Microportable Greenhouse Gas Analyzer
LGR ICOS^{TM} GLA131 Series
Measurement made easy

Description

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 analyzers (GLA131-GGA and GLA131-GPC) report 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 onboard aircraft) and requiring less than 35 watts, the GLA131-GGA and GLA131-GPC offers opportunities to measure greenhouse gases anywhere.

As with all LGR-ICOS analyzers, the GLA131-GGA and GLA131-GPC are fast and **simple to use** which makes them ideal for **field studies**, compliance monitoring, air quality studies and soil flux studies, and **wherever** sensitive measurements of greenhouse gases are needed.

The GLA131-GGA and GLA131-GPC begin **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 over older, conventional and delicate cavity ringdown spectroscopy and direct absorption techniques. LGR-ICOS analyzers are **easier to operate and more robust**, thus providing users with higher performance and reliability at **lower operating costs**.

The GLA131-GGA and GLA131-GPC analyzers have 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.

Benefits

- Lightweight: ~ 6 kg with battery (included)
- 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 2.5% (optional)
- No cross interferences
- Operates directly on DC power
- Fast gas flow response time (1 second, 1/e)
- Records data within 20 seconds after power on
- Multiple data outputs and internet connectivity
- Recirculating capabilities (inlet/outlet)

Performance Specifications

Precision (1s, 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 [GLA131-GGA]

CO_2: 6 ppm / 2 ppm / 1 ppm   [GLA131-GPC]

H_2O: 200 ppm / 60 ppm / 30 ppm

Measurement ranges (meets all specifications):

CH_4: 0 – 100 ppm (standard range)

CH_4: 0 – 2.5% (extended range) [GLA131-GGA]

CH_4: 0 – 500 ppm (extended range) [GLA131-GPC]

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:

1 second (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   [GLA131-GGA]

27 watts   [GLA131-GPC]

120W Power supply/charger included 99.9Wh internal battery included, 3 hours autonomy

Dimensions:

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

Weight:

6.1 kg (13.5 pounds) with internal battery

Accessories (optional)

- **ACC-MICRO-KIT** Accessory kit for microportable Includes shoulder strap and collapsible wand
- **ACC-WIFI-iPad** Wireless User Interface - Apple iPad with WiFi router Provides full instrument control and provides touchscreen 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.
- **OPTEXTENDED-CH4**
    - Extended range for CH_4 measurement Extends normal 0-100 ppm range to 0-2.5% (GLA131GGA)
    - Extends normal 0-100 ppm range to 0-500 ppm (GLA131-GPC)
- **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.

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