

CO₂-Pro™ CV

CO₂-PRO™ CV SUBMERSIBLE PCO₂ SENSOR

The CO₂-Pro™ CV instrument measures the partial pressure of CO₂ gas dissolved in water using infrared detection. Standard ranges from 0-600 ppm up to 0-10,000 ppm as well as custom ranges are available that cover the full spectrum of pCO₂ needed for accurate measurement of ocean, coastal, riverine, and lake CO₂ levels.

With industry-leading pCO₂ accuracy and stability for submersible instruments, the CO₂-Pro™ CV is the sensor of choice for most applications. Labelled the CV for Compact Version of our flagship CO₂-Pro™ instrument, the Pro-CV can be deployed up to 6000 meters depth, ideal for carbon capture storage monitoring and deep ocean CO₂ fluxes.

The small size of the CO₂-Pro™ CV means it is easily transported and deployed in the field. When combined with our anti-fouling features and options, the instrument can perform in even the most biologically active rivers and lakes for extended periods of time. An internal zeroing feature provides a stable long-term baseline to ensure accurate measurements. A flow-through adapter is also available for simple integration into many systems. The CO₂-Pro™ CV is factory calibrated using WMO traceable standard gases. In addition, detector temperature stabilization and measurement of gas steam pressure and humidity provide accuracy unparalleled by small submersible pCO₂ instrument.



FEATURES

- Fast response and high accuracy
- Long-term stable data for deployments of a year or longer
- Resistant to biofouling
- Real-time data output
- Large selection of concentration ranges
- External battery power available
- Internal data logger and controller with 2GB flash memory

PCO₂ SENSOR APPLICATIONS

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

PRO
OCEANUS

Dissolved Gas Sensors

CO₂-Pro™ CV

SENSOR SPECIFICATIONS

Sensor Performance

Accuracy

CO₂ concentration ±0.5%

Resolution

CO₂ concentration 0.01 ppm

Zero drift

automatic zero compensation

Equilibration time (t₆₃)

50 seconds (with pumped head)

Standard range

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

Physical

Length 38 cm (15 in)

Diameter 10 cm (4 in)

Weight Air: 2.8 kg (6.2 lbs)
Water: 0 kg

Housing Acetal Plastic or Titanium

Depth 0-600 meters (Plastic)
0-2000 meters
0-4000 meters
0-6000 meters (Titanium)

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 3 W (9 W during warmup)

w/Optional Water Pump 4 W (10 W during warmup)

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

Sample rate 1 second (variable rate with logger/controller)

Optional Accessories

Water-Pumped Interface Head

Reduces biofouling and improves response rate

Internal Battery Power

External Battery Pack

76, 134, or 247 Amp-hour capacity

Seabird Water Pump with cable

5P (Plastic) or 5T (Titanium)

Mooring cage or frame with instrument brackets

Pigtail Cables with Locking Sleeve

5, 10, 25, or 50 meters



SBE 5T Water Pump



Pigtail Cable with Locking Sleeve



CO₂-Pro™ CV water pumped head



Instrument and Battery Mooring Bracket