METHANE SENSOR

**Version Class** 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.

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**Mechanical specifications**

- 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. Following specifications are indicative, we can select and tune the detectors to meet your requirements.

**Electrical specifications**

- Input: 9 to 36 VDC, 40 to 120 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.