

# Mini CH<sub>4</sub><sup>TM</sup>

## 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

## pCH<sub>4</sub> 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 pCH<sub>4</sub> in fermentation bioreactors

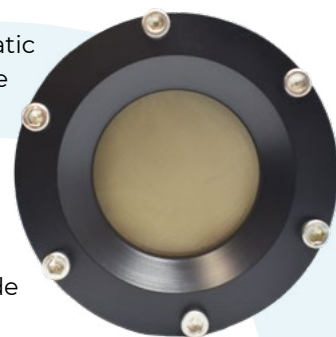
## Mini CH<sub>4</sub><sup>TM</sup> Submersible pCH<sub>4</sub> Sensor

The Mini CH<sub>4</sub><sup>TM</sup> instrument uses infrared detection to measure the partial pressure of CH<sub>4</sub> gas dissolved in liquids. Conversion to dissolved methane concentration is simple with known temperature and salinity values.

Mini CH<sub>4</sub><sup>TM</sup> submersible instruments are compact, lightweight, plug and play sensors designed to measure pCH<sub>4</sub> 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 CH<sub>4</sub> can provide reliable dissolved methane data 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.



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**OCEANUS**



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# Mini CH<sub>4</sub><sup>TM</sup>

## Sensor Specifications

### Sensor Performance

**pCH<sub>4</sub> Measurement Ranges** 0-1% CH<sub>4</sub>; 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:

pCH<sub>4</sub> ± 3% of max range

TDGP ± 1%

**Equilibration rate (t<sub>63</sub>)** 8 minutes (with water-pumped 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 (2.2 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** 0° to 40° C

### Electrical

**Input voltage** digital: 7-24 VDC  
analog: 12-24 VDC

**Power consumption** 85 mW (7 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 packs

19, 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



Water-Pumped Head Accessory



Pigtail Cable with Locking Sleeve



Copper Antifouling Shield



Instrument and Battery Mooring Bracket

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