



## Industrial Refrigerant Gas Detector

### MGS-550

#### FEATURES

One or two sensor capability  
Remote sensor capabilities  
Analog and digital interface  
On-board relays  
Magnetic wand  
Status indicator and LED display  
Optional MGS Controller available

#### BENEFITS

Detects two gases and/or in two locations with one instrument  
Flexible placement in hard to reach areas  
Ease of integration with multiple control devices  
Connects to local alarm devices for saving costs on installation  
Non-intrusive configuration and calibration  
Provides at-a-glance status overview and comprehensive direct user interface  
Create an independent, centralised alarm system with up to 6 gas detectors

#### Enabling Gas Leak Detection in Industrial Refrigeration Applications

#### DESCRIPTION

Bacharach's MGS-550 leak detector combines electrochemical, semiconductor, catalytic bead and infrared sensors into one platform to support leak detection for the new low GWP (Global Warming Potential) refrigerant blends as well as natural refrigerants to enable gas leak detection in the often harsh environments of industrial refrigeration.

The MGS-550 can easily be integrated into any building management system (BMS). The Modbus RTU interface allows the user to program and configure the unit remotely through the BMS. Remote access gives complete control to the user when using Modbus. Alternatively, electrical current or volt analog output provides an industry standard reading using 4-20mA.

Having three integrated relays within each instrument reduces the need for having to wire alarm devices back to a central control system. Because of the integrated relays, the Bacharach MGS-550 can be operated as a stand-alone system. Each relay can be individually programmed to trigger alarm devices and actions separately or as a redundant system.

The straightforward menu structure is identical regardless of the type of sensors used, reducing the costs and amount of time for training required upon installation or during maintenance.

Bacharach's MGS-550 offers the flexibility of adding a second sensor at any point in time without the need for any additional controllers. Any sensor can be remotely mounted from the main instrument to a distance of 5 meters or 15 feet. It meets the requirements of EN 378 and ASHRAE 15.

5 DIGIT LED DISPLAY



DUAL SENSOR CAPABILITY



INDUSTRIAL



REFRIGERATION

**TECHNICAL DATA**

| PRODUCT ATTRIBUTES         | DESCRIPTION                                                                     |                                          | DEFINITION                                             |
|----------------------------|---------------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------------|
| <b>Gases and Ranges</b>    | Refrigerants                                                                    |                                          | 1,000 / 10,000 ppm                                     |
|                            | CO <sub>2</sub>                                                                 |                                          | 5,000 / 10,000 / 20,000 / 30,000 / 40,000 / 50,000 ppm |
|                            | NH <sub>3</sub> *                                                               |                                          | 100** / 1,000** / 5,000** / 10,000 ppm / 100% LEL      |
|                            | O <sub>2</sub>                                                                  |                                          | 30Vol%                                                 |
|                            | CO**                                                                            |                                          | 500 / 1,000 ppm                                        |
|                            | Combustible Gases                                                               |                                          | 5,000 ppm / 100% LEL                                   |
|                            | C <sub>2</sub> H <sub>4</sub>                                                   |                                          | 2,000 ppm                                              |
|                            | NO <sub>2</sub> ***                                                             |                                          | 20 ppm                                                 |
| <b>Repeatability</b>       | ±5% of applied gas concentration                                                |                                          |                                                        |
| <b>Display</b>             | Red 5-digit, 7-segmented LED and green status LEDs                              |                                          |                                                        |
| <b>Output</b>              | Analog                                                                          |                                          | 4 to 20 mA, 0 to 5 V, 0 to 10 V, 1 to 5 V, 2 to 10 V   |
|                            | Digital                                                                         |                                          | Modbus RTU via RS 485                                  |
| <b>Power Supply</b>        | 19.5 to 28.5 VDC or 24 VAC ±20%; 3- or 4-wire                                   |                                          |                                                        |
| <b>Relay</b>               | Three relays, SPDT, user assignable                                             |                                          |                                                        |
|                            | Rating 2 A @ 30 VDC NO, 0.5 A @ 125 VDC, 0.25 A @ 250 VAC, 30 W, resistive load |                                          |                                                        |
| <b>Enclosure</b>           | General purpose                                                                 |                                          | ABS IP66 with four M20 x 1.5 cable glands              |
|                            | Rugged, Explosion-Proof Certified****                                           |                                          | Aluminum with four M20 x 1.5 hubs                      |
| <b>Size (WxHxD) Approx</b> | General purpose                                                                 |                                          | 8.3" x 8.9" x 3.4" / 210 x 225 x 85 mm                 |
|                            | Rugged, Explosion-Proof Certified****                                           |                                          | 4.9" x 7.5" x 3.5" / 125 x 190 x 90 mm                 |
| <b>Weight Approx</b>       | GP: 2 lbs / 1 kg; XP: 3.5 lbs / 1.6 kg                                          |                                          |                                                        |
| <b>Approvals</b>           | CE, UL / CSA / IEC EN 61010-1                                                   |                                          |                                                        |
| <b>Ambient Conditions</b>  | Temperature                                                                     | Semiconductor                            | -40 to 122°F / -40 to +50°C                            |
|                            |                                                                                 | Electrochemical                          | -5 to 122°F / -20 to +50°C*                            |
|                            |                                                                                 | Infrared                                 | -40 to 122°F / -40 to +50°C                            |
|                            |                                                                                 | Catalytic Bead                           | -40 to 122°F / -40 to +50°C                            |
|                            | Humidity                                                                        | 5 to 90 % RH, non condensing             |                                                        |
|                            | Pressure                                                                        | 23.6 to 32.5 inch Hg / 800 to 1,100 mbar |                                                        |

\* NH<sub>3</sub> available as low temperature version -40°F / 40°C (not for 5,000 ppm Electrochemical sensor)

\*\* IP66 rated; not available in XP enclosure

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\*\*\*\* MGS-550 is not approved as an explosion-proof product and should NOT be installed in hazardous locations



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