

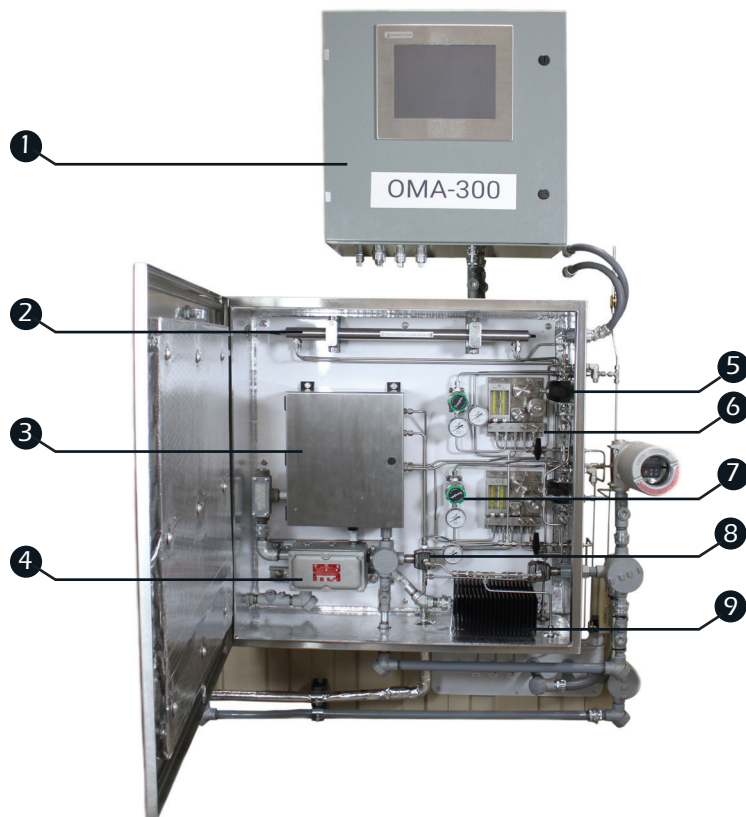
H₂S OMA-300

Measuring Hydrogen Sulfide in Natural Gas



Mustang Sampling[®]

Item Number	Description
1	Analyzer Controller
2	Measurement Cell
3	Aromatic Trap
4	PID Temperature Controller
5	Zero Gas Valve
6	Mustang [®] Modular Sample Control Panel (MMSCP [®])
7	Back Pressure Regulator
8	Back Flush Valve
9	Self-Limiting Block Heater



APPLICATION

The composition of pipeline natural gas varies widely by source but typically reflects a mixture of simple hydrocarbon gases with a few other components including water vapor, carbon dioxide, helium, nitrogen, and sometimes hydrogen sulfide (H₂S). Hydrogen sulfide can be especially problematic because it is both toxic and corrosive, representing one of the largest threats to pipeline integrity when stress corrosion cracking occurs. Hydrogen sulfide detection is an integral element of natural gas analysis from the wellhead to burner in North America and throughout the world.

The OMA-300 is a highly field-proven solution for fast-response H₂S measurements in several natural gas applications. Due to high accuracy and dynamic range, the OMA is the analyzer of choice both for high-level and low-level H₂S ranges. The OMA provides fast response measurement with less downtime than alternatives for more effective control in a natural gas process. When compared against other photometers, the OMA provides more accurate measurement of a wider concentration range due to the dispersive "full-spectrum" acquisition at high resolution.

FEATURES

- Dispersive UV-Vis absorbance spectrophotometer
- 1,024-photodiode array
- Rugged flow cell
- 316 SS NEMA 4X Enclosure

BENEFITS

- Cell located independent from power
- Continuously measures H₂S concentration in natural gas
- Accurate measurement of 0-10 ppm, 0-100%, or any range in between
- Direct analysis of hot, wet, high-pressure sample
- Solid state device with no moving parts
- Low maintenance

PRODUCT SPECIFICATIONS

Measurement Principle	Dispersive UV-Vis absorbance spectrophotometry
Detector	nova IITM Spectrophotometer
	Data sheet: http://aai.solutions/documents/AA_DS201A_novall.pdf
Spectral Range	200-800 nm (UV-Vis model)
Light Source	Standard: pulsed xenon lamp with average 5 year lifespan (dependent on application)
Fiber Optic Cables	Standard: 600 µm core 1.8 meter fiber optic cables (qty = 2)
	Data sheet: http://aai.solutions/documents/AA_DS206A_FiberOptics.pdf
Sample Medium	Gas or liquid
Sample Introduction	Standard: stainless steel 316L flow cell with application-dependent path length
	Options in data sheet: http://aai.solutions/documents/AA_DS207X_FlowCell_All.pdf
Measuring Parameters	
Photometric Accuracy	±0.004 AU at 220 nm
Response Time	1-5 seconds
Sensitivity	±0.1 % full scale
Sample Conditions	
Sample Temperature	Standard: -20 to 70 °C (-4 to 158 °F)
Sample Pressure (max)	Using standard flow cell: 206 bar (3000 psi)
Ambient Conditions	
Analyzer Environment	Indoor/Outdoor (no shelter required)
Ambient Temperature	Standard: 0 to 35 °C (32 to 95 °F)
	Optional: -20 to 55 °C (-4 to 131 °F)
	To avoid radiational heating, use of a sunshade is recommended for systems installed in direct sunlight.
Utility Requirements	
Electrical Requirements	85 to 264 VAC 47 to 63 Hz
Power Consumption	45 watts
Outputs/Communication	
Outputs	1x galvanically isolated 4-20mA analog output per measured analyte
	2x digital outputs for fault and SCS control
	Optional: Modbus TCP/IP; RS-232; RS-485; HART; more
I/O Electronics	Voltage/Current Interface Module (i.e. I/O Board)
	Data sheet: http://aai.solutions/documents/AA_DS205A_VCIM.pdf
Performance Specifications	
Accuracy	Custom measurement ranges available; example ranges below. Accuracy specifications represent gas sample analysis validated with span gas.
H ₂ S	0-10 ppm: ±1 ppm 0-100 ppm: ±1% full scale or 1 ppm* 0-10,000 ppm: ±1% full scale

*Whichever is larger.

Analytically Accurate® TECHNOLOGY

About Mustang Sampling

Mustang Sampling, LLC is the innovator of Analytically Accurate® solutions within sample conditioning systems. We provide custom solutions of products and services globally to the Natural Gas, Natural Gas Liquids (NGL), and Liquefied Natural Gas (LNG) industries. Mustang Sampling continues to pioneer integrated control systems, allowing our customers to maintain phase stability from sample extraction at the source through sample analysis. Our products are continuously improved and subjected to the highest quality standards which provides our customers with the best sample conditioning solutions.

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