

Nitrate Nitrogen Digital Sensor

Model: KWS-275

Product Datasheet



Xi'an Kacise Technology Co., Ltd.

1. Product Overview

Based on the national standard UV absorption method, this product detects NO_3^- -N concentration in water using multi-wavelength UVC-LED light sources. A patented algorithm corrects interference from dissolved organic matter. Equipped with an auto-cleaning brush (configurable mode/frequency) for energy-saving and low-maintenance operation.

Key Features

- Sensitive and stable UV signal detection
- Dual-algorithm correction for suspended solids interference
- Multiple optical window cleaning modes for various scenarios
- Patented in China & US — proprietary algorithm
- Customizable: standard 4-wavelength, expandable to 10-wavelength
- Self-developed core technology for rapid response to custom needs

2. Technical Specifications

Parameter	Specification
Measurement	Nitrate Nitrogen (NO_3^- -N), COD
NO_3^- -N Range	0-15 / 0-30 / 0-80 mg/L
NO_3^- -N Accuracy	±5%
COD Range	0-250 / 0-500 / 0-1000 mg/L
COD Accuracy	±5%
Optical Path	10 / 5 / 2.5 mm
Resolution	0.01
Probe Size	O.D. 40/45 mm, NPT 3/4" thread
Operating Temp	0 to 50 °C
Protection Grade	IP68
Housing Material	316L Stainless Steel (customizable)
Communication	RS485, MODBUS Protocol
Avg Power	≤ 0.2 W (no brush), ≤ 0.6 W (brush), ~4 W brush start
Supply	DC 9~24 V, 1 A

Note: All technical parameters are tested under laboratory standard solution conditions. Recommended sample water $\text{A}_{275} < 0.500$, $\text{A}_{230} < 0.100$. Specifications may vary by product configuration.

3. Applications

- Drinking Water
- Surface Water
- Domestic Sewage
- Industrial Wastewater

4. Ordering Information

Order Code	Model	Measurement Range
KWS-275-15	KWS-275	Nitrate Nitrogen 0-15 mg/L, COD 250 mg/L
KWS-275-30	KWS-275	Nitrate Nitrogen 0-30 mg/L, COD 500 mg/L
KWS-275-80	KWS-275	Nitrate Nitrogen 0-80 mg/L, COD 1000 mg/L

Note: Please select the appropriate range based on your application. Contact sales for recommendations if uncertain. Factory calibration with on-site water sample: Yes/No.

5. Contact Us

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