

CO₂-Pro™

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 small submersible pCO₂ instruments.



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

PRO
OCEANUS

Dissolved Gas Sensors

CO₂-Pro™

SENSOR SPECIFICATIONS

Sensor Performance

Accuracy

CO₂ concentration ±0.5%

Resolution

CO₂ concentration 0.01 ppm

Zero drift

automatic zero compensation

Equilibration time (t₆₃)

2.5 minutes (with water pump)

Standard range

0-600 µatm
0 - 1000 µatm
0 - 2000 µatm
*other ranges available

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 (10 W during warmup, includes SBE 3K pump)

Data output RS-232, ASCII format, 0-5 V or 4-20mA optional

Sample rate 1 second (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 cage or frame with instrument brackets

Pigtail Cables with Locking Sleeves

5, 10, 25, or 50 meters



SBE 5T Water Pump



Pigtail Cable with Locking Sleeve



Instrument and Battery Mooring Bracket