JNC Ammonium Nitrogen Sensor NH4485

[Product Description]

- IoT NH4 sensor equipped with both RS-485 and Wi-Fi web interface, allowing for remote or on-site monitoring directly via smartphone—no display unit or app required. It provides accurate and durable NH4 readings and can integrate with any global display system or software.
- Automatic Cleaning Function (Optional): Includes a built-in micro air pump. The cleaning schedule is adjustable, featuring automatic cleaning mode that holds the last measured value and adjustable stabilization time—significantly extending 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 Features: Includes notifications for calibration and automatic cleaning status, as well as self-diagnosis of electrode contamination or aging.

[Features]

- All-in-One Design: Built-in IoT transmission module and sensor; ready to operate upon power-up with all functions fully integrated.
- IP68 Submersible, Corrosion-Resistant Construction: Designed for direct immersion in water without the need for protective tubing.
- High-Durability, Isolated Signal Cable: Ready for direct use in the field with stable signal transmission and surge-isolated power and IoT communication lines.
- Temperature Compensation & Compliance: Includes temperature compensation and measurement method compliant with Taiwan EPA regulation NIEA W218.51C for automatic monitoring facilities.
- Smart Design with Calibration Memory: Calibration parameters are stored internally, allowing the sensor to be installed on-site immediately after calibration.
- Three-Point Calibration: Supports calibration using standard solutions or known-concentration samples.
- Maintains Last Reading During Calibration & Cleaning: Prevents false readings during calibration and automatic cleaning; displays live status such as "Calibrating," "Auto-Cleaning," "Stabilizing," or "Under Maintenance."
- Web & RS-485 Calibration Record Access: Allows querying of the latest three calibration records (date, slope, calibration points) via web interface or RS-485.

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

Code 2: Quick connector

Code 2 :Cable head

[Optional code] NH4485 – Code 1 – Code 2 – Code 3

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

[Calibration Instructions]※Optional model "Sample-NH4" available for on-site sample-based calibration, based on field requirements.

The NH4 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
NH4 colorimetric water sample calibration	Sample-NH4

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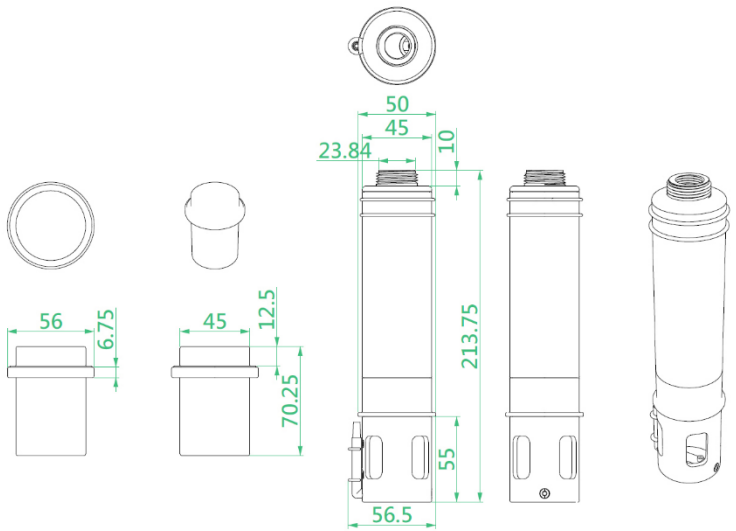
[Technical Specifications]

- RS-485 Modbus RTU. The mobile phone operates with web page(no app).
- Data resolution:16 bit(0.001%F.S).
- Surge protection:8000VDC.
- Protection: polarity、overload、short circuit.
- Measurement principle:：In accordance with NIEA W456.51C. It takes advantages of the material of sensing front-end to sens
  NH4-N potential change. The potential difference converts to concentration, and correct various
- Installation method: submerged、three way、intubation.

[NH4 Specification]

NH4 Specification		Temperature Specification	
Measuring range	0～10000 mg/L (Or customize 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	
Working parameters	Working temp: 5~50 ℃	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:12VDC or24VDC Non auto-cleaning:9~36VDC
Safety certification	CE,FCC	Power consumption	Auto-cleaning: 6.8 W Non auto-cleaning:0.8w
		Ingress Protection Rating	IP68

[Dimension]: mm



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