

# AMNG-EXP

## Automatic Mercury Monitor for Natural Gas Explosionproof



### KEY FEATURES

#### Housing:

- Wall mounted, explosionproof, ATEX certified Aluminum enclosure
- 25 mm shell thickness
- Hazardous Area Classification: Class 1 Division 1 or 2, Groups B, C, D
- External ON / OFF Switch
- Window in door displays the 5-minute average
- Window turns RED / GREEN to display status

#### Spectrometer:

The AMNG-EXP features a highly sensitive, atomic absorption spectrometer with Zeeman background correction, providing interference free measurements.

#### Sample Lines:

The inlet and outlet ports of the Monitor are equipped with 6 mm compression fittings for connecting to 6 mm OD (1/4"), 4-5 mm ID, Teflon PTFE or PFA tubing.

#### Data Acquisition / Communications:

Built-in industrial grade computer, real time readings with Excel data file or direct communications with DCS via Modbus TCP. On-line remote data transfer and analyzer control/calibration capabilities.

#### Advantages:

- Direct continuous measurements
- Analyzes gas "as is", providing better process control
- Low detection limit and wide range of measurement
- Long term calibration stability
- No chemicals, carrier or zero gases
- Very low operating costs
- Automatic zero drift and span drift correction
- Automatic recalculation to standard conditions
- Auto control and preventive maintenance functions
- Robust and low maintenance
- Customized configuration

#### Description

The AMNG-EXP Automatic Mercury Monitor for Natural Gas is designed for continuous, on-line measurement of Mercury in the gas flow. The spectrometer, operating computer, filters, valves, electrical connections, and power supply are located inside an explosionproof, ATEX certified enclosure. The AMNG-EXP Monitor is designed for indoor operation, or installation inside a climate controlled room. The embedded operating computer controls the measurement procedure, data processing, and data transfer via RS-232/485 interface or current loop.

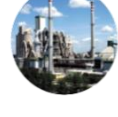
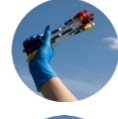


# Technical Specifications

	Treated Gas	Raw Gas
Measurement Range*	0 – 25,000 ng/m <sup>3</sup>	0 – 250,000 ng/m <sup>3</sup>
Detection Limit**	1 – 5 ng/m <sup>3</sup>	10 – 50 ng/m <sup>3</sup>
* Other measurement ranges available depending on customer requirements.		
** Detection limit can vary depending on sample matrix.		
Averaging Interval	5 min	
Zero Drift Correction	Automatic	
Span Drift Correction	Automatic	
<b>Sampling Gas Conditions</b>		
Gas Pressure	Atmospheric (± 20 %)	
Flow Rate	4 – 10 Liters/min	
Gas Humidity	Dew Point < +10°C (+50°F)	
Gas Temperature	-20 to +40°C (-4 to +104°F)	
<b>Data Output</b>		
Communication Ports	2 x USB; 2 x LAN, Isolated 4-20 mA	
Status Outputs	MEASURING; ZERO CONTROL; CALIBRATION; SERVICE; FAILURE	
<b>Operating Conditions</b>		
Temperature	+20 ± 2°C (+68 ± 3.6°F)	
Pressure	84.0 to 106.7 kPa (12.2 to 15.5 psi)	
Relative Humidity	< 98% at +35°C (+95°F)	
Power	110/240 V, 50/60 Hz; 120 VA	
Dimensions	740 x 584 x 251 mm (29.1 x 23.0 x 9.9 inches)	
Weight	92 kg (203 lbs)	

## Services

Initial installation, method development, and training are not required due to the fully automated and simple operation.



OHIO LUMEX



The information and specifications in this publication are subject to change without notice.

### Ohio Lumex Co., Inc.

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AMING-EXP Equipment Data Sheet

# RA-915 AMNG Automatic Mercury Monitor for Natural Gas



## AREA OF APPLICATION

Automatic mercury monitor for natural hydrocarbon gas is designed for continuous online monitoring of mercury gas flow.

## METHOD

The method of mercury determination in gas is based on atomic absorption spectrometry with Zeeman correction of background absorption.

## ADVANTAGES

- Direct continuous measurements
- Analyzes gas “as is” providing better control of production process
- Low detection limit and wide range of measurement
- Highest selectivity
- Long term calibration stability
- No chemicals, carrier or zero gases
- Low continuous operating costs
- Automatic zero drift and span drift correction
- Automatic recalculation to standard conditions
- Auto control and preventive maintenance functions
- Robustness and low maintenance

## DESIGN

The monitor is mounted in a standard 19-inch rack. The RA-915 AMNG monitor is designed for indoor operation or installation in climate controlled cabinets. The embedded operating computer controls the measurement procedure, data processing, and data transfer via RS-232/485 interface or current loop. The monitor may be placed in an explosionproof ATEX certified enclosure.



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## TECHNICAL SPECIFICATIONS

	Treated Gas	Raw Gas
Measurement Range*	0 – 25,000 ng/m <sup>3</sup>	0 – 250,000 ng/m <sup>3</sup>
Detection Limit**	1 – 5 ng/m <sup>3</sup>	10 – 50 ng/m <sup>3</sup>
* Other measurement ranges available depending on customer requirements.		
** Detection limit can vary depending on sample matrix.		
Averaging Interval	5 min	
Zero Drift Correction	Automatic	
Span Drift Correction	Automatic	
Sampling Gas Conditions		
Gas Pressure	Atmospheric (± 20 %)	
Flow Rate	4 – 10 Liters/min	
Gas Humidity	Dew Point < +10°C (+50°F)	
Gas Temperature	-20 to +40°C (-4 to +104°F)	
Data Output		
Communication Ports	2 x USB; 2 x LAN, Isolated 4-20 mA	
Status Outputs	MEASURING; ZERO CONTROL; CALIBRATION; SERVICE; FAILURE	
Operating Conditions		
Temperature	+20 ± 2°C (+68 ± 3.6°F)	
Pressure	84.0 to 106.7 kPa (12.2 to 15.5 psi)	
Relative Humidity	< 98% at +35°C (+95°F)	
Power	110/240 V, 50/60 Hz; 120 VA	
Dimensions	600 x 480 x 220 mm (23.6 x 18.9 x 8.7 inches)	
Weight	20 kg (44 lbs)	

## SERVICES

Initial installation, method development and training is not required due to the fully automated and simple operation.



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Optional Nitrogen Purge System

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