



Applications	Flow through/ Underway measurement of dissolved CO ₂ motivated by: Air- sea gas exchange; Ocean Acidification; Limnology; Climate Studies; Agriculture/ Fish Farming; Fresh water control
Detector	High-precision optical analysing NDIR system • Maintenance free
Principle	Water is pumped through the membrane head of the underway sensor. Dissolved CO ₂ 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.
Dimensions	325 x 240 x 126 mm (L x W x H)
Flow rate	2 to 15 l/min (Recommended 5 l/min)
Temperature range	+2 ... +30°C
Measuring range	0... 3000 ppm (other ranges available) • Standard calibration is 200... 1000ppm • Units selectable: µatm, ppm, etc.
Equilibration time	first signal after 5s, T63 < 2min
Resolution	< 1 ppm
Accuracy	± 1% of upper range value (as the total sum of all errors)
Calibration	Calibration unit is ppm • Partial pressure in µatm is derived (internal sensors for pressure, temperature and humidity) • Recalibration recommended every 12 months
Drift correction / Features	Dual channel NDIR unit • Auto zeroing on programmed intervals or initiated manually with software • Included zeroing cartridge lasts for approx. 1 year • In situ response- time test
Connector	Connector SUBCONN® MCBH8-M Titanium 8-pin • Others on request
Power supply/ Consumption	Typ. 12 VDC (11 - 24 VDC) • warm- up phase 2- 30min/ Appr. 400mA (700mA during warm- up) + 350mA during zeroing
Data Interface	RS-232C • Data format ASCII NMEA-0183
Software	Windows® Software DETECT™ included (real time data visualization, setting of sensor parameters, download data from internal data logger) • Adaption to user-software
Optional	Analogue Output: 0 – 5/10 V • Range / Full-scale can be user-configured • RS-485

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