



HydroC™ / CO₂ CO₂ Sensor



CO₂ is one of the most important gases in our environment. Indeed, in many areas of everyday life, the monitoring of CO₂ is a necessity. CONTROS' HydroC™ / CO₂ is a unique underwater carbon dioxide sensor solving the global problems of the in-situ measurements of CO₂. Applications include offshore inspections, green house effects, oceanographic applications and water & waste water treatment tasks.

Detector	Patented optical analysing NDIR system • Maintenance free
Function principle	CO ₂ diffuse out of the liquid through a special silicone membrane (patented) into the detector chamber. The adsorption of light and gas (CO ₂ molecules) leads to change of intensity which is measured electronically and converted into a voltage.
Membrane	Fast 2 µm membrane for shallow water < 1000m • 4 µm membranes up to 4000m • 10 µm HD membrane up to 6000m • anti fouling device on request:
Oper. depth	2000 m titanium • 4000m titanium deep sea • 6000m deep sea extended rating
Temperature	Standard 0 .. +50 °C • Option – 5°C...+50°C for arctic applications.

	“Shorty” Version	“Long John” Version
Measuring range	High range 0..100% (over-) saturation	High resolution 0..10%
Housing	90 d x 380 mm Titanium	90 d x 550 mm Titanium
Resolution	< 30 ppm	< 3 ppm
Response time	10s for the first signal, T ₆₆ appr. 30s	e.g. 2 times more
Weight	3.9 kg/1.9 kg app. in air/water 2000m 5.6 kg/3.2 kg app. in air/water 4000+m	5.3 kg/2.4 kg app. in air/water 2000m 6.6 kg/3.5 kg app. in air/water 4000+m
Accuracy	±3% reading • Noise level appr. ±3 • (manually) zeroing required	
Calibration	Stored internally • Recalibration recommended every 12 months • Calibration units in ppm, µAtm, µmol/l, µg/l or other on request.	
Zero adjust	Auto at power-on • smart zeroing • external with software or switch button	
Power supply	9 .. 36 VDC • 2W / 5W without / with thermal stabilisation • 10W at startup	
Connector	Connector SUBCONN® MCBH8MTI 8-pin	
Analogue Output	0 .. 5 V / 10 V • 0/4 .. 20 mA • range can be user-configured	
Digital Output	RS-232C • RS-485 max. 5000m • Long-Range-Modem max. 25 km	
Memory, Datalogger	Option internal SmartDI Datalogger with 2 GB CompactFlash Memory with RS-232, RS-485 Output Binary and ASCII / NMEA-0183 Format	
Underway	Extreme small and in-expensive Flow-trough system for underway / FerryBox and lab applications available • Lab-system with auto-calibration	



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