



SUNA (Submersible Ultraviolet Nitrate Analyzer)

The SUNA nitrate analyzer is the latest addition to Satlantic's line of leading edge water quality monitoring sensors. SUNA is a cost-effective solution for real time, chemical-free nitrate analysis in coastal and freshwater environments. The sensor provides quick, continuous nitrate measurements and easily integrates into existing water monitoring systems. SUNA is complemented by a newly developed Windows™ based software package enabling easy set up, operation and in-field calibration updates.

SUNA incorporates the proven MBARI-ISUS nitrate measurement technology, which is in extensive use worldwide. This method of nitrate analysis is based on the absorption characteristics of dissolved inorganic compounds in the UV light spectrum. Chemicals absorb light in the UV and each has a unique absorption spectrum. The SUNA uses advanced UV absorption algorithms to compute the nitrate concentration directly, without the use of reagents. This technology has proven to be robust, sensitive and stable, operating continuously for extended periods of time in remote and harsh environments.

SUNA is the latest advance in accurate and cost-effective nutrient monitoring. Features include:

- **Real time nitrate calculation**
- **Full UV spectrum for maximum accuracy**
- **Simple in-field reference update**
- **Includes easy to use Windows™ software package**
- **Based on proven MBARI-ISUS technology**

SUNA is the economical choice for routine nitrate measurements in virtually any aquatic environment:

- **Lakes and rivers**
- **Coastal estuaries**
- **Drinking water reservoirs**
- **Agricultural drainage systems**

For extended deployment options, please talk to a Satlantic representative about our external data logging instruments and third party integration experience.

For additional information about SUNA and our range of water quality monitoring equipment, please visit www.satlantic.com.





SUNATA SPECIFICATIONS

PERFORMANCE

Detection range:	0.007 to 28 mg/l-N *(0.5 to 2000 μ M)
Accuracy:	± 0.028 mg/l (± 2 μ M) <i>or</i> $\pm 10\%$ of reading, whichever is greater (σ under laboratory conditions)
Long term drift:	0.004 mg/l per hour of lamp time
Thermal Compensation:	0 to 40 °C
Salinity Compensation:	0 to 50 psu

OPTICS

Path length:	1 cm
Wavelength range:	190 - 370 nm
Lamp type:	Deuterium
Lamp lifetime:	900 h

ELECTRICAL CHARACTERISTICS

Input voltage:	8 - 18 VDC
Power consumption:	7.5 W (0.625 A @ 12V) nominal
Sample rate:	0.5 Hz
Telemetry options:	RS-232 Baud rate user selectable - default 38,400 bps Analog output 0 - 4.096 VDC and 4 - 20 mA SDI-12

PHYSICAL CHARACTERISTICS

Depth rating:	100 m (330 ft)
Length:	533 mm (21 in)
Diameter:	57 mm (2.25 in)
Weight:	2.5 kg (5.4 lb) in air 1.0 kg (2.3 lb) in water
Housing material:	Titanium and Acetal
Operating temperature:	0 to 40 °C

*Specifications may change without notice.
February 2010*