Subsea Technologies for the marine environment

Underwater Methane Sensor MK5

Robust and precise, but lower-cost underwater CH_4 sensor for industrial condition monitoring

- Aquaculture – lake or sea-water
- ROV and AUV integration
- Water quality monitoring
- Buoy equipment
- Profiling
- Long-time deployments

- **Cost-effective sensor**
- **Precise NDIR dual-wavelength sensor**
- **Low maintenance – low follow up costs**
- **Robust construction**
- **Corrosion-free**
- **Low power**
- **Snaps into industrial PLC**
- **Optional data logger**
- **Optional Li-Ion rechargeable battery**

Features & Benefits:

- Robust, versatile and compact submergible housing
- Complete, hands carry able and easy to maintain.
- Highest accuracy due to automatic temperature and pressure compensation.
- Long-time deployment anti-fouling protection for the flat membrane equilibrator
- Mechanical protection
- Optionally supervisor function with alarm settings and optionally alarm outputs
- Optionally expandable by easy integration of instrumentation with the optional integrated data logger, e.g. for Oxygen Optode, Fluorometer, Turbidity sensors, CTD's etc.
- Optional rechargeable Li-Ion PowerPacks, different capacities
- Complete solution "Ready to Run" with cables, clamps, Datalogger etc.
- Optional high-reliability production IPC-A-610 class 3

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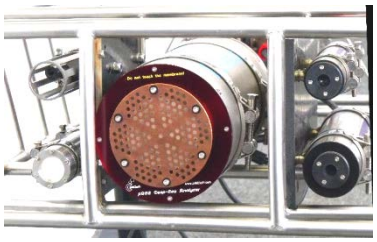
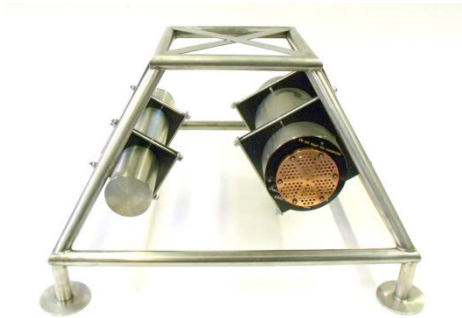
Specification	
Sensor Principle	High performance **NDIR** dual-wavelength optical sensor ● Silicone flat membrane equilibrator (patent pending) ● Robust against sediments, particles, fouling ● **Auto-correction for pressure and temperature effects**
Range	Standard 0...3000 ppm CH_4 ● Optional: 1000ppm, 1%, 3%, 5%, 10%
Resolution	**15 bit / 0.1 ppm** CH_4 (3000ppm range sensor)
Accuracy	±2% Full-scale
Sample Rate	Output rate typ. 1 Hz with optionally average ● **User configurable** ● Storage rate configurable
Calibration	Calibration stored internally ● User correction supported for Zero & Span
Temperature	Operating temperature range 0 to +45°C ● Optional -20 to +55°C
Analogue Out	0...5V / 0/4...20mA ● Range can be adjusted ● **Snaps into standard PLC systems**
Data Interface	RS-232 / RS-485 interface ● Data output ASCII ● **Easy integration into existing systems**
Water depth	300m ● Other available on request
Housing	Φ130mm x 350 mm length (300m operating depth) ● approx. 4.3 kg at air, +0.5kg in sea-water
Anti-fouling	**Anti-fouling design for the equilibrator sensor head** included
Power	7...30 VDC ● typ. 5W ● Warming up max. 10W Optional low-power version <5W operating and Power-Manager-Module for sleep-modes
Software	NEW Windows® PC Software **OceanView™ 4** for logging and online real-time data
Datalogger	Option: **Data-logger** Optional external sensor inputs ● Data interface with logger is standard ASCII NMEA-0183
Battery	Option: **Li-Ion *PowerPack*™** ● Charging without opening the housing
Service	Recalibration & service recommended every 12 months ● Membrane lifetime up to 10years ● Operating time for 24/7 usage typ. 2 year before service



Underwater ROV Inspection Sensor Pack, application example with industrial high-grade sensors for Oil+Gas offshore surveys



Complete monitoring system with optical gas sensor MK5, mooring frame and Li-Ion battery

Underwater vehicle for offshore construction monitoring

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