



VARiON[®] Plus 700 IQ

AMMONIUM & NITRATE ION-SELECTIVE ELECTRODE SENSOR FOR IQ SENSORNET



Reliable nutrient monitoring for harsh environments.

The VARiON[®] is a rugged, Ion Selective Electrode (ISE) sensor for YSI's IQ SensorNet system. Continuously measure nitrate and ammonium, plus one compensation electrode for potassium or chloride, in wastewater applications. The VARiON is the first networkable ISE sensor certified for use in Class 1 Division 2 (CID2) hazardous locations.



Rugged Design

Built with a durable stainless steel mesh membrane to extend the electrode lifespan; a long reference electrode increases the time between replacements.



Cost Savings

All electrodes are individually user-replaceable with a typical lifetime between 18 and 24 months, minimizing maintenance efforts and ownership costs.



Smart Technology

Electrodes are automatically recognized when replaced; no additional programming needed.



Protected Investment

Backed by a 2-year sensor warranty and 1-year electrode warranty.



a xylem brand

VARiON® Plus 700 IQ AMMONIUM & NITRATE ION SELECTIVE ELECTRODE SENSOR

VARiON Sensor Options

VARiON Plus 700 IQ

Ammonium, nitrate, potassium, and chloride ISE sensor

VARiON Plus 700 IQ H

Ammonium, nitrate, potassium, and chloride ISE sensor for Class I, Division 2 hazardous locations



The VARiON sensor is ideal for monitoring and control of activated sludge aeration and nitrogen removal processes.

VARiON® Plus 700 IQ General Specifications

Temperature Conditions	Operating Temperature: 32 to 104 °F (0 to 40 °C) Storage Temperature: 32 to 104 °F (0 to 40 °C)
Measurement Method	Potentiometric
Calibration Capability	Matrix adjustment against any reference value, 2-point calibration possible with multiple standard solution
Warranty	2 years sensor, 1 year electrode
pH Range	Ammonium: 4 to 8.5 pH Nitrate: 4 to 11 pH
Dimensions	15.43 L x 2.17 D in (392 L x 55 D mm)
Weight	1.5 lbs (670 g)
Conformance/Certifications	EN 61326, Class B, FCC Class A; intended for indispensable operation CE, cETLus VARiON Plus 700 IQ H - Conforms to UL 121201, CAN/CSA C22.2 # 213; Class I Division 2, Groups A, B, C, D, T6; Class I Zone 2, Groups IIC T6
Protection Class	IP68; waterproof
Maximum Pressure	0.2 bar (2.9 psi)
Power Consumption	0.2 W
Electrical Connections	2-wire shield cable with quick sensor connection
Material	Sensor body: V4A stainless steel 1.4571; Probe Guard: POM; Temperature sensor: V4A stainless steel 1.4571; Electrode connector: POM
Note	The VARiON Plus 700 IQ H (207040Y) requires the MIQ/BB1 module (207 001Y) for operation.

VARiON® Plus 700 IQ Technical Specifications

Parameter	Measuring Range	Resolution
NO3	0.5 to 450.0 mg/L	0.1 mg/L
	5 to 4500 mg/L	1 mg/L
NO3-N	0.1 to 100.0 mg/L	0.1 mg/L
	1 to 1000 mg/L	1 mg/L
mV (Nitrate)	-2000 to 2000 mV	1 mV
NH4	0.1 to 129.0 mg/L	0.1 mg/L
	1 to 2580 mg/L	1 mg/L
NH4-N	0.1 to 100.0 mg/L	0.1 mg/L
	1 to 2000 mg/L	1 mg/L
mV (Ammonium)	-2000 to 2000 mV	1 mV
K	0.1 to 1000 mg/L	0.1 mg/L
mV (Potassium)	-2000 to 2000 mV	1 mV
Cl (compensation only)	0.1 to 1000 mg/L	0.1 mg/L
mV (Chloride)	-2000 to 2000 mV	1 mV
Electrode Accuracy	+5% of measured value or + 0.2 mg/L	
Temperature Measurement	32 to 104 °F (0 to 40 °C) Accuracy ± 0.5 K Resolution ± 0.1 K	

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