LI-7200RS

Enclosed CO_2/H_2O Gas Analyzer

Water vapor and carbon dioxide are the two most influential greenhouse gases affecting global climate change. The LI-7200RS is the next generation high-performance, enclosed CO_2/H_2O gas analyzer chosen by leading flux networks around the world including NEON and ICOS.

The LI-7200RS is designed to deliver the high-speed CO_2/H_2O measurements of a closed path analyzer with the ruggedness and low power demands of an open path analyzer. Temperature-controlled optics ensure stability – even in very harsh environments.

To learn more about the LI-7200RS visit **licor.com/LI-7200RS**.

Key Features

- Minimize data gaps with continuous measurements through rain, snow, and fog
- An insulated or heated intake tube ensures high frequency response of water vapor measurements, even in high humidity
- SmartFlux® System processes real-time fluxes on-site using EddyPro® Software
- SmartFlux syncs instrument clocks using GPS and PTP for precise data synchronization within and across sites
- Improved, temperature-controlled optics deliver stable measurements, even in extreme conditions
- Compatible with nearly all fast response, three-dimensional sonic anemometers to meet your unique research needs

LI-COR®

LI-7200RS Specifications

CO_2 Measurements

Calibration range:
0 to 3000 µmol mol^{-1}

Accuracy: Within 1% of reading

Zero drift (per °C):

- ±0.1 ppm typical
- ±0.3 ppm maximum

RMS noise (typical @ 370 ppm CO_2 and 10 mmol mol^{-1} H_2O):

- **@5 Hz:** 0.08 ppm
- **@10 Hz:** 0.11 ppm
- **@20 Hz:** 0.16 ppm

Gain drift (% of reading per °C @ 370 ppm):

- ±0.02% typical
- ±0.1% maximum

Direct sensitivity to H_2O (mol CO_2/mol H_2O):

- ±2.00E-05 typical
- ±4.00E-05 maximum

H_2O Measurements

Calibration range: 0 to 60 mmol mol^{-1}

Accuracy: Within 2% of reading

Zero drift (per °C):

- ±0.03 mmol mol^{-1} typical
- ±0.05 mmol mol^{-1} maximum

RMS noise (typical @ 370 ppm CO_2 and 10 mmol mol-1 H_2O):

- @5 Hz: 0.0034 mmol mol^{-1}
- @10 Hz: 0.0047 mmol mol^{-1}
- @20 Hz: 0.0067 mmol mol^{-1}

Gain drift (% of reading per °C @ 20 mmol mol-1):

- ±0.15% typical
- ±0.30% maximum

Direct sensitivity to CO_2 (mol H_2O/mol CO_2):

- ±0.02 typical
- ±0.05 maximum

General

Analysis Type: Absolute, non-dispersive infrared spectroscopy

Data Storage: 16 GB removable industrial grade USB storage device

Data Communication: Ethernet, Synchronous Devices for Measurement (SDM; >50 Hz), RS-232 (115,200 baud; 20 records per second max), 6 DACs (0-5 V; 300 Hz)

Inputs: Four analog input channels (differential; bi-polar; ±5 V; 300 Hz)

Operating Temperature Range:
-25 to 50 °C (-40 to 50 °C verification test available on request)

Power Requirements: 10.5 to 30 volts DC

Power Consumption: 12 W nominal (up to 30 W during startup)

Detector: Thermoelectrically cooled lead selenide

Bandwidth: 5, 10, or 20 Hz, user-selectable

User Interface: Windows® based

Cable length:
5 meters (all cables); 5-meter head cable extension available

Analyzer Head

Size: 7.5 cm (3″) diameter, 31 cm (12.2″) length

Weight: 1.8 kg (3.95 lbs.)

LI-7550 Analyzer Interface Unit

Size: 35 cm × 30 cm × 15 cm (13.8″ × 12″ × 6″)

Weight: 4.4 kg (10 lbs)

7200-101 Flow Module

Operating Temperature Range:
-25 to 50 °C

Power Requirements:
10.5 to 30 VDC

Power Consumption:
< 16 W nominal

Flow Rate: 15 LPM nominal

Size: 35 cm × 30 cm × 15 cm (13.8″ × 12″ × 6″)

Weight: 6.15 kg (13.55 lbs)

Insulated Intake Tube

Length: Up to 1 meter

Inside Diameter: 5.33 mm

Outside Diameter: 6.35 mm

Heated Intake Tube

Length: 71.1 cm

Inside Diameter: 5.33 mm

Outside Diameter: 6.35 mm

Operating Temperature Range:
-40 to 50 °C

Output Wattage: 0.1 to 6 W

Heat Density Ratio:
(short tube to long tube) 2:1

Weight: 0.54 kg (1.2 lbs)

7550-101 Auxiliary Sensor Interface

Size: 11.5 cm × 6.5 cm × 4.2 cm (4.5″ × 2.6″ × 1.7″)

Weight: 0.39 kg (0.85 lbs) including mounting bracket

Specifications subject to change without notice.

982-18573 09/2019