

CONTROS HydroC™ CO₂ FT



ACCURATE, FAST AND VERSATILE pCO₂ FLOW THROUGH SENSOR

Unmatched short and long term CO₂ measurement accuracy for essential climate change research

The CONTROS HydroC™ CO₂ FT is a unique surface water carbon dioxide partial pressure sensor designed for underway (FerryBox) and lab applications. Based on the innovative and field proven CONTROS HydroC™ technology, which has an enviable track record in peer-reviewed scientific publications, the HydroC™ CO₂ FT is an internationally trusted system and an essential tool for climate change research.

INDIVIDUAL, 'IN-SITU' CALIBRATION

All sensors are individually calibrated in a water tank which simulates the average deployment temperature. Here, a sophisticated reference detector is used to verify the pCO₂ concentrations in the calibration tank. The reference sensor is recalibrated with secondary high quality standards on a daily basis, which ensures that CONTROS HydroC™ pCO₂ sensors achieve unmatched short and long term accuracy.

OPERATING PRINCIPLE

Water is pumped through the flow head of the CONTROS HydroC™ CO₂ FT sensor. Dissolved CO₂ molecules diffuse through the newly designed custom made thin film TOUGH membrane into the internal gas circuit leading to a detector chamber, where the partial pressure of CO₂ is determined by IR absorption spectrometry. Concentration dependent nondispersive infrared (NDIR) light intensities are converted into an output signal from calibration coefficients stored in the sensor's firmware and data from additional sensors within the gas circuit.

SOFTWARE

CONTROS DETECT® includes real-time data visualization, setting of sensor parameters, download of data from internal data logger and sleep mode function.

HARDWARE

- Windows 7 32 Bit or higher
- 200 MB free disk space
- Dual Core CPU with 2GB RAM

OPTIONS

- Measuring range 100 – 6,000 µatm
- Data logger
- Easy integration into FerryBox applications

CONTROS HydroC™ CO₂ FT

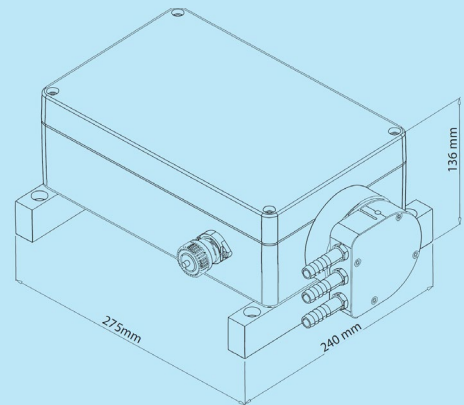
APPLICATIONS

The CONTROS HydroC™ CO₂ FT is trusted to deliver precise readings for diverse applications, including:

- Ocean acidification research
- Climate studies
- Air-sea gas exchange
- Limnology
- Fresh water control
- Aquaculture
- Carbon capture and storage - monitoring, measurement and verification (CCS-MMV)

FEATURES

- New robust TOUGH membrane
- High accuracy
- Fast response time
- User-friendly operation
- Long-term maintenance interval (12 months)
- 'Plug & Play' principle; all cables, connectors and software included



TECHNICAL SPECIFICATIONS

Detector	High-precision optical analyzing NDIR system	Initial accuracy	± 0.5 % of reading
Measuring range ¹	200 – 1,000 µatm	Data format	ASCII and NMEA protocol
Weight	5.3 kg	Connector ³	Hirschmann-plug CA6LD
Flow rate ²	2 to 15 l/min	Supply Voltage	11 V - 24 V
Dimensions	325 x 240 x 136 mm	Power Consumption	Approx. 350 mA @ 12 V
Temp range	1°C to 30°	Data interface	For FT only RS232
Resolution	< 1 µatm	Data format	ASCII, NMEA protocol

1. Other ranges available 2. Recommended 5l/min, 3. Other connectors on request. Specifications subject to change without notice.

CONTACT -4H-JENA

Get in touch to find out how CONTROS HydroC™ CO₂ FT sensors can secure your ability to measure and report dependable Carbon Dioxide data as part of your workflow.

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CONTACT YOUR LOCAL REPRESENTATIVE

The CONTROS HydroC™ CO₂ FT enables climate researchers to contribute towards meeting the United Nations Sustainable Development Goals.

