Aqueous Ammonia Concentration Refractometer

Technology | Brand | Innovation

MDS-7200-NH4OH



Product Overview

The Online Aqueous Ammonia Concentration Refractometer utilizes refractive index measurement technology and is purpose-built for real-time, inline monitoring of ammonia concentration in process control applications across the chemical, pharmaceutical, and food industries. Equipped with a built-in ultrasonic cleaning probe, the device automatically removes buildup from the optical window to ensure long-term stability. It offers versatile installation options—including a flow cell configuration—and supports both submersible and pipe bypass layouts. The mounting design is highly flexible, accommodating standard connections such as threaded, flange, and sanitary clamp fittings, with customized interfaces available upon request.

The instrument features automatic temperature compensation and is rated for medium temperatures from 0 to 100°C and pressures up to 1 MPa, ensuring excellent environmental adaptability. For seamless integration with control systems, it provides a standard 4–20 mA analog output and RS485 digital interface, with custom communication protocols available upon request. The measurement unit carries an IP67 protection rating, making it highly reliable in humid or mildly dusty environments. Featuring a compact design and rapid response time, it provides continuous concentration monitoring—an effective replacement for manual sampling and lab testing that significantly enhances the timeliness and reliability of your process control.

Product Advantages

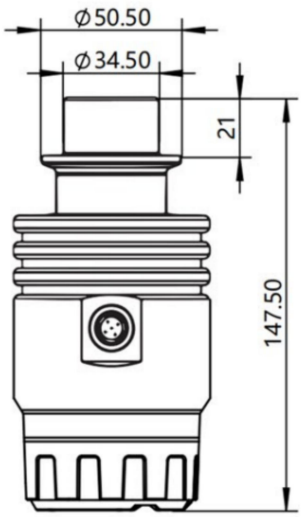
1. Continuous Inline Monitoring: Utilizes refractive index measurement technology to provide continuous inline monitoring of ammonia concentration, eliminating the need for manual sampling and laboratory testing.
2. Automated Cleaning: Features a standard built-in ultrasonic cleaning probe that automatically removes buildup from the optical window, ensuring long-term measurement stability.
3. Versatile Installation: Supports a flow cell configuration and is compatible with various connections—including threaded, flange, and sanitary clamp fittings—for seamless integration into diverse pipeline setups.
4. Flexible Integration: Offers both analog current and digital communication outputs, with customizable communication protocols available to integrate seamlessly with various control systems.
5. Reliable Accuracy: Equipped with automatic temperature compensation that corrects for temperature fluctuations, ensuring reliable and accurate concentration readings.

Technical Specifications

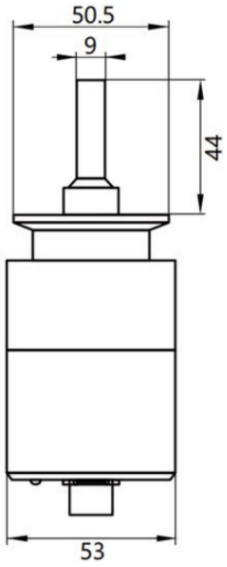
Measurement Range	Aqueous Ammonia: 1.328~1.3565%
	Refractive Index: 1.33299 - 1.51782
	Temperature: 0°C~100°C (Customizable up to 150°C)
Measurement Accuracy	Brix: ±0.20%
	Refractive Index: ±0.00030
	Temperature: ±0.5°C
Resolution	Brix: 0.1%
	Refractive Index: 0.0001
	Temperature: 0.1°C
Output	Analog Output: 4~20mA corresponding to Brix concentration -1.0 ~ 57.0% (Customizable)
	Digital Output: RS485
	Other output methods customizable
Input	DC 24V ±10%, Current <100mA
Measurement Time	Default: 1 measurement per second
Ambient Temperature	0.0~60.0°C
Sample Volume	Immersion measurement
Pressure Resistance	1MPa
Protection Rating	Measurement section: IP67
Installation Method	Threaded, flanged, clamp, etc., customizable

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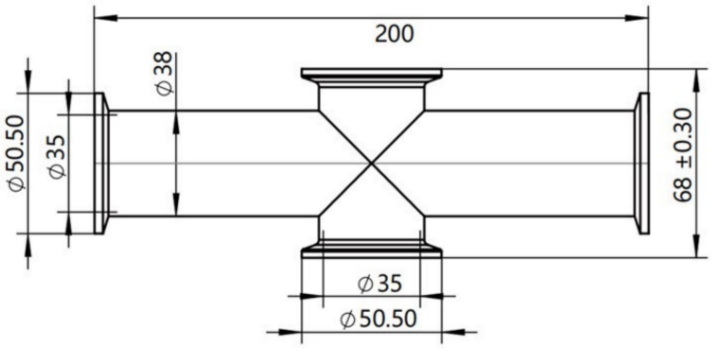
Product Dimensions



