



MSA Chemgard[®] Gas Monitor

[for the monitoring and detection of ethylene oxide]



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Chemgard Infrared Gas Monitor-
NEMA 4 Version

Application

The Chemgard Photoacoustic Infrared Gas Monitor, utilizing 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 the detection of ETO in hospital environments as well as 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.

Description

The NEMA 4 wall-mount Chemgard Monitor is easy to use and maintain, with only

four front-panel pushbuttons to configure the instrument. For most installations, gas monitoring begins after simply mounting the instrument, connecting the sample lines and powering the unit.

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

The direct-reading display shows the actual gas value as well as any 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 in the unit's sensitivity.

Data Logging

The Chemgard Monitor can log data, giving the user 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 multipoint sequencer option, the Chemgard Monitor can be expanded to monitor up to eight locations.

The display indicates the monitored location and the corresponding gas concentration at each location.

Features

- Photoacoustic infrared technology
- Easy to install, operate and maintain
- Operates over a wide temperature range
- Can be installed in numerous environments and configurations
- Easy-to-read display showing gas concentration(s) and alarms
- Three alarm levels with relay output
- UL 2075 approval
- All user functions configurable through front panel
- Monitor one, four or eight sampling points per instrument
- Long-life sensor has no consumable parts
- Normally energized trouble relay for failsafe 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 a 4-20mA analog current signal
- Audible alarm output for standard 85db buzzer or user-supplied horn
- Connection for a switch to reset alarms remotely

Options

- Heated enclosure for special applications
- Z-purged enclosure available for special applications
- Remote Relay Module-provides three discreet levels of alarm per monitoring point
- Remote display option

Order Information

Single-point Chemgard Monitor for EtO (without beacon):	A-3800-20-1-1-1-0-2-1-0-D-0-N-0
Single-point Chemgard Monitor for EtO (with beacon):	A-3800-20-1-1-1-S-2-1-0-D-0-N-0
4-point Chemgard Monitor for EtO (without beacon):	A-3800-20-4-1-1-0-2-4-0-D-0-N-0
4-point Chemgard Monitor for EtO (with beacon):	A-3800-20-4-1-1-S-2-4-0-D-0-N-0
8-point Chemgard Monitor for EtO (without beacon):	A-3800-20-8-1-1-0-2-8-0-D-0-N-0
8-point Chemgard Monitor for EtO (with beacon):	A-3800-20-8-1-1-S-2-8-0-D-0-N-0

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

Specifications

For 0-1000 ppm range:

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

Note: This Data Sheet contains only a general description of the product shown. While uses and performance capabilities are described, under no circumstances should the product be used except by qualified, trained personnel, and not until the instructions, labels or other literature accompanying the product have been carefully read and understood and the precautions therein set forth followed. Only they contain the complete and detailed information concerning this product.

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