ABB MEASUREMENT & ANALYTICS | DATA SHEET

LGR-ICOS™ GLA132-LWIA

Liquid water isotopic analyzer – Ultraportable

Fast and accurate analyzer for measurement of δ^2H and $\delta^{18}O$ in liquid water – anywhere

Measurement made easy

LGR-ICOS™ GLA132-LWIA liquid water isotopic analyzer – Ultraportable

Features and benefits

- Portable and rugged case for ease-of-use everywhere - proven in the field
- 90 unknowns per day
- High precision and unmatched accuracy
- Simple to operate - no need for factory return for service
- Easy switch between high throughput and high performance mode – no extra hardware required
- Compatible with “LIMS for Lasers”
- High-resolution absorption spectra are viewable continuously for real-time diagnostics
- New Post-Analysis Software simplifies analyses and enables highest performance
- Operates directly on DC power

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 (TDLAS).

ABB’s GLA132-LWIA ultraportable liquid water isotopic analyzer provides measurements of δ^2H and $\delta^{17}O$ of water in liquid with unsurpassed precision and speed on a portable device that is compact (TSA-approved size), crushproof and travels anywhere. ABB’s ultraportable instruments are used by researchers, scientists, governmental agencies and intergovernmental organizations on all 7 continents.

Now, measurements are reported at the unmatched speed, with the typical operating procedure (6 injections per sample), this measurement rate yields 90 unknowns and 30 reference samples per day.

… Overview

The GLA132-LWIA is ideal for hydrological, analytical, and biological applications that involve field measurements of fresh water, seawater, and other liquids. The analyzer's ease-of-use, field portability, durability and high throughput make it the best choice for reliable, high performance measurement of freshly collected samples in the field.

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. OA-ICOS analyzers are simpler, easier to operate and more rugged. As a result, ABB analyzers provide higher performance and reliability with minimal operational cost.

The GLA132-LWIA includes an internal computer that can store data practically indefinitely on its internal hard drive (for applications requiring unattended longer term operation), and send real-time data to a data logger through its analog and digital (RS232) outputs.

Accessories

ACC-AUTOINJECT	**Autoinjector w/ heated injection module** Automated injection of liquid water samples Holds 162 vials. Includes startup kit.
ACC-DCCASE	**External protective LiFePO4 battery case for field experiments** Can power two analyzers. Adapter cable included. Battery not included, refer to local battery supplier.
Included	**Heater and power supply**
Included	**Spectral Contamination Identifier software** Identifies, flags and corrects for contaminants
Included	**Post-Analysis software** Advanced software simplifies analytical procedure to enable high precision measurements quickly

Ordering information

- **LGR-ICOS™ GLA132-LWIA**

Specifications

Precision (1σ):
High Throughput Mode
δ^2H: 0.6 ‰
δ^{18}O: 0.2 ‰

Throughput:
720 injections per day (typically 90 samples)

Sample Volume:
0.5 µL per injection

Salinity:
<4% (Total dissolved solids < 40 parts per thousand)

Temperature/Humidity:
Sample Temperature: 0 to 50 °C
Operating Temperature: 5 to 45 °C

Outputs:
Digital (RS-232), Ethernet, USB

Power Requirements:
60 watts (10/30VDC)
66 watts (115/230 VAC, 50/60 Hz)

Dimensions:
18 cm (7") H × 47 cm (18.5") W × 36 cm (14") D

Weight:
17 kg

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