

[Product Description]

- IoT NO3 sensor equipped with both RS-485 and Wi-Fi web interfaces, allowing for remote or on-site monitoring directly via smartphone—no display unit or app required. Provides accurate and stable NO3 readings, compatible with any global display unit or software.
- Automatic Cleaning Function (Optional): Includes a built-in micro air pump. Adjustable cleaning schedule, automatic cleaning with last-value hold and stabilization time settings. Significantly extends maintenance intervals.
- Smart calibration function via mobile web interface: On-site replacement of standard solution bottles with protective caps, and a guided calibration process via mobile web interface, making calibration extremely convenient.
- Smart AI Functions: Notifications for calibration and auto-cleaning status. Intelligent diagnostics for electrode contamination or aging levels.



[Features]

- Integrated Design: Built-in IoT transmission and sensor module. Fully functional upon power-up—no additional hardware required.
- IP68 Submersible and Corrosion-Resistant Housing: Designed for direct deployment in water without the need for a protective sleeve.
- High-Strength Isolated Cable: Ready for direct immersion. Ensures stable signal transmission with surge isolation protection for both power and IoT communication.
- Temperature Compensation & Regulatory Compliance: Measurement method complies with the Environmental Protection Administration's standard NIEA W218.51C for automatic monitoring equipment.
- Smart Configuration: Calibration parameters are stored internally. After calibration, the device can be directly installed in the field without reconfiguration.
- Three-Point Calibration: Supports calibration using standard solutions or samples with known concentrations.
- Last Value Hold During Calibration and Auto-Cleaning: Prevents erroneous readings by retaining the last measured value. Status indicators show real-time state—Calibrating, Auto-Cleaning, Stabilizing, or Maintenance.
- Calibration Record Access: Last three calibration records (date, slope, and calibration points) can be retrieved via web interface or RS-485.

[Applications] Sewage, groundwater, freshwater aquaculture, river and lake detection

systems

[Optional code]

NO3485

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Code 1

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Code 2

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Code 3

Code 2: Quick connector

Code 2 :Cable head



Code 1	Function	Code 2	Line/Air duct length	Code 3	Line/Air duct length
N	No auto-cleaning	C	Quick connector	N	3M
A	Auto-cleaning (Including standard 12VDC air pump and nozzle)	F	Cable head	C	3 meters + quick connector
A24	Auto-cleaning (Including 24VDC air pump and nozzle)			ValueN	Line length
				Value C	Line length +quick connector

[Calibration Instructions]※Optional model "Sample-NO3" available for on-site sample-based calibration, based on field requirements.

The NO3 measurement is based on the Ion-Selective Electrode (ISE) method, which is the most cost-effective solution requiring no additional reagent costs, enabling continuous online monitoring. Each electrode is factory-calibrated with standard solutions following ISO 9001 procedures by JNC prior to shipment.

To eliminate background interference during use, it is recommended to first collect a water sample on-site and verify the concentration using the colorimetric method. Then proceed with on-site sample-based calibration to achieve more accurate readings. JNC offers (optional) on-site colorimetric sample calibration. During actual execution, on-site water samples will be diluted by 10x and 100x for calibration. The complete calibration process includes three points: low (100x dilution) medium (10x dilution), and high (undiluted on-site sample).

Product name	Model
NO3 colorimetric water sample calibration	Sample-NO3

[Technical Specifications]

- RS-485 Modbus RTU, web page without APP, direct operation on mobile phone
- Data resolution:16 bit(0.001%F.S).
- Surge protection:8000VDC.
- Protection: polarity 、 overload 、 short circuit.
- Measurement principle: : In accordance with NIEA W218.51C. It takes advantages of the material of sensing front-end to sense NO₃-N potential change. The potential difference converts to concentration, and correct various compensations. It provides an accurate data.
- Installation method: submerged · three way · intubation.

[NO₃ Specification]

NO ₃ Specification		Temperature Specification	
Measuring range	0~10000mg/L (Or customized with higher concentration) Slope reading 70~130%	Temperature principle	NTC30K
		Measuring range	-10~120°C(ATC)
		Accuracy	±0.2°C
Accuracy	±5% reading ±0.5mg/L	Resolution	0.1°C
Resolution	0.01 mg/L	Reproducibility	0.1°C
Reproducibility	±3% reading ±0.5 mg/L	Other Specification	
Operating Parameters	Operating Temperature: 5~50°C	Link above	3/4" NPT
		Link below	M42
Response time	T90 ≤120 second	Housing Material	PP, acid and alkali resistance/food grade/ zero dissolution
		Electrode material	PVC
		Dimension	ø50*L213.9mm
Communication	RS-485 Modbus RTU Web Browser direct reading(192.168.1.80)	Weight	≤340 g
		Power	Auto-cleaning:12 or24VDC Non auto-cleaning:9~36VDC
Safety certification	CE,FCC	Power consumption	Auto-cleaning: 6.8W Non auto-cleaning:0.8w
		Ingress Protection Rating	IP68

[Dimension]: mm

