon dioxide. The unit alarms when pre-set thresholds are exceeded. Alarms are monitored by a centralized controller, which can alert personnel of potential hazardous conditions via an onboard buzzer and LED alarm indicators.

The unit can be configured from single-sensor, one-alarm level systems to larger scale systems consisting of 6 sensors with 2 alarm levels. The instruments are connected to and powered by the MGD controller. A variety of housing options are available, including IP41 and IP66 rated enclosures, which enable direct placement of the MGD-100 in a variety of environments. For special applications, the sensor can be remotely mounted from the instrument.



#### HOW TO CONTACT US:

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For more information  
 about the MGD-100 and  
 other Bacharach products  
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INDUSTRIAL



COMMERCIAL



REFRIGERATION

## SPECIFICATONS

MEASUREMENT	DESCRIPTION			
	Controller with 1 or 2 Sensors		Controller with 4 or 6 Sensors	
Alarm Levels	One level	Two levels	One level	Two levels
Power Monitoring	Green LED	Green LED	Green LED	Green LED
Visual Alarm	Red LED	Red LED	Red LED	Red LED
Fault Monitoring	Red LED, relay, siren inactive	Red LED, relay, siren inactive	Red LED, relay, siren inactive	Red LED, relay, siren inactive, fault relay active
Audible Alarm	Internal buzzer - continuous	Internal buzzer - intermittent (low), continuous (high)	External buzzer - continuous	External buzzer - intermittent (low), continuous (high)
Buzzer Deactivate	By onboard jumper	By key switch	By onboard jumper	By key switch
Alarm Realy (Volt-Free)	10 amp @ 120v or 230v	10 amp @ 120v or 230v (both low & high level)	10 amp @ 12v or 230v	10 amp @ 120v or 230v (both low & high level)
Relay Expander Box (One Relay for Each Sensor / Alarm Level)	N/A	N/A	N/A	Available
Alarm Reset	Automatic when gas clears	Automatic when gas clears (low). Latch out, manual reset by push button when gas clears (high)	Automatic when gas clears	Automatic when gas clears (low). Latch out, manual reset by push button when gas clears (high)
Delayed Response	Selectable (25 sec when on)	25 sec (low) 30 sec (high)	Selectable (25 sec when on)	25 sec (low) 30 sec (high)
Ratings	Controller: IP51	Standard sensor: IP41	Controller: IP51	Standard sensor: IP41
Cabling, Conroller-to-Sensor	4 wire shielded cable, 200 feet (61 m) max, 22AWG @ 120VAC • 0.2 mm		4 wire shielded cable, 500 feet (152 m) max, 22AWG @ 120VAC • 0.2 mm	
Dimensions (Standard Controller)	8.4" x 4.1" x 3.15" (214 x 105 x 80 mm) • 2.9 lbs (1.3 kg)		10.3" x 10.4" x 3.3" (262 x 265 x 84 mm) • 5.7 lbs (2.6 kg)	
Dimensions - Other Enclosures	Standard:	3.35" x 5.59" x 2.09" (86 x 142 x 53 mm) • 6.3 oz (180 g)		
	IP66:	6.89" x 6.5" x 3.29" (175 x 165 x 82 mm) • 22 oz (629 g)		
	IP66 w/ Splash:	6.89" x 8.9" x 3.29" (175 x 225 x 82 mm) • 24.7 oz (700 g)		
	IP66 w/ Remote:	6.89" x 6.1" x 3.29" (175 x 155 x 82 mm) • 27 oz (790 g)		
	IP66 w/ EXd:	6.89" x 6.1" x 3.29" (175 x 155 x 82 mm) • 42 oz (1185 g)		
	PRV / IP66:	6.89" x 6.1" x 3.29" (175 x 155 x 82 mm) • 32.3 oz (916 g)		
	Airflow / Duct:	6.89" x 4.9" x 3.29" (175 x 125 x 82 mm) • 20 oz (578 g)		
	EXd:	5.12" x 6.3" x 3.54" (130 x 160 x 90 mm) • 148 oz (4200 g)		
Power Supply	12 VDC or 100-230 VAC 50/60 Hz			
Power-On Delay	3-10 minutes to stabilize from power-up; slightly longer from storage			
Approvals	CE • UL 61010-1 • CAN/CSA 22.2 61010-1 • Lloyd's Approval			
Temperature Range	Standard Housing: -4° to 122° F (-20° to 50° C) IP66 Housing: -40° to 122° F (-40° to 50° C)			
Gases Detected	<b>NDIR Sensor:</b>			
	Carbon Dioxide (CO <sub>2</sub> )	0 to 5,000 ppm (level 1), 0 to 9,000 ppm (level 2)		
	<b>Semiconductor Sensor:</b>			
	All HFC, CFC and HCFC refrigerants	100 ppm or 100 / 1,000 ppm*		
	Ammonia (NH <sub>3</sub> )	500 ppm or 500 / 1,000 ppm and 500 or 500 / 10,000 ppm*		

\*Full sensor detection range: 0 - 10,000



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