

Methane Analyzer Travels Anywhere



Ultraportable instrument measures CH₄ in the field

Ultraportable Methane Analyzer (CH₄, H₂O)

Features and Benefits

- 15 kg, 60 watts (DC power)
- Gases measured simultaneously
- All absorption spectra always viewable
- CH₄ reported on dry mole basis
- Ideal for natural gas leak detection, chamber flux, soil studies, compliance monitoring
- Wide measurement range
- New *Extended Range* option allows methane measurements at levels up to 10%
- Species specific - no cross interferences
- Operates on DC or AC power

LGR's new Ultraportable Methane Analyzer (UMA) reports measurements of methane and water vapor simultaneously in a package that is compact, crushproof and travels anywhere. Small enough to be carried on-board aircraft (TSA approved size) and requiring 60 watts (on either AC or DC power), the UMA offers opportunities to measure methane anywhere. As with all LGR instruments, the UMA is simple to use and is ideal for field studies, compliance monitoring, leak detection, air quality and soil flux studies, and wherever measurements of methane, carbon dioxide and water vapor are needed.

In addition, the UMA reports and stores all measured absorption spectra which allows the instrument to accurately correct for water vapor dilution and absorption line broadening effects and thus to report CH₄ on a dry mole fraction basis without drying or post processing. Furthermore, LGR's "Extended Range" option provides accurate methane measurements at levels up to 10% mole fraction (without dilution) without reducing precision and sensitivity at typical ambient levels - a unique capability to

LGR. Moreover, only LGR's analyzers provide reliable *guaranteed* measurements at mole fractions greater than 100 times ambient levels.

LGR's patented technology, a fourth-generation cavity enhanced absorption technique, has many advantages (simpler, easier to build, rugged) over older, conventional cavity ringdown spectroscopy (CRDS) and direct absorption techniques. As a result, LGR Analyzers provide higher performance at lower cost.

LGR Analyzers have an internal computer (Linux OS) that can store data practically indefinitely on a hard disk drive and send real time data to a data logger via the digital (RS232), analog or Ethernet outputs. In addition, LGR analyzers may be controlled remotely via the Internet. This capability allows the user to operate the analyzer using a web browser anywhere. Furthermore, remote access allows full control of the instrument and provides the opportunity to obtain data and diagnose the instrument operation without being on site.

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Performance Specifications

Repeatability / Precision (1-sigma):

CH₄: <2 ppb (1 sec), <0.6 ppb (10 sec),
<0.25 ppb (100 sec)

H₂O: <100 ppm (1 sec), <35 ppm (10 sec),
<15 ppm (100 sec)

Response Time (flow time through meas. cell):

10 s

Measurement Range:

CH₄: 0.01 – 100 ppm
H₂O: 500 – 70000 ppm

Operational Range:

CH₄: 0 – 500 ppm
H₂O: 0 – 70000 ppm

Outputs:

Digital (RS232), Analog, Ethernet, USB

Data Storage:

Internal Solid State Hard Disk Drive

Ambient Humidity:

<98% RH non-condensing

Operating Temperature:

5 – 45 °C

Inlet / Outlet Fittings:

¼" Push-Connect

Power Requirements:

60 watts (10-30 VDC)
66 watts (115/230 VAC, 50/60 Hz)

Dimensions:

7" H x 18.5" W x 14" D

Weight:

15 kg



Ordering Information

915-0001: Ultraportable package

Extended Range – available in Greenhouse Gas Analyzer - extends measurement range to 10% (100,000 ppm) methane

Accessories (optional)

908-0003-9001: Multiport Inlet Unit – 16 inlet port multiplexer

908-0003-9002: Multiport Inlet Unit – 8 inlet port multiplexer

904-0002: Data Logging System – multi-channel data logging system records and synchronizes serial (RS-232) outputs from multiple LGR analyzers and other devices (GPS, anemometers)



Instrument complies with 21 CFR 1040.10 and 1040.11