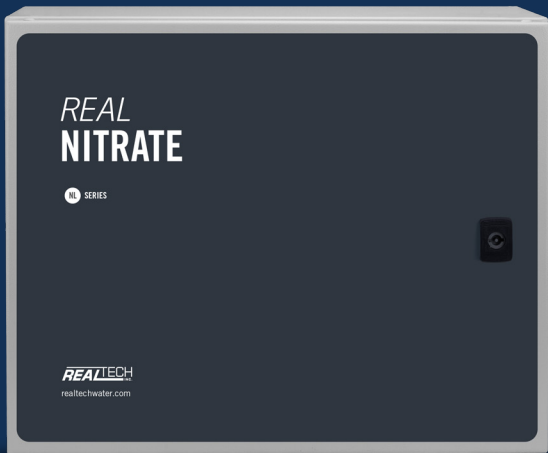


NITRATE SENSOR

NL SERIES



FEATURES & BENEFITS

- Accurate and reliable monitoring of nitrates (NO_3)
- Optical measurement method (reagent free)
- Wastewater to high purity measurement ranges
- Bypass style sensor with multiple flow cell selections to meet application demands
- Operator friendly, low maintenance design
- Easy to install and operate
- Liquid Ai compatible for optional Remote Monitoring service

MUNICIPAL DRINKING WATER
MUNICIPAL WASTEWATER
INDUSTRIAL PROCESS WATER
INDUSTRIAL WASTEWATER

WATER QUALITY
MONITORING
SOLUTIONS

REAL-TIME MONITORING SOLUTION

Nitrate Sensor

Real Tech's bypass Nitrate sensor provides real-time measurement of nitrate (NO_3) in water or wastewater. Designed to meet the needs of many monitoring applications, the NL series offers multiple flow cell designs and sensor path length selections for the desired measurement range.

Controllers And Accessories

Our innovative modular product platform ensures our clients gain the real-time water quality monitoring system that meets their specific demands and budget. With multiple controller and accessory options available such as automatic chemical cleaning systems that lower maintenance while improving system performance, Real Tech provides a total solution for all of your unique water quality needs.

Liquid Ai Compatible

Our Liquid Ai data services complement our real-time water quality monitoring systems. Our Remote Monitoring platform is a powerful data management and visualization tool that enables access to data anywhere, anytime.

MEASUREMENT PRINCIPLE

Real Tech's Nitrate sensors utilize UV-VIS light for measurement as nitrate ions have a natural absorbance peak in the 200-220 nm wavelength range. Common interferences with nitrate measurement, such as organic compounds, nitrite, iron (II), and turbidity or suspended solids are automatically compensated for by measurements at additional reference wavelengths in the UV-VIS spectrum where the interfering compounds absorb, but nitrates do not. The nitrate sensor benefits from Real Tech's innovative Split-Sense Pro technology that compensates for lamp drift and fluctuations, providing an accurate and stable output overtime.

REALTECH
INC.



NITRATE SENSOR SPECIFICATIONS

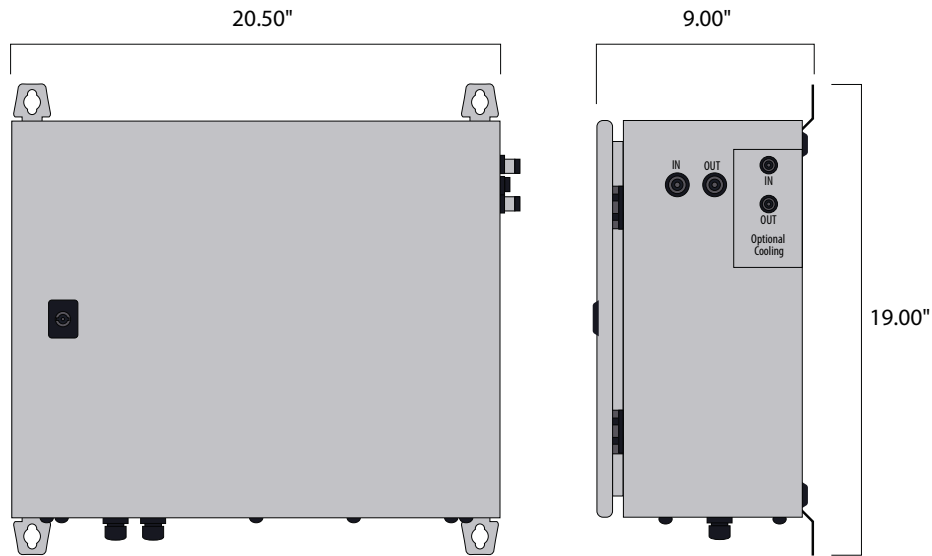
CHARACTERISTIC	TECHNICAL DATA		
Model Series	1000 series	2000 series	4000 series
Path Length	0.5, 1, 2, 4, 10 mm	1, 2, 4, 8 mm	25, 50, 150 mm
Parameters	Nitrate (NO ₃ ⁻ , NO ₃ ⁻ N)		
Range	Depends on model selected. Refer to range chart on page 4.		
Units	mg/L, ppm		
Sampling Time	1 minute		
Calibration	Factory calibrated. Field adjustment of calibration is possible.		
Cleaning	In-situ chemical cleaning makes cleaning quick and easy. Automatic chemical cleaning is optional.		
Self-Diagnostics	Detection and diagnosis of internal system fault		
Alarms	Dry contact terminals allow for operator configurable alarms for: high and low set points, low lamp output, leak detect, system fault, etc.		
Humidity Control	Humidity sensor with large plug-in regenerating desiccant system		
Wavelengths	Configurable up to 40 wavelength between 200-750 nm		
Light Source	Xenon Flash Lamp		
Lamp Life	2-5 years		
Flow Rate	500-1000 mL/min	300-1000 mL/min	
Pressure Rating	85 PSI maximum	20 PSI maximum	
Fluid Connections	3/8" OD tube push-in fittings	1/4" OD tube push-in fittings	
Wetted Materials	Kynar, FEP, Quartz, SS316L, Viton	Kynar, Polyethylene, Quartz, SS 316L, Viton	
Electrical/Comm.	From controller		
Ambient Temp.	0 to 45°C (32 to 113°F)		
Water Temp.	0 to 35°C (32 to 95°F) at 21°C (69.8°F) Ambient temperature		
Enclosure	NEMA 4, wall mountable		
Weight	44 lb		
Dimensions	19.0"H x 20.5"W x 9.0"D		
Warranty	2-year limited warranty (Extended care packages available)		

