

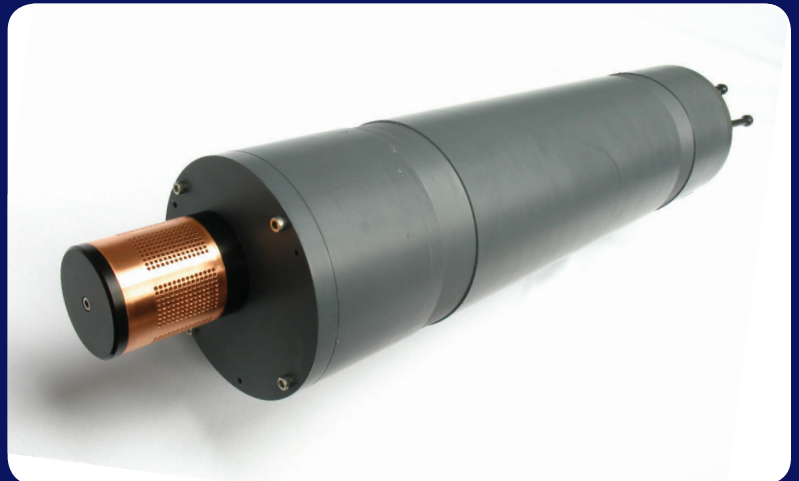
ISUS V3

Nitrate Sensor

Satlantic's ISUS V3 nitrate sensor version of the original MBARI-ISUS nitrate sensor, comes with full USB capability and ISUSCom software. ISUSCom is a windows-based application that enables the user to download files, setup schedules, log and view data all through a simple, easy to use interface. ISUS V3, originally developed by the Monterey Bay Aquarium Research Institute (MBARI), uses advanced UV absorption technology to provide accurate nitrate concentration measurements in real-time.

Features

- Simplified Instrument Setup
- Fast and Easy File Download
- Real-time Spectral Display
- Nitrate Time-Series Plotting
- Schedule Programming
- Calibration Updates
- Data Logging



Applications

The ISUS nitrate measurement technology has been successfully deployed in a wide range of aquatic environments, from deep ocean moorings to coastal buoys to small lakes and rivers. The technology has proven to be robust, sensitive and stable, operating continuously for extended periods of time in remote and harsh environments.

Performance

Accuracy:	$\pm 2 \mu\text{M}$ (0.028 mg/l)
Detection range:	or $\pm 10\%$ of reading, whichever greater
Thermal Compensation:	0.5 to 2000 μM *(0.007 to 28 r
Salinity Compensation:	0 to 40 °C 0 to 40 psu

Optics

Pathlength:	1 cm
Wavelength range:	200 - 400 nm
Lamp type:	Deuterium
Lamp lifetime:	900 h

Electrical

Input voltage:	6 - 18 V (Non-isolated power input from batteries) 19 - 75 V (Isolated power input) 11 - 36 V (Optional isolated power input)
Power consumption:	7.5 W (0.625A @ 12V)
Data storage:	256 MB
Sample rate:	1 Hz
Telemetry options:	Analog output 0 - 4.096 VDC Isolated RS-232 - RS-485 serial output User selectable baud rates available (Default 38,400 bps)
Data Download Options	USB RS-232

Physical

Depth rating:	1000 m/ 200m
Length:	24 inches (608 mm)
Diameter:	4.5 inches (114 mm)
Weight:	11.0 lbs in air (5.0 kg) 1.5 lbs in water (0.7 kg)
Housing material:	Anodized Aluminum/ PVC
Operating temperature:	0 to 40 °C

