

AMTAX sc ONLINE AMMONIA ANALYZER



Applications

- Wastewater
- Drinking Water



Transparent, high quality measurement technology for reliable values with short response time

Hach®'s Amtax sc digital on-site analyzer with gas sensitive electrode (GSE) is designed for the high precision determination of ammonia concentration directly at the tank. The analyzer offers a high degree of accuracy due to selective GSE instrumentation and needs only minimal supervision thanks to automatic cleaning, calibration and self diagnosis.

Wide measuring range

Amtax sc Ammonia Analyzers are available in four measuring ranges. With detection limits as low as 0.02 mg/L and as high as 1000 mg/L, the Amtax sc can be used anywhere in the wastewater treatment process, from the influent or start of the nitrification process with high $\text{NH}_4\text{-N}$ levels to the effluent with only low ammonia levels. In the lowest range it can also be used for drinking water applications.

Fast response time for control of nutrient removal process

Nutrient removal is a critical and sensitive process in wastewater treatment. Quick response is vital for optimal operation. The fast response time of only 5 minutes, including sample preparation and selection of the measurement interval, make the Amtax sc one of the fastest responding ammonia analyzers on the market.

Easy installation

The Amtax sc Analyzer is designed to be installed at the measuring location, including outdoor locations. The housing is weatherproof and lockable so that the analyzer can be installed right at the basin, even in the toughest climates.

The Amtax sc easily mounts to a wall, rail- and stand-mounting options are available. Due to its SC technology the analyzer is ready for use in the network of the SC controller ("plug-and-play").

Low maintenance and simple operation

The analyzer calibrates and cleans itself automatically and is equipped with comprehensive self-diagnostic routines. With at least a 3-month supply of reagents (for 5 min interval), the Amtax sc analyzer offers the most economical reagent consumption. Reagents and wear parts are easily accessible.

Optional with integrated filter probe or second channel

The Amtax sc analyzer is available with a low-maintenance filtration probe that removes particles larger than 0.15 μm . The filtrate is sent to the analyzer while air bubbles constantly clean the filtration membrane. The Amtax sc may also be used with alternative filtration systems (e.g. Filtrax) that deliver a continuous sample stream.

The analyzer is also available as two channel version for measurement at two different sampling points.

Technical Data*

	Range 1	Range 2	Range 3	Range 4
Range	0.02 - 5.0 mg/L NH ₄ -N	0.05 - 20.0 mg/L NH ₄ -N	1.0 - 100 mg/L NH ₄ -N	10.0 - 1000 mg/L NH ₄ -N
Lower Limit of Detection (LOD)	0.02 mg/L NH ₄ -N	0.05 mg/L NH ₄ -N	1.0 mg/L NH ₄ -N	10 mg/L NH ₄ -N
Accuracy	≤ 1 mg/L: 3 % + 0.02 mg/L; > 1 mg/L: 5 % + 0.02 mg/L	Using standard solutions: 3 % + 0.05 mg/L	Using standard solutions: 3 % + 1.0 mg/L	Using standard solutions: 4.5 % + 10 mg/L
Reproducibility	3 % + 0.02 mg/L	2 % + 0.05 mg/L	2 % + 1.0 mg/L	2 % + 10 mg/L
Response Time	0.02 - 2.0 mg/L: 15 min; 2.0 - 5.0 mg/L: 5 min	< 5 min	< 5 min	< 5 min
Measurement Method	GSE (Gas Sensitive Electrode) with screw-on membrane cap			
Measuring Interval	5 - 120 min , adjustable per 5 min.			
pH Range	5 - 9 pH			
Pressure Range	-30 - 50 mbar with continuous sample preparation; at overflow vessel			
Permissible Chloride Range	Max. Cl ⁻ concentration: 1000 mg/L			
Operating Conditions	Indoor model: 5 - 40 °C; 95 % relative humidity, non-condensing Outdoor model: -20 - 45 °C; 95 % relative humidity, non-condensing			
Sample Temperature	4 - 40 °C			
Sample Quality	Ultra filtrated or comparable.			
Flow	1 - 20 L/h sample (free of suspended solids)			
Power Requirements (Voltage)	115 or 230 V AC, power provided by the universal controller or a separate power box			
Power Requirements (Hz)	50 Hz			
Dimensions (H x W x D)	Indoor model: 720 mm x 540 mm x 370 mm Outdoor model: 720 mm x 540 mm x 390 mm			
Cable Length	2 m fixed data cable at analyzer			
Weight	Without sample preparation system and without chemicals: 29 kg (ndoor model) or 31 kg (outdoor model)			
Material	ASA/PC UV-resistant			
Enclosure Rating	Indoor model: IP54 Outdoor model: IP55			

