

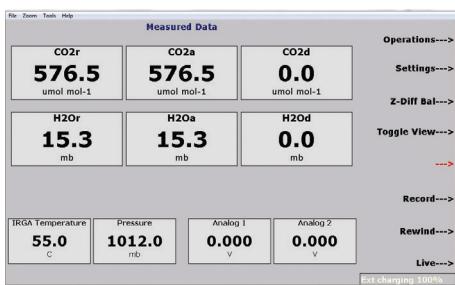
CIRAS-3 DC CO₂/H₂O Gas Analyzer

Product Features

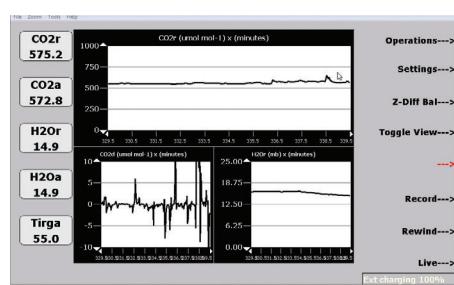
- High precision instrument featuring 4 independent, non-dispersive infrared gas analyzer for both CO₂ and H₂O (Differential Analyzer)
- CO₂ measurement range: Up to 10000 umol mol⁻¹
- H₂O measurement range: 0-75 mb
- Fast response and long term stability with built-in Auto Zero
- Fully compensated for changes in temperature, pressure and foreign gas broadening
- Large, full color 7" transreflective LCD with optimized viewing angle (30°)
- Large numeric and graphical presentation of data
- Unlimited data storage (internal memory and USB flash drive)
- Analog and digital (USB) output
- Built-in sampling pump with mass flow controller
- Powerful, intuitive user interface and software
- On-line Help
- Remote display capability
- Internal 7.2V Li-Ion rechargeable battery (optional) for portability



Numeric Display



Graphical Display



Applications

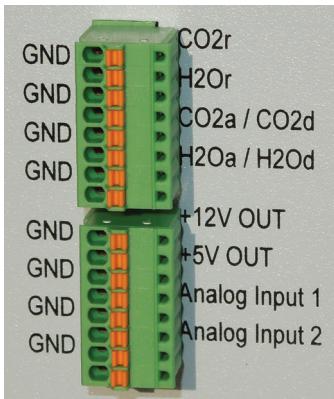
- Photosynthesis and respiration
- Plant physiology
- Soil CO₂ efflux
- Whole canopy assimilation
- Homemade chambers
- Global change & atmospheric studies
- FACE studies
- Forest & agricultural meteorology
- Air-sea surface exchange (pCO₂)



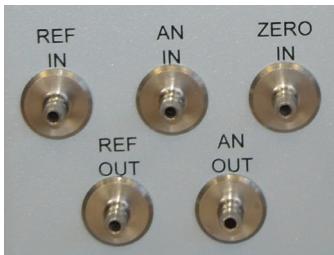
Powerful Software

Simple, intuitive and menu-driven software is designed into the system for system setup, operation, recording and data management. On-line help is available throughout the software to guide you every step of the way.

Convenient, pluggable terminal block for analog signals.



Gas connections for direct connection to gas analyzers



For further information, please contact us at:

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Printed: December 2014

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Technical Specifications

Analysis Method	Non-dispersive infrared, configured as an absolute absorptionmeter with micro-processor control of linearization. Four independent gas analyzers simultaneously measure absolute CO ₂ and H ₂ O for both reference and analysis gas streams. All measurements corrected for temperature and pressure.
CO₂ Measurement Range	0-10000 μmol mol ⁻¹
CO₂ Precision	<ul style="list-style-type: none"> • 0.2 μmol mol⁻¹ at 300 μmol mol⁻¹ • 0.5 μmol mol⁻¹ at 1750 μmol mol⁻¹ • 3.0 μmol mol⁻¹ at 10000 μmol mol⁻¹
H₂O Measurement Range	0-75 mb
H₂O Precision	<ul style="list-style-type: none"> • 0.015 mb at 0 mb • 0.020 mb at 10 mb • 0.030 mb at 50 mb
Bandwidth (CO₂ and H₂O)	10 Hz (sampling rate). Sample data is averaged and output every 1.6 seconds.
Pressure Range	65-115 kPa
Air Sampling	User adjustable from 50-100 cc min ⁻¹ using integral DC pump with mass flow controller.
Auxiliary Port	For connection to external sensors.
Terminal Block	Two 8 pin terminal blocks for simple connection to external devices.
Digital Output	<ul style="list-style-type: none"> • USB-Mini b (Host) • 2 Ea. USB for use with external devices (Memory stick, USB Mouse, etc.).
Analog Output Channels	4 Analog output channels available. Users can configure system to output CO ₂ reference, CO ₂ analysis, CO ₂ differential, H ₂ O reference, H ₂ O analysis and H ₂ O differential.
Analog Output Range	0-2.5V or 0-5V
Analog Input Channels	2 Analog input channels available for use with external sensors
Analog Input Ranges	0-1V or 0-5V
Data Storage	512 MB flash memory for programming and data storage. Unlimited data storage using USB thumb drives (memory sticks).
Microprocessor Speed	800 MHz
Display	7.0" WSVGA transreflective, color LCD
User Input	27 key tactile keypad
Power Supply (Optional)	Internal, rechargeable 7.2V Li-ion battery providing up to 10 hours continuous use. Power supply/charger included.
Operating Temperature Range	0-50 °C, non-condensing. In dirty environments, external air filtration may be required.
Enclosure	Rugged, ergonomic, lightweight aluminum with polyurethane base.
Dimensions	28 cm (W) x 14.5 cm (D) x 24 cm (H)
Weight	<ul style="list-style-type: none"> • 3.8 kg (without battery). • 4.3 kg (with optional battery).

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