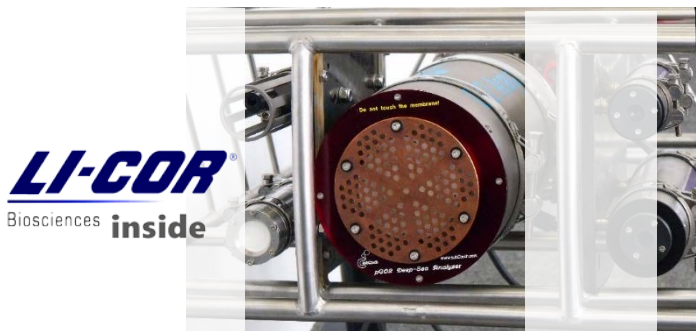


Subsea CO₂ Analyzer

Precise optical NDIR pCO₂ Analyzer



- Monitoring e.g. Offshore Oil+Gas or CCS
- ROV or AUV integration
- Profiling
- Deep-Sea
- Monitoring of biological processes
- Water quality control

- Premium optical NDIR LI-COR® analyzer
- Automatic zero calibration
- Corrosion-free titanium or POM housing
- Low maintenance
- Robust design
- Highest precision
- Low investment – low follow up costs
- Low power
- Expandable

Features & Benefits:

- It's a LI-COR®: highest accuracy due to automatic temperature, pressure and H₂O compensation
- Robust, versatile and compact submersible housing for buoy and subsea applications
- Complete, hands carry able and easy to maintain. Easy handling and intuitive overall design (e.g. red / green LED signals)
- High stability with auto calibration features including standard offset zeroing, auto- or manually span gas calibration supported: low maintenance costs
- Long-time deployment anti-fouling protection for the flat membrane equilibrator conductor
- Optionally expandable by easy integration of instrumentation through the data logger, e.g. Oxygen optode, Fluorometer and Turbidity sensors, CTD's etc.
- For shallow water deployments expandable through external modules via RS-485 MBUS bus, e.g. to connect a Meteorology or GPS geo references with position event control
- Optional real-time online telemetry data transfer and alarm services
- Optional external Li-Ion PowerPack
- Adaption set for Inspection ROV



Specification	
Sensor Principle	High performance LI-COR® LI-840x analyzer – exclusively produced by LI-COR Biosciences for SubCtech Contains dual-wavelength NDIR detector for CO ₂ and H ₂ O. • Silicone flat membrane equilibrator External sea-water pump for high response times (T ₆₆ : 3min) supported
Range	Standard 0...3000 ppm CO ₂ • 0...80 ppt H ₂ O • up to 20.000 ppm CO ₂ • Units selectable
Resolution	0.01 ppm CO ₂ • 0.001 ppt H ₂ O
Accuracy	Correction for water vapour, pressure and temperature effects • Overall accuracy < 1.5%
Sample Rate	Physical 1 Hz with optionally averages for storage (e.g. 30s, 10min,...) and real-time output
Air CO₂	Optionally automatic analysis on programmed intervals • Additional air CO ₂ port and external gas inlet
Calibration	Factory calibration with traceable gases to WMO standards for CO ₂ . NIST traceable LI-610 portable dew point generator for H ₂ O • User correction supported
Auto Calibration	Auto offset zeroing on programmed intervals • Zeroing reference included for >1 year operation time Manual span gas calibration supported • Optionally external gas calibration (extra gas ports)
Temperature	Operating temperature range 0 to +40°C • Optional heater for -20 to +40°C
Analogue Out	0...5V / 0...2,5V or 4...20mA • Range can be adjusted
Interface	RS-232 / RS-485 interfaces provided • Real-time data output ASCII NMEA-0183, typ. 1 Hz • Easy integration into existing systems • Optionally usage of radio links, Ethernet, WLAN etc.
Data logger	Optional data logger • 2GB CF card for approx. 5 years' storage (depending sample rate) Quality and event flagging • PLC Controller for auto-calibration and external component control (pumps, lights, sensors etc.) • Real time processing with 180+ calibration formulas • Optional alarms
More Sensors	Additional sensors such as CTD, pH, Fluorometer etc. can be adapted
Analogue Input	Optionally 16 or 24 Bit data acquisition 0/4-20 mA, ±10V etc.
Software	NEW Windows® PC Software <i>OceanView™</i> 4 for logging and online real-time data • Diagnostic screen
Anti-fouling	Anti-fouling design for the equilibrator sensor head
Housing	Titanium Φ168mm x 380 mm length (300m) • Approx. 12 kg at air, 4 kg in seawater Titanium Φ180mm x 380 mm length (3000m) • Approx. 15 kg at air, 6 kg in seawater
Water depth	Buoy / Shallow water 50m • Estuary 300m • Subsea up to 6000m on request
Power	12...28 VDC • typ. 8W • Warming up max. 25W • Optional Li-Ion PowerPack™ Optional low-power version <5W operating and Power-Manager-Module for sleep-modes
Service	Recalibration & Service recommended every 12 months • Membrane lifetime up to 10years • Operating time for 24/7 usage typ. 1 year before service (internal micro pump, zero filter)

