Ammonia Recovery Solution Concentration Refractometer

Technology | Brand | Innovation

MDS-7200-NH3



Product Overview

Based on the refractive index measurement principle, this online analyzer is purpose-built for real-time, inline monitoring of aqueous ammonia recovery solution concentration, specifically tailored for process control applications across the chemical, pharmaceutical, and food industries. The device features a built-in ultrasonic cleaning probe that automatically removes buildup from the optical window, ensuring stable long-term operation. It also offers a flow cell configuration and supports both submersible and pipeline bypass layouts. The mounting design is highly flexible, accommodating various connections such as threaded, flange, and sanitary clamp fittings, with customized interfaces available upon request.

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

Product Advantages

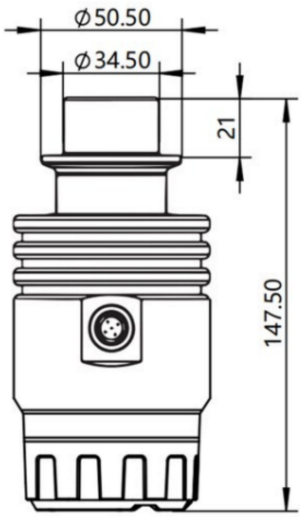
1. Continuous Inline Monitoring: Utilizes refractive index measurement technology to provide continuous inline monitoring of ammonia recovery solution concentration, eliminating the need for manual sampling and lab testing.
2. Automated Cleaning: Features a standard built-in ultrasonic cleaning probe that automatically removes buildup from the optical window, ensuring long-term measurement stability.
3. Versatile Installation: Supports flow cell configurations 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 with various control systems.
5. Reliable Accuracy: Equipped with automatic temperature compensation that corrects for temperature fluctuations, ensuring accurate and reliable concentration readings.

Technical Specifications

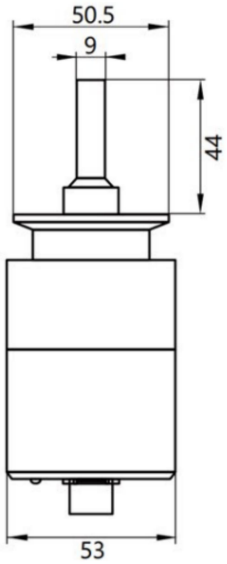
Measurement Range	Ammonia Recovery Solution Concentration 0~21%
	Refractive Index: 1.32700~1.35500
	Temperature: 0°C~100°C (Customizable up to 150°C)
Measurement Accuracy	Brix: ±0.20%
	Refractive Index: ±0.00030
	Temperature: ±0.5°C
Resolution	Brix: 0.1%
	Refractive Index: 0.0001
	Temperature: 0.1°C
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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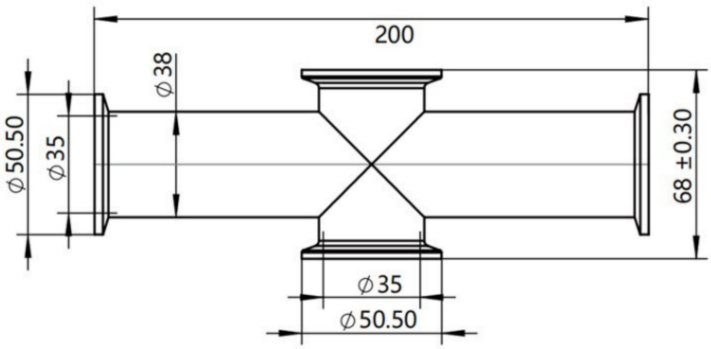
Product Dimensions



Online Liquid Optical Analyzer

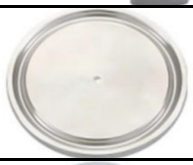


Ultrasonic Cleaning Probe



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



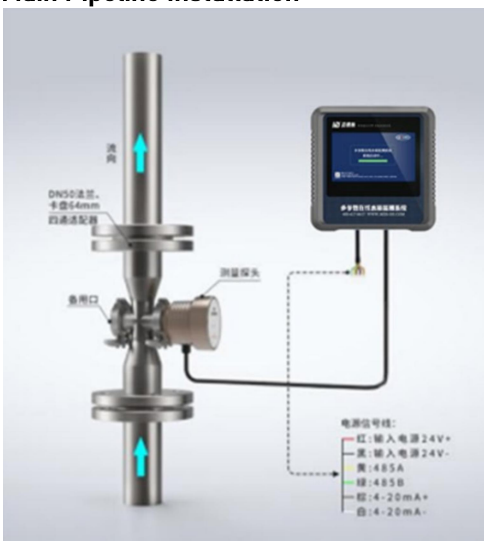
Side-Wall Direct Insertion



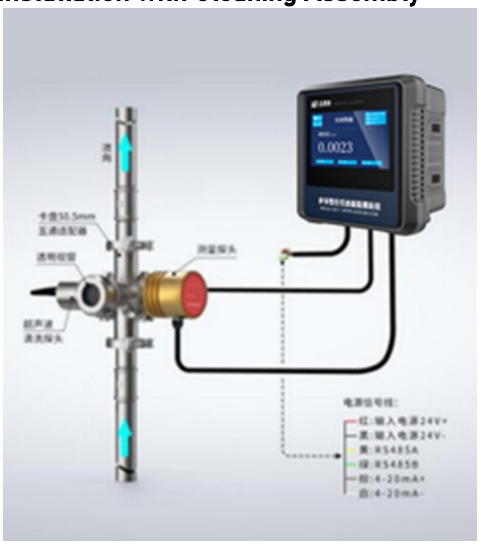
Top Direct Insertion



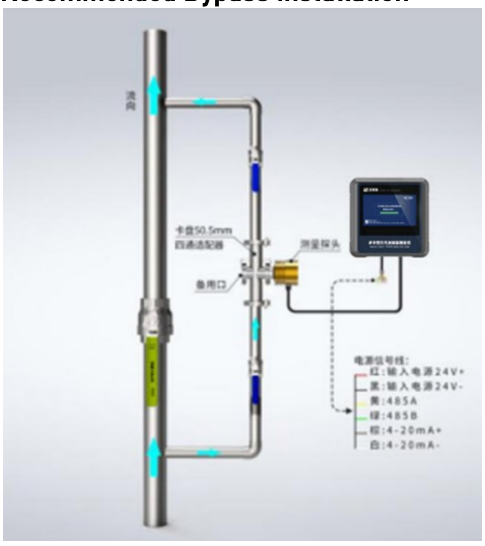
Main Pipeline Installation



Installation with Cleaning Assembly



Recommended Bypass Installation



Product parts



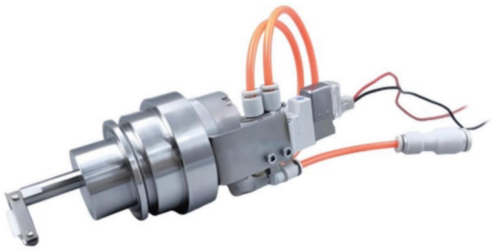
Ultrasonic Cleaning Probe



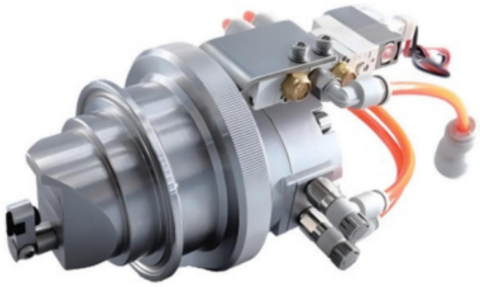
Ultrasonic Cleaning Probe



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

