



<b>Applications</b>	In-situ measurement of dissolved CH <sub>4</sub> motivated by: Climate Change Studies; Methane Hydrate Studies; Limnology; Profiling/ Moorings; Offshore Risk Management; Pipeline Inspection and Leak detection
<b>Detector</b>	High-precision optical analysing NDIR system • Maintenance free
<b>Principle</b>	Dissolved CH <sub>4</sub> molecules diffuse through a silicone membrane into the patented detector chamber, where their number is determined by means of IR absorption spectrometry. Concentration dependent IR light intensities are converted into output signals.
<b>Dimension/ Weight</b>	90 d x 376 mm plastic housing/ 3,4 kg (0,2 kg in fresh water @ 20°C; S = 0)
<b>Operation depth</b>	2000, 4000, 6000 m version available
<b>Temperature range</b>	3 ... +30°C (Arctic version: -2 ... +15°C)
<b>Measuring range</b>	100nmol – 50µmol/l (other ranges available)
<b>Equilibration time</b>	first signal after 5s, T <sub>63</sub> < 100 sec (with external pump)
<b>Resolution</b>	10 nmol
<b>Accuracy</b>	±3% reading (as the total sum of all the errors)
<b>Calibration</b>	Calibration unit is µmol/l • signal is derived considering internal sensors for pressure, temperature and humidity • Recalibration recommended every 12 months
<b>Drift correction / Features</b>	Dual channel NDIR unit
<b>Connector</b>	Connector SUBCONN® MCBH8-M Titanium 8-pin • Others on request
<b>Power supply/ Consumption (@12 VDC)</b>	Typ. 12 VDC (11 - 24 VDC) (Arctic version: 12 - 24 VDC) • warm- up phase 2- 30min (depending on water temp)/ Apr. 300 mA + max. 150 mA small external pump (option) + max. 450 mA big external pump (option)
<b>Data Interface</b>	RS-232C and RS-485 • Data format ASCII NMEA-0183
<b>Software</b>	Windows® Software DETECT™ included (real time data visualization, setting of sensor parameters, download data from internal data logger) • Adaption to user-software • Sleep mode function user configurable
<b>Options</b>	Analogue Output: 0 – 5/10 V (Range / Full-scale can be user-configured) • Internal or external data logger (µSD card/ CF card) • external Battery Pack (e.g. 200 Ah Lithium (SAFT LSH 20)) • Build-in water temperature probe for concentration calculation • ROV and AUV adaption packages • Profiling and mooring frames • HydroC™/CO <sub>2</sub> (and/or CH <sub>4</sub> ) Flow Through version for underway (FerryBox) and lab applications • biofouling protection • external mounted pump with flow head for faster response time

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