

Highest accuracy and reliability



Hydrogen Sulfide Analyzer (H₂S, CO₂, H₂O)

Features and Benefits

- Fastest response: 1-Hz measurements: allow observation of transient and time varying flows
- Extremely wide range of concentrations even in the presence of 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
- Available in Ultraportable package

LGR's Hydrogen Sulfide Analyzer (H₂S) 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 hydrogen sulfide gas with high sensitivity and accuracy – LGR's H₂S Analyzer provides measurements every second with sub-ppm level precision. In addition, the H₂S Analyzer can report measurements quickly over a very wide range of H₂S mole fractions even in complex process flows.

LGR's H₂S Analyzer is available in two 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 H₂S 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 H₂S at levels that can 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. Moreover, only LGR's analyzers provide reliable guaranteed measurements at mole fractions

more than 20 times ambient levels. For highest portability, the analyzer is now available in the new Ultraportable package.

The H₂S 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 power consuming auxiliary components.

As with all LGR instruments, the H₂S Analyzer includes an internal computer (Linux OS) that can store data practically indefinitely on its internal hard drive (for unattended long-term operation), and that can send real-time data to a data logger through its analog, digital (RS232) and Ethernet outputs.

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

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Performance Specifications

Precision (1s, 1 sec / 100 sec):

- High Sensitivity model: 15 ppb / 5 ppb
- Industrial model: 100 ppb / 10 ppb
- Ultraportable packages 2x higher precision

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

- High Sensitivity model: 30 ppb
- Industrial model: 20 ppb

Measurement Range (meets all specs):

- High Sensitivity model: 0.025 – 400 ppm
- Industrial model: 0.08 – 400 ppm
- Other gases measured:
 - CO₂: 0.1 – 15%
 - H₂O: 0.1 – 100% RH noncondensing

Operational Range

(external calibration may be required):

- High Sensitivity model: 0 – 1000 ppm
- Industrial model: 0 – 1000 ppm
- Background gases tolerated:
 - CO < 15%
 - CO₂ < 15%
 - CH₄ < 1%
 - C₃H₈ < 5000 ppm

Measurement Rates (user selectable, all models):

0.01 – 1 Hz

Sampling Conditions (all models):

- Sample Temperature: -20 – 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 (Ultraportable model)
- Standard models: 100 watts
- Enhanced Performance models: 150 watts (steady state)
- Ultraportable: 60 watts (10-30 VDC, or 115/230 VAC)

Dimensions:

- Rackmount Package (Standard models): 8.75"×19"×24"
- Rackmount Package (Enhanced Performance models): 14"×19"×24"
- Ultraportable Package: 18.5"×14"×7"

Weight:

- 27 kg (Standard models)
- 40 kg (Enhanced Performance models)
- 15 kg (Ultraportable model)

Ordering Information

- 907-0018: Rackmount package - High Sensitivity model
- 911-0018: Enhanced Performance package - High Sensitivity model
- 907-0030: Rackmount package - Industrial model
- 911-0030: Enhanced Performance package - Industrial model
- 915-0030: Ultraportable package - Industrial model
- 915-0018: Ultraportable package - High Sensitivity model

Accessories

- MIU-16: Multiport Inlet Unit – Automated control of up to 16 inlet ports
- MIU-8: Multiport Inlet Unit – Automated control of up to 8 inlet ports
- ACC-DP20: N920 Pump – External pump provides 6x faster flow-through response (1/e) time
- Datalog: Digital Data Logging capability allows simultaneous recording of serial (RS-232) data outputs from multiple ABB analyzers and from other instruments into a single data file on the analyzer.



Instrument complies with 21 CFR 1040.10 and 1040.11