

Simultaneous measurements of H_2S and NH_3



H_2S/NH_3 Analyzer (H_2S , NH_3 , CO_2 , H_2O)

Features and Benefits

- Fast response allows observation of transient and time varying flows
- Wide dynamic range even in complex flows
- High-resolution absorption spectra always viewable
- Low power: ideal for field apps
- Enhanced Performance model provides ultra-low drift and unsurpassed precision
- Full remote control via Internet
- Extremely robust and fully serviceable in the field
- New Ultraportable package available (60 watts, 15 kg, AC or DC power)

LGR's new H_2S/NH_3 (ammonia, hydrogen sulfide) Analyzer provides sensitive measurements in ambient air or in industrial process flows with extremely high precision and sensitivity. No longer do you have to wait a long time to measure these gases with high sensitivity and accuracy – LGR's H_2S/NH_3 Analyzer provides measurements every second with sub-ppm level precision. In addition, the H_2S/NH_3 Analyzer can report measurements quickly (on a dry and wet basis) over a very wide range of mole fractions even in complex process flows.

LGR's H_2S/NH_3 Analyzer is available in different versions to allow users to select the model suitable for their needs. LGR's "high sensitivity" model is designed for ultra trace detection of NH_3 and H_2S in ambient air, industrial process streams, or wherever highest detectivity is required. LGR's "industrial" model is designed for high accuracy measurements in complex processes which contain NH_3 and H_2S at levels that exceed the dynamic range of other analytical techniques.

LGR's new "Enhanced Performance" series incorporates proprietary internal thermal control for ultra-stable measurements with

unsurpassed precision, accuracy and drift. Also, LGR's new "Ultraportable" series allows users to hand carry the instrument anywhere and to operate directly on DC or AC power.

The H_2S/NH_3 Analyzer uses LGR's patented Off-axis ICOS technology, a fourth-generation cavity enhanced absorption technique. Off-axis ICOS has many advantages over conventional cavity ringdown spectroscopy (CRDS) techniques such as being alignment insensitive, having a much shorter measurement time, and not requiring expensive and complicated components.

LGR Analyzers include an internal computer (Linux OS) that can store data practically indefinitely on an internal hard drive (for unattended long-term operation), and send real-time data to a data logger through its analog, digital and Ethernet outputs.

Furthermore, LGR instruments may be fully controlled remotely. This capability allows the user to operate the analyzer using a web browser anywhere Internet access is available. Remote access allows full control of the instrument and the opportunity to obtain data and diagnose the instrument operation without being on site.

H₂S/NH₃ Analyzer (NH₃, H₂S, CO₂, H₂O)

Performance Specifications

Precision (1σ, 1 sec / 100 sec):

High Sensitivity model

NH₃: 2 ppb / 0.2 ppb

H₂S: 15 ppb / 2 ppb

Industrial model:

NH₃: 10 ppb / 1 ppb

H₂S: 100 ppb / 10 ppb

Maximum Drift (Enhanced Performance model) (15 min average, at STP, over 24 hrs):

High Sensitivity model

NH₃: 0.3 ppb

H₂S: 5 ppb

Industrial model:

NH₃: 2 ppb

H₂S: 20 ppb

Measurement Range (meets specs):

High Sensitivity model:

NH₃: 0.001 – 10 ppm

H₂S: 0.001 – 10 ppm

Industrial model:

NH₃: 0.08 – 400 ppm

H₂S: 0.08 – 400 ppm

CO₂: 0.1 – 15%

H₂O: 0.1 – 100% RH noncondensing

Measurement Rates (user selectable):

0.01 – 1 Hz

Sampling Conditions:

Sample Temperature: -10 – 80 °C

Operating Temperature: 0 – 45 °C

Ambient Humidity: 0 – 100% RH non-condensing

Outputs (all models):

Digital (RS232), analog, Ethernet, USB

Power Requirements:

115/230 VAC, 50/60 Hz or 12 VDC

Standard models: 100 watts

Enhanced Performance models: 150 watts (steady state)

Dimensions:

Rackmount Package - Standard models:

8.75" × 19" × 24", 29 kg

Rackmount Package - Enhanced Performance models:

14" × 19" × 24", 40 kg

Ultraportable package:

18.5" × 14" × 7", 25 kg



Ordering Information

907-0039: Rackmount package - High Sensitivity model

911-0039: Enhanced Performance package - High Sensitivity model

915-0039: Ultraportable package - High Sensitivity model

907-0040: Rackmount package - Industrial model

911-0040: Enhanced Performance package - Industrial model

915-0040: Ultraportable package - Industrial model

Accessories

908-0003-9001: Multiport Inlet Unit –
Automated control of up to 16 inlet ports

908-0003-9002: Multiport Inlet Unit –
Automated control of up to 8 inlet ports

904-0002: Data Logging Software – software records and synchronizes serial (RS-232) outputs from multiple LGR analyzers and other devices (GPS, anemometers) on a Windows 7 computer.



Instrument complies with 21 CFR 1040.10 and 1040.11