

## Ammonium- und Nitratsensor: ISE-Kombisensor - WTW



Ammonium and nitrate sensor: ISE combination sensor

**Rating:** Not Rated Yet

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Manufacturer [Borgmann Aquaponik Hydroponik](#)

Description **ISE combination sensor for ammonium and nitrate - WTW**  
Digital ISE sensor for NH<sub>4</sub> and NO<sub>3</sub>

- ISE: Ion selective electrode
  - Digital ISE sensor for NH<sub>4</sub> and NO<sub>3</sub>
- Reagent-free ammonium and nitrate ion-selective measurement with automatic compensation of

potassium/chloride with the

VARiON® Plus 700 IQ:

- Ammonium and nitrate measurement directly in the process
- Simultaneous compensation of potassium, chloride
- No sampling, reagent-free
- Calibration-free , long-term stable

The particularly stable electrodes guarantee a long service life and easy cleaning. To measure, simply install the corresponding electrode into the IQ SENSOR NET sensor; everything else happens automatically. The values ??that have already been compensated are shown in the measured value display, either with potassium or chloride output. These values ??are also directly available for signal output via 0/4–20 mA output or digital output (Profibus, Modbus RTU, Ethernet/IP, Modbus TCP).



	Ammonium measurement	Nitrate measurement
Measuring principle	Electrochemical	
Maximum configuration of a sensor	Common reference electrode, two measuring electrodes, one compensation electrode	
Integrable measuring chains: reference	VARiON ® Plus Ref	
measuring electrode	VARiO N® Plus NH <sub>4</sub> <sup>-</sup>	VARiON ® Plus NO <sub>3</sub>
compensation	VARiON ® Plus K	VARiON ® Plus Cl
Measuring	NH <sub>4</sub> <sup>-</sup> -N :	NO <sub>3</sub> <sup>-</sup> -N:



<b>Ranges/resolution</b>	1 ... 2,000 mg/l / 1 mg/l; 0.1 ... 100 mg/l / 0.1 mg/l $\text{NH}_4^+$ : 1 ... 2,580 mg/l / 1 mg/l; 0.1 ... 129.0 mg/l / 0.1 mg/l	1 ... 1,000 mg/l / 1 mg/l; 0.1 ... 100 mg/l / 0.1 mg/l $\text{NO}_3^-$ : 5 ... 4500 mg/l / 1 mg/l; 0.5 ... 450.0 mg/l / 0.1 mg/l
<b>Compensation areas</b>	$\text{K}^+$ : 0.1 ... 1,000 mg/l / 0.1 mg/l	$\text{Cl}^-$ : 0.1 ... 1,000 mg/l / 0.1 mg/l
<b>Measurement accuracy in laboratory standards</b>	$\pm 5\%$ of measured value $\pm 0.2 \text{ mg/l}$ in standard solutions	
<b>Calibration types</b>	Matrix adjustment against any reference value, 2-point calibration with combined standards possible	
<b>Downtime (typical)</b>	Reference electrode: 18 months, measuring and compensation electrode: 18 months for typical application (municipal sewage treatment plants)	
<b>Temperature measurement and compensation</b>	Integrated NTC, range 0 °C ... +40 °C, accuracy $\pm 0.5 \text{ K}$ , resolution 0.1 K, $t_{95} < 20 \text{ s}$	
<b>Compressive strength</b>	Maximum 0.2 bar (including sensor connection cable, with built-in measuring chains)	
<b>Environmental conditions</b>	Operating temperature: 0 °C ... +40 °C, storage temperature: 0 °C ... +40 °C	
<b>Electrical connection</b>	2-core shielded cable with quick release on the sensor	
<b>Electromagnetic compatibility</b>	EN 61326, Emission: Class B, FCC Class A Immunity for essential operation	
<b>Test mark</b>	CE	
<b>mechanics</b>	Housing shaft: V4A stainless steel 1.4571 Protective basket: POM, temperature sensor: V4A stainless steel 1.4571 Protection class: IP 68 (0.2 bar, with built-in measuring chains) Measuring chain holder: POM	
<b>Weight</b>	Approx. 670 g (without measuring chains, without sensor connection cable)	
<b>guarantee</b>	VARION ® Plus 700 IQ: 2 years Electrodes: 1 year for material defects in accordance with § 10 General Terms and Conditions	



[data sheet](#)

Units in box: 1