* Technical Specifications are subject to change without notice.

* Water temperature range based on material compatibility only. Contact Real Tech to verify application.

DIMENSIONS

The nitrate sensor is a bypass cabinet instrument installed directly on a wall, railing or system backboard. Sample is supplied to the sensor from either a pressurized source or from an open-channel using an accessory pumping system.



SENSOR SELECTION

MODEL SERIES	DESCRIPTION
1000	Ideal for closed loop, high pressure or high solids wastewater monitoring applications
2000	Ideal for general water monitoring applications
4000	Ideal for high purity water monitoring applications

SENSOR MODELS & RANGE

Includes nitrate sensor, flow cell, calibration bottle and dehumidifier. Controller and accessories sold separately.

MODEL #	PATH LENGTH	NO ₃ ⁻ N (mg/L)	NO ₃ (mg/L)
NL1005	0.5 mm	0 - 100	0 - 440
NL1010	1 mm	0 - 50	0 - 220
NL1020	2 mm	0 - 25	0 - 110
NL1040	4 mm	0 - 12.5	0 - 55
NL1100	10 mm	0 - 5	0 - 22
NL2010	1 mm	0 - 50	0 - 220
NL2020	2 mm	0 - 25	0 - 110
NL2040	4 mm	0 - 12.5	0 - 55
NL2080	8 mm	0 - 6.25	0 - 27.5
NL4025	25 mm	0 - 2	0 - 8.8
NL4050	50 mm	0 - 1	0 - 4.4
NL4150	150 mm	0 - 0.33	0 - 1.45

* Stated ranges are approximate, dependent on industry, site and application - contact Real Tech to confirm model selection

* Higher maximum range possible with use of Dilution System option

CONTROLLERS

Controllers include proprietary inputs for Real Tech sensors and accessories.

PRODUCT #	NAME	DESCRIPTION
S--229005	Real Controller Lite	Wall mounted controller with 4-line x 20-character back lit LCD display. Includes modbus RTU (RS485)
S-169000	Real Controller	Wall mounted controller with 4-line x 20-character back lit LCD display. Includes modbus RTU (RS485), 1 channel of 4-20 mA out and digital I/O module
S-11TPC	Real Controller Pro	Wall mounted controller with 12.1" colour LCD touch panel PC interface (PC inside cabinet model). Includes Modbus TCP
S-11TPCD	Real Controller Pro	Wall mounted controller with 12.1" colour LCD touch panel PC interface (PC external on door model). Includes Modbus TCP

ACCESSORIES

PRODUCT #	NAME	DESCRIPTION
UVT-078130	Real Clean System I	Automatic chemical cleaning system for use with 2000 series models
UVT-118010	Real Clean System II	Automatic chemical cleaning system for use with 4000 series models
S-178121	Dual Feed II	Dual feed option includes Digital I/O module for use with controllers

Real Tech Inc.

1150 Champlain Court,
Whitby, Ontario L1N 6K9 Canada
TF: 1.877.779.2888 T: 1.905.665.6888
info@realtechwater.com

REALTECH
INC.