LGR-ICOS™ M-GGA-918
Microportable Greenhouse Gas Analyzer

Sensitive, fast and compact analyzer for field measurement of CH_4, CO_2 and H_2O

Measurement made easy

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LGR-ICOS™ M-GGA-918
microportable analyzer

Features and benefits

- Lightweight, less than 6 Kg (13 pounds)

- Continuous measurements

- Data reported every second with high sensitivity

- Ideal for soil flux studies and field measurements of greenhouse gases

- Extremely wide linear range, CH_4 range up to 10% (optional)

- No cross interferences

- Operates directly on DC power

- Fast gas flow response time (3 seconds, 1/e)

- Records data within 20 seconds after power on

- Multiple data outputs and internet connectivity

Overview

The ABB LGR-ICOS gas analyzers build on the heritage and extensive track record of Los Gatos Research analyzers, using patented Off-Axis Integrated Cavity Output Spectroscopy (OA-ICOS) technology, the latest evolution in tunable diode laser absorption spectroscopy.

ABB's new Microportable Gas Analyzer (M-GGA-918) reports measurements of methane, carbon dioxide and water vapor simultaneously in a package that is compact, crushproof and travels anywhere. Small enough to be hand-carried (even on-board aircraft) and requiring less than 35 watts, the M-GGA-918 offers opportunities to measure greenhouse gases anywhere.

As with all LGR-ICOS analyzers, the M-GGA-918 is fast and simple to use which makes it ideal for field studies, compliance monitoring, air quality studies and soil flux studies, and wherever sensitive measurements of greenhouse gases are needed.

... Overview

The M-GGA-918 begins recording data within 20 seconds after power on so users do not have to wait for a long warm-up period for the system to thermally equilibrate.

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

The M-GGA-918 analyzer has an internal computer that can store data practically indefinitely on an SD card and send real time data to a tablet, smartphone or other WiFi device. The analyzer includes control and analysis software.

Accessories, Maintenance & Options

ACC-MICRO-KIT	**Accessory kit for microportable** Includes shoulder strap and collapsible wand
ACC-MICRO-AC	**AC Power adapter for microportable**
ACC-WIFI-iPad	**Wireless User Interface - Apple iPad with WiFi router** Provides full instrument control and provides touch-screen video display, keyboard and mouse.
ACC-WIFI-Android	**Wireless User Interface - Samsung Galaxy Tab S3 with WiFi** router provides full instrument control and provides touch-screen video display, keyboard and mouse.
MTN-MICRO	**Maintenance kit for microportable**
MTN-CLEAN-M	**Mirror cleaning kit for microportable**
MIU-8	**Multiport Inlet Unit 8 channels -** External hardware (includes 8 solenoid valves) and internal software package which enables fully integrated, programmable selection from up to 8 separate sources.

*Batteries purchased separately, contact factory for Microportable external DC power cases for 4-hours and 12-hours batteries

Ordering information

- LGR-ICOS™ M-GGA-918

Specifications

Precision (1σ, 1 sec / 10 sec / 100 sec):
 CH_4: 4 ppb /1.2 ppb / 0.5 ppb
 CO_2: 0.6 ppm / 0.25 ppm / 0.1 ppm
 H_2O: 200 ppm / 60 ppm / 30 ppm

Measurement rate:
 0.01 – 1 Hz (user selectable)

Measurement ranges (meets all specifications):
 CH_4: 0 – 100 ppm (standard range)
 CH_4: 0 – 10% (extended range)
 CO_2: 0 – 20000 ppm
 H_2O: 0 – 30000 ppm

Sampling conditions:
 Sample temperature: -40 – 50 °C
 Operating temperature: 5 – 45 °C
 Ambient humidity: 0 - 98% relative humidity non-condensing

Flow time response:
 3 seconds (1/e)

Data outputs:
 WiFi, Ethernet, USB, MIU connection (8 ports), Serial(RS-232)

Power requirements:
 10-30 VDC or 110/240 VAC
 35 watts
 100W Power supply/charger included

Dimensions:
 12cm H x 34 cm W x 29.5 cm D
 6 in. H × 13.4 in. W × 11.6 in. D

Weight:
 5.0 kg (11 pounds) without internal battery
 5.4 kg (12 pounds) with internal 2-hours battery*
 +1.4 kg (3 pounds) with external DC power pack and 4-hours battery*
 +6.4 kg (14 pounds) with external DC power pack and 12-hours battery*

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