



# MGS-408

## Gas Detection Controller for Commercial & Industrial Applications



### Refrigerant Leak Detection

P/N: 1100-2292 | February 2019 Revision 0

### Quick Start Guide

**Languages** EN DE ES FR IT ND  
ENGLISH DEUTSCH ESPAÑOL FRANÇAIS ITALIANO NEDERLANDS



This quick start guide has been translated into the following languages: **Deutsch, Español, Français, Italiano and Nederlands.** To download a translated document, scan here or visit <http://bit.ly/2TbbFNb>.

## 1. Introduction

The MGS-408 Gas Detection Controller displays comprehensive information about the status of all connected gas detectors. A maximum of eight (8) gas sensors can be connected to the MGS-408 via Modbus RTU. Compatible Bacharach gas detectors are the MGS-410, MGS-450, MGS-460, MGS-250 and MGS-550.

## 2. Safety Instructions

**DANGER:** The MGS-408 is NOT certified or approved for operation in oxygen-enriched atmospheres. Failure to comply may result in **EXPLOSION**.

**WARNING:** NEVER operate the MGS-408 without connection to a protective ground. Failure to comply may result in a potential shock hazard and is a violation of electrical safety standards.

## 2. Safety Instructions (Continued)

**WARNING:** Extreme care should be exercised when accessing the product's interior. Only qualified electrical maintenance personnel should perform connections and adjustments. Always remove AC power before working inside the MGS-408's enclosure.

**WARNING:** Use a DRY CLOTH to clean the outside of this product. DO NOT use soap and water or other detergents. Failure to comply may result in a potential shock hazard.

**CAUTION:** The protection provided by this product may become impaired if it is used in a manner not specified by the manufacturer. Modifications to this instrument, not expressly approved, will void the warranty.

**CAUTION:** Use ONLY the provided cable glands for electrical and communication wiring. Drilling into the box will void the warranty.

A certified AC power disconnect or circuit breaker should be mounted near the controller and installed following applicable local and national codes. If a switch is used instead of a circuit breaker, a properly rated **CERTIFIED** fuse or current limiter is required to be installed as per local or national codes. Markings for positions of the switch or breaker should state (I) for on and (O) for off.

**CAUTION:** In case of malfunction, **DO NOT** continue to use this equipment if there are any symptoms of malfunction or failure. In the case of such occurrence, de-energize the power supply and contact a qualified repair technician or the nearest Bacharach Service Center.

**CODE COMPLIANCE:** Comply with all local and national laws, rules and regulations associated with this equipment. Operators should be aware of the regulations and standards in their industry / locality for the operation of the MGS-408.

**TECHNICIAN USE ONLY:** The MGS-408 must be installed by a suitably qualified technician who will install this unit in accordance with these instructions and the standards in their

particular industry / country. This document is only intended as a guide and the manufacturer bears no responsibility for the installation or operation of this unit.

Failure to install and operate the unit in accordance with these instructions and with industry guidelines may cause serious injury or death and the manufacturer will not be held responsible in this regard.

## 4. Key Specifications

<b>Size (H×W×D):</b>	11.0" × 8.5" × 3.9" (280 × 215 × 100 mm)
<b>Weight:</b>	2.76 lbs (1250 g)
<b>Indicators:</b>	Multi-color Status LED Internal Alarm Buzzer: 72dB @ 3.9" (10 cm)
<b>Alarm Delay:</b>	Configurable (0 to 15 minutes)
<b>Inputs:</b>	Tactile Switches (×2), Magnetic Switches (×2)
<b>Outputs:</b>	Analog Output: 4 to 20 mA, 0 to 5V, 0 to 10V, 1 to 5V (default) or 2 to 10V
<b>Bluetooth®</b>	Bluetooth® Low Energy, BLE 4.2
<b>Modbus:</b>	<b>Connection:</b> RS-485 terminal block <b>Baud Rate:</b> 9,600 (default) or 19,200 <b>Data Bits:</b> 8 <b>Parity:</b> None (default), odd or even <b>Stop Bits:</b> 1 (default) or 2 <b>Retry Time:</b> 500 ms (minimum)

<b>Power Supply:</b>	100 - 240 VAC, 50 / 60 HZ, 80W (maximum)
<b>Wiring (Power):</b>	2-core cable, 16 to 28 AWG
<b>Wiring (Relays):</b>	2-core cable, 16 to 28 AWG
<b>Wiring (Modbus):</b>	<b>Recommended:</b> Belden 3106A (or equivalent) 3-core, 2 twisted pair + ground, shielded cable with 120 Ω characteristic impedance, 16 to 28 AWG
<b>Enclosure:</b>	<b>Material:</b> ABS <b>Protection:</b> IP66
<b>Temperature:</b>	32 to 113°F (0 to 45°C)
<b>Humidity:</b>	5 to 90% RH, non condensing
<b>Pressure:</b>	23.6 to 32.5" Hg (800 to 1,100 mbar)
<b>Elevation:</b>	0 to 6,560' (2,000 m) altitude

## 5. Mounting Template

