

Mini CH₄TM

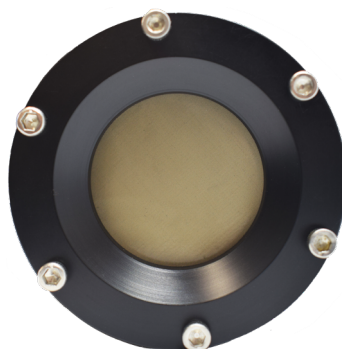
MINI CH₄TM SUBMERSIBLE pCH₄ SENSOR

The Mini CH₄TM instrument uses infrared detection to measure the partial pressure of CH₄ gas dissolved in liquids. Conversion to dissolved methane concentration is simple with known temperature and salinity values.

Mini CH₄TM 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.

With housing options rated to 6000 dbar of hydrostatic pressure and resistance to most corrosive liquids, the Mini CH₄ can provide reliable dissolved methane data for many applications. Flow-through and inline adapters are also available for simple industrial solutions.

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



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Dissolved Gas Sensors

FEATURES

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

pCH₄ SENSOR APPLICATIONS

- Determining background levels of dissolved methane prior to hydrofracturing
- 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

Mini CH₄TM

SENSOR SPECIFICATIONS

Sensor Performance

pCH₄ Measurement Ranges 0-1% CH₄ ; by volume
(~0-300 µg/L; by mass)
0-10%v/v (~0-3 mg/L)
0-100%v/v (~0-30 mg/L)

Total Dissolved Gas Pressure 0-2 bar

Accuracy

pCH₄ ± 3% of max range

TDGP ± 1%

Equilibration time (t₆₃) 8 minutes (with waterpumped head)

Resolution 0.1% of max range

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 35° C

Electrical

Input voltage Digital: 7-24 VDC
Analog: 12-24 VDC

Power consumption Digital: 0.45 W (35 mA @ 12 VDC)
Analog: 0.6 W - 0.9 W (55 mA - 75 mA @ 12 VDC)

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

19, 38 or 76 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



Water-Pumped Head Accessory



Pigtail Cable with Locking Sleeve



Copper Antifouling Shield