

## Mini-Pro CO<sub>2</sub> Submersible pCO<sub>2</sub> Sensor

The Mini-Pro CO<sub>2</sub> instrument uses infrared detection to measure the partial pressure of CO<sub>2</sub> gas dissolved in liquids. With pCO<sub>2</sub> ranges from 0-500 ppm up to 0-100%, the Mini-Pro CO<sub>2</sub> provides the versatility needed for any application.

Mini-Pro CO<sub>2</sub> submersible instruments are compact, lightweight, plug and play sensors. The instrument also measures total dissolved gas pressure (TDGP), a useful parameter for many applications and data correction.

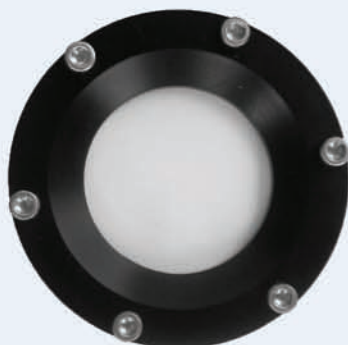


## Features

- Low power consumption
- Easy integration
- Multiple data output formats available
- Optional datalogger (more than a year of continuous data storage)
- Large selection of concentration ranges
- Optional internal or external battery power

With submersible options rated from 300-4000 dbar, and resistant to most corrosive liquids, the Mini-Pro CO<sub>2</sub> can provide reliable carbon dioxide data that is required for many applications. Flow-through and in-line adapters are also available for simple and effective industrial solutions.

For specialized applications Pro-Oceanus can provide custom products to suit any need.



## pCO<sub>2</sub> Sensor Applications

- Aquaculture monitoring of dissolved CO<sub>2</sub> for fish and shellfish health
- Coastal zone CO<sub>2</sub> fluxes
- Algae to fuel bioreactor feedback control
- Groundwater and wellwater monitoring
- Carbon budget studies of lakes and rivers
- Carbon capture storage monitoring of aquifer and surface water levels of pCO<sub>2</sub>
- Wastewater greenhouse gas emissions
- Ocean glider and profiler missions

## Sensor Specifications

### Standard measurement ranges

| pCO <sub>2</sub> Concentration         | Resolution |
|--|------------|
| 0–2000 ppm CO <sub>2</sub> ; by volume | 1 ppm      |
| 0–5000 ppm                             | 10 ppm     |
| 0–1 %                                  | 0.01 %     |
| 0–100 %                                | 0.1 %      |

\*Other ranges available

|      |         |
|------|---------|
| TDGP | 0–3 bar |
|------|---------|

|                                       |                    |
|---------------------------------------|--------------------|
| Accuracy: pCO <sub>2</sub>            | ± 2% of max. range |
| TDGP                                  | ± 1%               |
| Equilibration rate (t <sub>63</sub> ) | 3 minutes          |

### Options and Accessories

#### - Datalogger and controller

*Complete with 2 GB flash memory and terminal program for self-contained measurement and logging. \*Required for digital output.*

#### - Titanium housing for depths to 4000 m

#### - Internal battery power

#### - External battery pack

#### - Water-pumped head

*Reduce biofouling and improve response rate with this feature.*

Water-pumped  
head accessory



### Physical

|             |  |
|-------------|--|
| Length      | 28 cm (11 in)  |
| Diameter    | 5 cm (2 in)  |
| Weight      | 1 kg in air (2.2 lbs)<br>0.25 kg in water (0.55 lbs) |
| Housing     | Delrin®  |
| Depth       | 0–300 meters (0–1000 ft)                             |
| Temperature | –2 to 50 degrees C                                   |

### Electrical

|                   |  |
|-------------------|--|
| Input voltage     | 6–12 VDC   |
| Power consumption | 100 mA<br>(120 mA during warmup)                   |
| Data output:      |  |
| Analog            | 0–5 V or 4–20mA                                    |
| Digital           | RS-232 or RS-485                                   |
| Sample rate       | 1 second (variable rate<br>with logger/controller) |