

# MSA Chemgard® Gas Monitor

## For Monitoring and Detection of Ethylene Oxide



### Description

The NEMA 4 wall-mount Chemgard Monitor is easy to use and maintain, with only 4 front-panel pushbuttons to configure the instrument. For most installations, gas monitoring begins after simply mounting the instrument, connecting sample lines, and powering the unit.

The instrument typically draws the gas sample via an internal pump. This process allows the unit to be mounted conveniently for operators if the area to be monitored is inaccessible. A pressurized sample can also be delivered to the unit, eliminating the necessity for an internal pump. An internal flow switch alerts operators if the gas sample is blocked by a dirty end-of-line filter or clogged sample line.

The direct-reading display shows actual gas value as well as alarms and diagnostic messages.

Cross-sensitivity to water vapor, a common problem with other types of infrared analyzers, does not occur with this instrument. Its proprietary sensing technique determines the amount of water vapor in the sample and subtracts it from the gas reading. This permits the gas reading to be extremely stable, with no compromise of the unit's sensitivity.

### Application

The Chemgard Photoacoustic Infrared Gas Monitor using photoacoustic infrared (PIR) sensing technology, provides precise, low-cost, high-performance monitoring for detection of ethylene oxide. This wall-mounted unit gives accurate, multi-point monitoring with an easy-to-read display. The Chemgard Gas Monitor is suitable for ETO detection in hospital environments as well as for many other applications.

### Technology

The Chemgard Gas Monitor is extremely stable and highly selective to the gas of interest. The Chemgard Monitor can operate for months with virtually no zero drift. The long-life sensor has no consumable parts. The instrument has detectability as low as 3 ppm for ethylene oxide.

### Data Logging

The Chemgard Monitor can log data, giving users access to date-stamped information on key events including gas readings, alarms, and fault conditions. Gas readings can be logged as maximum or average readings over 15-minute or 1-hour time periods. Data is accessible through the front panel display or the RS-232 port.

### Expandability

Simply by adding the multi-point sequencer option, the Chemgard Monitor can be expanded to monitor up to 8 locations. The display indicates the monitored location and corresponding gas concentration at each location.

## Options

- Heated enclosure for special applications
- Z-purged enclosure available for special applications
- Remote relay module provides 3 discreet levels of alarm per monitoring point
- Remote display option

## Ordering Information

P/N	Description
A-3800-20-1-1-1-0-2-1-0-D-O-N-O	Single-point Chemgard Monitor for EtO (without beacon)
A-3800-20-1-1-1-5-2-1-0-D-O-N-O	Single-point Chemgard Monitor for EtO (with beacon)
A-3800-20-4-1-1-0-2-4-0-D-O-N-O	4-point Chemgard Monitor for EtO (without beacon)
A-3800-20-4-1-1-5-2-4-0-D-O-N-O	4-point Chemgard Monitor for EtO (with beacon)
A-3800-20-8-1-1-0-2-8-0-D-O-N-O	8-point Chemgard Monitor for EtO (without beacon)
A-3800-20-8-1-1-5-2-8-0-D-O-N-O	8-point Chemgard Monitor for EtO (with beacon)

Contact your local MSA representative to discuss other options available for the Chemgard Infrared Gas Monitor.

## Specifications

<b>For 0-1000 ppm range</b>	
Accuracy	0-100 ppm $\pm$ 2 ppm; 100-1000 ppm $\pm$ 10% reading
Linearity	0-100 ppm linear, 100-1000 $\pm$ 2% of full scale
Sensitivity	2 ppm
Resolution	1 ppm
<b>Reproducibility</b>	$\pm$ 2 ppm over 12 months at specified operating conditions
<b>Response</b>	Updated reading every 7 seconds
<b>Operating temperature</b>	0-50°C, 32-122°F
<b>Temperature effect</b>	$\pm$ 0.3% per °C of reading
<b>Relative humidity</b>	0-99% non-condensing - no effect on reading
<b>Sample flow rate</b>	1.5 liter/minute
<b>Maximum total tubing length</b>	150 feet with 1/8" ID 500 feet with 3/16" ID
<b>Operating power requirements</b>	120 VAC $\pm$ 10% at 0.56 Amps, or 240 VAC; $\pm$ 10% at 0.3 Amps
<b>Alarm relays</b>	3 relays @ 8 Amps resistive
<b>Approvals</b>	UL 2075
<b>Physical enclosure information</b>	
<b>NEMA 4</b>	
Dimensions	18" H x 16" W x 7" D
Weight	40 lbs.

## Features

- › Photoacoustic infrared technology
- › Easy to install, operate, and maintain
- › Operates over wide temperature ranges
- › Can be installed in numerous environments and configurations
- › Easy-to-read display showing gas concentration(s) and alarms
- › 3 alarm levels with relay output
- › UL 2075 safety and performance approval
- › All user functions are configurable through front panel
- › Monitor 1, 4, or 8 sampling points per instrument
- › Long-life sensor has no consumable parts
- › Normally energized trouble relay for fail-safe operation
- › Adjustable alarm set points from 3 to 999 ppm
- › Signal outputs:
  - Sourcing 4-20mA current output
  - 0-10 VDC signal output
  - Voltage output can be configured to indicate monitored sample point
  - RS-232
- › Auxiliary input accepts 4-20 mA analog current signal
- › Audible alarm output for standard 85 dB buzzer or user-supplied horn
- › Switch connection resets alarms remotely

**Note:** This Bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.



**Corporate Headquarters**  
P.O. Box 426, Pittsburgh, PA 15230 USA  
Phone 412-967-3000  
[www.MSAnet.com](http://www.MSAnet.com)

**U.S. Customer Service Center**  
Phone 1-800-MSA-INST  
Fax 1-800-967-0398

**MSA Canada**  
Phone 1-800-672-2222  
Fax 1-800-967-0398

**MSA Mexico**  
Phone 01 800 672 7222  
Fax 52-44 2227 3943

**MSA International**  
Phone 412-967-3354  
FAX 412-967-3451