Online Liquid Optical Analyzer

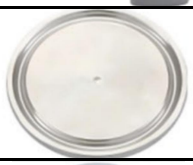


Ultrasonic Cleaning Probe



Flow-through Cell

Product Accessories

Flow-through Cell x 1		Clamp x 4	
Gasket x 4		Plug x 1	
Weld-on quick connector x 2		Lens Protective Cover x 1	

Customizable split-type display

Recommended External Loop Installation



Side-Wall Direct Insertion

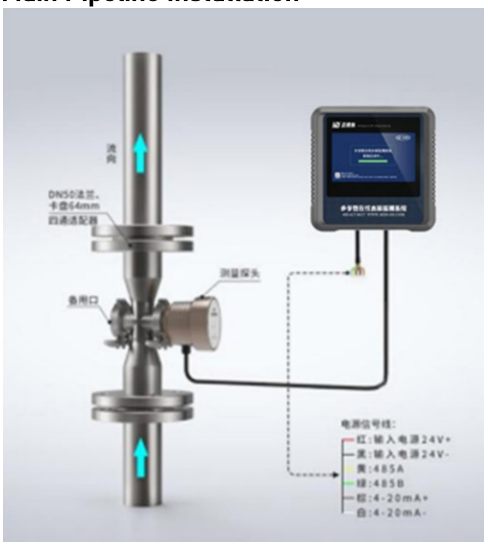


Top Direct Insertion

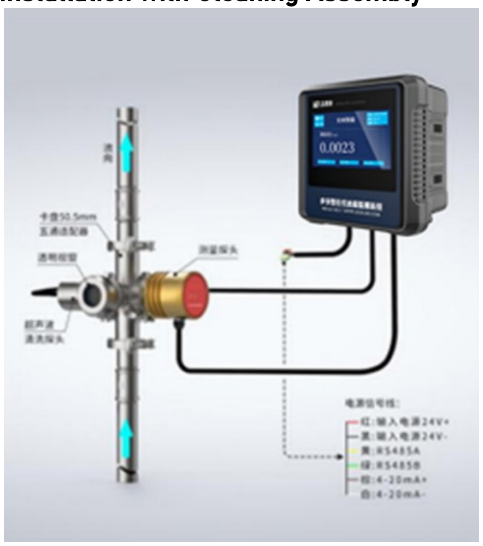


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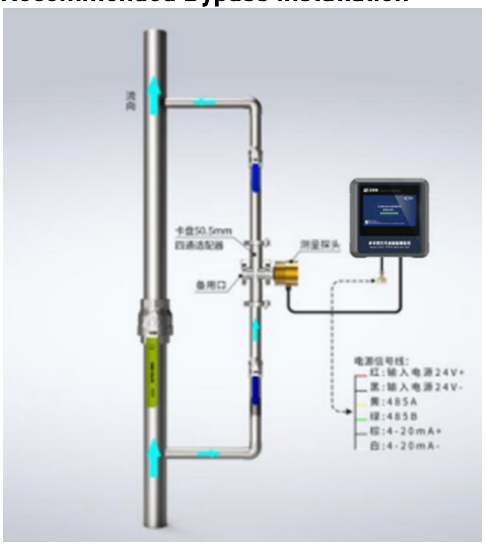
Main Pipeline Installation



Installation with Cleaning Assembly



Recommended Bypass Installation



Product parts



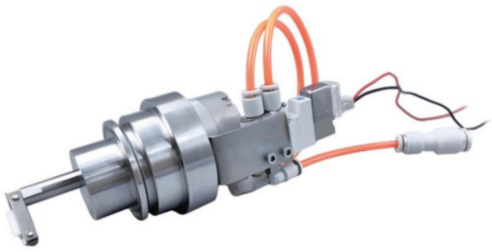
Ultrasonic Cleaning Probe



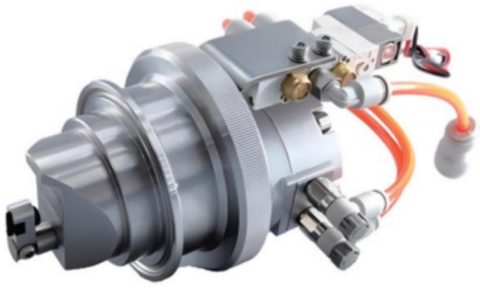
Ultrasonic Cleaning Probe



Ultrasonic Cleaning Probe



Automatic Brush Cleaning Device



Automatic Brush Cleaning Device



Automatic Brush Cleaning Device



High-pressure water/air cleaning unit

Showcase of Engineering Application Examples

