

LGR-ICOS™ GLA132-LWIA

Liquid water isotopic analyzer – Ultraportable



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

Measurement made easy

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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 $\delta^2\text{H}$ and $\delta^{18}\text{O}$ 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

δ²H: 0.6 ‰

δ¹⁸O: 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