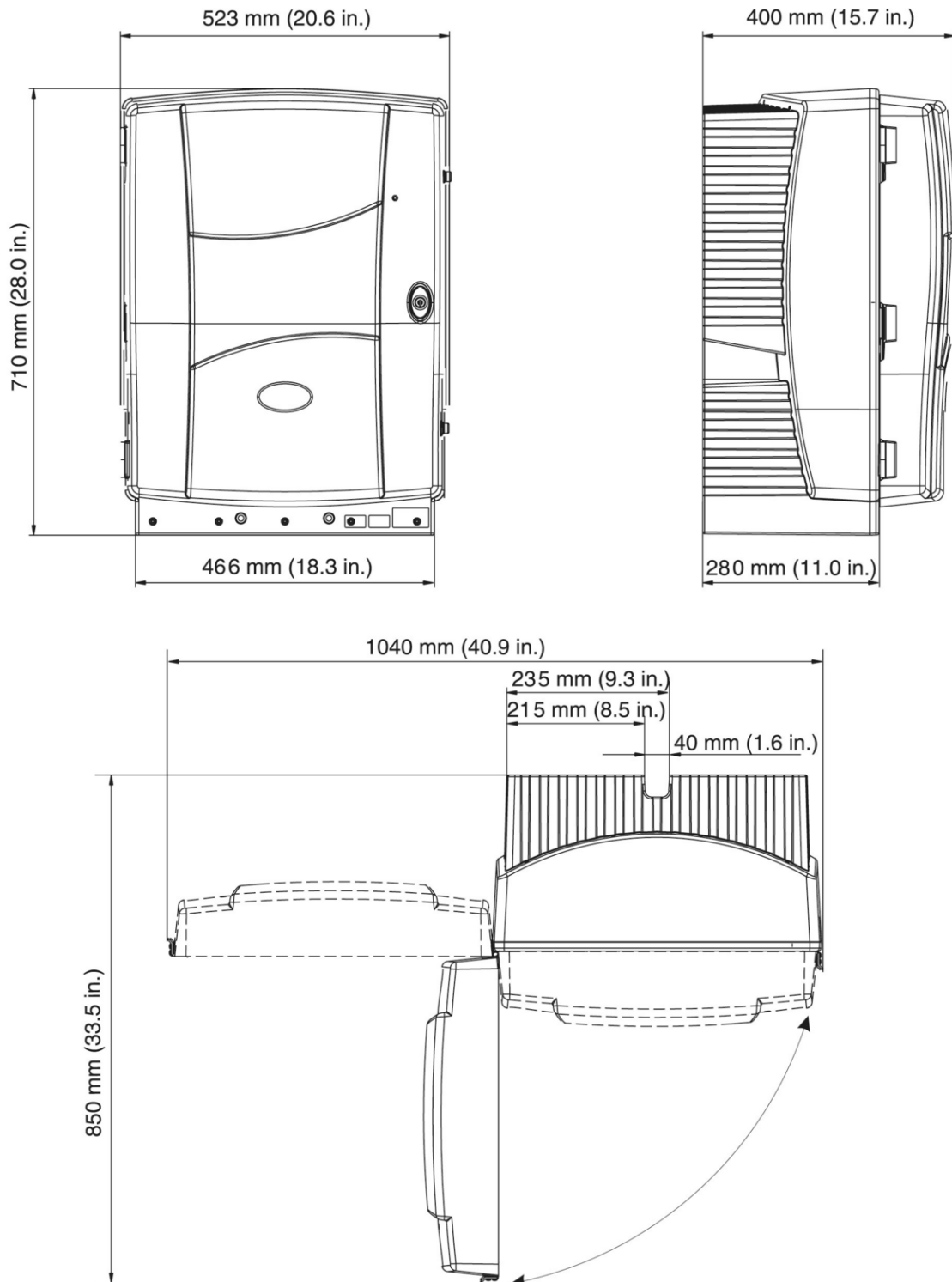
*Subject to change without notice.

