OceanXpert-Lab IR-CH4

Precise flow-through CH₄ Analyzer

▶ Cost effective sensor

▶ CH₄ Sea and Air analysis

▶ Standalone or in OceanPack™

▶ Auto calibration

▶ Low maintenance

▶ Robust construction

▶ High precision

▶ Expandable

✓ Water quality control
✓ Climate studies
✓ Monitoring of biological processes

✓ Environmental monitoring
✓ Standalone Lab Analyzer
✓ Integrate in AUMS

Features & Benefits:

● Dual-wavelength NDIR detector

● Robust, versatile and compact 19" housing for Lab and Vessel applications

● Easy to operate and maintain with intuitive design. Just Plug & Play

● High stability with automatic or manual span gas calibration – low maintenance costs

● Patented robust flat-membrane-equilibrator cassette – lifetime 10+ years

● Internal data logger allows easy integration of additional sensors: CTD/TSG, Oxygen, Fluorometer, Turbidity, Nutrient Analysers, pH, etc.

● Expandable through external modules via RS-485 MODBUS, e.g. for meteorological sensors

● Optional GPS georeferencing for all data and position event control

● Optional online telemetry data transfer and alarm services

● Real-time data interface NMEA-0183: simple ASCII protocol, configurable to your needs

Specifications

Sensor Principle	High performance NDIR dual-wavelength optical sensor ● Silicone flat membrane equilibrator
Range	0..1%, 0..5%, 0..10%, 0..30%, 0..100%
Resolution	0.1 ppm CH_4
Accuracy	Auto-correction for pressure and temperature effects ● ±2% Full-scale
Sample Rate	Output rate typ. 1 Hz with optional averaging ● User configurable ● Storage rate configurable
Air CH_4	Optional ● Automatic analysis on programmed intervals
Calibration	Internally stored coefficients ● User correction supported for Zero & Span
Temperature	Operating temperature range 0 to +40°C ● Optional heater for -20 to +40°C
Analogue Output	Optional ● 0...5V or 0...20mA / 4...20mA ● Range can be adjusted
Data Interface	RS-232 (RS-485 optional) ● simple ASCII NMEA-0183 ● Easy integration into existing systems
Data Storage	Internal 8GB SD card ● Storage capacity approx. 5 years (depending on sample rate)
External Sensors	GPS ● CTD ● Meteorological instrumentation ● Oceanographic sensors
Analogue Input	Optional 16 Bit data acquisition 0/4-20 mA, ±10V etc.
Housing	19'' industrial rack housing ● Splash protected ● Size 445 x 135 x 400 mm W x H x D ● Weight 10 kg
Power	12...32 VDC or 100...240 VAC, 50/60Hz ● Typ. 20W operating ● Max. 50W warming up
Water Supply	Flow rate typ. 3-15 l/min ● Max. water pressure 3 Bar
Accessories	External datalogger ● External sensors or analyzers ● Intake for air CH_4 ● Debubbler ● Self-cleaning unit
Service	Recalibration & Service recommended every 12 months ● Membrane lifetime up to 10 years ● Operating time for 24/7 usage typ. 1 year before service