

Ammonia Analyzer

MS3500



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Monitoring ammonia in wastewater

NH_3

NH_4


The MS3500 is an Ammonia Analyzer designed to measure ammonia in **Untreated Waste Water**.

It provides on-line monitoring for process control and optimization, safeguarding assets and environmental protection.

The use of a **non-contact measurement system** virtually eliminates fouling, corrosion of probes and sensitivity to water conditions. The MS3500 provides low cost of ownership through high reliability together with long servicing and validation periods.

The MS3500 combines innovative sensor and instrument engineering with proven sampling techniques to provide a reliable and efficient system for measuring ammonia in the harshest conditions.

Supplied in a robust enclosure the MS3500 can be deployed on site with **minimum preparation** and no need for protection from the environment.

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- ✓ Resistant to blockage and fouling
 - ✓ Reduced use of chemicals
 - ✓ Low maintenance costs
 - ✓ High reliability
 - ✓ Robust and weatherproof

Main Applications

- Raw Waste Water Intake
- Waste Water Treatment Process Control
- Sludge de-watering ammonia measurement

Installation

Installation is a **simple process** and consists of connecting the instrument to power and securing the intake tube into the channel to be monitored. Setup uses the touchscreen interface.



CASE STUDY

The Problem

The customer wanted a way to measure the ammonia levels of the wastewater coming into the plant. This would allow them to implement feed forward control of their process to optimize the plant.

Why Multisensor

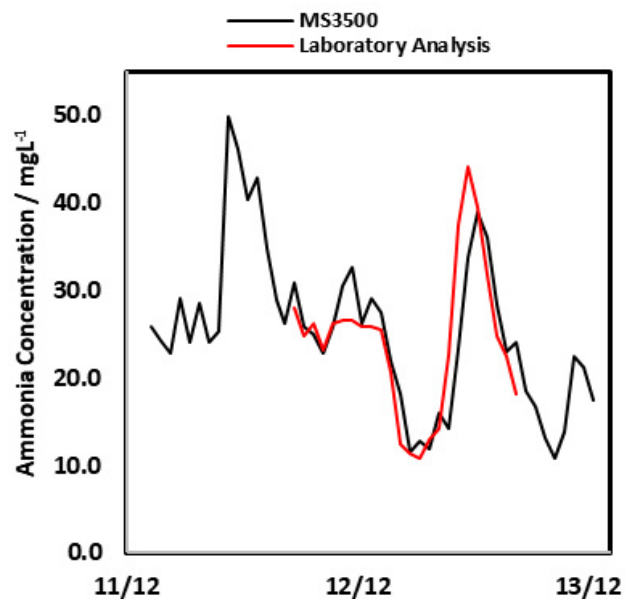
Multisensor offers the only ammonia monitor designed specifically to work at a raw waste water intake without blocking.

Installation facts

The MS3500 was installed at the raw intake after the primary screens. Automatic, periodic sampling allowed the waste-water treatment plant operator to compare the intake ammonia concentrations with laboratory analysis, as shown below. This enables the operator to optimize and control their processes more efficiently.

Field data

In the graph below we can see a comparison between the readings of the MS3500 at the intake of a wastewater treatment plant compared with the laboratory analysis for a 3-day period.



TECHNICAL SPECIFICATION

| PARAMETER | OPERATIONAL REQUIREMENTS | | NOTES |
|---|---|--------------------|---|
| | <i>Minimum</i> | <i>Maximum</i> | |
| Supply Voltage | 90 V AC | 240 V AC | 50 Hz or 60 Hz |
| Power Consumption at 20 °C Operating Temp | | 70 W | |
| Power Consumption at 5 °C Operating Temp | | 250 W | Includes heater |
| Sample Lift Height | | 6 m / 19.5 ft | |
| Working Temp: Ambient | -10 °C / 14 °F | 50 °C / 122 °F | In still air, out of direct sunlight |
| Working Temp: Water | 1 °C / 33.5 °F | 50 °C / 122 °F | |
| Sampling Interval | 30 mins | 60 mins | High concentrations may limit the minimum time period allowed |
| System Enclosure | Glass Reinforced Plastic | | |
| NaOH Consumption per Year | 30 liters / 8 US gallons | | 60 minute sampling |
| Detection Range | 1 ppm 20 ppm | 200 ppm 500 ppm | |
| Repeatability | -2% | +2% | |
| Analog Output | 4 mA | 20 mA | Scalable to range required, max load 900 Ω |
| Analog Output Isolation | 400 V | | |
| Digital Interfaces | Profibus, Modbus | | |
| Relay Voltage | | 50 V | Alarm 1 and Alarm 2 Relays with NO and NC contacts |
| Relay Current | | 5 A | |
| Weight | 75 kg / 165 lbs | | |
| Dimensions | 750 x 750 x 350 mm 29.5 x 29.5 x 13.8 in | | |

Consumables

Every 12 Months: Sample Tank Seals



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Multisensor Systems is a developer and supplier of Water and Gas Analyzers specializing in Oil in Water, Hydrocarbon Analyzers, Oil in Water Detectors, THM Analyzers and Ammonia Analyzers based in the United Kingdom.

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