

CO₂-Pro™

Features

- Patented tubular interface provides unmatched biofouling resistance
- High accuracy, long-term stability
- Multiple data outputs
- Large selection of pCO₂ concentration ranges
- Easy integration into any system
- Real-time data output; no post-processing
- Internal data logger and controller with 2GB flash memory

pCO₂ Sensor Applications

- Ocean acidification
- Long-term ocean pCO₂ monitoring
- Near-surface flux studies
- Shipboard flow-through pCO₂ measurements
- Coastal zone CO₂ fluxes

CO₂-Pro Submersible pCO₂ Sensor

The CO₂-Pro instrument measures the partial pressure of CO₂ gas dissolved in water using infrared detection. Standard ranges from 0-600 ppm to 0-2000 ppm as well as custom ranges are available. This ensures the full spectrum of pCO₂ is covered for accurate measurement of CO₂ in any application.

With industry-leading pCO₂ accuracy and stability for fully submersible instruments, the CO₂-Pro sensor provides the reliable long-term data that are needed for monitoring and assessing the magnitude of ocean acidification, climate change, and carbon fluxes.

The patented supported tubular interface provides three effective modes of biofouling resistance: high shear on the membrane surface, darkness, and solid copper. The CO₂-Pro is ideal for shallow waters in highly productive areas.

An internal zeroing feature provides a stable long-term baseline for ensuring accurate and stable measurements. The CO₂-Pro can also be modified to measure both water and air pCO₂.

For optimal accuracy, instruments are factory calibrated using WMO traceable standard gases. In addition, detector temperature stabilization and measurement of gas stream pressure and humidity provide accuracy unparalleled by other small submersible pCO₂ instruments.

PRO *Stability in a sea of change.*
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CO₂-Pro™

Sensor Specifications

Sensor Performance

Accuracy	±0.5%
Resolution	0.01 ppm
Zero drift	automatic zero compensation
Equilibration time (t ₆₃)	2.5 minutes (with water pump at 20° C)
Standard range	0-600 ppm
(alternate ranges available)	0 - 1000 ppm 0 - 2000 ppm

Physical

Length	33 cm (13 in)
Diameter	19 cm (7.5 in)
Weight	Air: 6.5 kg (14.3 lbs) Water: -0.5 kg (-1.1 lbs)
Housing	Acetal Plastic
Depth	50 m
Water Temperature	0° to 30° C (Standard) -2° to 20° C (Arctic) 15° to 40° C (Tropical)

Electrical

Input voltage	10-18 VDC
Power consumption	4 W (12 W during warmup, includes SBE 3K pump)
Data output	RS-232, ASCII format, 0-5 V or 4-20 mA optional
Sample rate	1 seconds (user selectable with datalogger/controller)

Optional Accessories

Seabird Water Pump with cable
5P (Plastic) or 5T (Titanium) - water pumping required

External Battery Pack
76, 134, or 247 Amp-hour capacity

Mooring frame with instrument brackets

Mooring cage with brackets

Pigtail Cables with Locking Sleeves
5, 10, 25, or 50 meters



Mooring Cage with Brackets



SBE 5T Water Pump



Pigtail Cable with Locking Sleeve

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