LGR-ICOS™ GLA151-N2OM1

N_2O & CH_4 analyzer – QC Portable

Highly sensitive and accurate analyzer for reliable measurement of N_2O and CH_4.

Measurement made easy

LGR-ICOS™ GLA151-N2OM1 N_2O & CH_4 – Quantum cascade portable analyzer

Features and benefits

- Simultaneous measurements of N_2O and CH_4
- High precision and robust to cross-interferences
- Measurement rates selectable up to 1 Hz
- Installed and operational in minutes
- Extremely high dynamic range
- Unsurpassed ruggedness and reliability
- Real-time diagnostics

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).

The GLA151-N2OM1 quantum cascade (QC) portable analyzer simultaneously measures water vapor mole fraction. As a result, the analyzer reports N_2O and CH_4 on a dry mole basis. It accurately corrects for water vapor dilution and absorption line broadening effects without the need for sample drying or empirical corrections.

The GLA151-N2OM1 analyzer is designed for the most demanding field applications, as proven by its track record, and generally focused on greenhouse gases emission studies and atmospheric monitoring, where highest precision, accuracy, ruggedness and mobility are required.

… Overview

Ordering information

- **LGR-ICOS™ GLA151-N2OM1**

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. They exhibit negligible zero and span drift and a significantly reduced need for regular calibration with expensive reference gases. As a result, ABB analyzers provide higher performance and reliability with minimal operationnal cost.

The GLA151-N2OM1 has an internal computer that can store data practically indefinitely (for applications requiring unattended longer term operation), and send real-time recordings to a data logger through its analog and digital (RS232) outputs. The analyzer includes control and analysis software.

Accessories

MIU-16	**Multiport Inlet Unit** Automated control of up to 16 inlet ports
MIU-8	**Multiport Inlet Unit** Automated control of up to 8 inlet ports
ACC-DP3H	**3-head Diaphragm External Pump**
OPT-DATALOG	**Digital Data Logging Capability** Multi-channel data logging option records and synchronizes serial (RS-232) outputs from multiple ABB analyzers and other devices (GPS, anemometers)

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Specifications

Precision (1σ, 1 sec / 10 sec):

N_2O: 0.5 ppb / 0.2 ppb [<500 ppb]
CH_4: 2 ppb / 0.6 ppb [<500 ppb]
H_2O: 50 ppm / 20 ppm

Linear measurement ranges (meets all specifications):

N_2O: Up to 4 ppm
CH_4: Up to 100 ppm
H_2O: Up to 30 000 ppm

Operational ranges:

N_2O: Up to 40 ppm
CH_4: Up to 600 ppm
H_2O: <99% RH, non-condensing

Measurement rate:

0.01 – 1 Hz (user selectable)

Flow response time:

<30 seconds (1/e)
<10 seconds (1/e) with external diaphragm pump ACC-DP3H

Sampling conditions:

Operating temperature: 5 – 45 °C
Ambient humidity: <99% relative humidity non-condensing

Data outputs:

WiFi, Ethernet, USB, Serial (RS-232)

Power requirements:

24-30VDC
110/240 VAC, 50/60 Hz
180 watts (steady state)
max 300 watts with ACC-DP3H

Dimensions:

51 cm (20 in.) x 61cm (24 in.) x 20 cm (8 in.)

Weight:

23 kg (51 pounds)