EnviroTech Instruments

Aqua Sentinel

On-line Nutrient/Chemical Analyzer

Modular design for continuous on-line analysis

Aqua Sentinel is a automatic analyzer for on-line monitoring of nutrients and other chemicals in all natural waters, research establishments, survey vessels, aquaculture, seafood transport, waste water and process control applications. The modular system may be configured to run up to four analytical channels simultaneously. Aqua Sentinel is designed to operate unattended for several weeks. Four parallel analysis modules provide rapid concurrent measurements of each parameter. Nitrate, phosphate, ammonia, silicate, urea and iron versions are currently available. Integral self-calibration / maintenance routines enable Aqua Sentinel to cost-effectively provide reliable data with minimal maintenance overhead.

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Water Treatment

Benefits

- Cost-effective round-the-clock high frequency monitoring
- Early warning and alarms
- Maximizes use and protection of resources
- Enhances existing manual measurements
- Build-in data dissemination for shared facilities

Applications

- Laboratory water intake
- Aquaculture and large aquarium health
- Effluent and waste water remediation
- Vessel mounted surface mapping
- Fixed station water quality monitoring
- Educational establishments

Survey Vessels

Description

High frequency sampling and integral self-maintenance routines enable Aqua Sentinel to provide reliable and precise data with no maintenance when running unattended for extended periods. Nitrate, nitrite, phosphate, silicate ammonia, urea and iron channels are currently available. The Aqua Sentinel system employs universally accepted and proven wet-chemistry and determines concentrations via standard lab-comparable analytical techniques. The systems discrete batch analysis techniques are key to long term reliability. The integrated touch screen display provides simple set-up and operation. Data are recorded internally to non-volatile memory and disseminated via serial, Ethernet, or wireless telemetry and are also backed-up to removable media.

Agricultural run-off

Aqua Sentinel easily connects to any pumped supply or existing measurement loop. External filtration and flow-line control modules can be supplied and integrated as part of a complete system. NEMA 4X / IP69 environmental protection ensures the units is equally suitable for installation within a pumping station or wet-laboratory environments. The portable design may also be installed in any other suitable location including aboard ships.

Aqua Sentinel can be supplied with many optional extras including a suitable pump and additional sensors (temperature, pH, salinity, etc.). Complete system installation is also available and training courses can be provided on-site.

Specification

	Nitrate / nitrite	Phosphate	Ammonia	Others
Range (mg/l)*	0.3, 1, 10 or 20	0.3, 1, 5 or 10	0-1, 10 or 20	Urea, iron, silicate.
Method	Colorimetric	Colorimetric	Colorimetric	Specification available on request.
Wavelength (nm)	543	880	660	
Precision (% range)	2%	3%	2%	
Sensitivity (mg/l)	0.006 (max)	0.006 (max)	0.006 (max)	
Endurance (max)	3000 samples per channel between services (max)			
Dimensions	24" (610 mm) h x 20" (510 mm) w x 12" (305 mm) d			
Weight	90 lbs (40.5 kg)			
Seals / protection	NEMA 4X / IP68			
Data storage	80 GB HHD, 4 GB removable drive			
Communications	RS232, RS485, Ethernet, wireless (802.11g), cellular (GSM)			
Display / control	800 x 600 LCD / Touch Screen Display Interface			
Power supply	90 - 250 VAC 50 - 60 Hz			
Scope of supply	Aqua Sentinel - base system (controller, memory, display, interface, power supply). 1 - 4 analytical modules. Reagent containers. Tool-kit.			
Optional extras	Filtration, flow-line control / manifold, pumps, sensors, training, installation,			

*Special measurement ranges can be configured on request. Max. ranges can be increased by automated pre-dilution

Please note that Aqua Sentinel can be configured for many additional analytes. Examples include chlorine, hydrogen sulphide, manganese and many others. Contact our technical support for help with your application.