Mini CO₂™

Features
- Low power consumption
- Compact size
- Optional internal or external battery power
- Easy integration
- Large selection of concentration ranges
- Digital option comes with internal data logger and controller with 2GB flash memory

pCO₂ Sensor Applications
- Aquaculture monitoring of dissolved CO₂ for fish and shellfish health
- Coastal zone CO₂ fluxes
- Algae to fuel bioreactor feedback control
- Groundwater and wellwater monitoring
- Carbon budget studies for lakes and rivers
- Carbon capture storage monitoring of aquifer and surface water levels of pCO₂
- Wastewater greenhouse gas emissions
- Ocean glider and profiler missions

Mini CO₂ Submersible pCO₂ Sensor
The Mini CO₂™ instrument uses infrared detection to measure the partial pressure of CO₂ gas dissolved in liquids. With pCO₂ ranges from 0-1000 ppm up to 0-100%, the Mini CO₂ provides the versatility needed for any application.

Mini CO₂™ 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.

With housing options rated to 6000 dbar of hydrostatic pressure, and resistance to most corrosive liquids, the Mini CO₂ can provide reliable dissolved carbon dioxide data 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 solutions to suit any need.
## Sensor Specifications

### Sensor Performance

| **CO₂ Measurement Ranges** | 0-2000 ppm CO₂ by volume  
| *other ranges available* | 0-5000 ppm  
|                          | 0-1% (10,000 ppm)  
|                          | 0-100%  
| **Total Dissolved Gas Pressure** | 0-2000 mbar  
| **Accuracy:** |  
| pCO₂ | ± 2% of max range  
| TDGP | ± 1%  
| **Equilibration rate (t₆₃)** | 3 minutes  
| **Resolution** | 0.1% of max range  

### Electrical

| **Input voltage** | digital: 6 - 24 VDC  
|                  | analog: 12 - 24 VDC  
| **Power consumption** | 0.4 W (35 mA @ 12 V)  
| **Data output** | digital: RS-232, ASCII CSV  
|                  | analog: 0-5 V or 4-20mA  
| **Sample rate** | 2 seconds (variable rate with logger/controller)  

### Optional Accessories

- **Titanium housings**  
  Rated up to 6000 m depth  
- **Internal battery power**  
- **External battery pack**  
  76 or 134 Amp-hour capacity  
- **Water-pumped head**  
  Reduce biofouling and improve response rate  
- **Mooring cage or frame with instrument brackets**  
- **Pigtail Cables with Locking Sleeves**  
  5, 10, 25, 50 meters, or longer

### Physical

| **Length** | 28 cm (11 in)  
| **Diameter** | 5.3 cm (2.1 in)  
| **Weight** | Air: 0.53 kg (1.2 lbs)  
|                  | Water: -0.06 kg (-0.1 lbs)  
| **Housing Material** | Acetal Plastic / Titanium  
| **Depth Rating** | 0 - 600 m (Plastic)  
|                  | Up to 6000 m (Titanium)  
| **Water Temperature** | -2° to 50° C (standard)  

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