

Mini-Pro CH₄ Submersible pCH₄ Sensor

The Mini-Pro CH₄ instrument uses infrared detection to measure the partial pressure of CH₄ gas dissolved in liquids. Conversion to dissolved methane is simple with known temperature and salinity values.

Mini-Pro CH₄ submersible instruments are compact, lightweight, plug and play sensors designed to measure pCH₄ for a range of applications. 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 pressure, and resistant to most corrosive liquids, the Mini-Pro CH₄ can provide reliable methane data that is required for many applications. Flow-through and in-line adapters are also available for simple industrial solutions.

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



pCH₄ Sensor Applications

- Determining background levels of dissolved methane prior to hydrofracking
- Groundwater and wellwater monitoring
- Offshore oil and gas leak detection
- Wastewater greenhouse gas emissions
- Landfill leachate methane monitoring
- Greenhouse gas emissions from dam reservoir water supplies
- Methane hydrate studies
- Measurement of pCH₄ in fermentation bioreactors

Sensor Specifications

Standard measurement ranges

pCH ₄ Concentration	Resolution
0–1 % CH ₄ ; by volume (~ 0–300 µg/L; by mass)	0.01 %
0–10 % (~ 0–3 mg/L)	0.01 %
0–100 % (~ 0–30 mg/L)	0.1 %
TDGP	0–3 bar

Accuracy: pCH ₄	± 2% of max. range
TDGP	± 1%
Equilibration rate (t ₆₃)	6 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) 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 (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 with logger/controller)