Principle of Operation

The Amtax sc measures the ammonia concentration with a gas-sensitive electrode (GSE). The ammonia in the sample is first converted to gaseous ammonia. Only the NH_3 gas passes through the gas-permeable membrane of the electrode and is detected. This method guarantees a wide measuring range and is less susceptible to cross sensitivity than methods based on an ion-selective electrode (ISE).

Dimensions

The Amtax sc ammonia analyzer is designed for wall mounting, outdoor or indoor. Rail- and stand-mounting options are available. The enclosure is rated to IP55 (outdoor model), is weatherproof and lockable.



Order Information

Analyzers

9009100	Amtax sc Ammonia Analyzer, 0.02 - 5 mg/L NH ₄ -N, one channel with continuous sample, 115 VAC
6157400	Amtax sc Ammonia Analyzer, 0.05 - 20 mg/L, one channel with continuous sample, 115 VAC
6158000	Amtax sc Ammonia Analyzer, 1 - 100 mg/L, one channel with continuous sample, 115 VAC
6157200	Amtax sc Ammonia Analyzer, 0.05 - 20 mg/L, 115 VAC, includes filtration probe with 5 m heated hose

There are additional options available, such as integrated filtration probe, indoor version, 2 channel version etc.

Please contact Hach for more information.

Mounting Hardware

LZY316	Rail mounting kit
LZY287	Stand mounting for SC analyzer without controller
LZY286	Stand mounting kit for Amtax sc analyzer with SC1000 controller
LZX355	Wall mounting kit
LZY285	Rail mounting kit for Amtax sc analyzer with SC1000 controller

Reagents

2894246	Amtax sc Cleaning solution, 250 mL
2514654	0.5 mg/L NH ₄ -N standard solution, 2000 mL
2894154	1 mg/L NH ₄ -N Standard Solution, 2000 mL
2514754	2.5 mg/L NH ₄ -N standard solution, 2000 mL
2894354	10 mg/L NH ₄ -N Standard Solution, 2000 mL
2825854	50 mg/L NH ₄ -N standard solution, 2000 mL
2825954	500 mg/L NH ₄ -N standard solution, 2000 mL

Accessories

LCW891	Amtax sc Electrode set (3x electrolyte and 3x membrane caps), for range 0.02 - 5.0 mg/L NH ₄ -N
LCW868	Amtax sc Electrode set (3x electrolyte and 3x membrane caps), for range 0.05 - 1,000 mg/L NH ₄ -N
LZY302	Heated drain/connecting hose, 2 m, 230 V
LZY367	Cleaning set for SC analyzer and filterprobe
LZY431	Power extension cable for SC1000, 5 m, 115-230 V AC
LQV155.99.00002	Power box without power connection cable (needed for operation with SC200)
LQV155.99.00012	Power box with power connection cable (needed for operation with SC200)

To order the SC200 or SC1000 Multi-Parameter Universal Controller please contact Hach.

Be certain in your measurements with a first class Service Partner. Be confident with Hach Service.

By having regular on-site preventative maintenance and calibration, you maximize your measurement reliability and instrument uptime. Hach Service Programs give you full assurance that your instruments stay in compliance, and you stay within your budget.

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Printed in U.S.A.

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