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YSI NOx Sensor for the IQ SensorNet System

IQ NOx (NO₃-N + NO₂-N) Probe



NOx (NO₃ + NO₂)

The YSI IQ SensorNet NOx sensor uses a reagentless, UV-based absorption measurement that is built into a rugged, corrosion-resistant field probe for the IQ SensorNet system. The NOx sensor measures the sum of nitrate (NO₃-N) and nitrite (NO₂-N) to determine NOx-N (NO₂₊₃-N). Measurements can be displayed as NO₃-N or NO₃. The NOx sensor measures nitrogen at a wavelength below 250 nm. A second wavelength is also measured in order to compensate for turbidity and organic matter that is in the water. The NOx sensor provides continuous data to help operational improvement decisions. The probe's built-in UltraClean® ultrasonic cleaning technology reduces routine maintenance requirements.

- Ideal for monitoring and controlling the nitrification/denitrification process; effluent monitoring
- Single wavelength determination of NOx; second wavelength for turbidity compensation
- Factory calibrated with optional user-calibration
- 2-year warranty
- Measurement directly in the process; no reagents required
- Maximum durability due to high-tech materials Titanium/PEEK
- Maintenance free ultrasonic cleaning with UltraClean technology built-in; no wipers or seals to replace and prevents biofouling from taking place. Built-in air holes for added air cleaning in high fouling applications.



A 5 mm gap YSI UV sensor deployed after one week with UltraClean® continuous-ultrasonic cleaning technology. No fouling observed.



IQ UV probes are rugged, accurate and designed to withstand field conditions. The optics are kept clean with UltraClean technology. 1 mm gap sensor is pictured.

UV 701/705 NOx IQ Technical Specifications

Measurement Method	UV absorption measurement	
Measurement Range	UV 701 IQ NOx* (higher NOx values; 1 mm gap width)	UV 705 IQ NOx* (lower NOx values; 5 mm gap width)
	0.0 to 100.0 mg/L NOx-N (NO ₃ -N)	0.0 to 20 mg/L NOx-N (NO ₃ -N)
	0.0 to 500.0 mg/L NOx (NO ₃)	0.0 to 100.0 mg/L NOx (NO ₃)
Resolution	0.1 mg/L	
Compensation	Turbidity Compensation	
Operating Temperature	0 to 45 °C (32 to 113 °F)	
Storage Temperature	-10 to 50 °C (14 to 122 °F)	
Warranty	2-years	
Flow Rate	≤ 3 m/s (~1 ft/s)	
pH range	4 to 12 units	
Cleaning System	UltraClean, ultrasonic cleaning system built directly into the sensors; air cleaning also available	
Dimensions/Weight	Length 774 mm (30.5 in); diameter 60 mm (2.36 in); weight ~3.8 kg (8.4 lbs)	
Certifications	CE, cETLus	
Protection Class	Sensor with SACIQ cable connected: IP68	
Pressure Resistance	1 bar (14.5 psi) maximum overpressure	
Lightning/Voltage Protection	Yes	
Electrical	Power Consumption: 8 W; Shielded 2-wire IQ cable provides power and communication	
Materials	Housing: Titanium, PEEK Window: Sapphire glass	

* The YSI 700 Series NOx sensors do not differentiate between nitrate and nitrite. Measurements are displayed as NO₃-N or NO₃.

UV 701/705 NOx IQ Optical Sensor Ordering Information (must be used with the YSI IQ SensorNet, sensor cable sold separately)

IQ NOx 701 Item #481 034Y	1 mm gap length optical UV NOx sensor for water/wastewater monitoring and control; integrated UltraClean technology provides ultrasonic continuous cleaning; includes protective guards
IQ NOx 705 Item #481 035Y	5 mm gap length optical UV NOx sensor for water/wastewater monitoring and control; integrated UltraClean technology provides ultrasonic cleaning; includes protective guards

Visit YSI.com/IQ for additional information on the entire IQ SensorNet system.

YSI

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