



Methane Sensor

VERSION CLASSIC METS

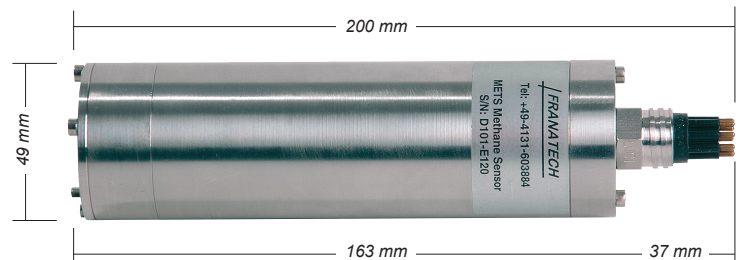
Function principle

A methane sensitive detector is located in a detector room in the sensor head. The detector room is protected against water and pressure by a silicone membrane. The gas molecules diffuse through the membrane, following the partial pressure gradient between water and detector room, according to the Law of Henry. Hence, the concentration in the detector room is directly correlated to the concentration in the outside water. The correlation is expressed by the calibration formula.

The Methane Sensor is a direct product of a R&D project funded by the German Federal Ministry for Research and Technology through Grant # BEO 71/03F0171A. The principles of the methane sensor and several applications are protected by international patents, pending patents and patent applications

Mechanical specifications

	Standard	Optional
Material	Stainless steel	Titanium
Weight in air METS	1.3 kg	0.8 kg



Depth rating 4000m

no internal moving parts or pumps, hence lower failure risk and lower power drain

Inherent to the technology, and also dependent on detector manufacturing and tuning, all parameters such as sensitivity, power consumption, response time and response behavior are linked together. The following specifications are indicative, we can select and tune the detectors to meet your requirements.

Electrical specifications

Input: 9 to 36 VDC, 35 to 100 mA@12VDC

Output: standard analogue 0...5V and digital RS485

Options: 4...20mA, RS232, analogue only, digital only, Desktop Converter RS485/RS232

Calibration Ranges

Temperature: standard 2–20°C, others on request

Methane: standard 50nM – 10µM
sensitive 1nM – 500nM (in pumped flow-through mode)
low range 20nM – 1µM
high range 1µM – 40µM

Calibration formula and parameters can be provided in format compatible with CTD-probe from different manufacturers (e.g. Seabird, SST)

Response time: reaction time within few seconds
T90 between 1 and 30 min depending on version and deployment conditions.

Special features: integrated formula (plug & play)
correction formula for work under variable oxygen levels

NOTE: above concentration and temperature ranges are typical. Depending on the application requirements, we can select other calibration ranges.

With compliments
Franatech GmbH