

# Amtax sc Online Ammonium Analyser



## Applications

- Wastewater
- Drinking water



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

Hach®'s Amtax sc digital on-site analyser with gas selective electrode (GSE) is designed for the high precision determination of ammonium concentration directly at the tank. The analyser 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 Ammonium Analysers are available in four measuring ranges. With detection limits as low as 0.02 mg/L and ranges up to 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 ammonium 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 and selection of the measurement interval, make the Amtax sc one of the fastest responding ammonium analysers on the market.

### Easy installation

The Amtax sc Analyser is designed to be installed at the measuring location, including outdoor locations. The housing is weatherproof and lockable so that the analyser 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 analyser is ready for use in the network of the SC controller ("plug-and-play").

### Low maintenance and simple operation

The analyser 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 analyser offers the most economical reagent consumption. Reagents and wear parts are easily accessible.

### Optional with sample preparation or second channel

The Amtax sc analyser works with a low-maintenance filtration system (e.g. Filtrax) that removes particles larger than 0.15  $\mu\text{m}$ . The filtrate is sent to the analyser while air bubbles constantly clean the filtration membrane.

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

## Technical Data\*

	<b>Range 1 (LXV421.99.4xxxx)</b>	<b>Range 2 (LXV421.99.1xxxx)</b>	<b>Range 3 (LXV421.99.2xxxx)</b>	<b>Range 4 (LXV421.99.3xxxx)</b>
<b>Measuring range</b>	0.02 - 5.0 mg/L NH <sub>4</sub> -N	0.05 - 20.0 mg/L NH <sub>4</sub> -N	1.0 - 100 mg/L NH <sub>4</sub> -N	10.0 - 1000 mg/L NH <sub>4</sub> -N
<b>Detection limit</b>	0.02 mg/L NH <sub>4</sub> -N	0.05 mg/L NH <sub>4</sub> -N	1.0 mg/L NH <sub>4</sub> -N	10 mg/L NH <sub>4</sub> -N
<b>Accuracy</b>	≤ 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
<b>Reproducibility</b>	2% + 0.02 mg/L	2% + 0.05 mg/L	2% + 1.0 mg/L	2% + 10 mg/L
<b>Response time</b>	0.02 - 2.0 mg/L: 15 min; 2.0 - 5.0 mg/L: 5 min	< 5 minutes	< 5 minutes	< 5 minutes
<b>Measurement method</b>	GSE (Gas Sensitive Electrode) with screw-on membrane cap			
<b>Measuring interval</b>	5 - 120 min, adjustable per 5 min.			
<b>pH range</b>	5 - 9 pH			
<b>Pressure range</b>	-30 - 50 mbar with continuous sample preparation; at overflow vessel			
<b>Permissible Chloride range</b>	Max. Cl <sup>-</sup> concentration: 1000 mg/L			
<b>Operating conditions</b>	Indoor model: 5 - 40 °C; 95 % relative humidity, non-condensing Outdoor model: -20 - 45 °C; 95 % relative humidity, non-condensing			
<b>Sample temperature</b>	4 - 40 °C			
<b>Sample quality</b>	Ultra filtrated or comparable.			
<b>Flow</b>	1 - 20 L/h sample (free of suspended solids)			
<b>Power requirements (Voltage)</b>	115 - 230 VAC, 50/60 Hz, power provided by SC controller or power box			
<b>Dimensions (H x W x D)</b>	Indoor model: 720 mm x 540 mm x 370 mm Outdoor model: 720 mm x 540 mm x 390 mm			
<b>Cable length</b>	2 m fixed data cable at analyser			
<b>Weight</b>	Without sample preparation system and without chemicals: 29 kg (ndoor model) or 31 kg (outdoor model)			
<b>Material</b>	ASA/PC UV-resistant			
<b>Enclosure waterproof rating</b>	Indoor model: IP54 Outdoor model: IP55			

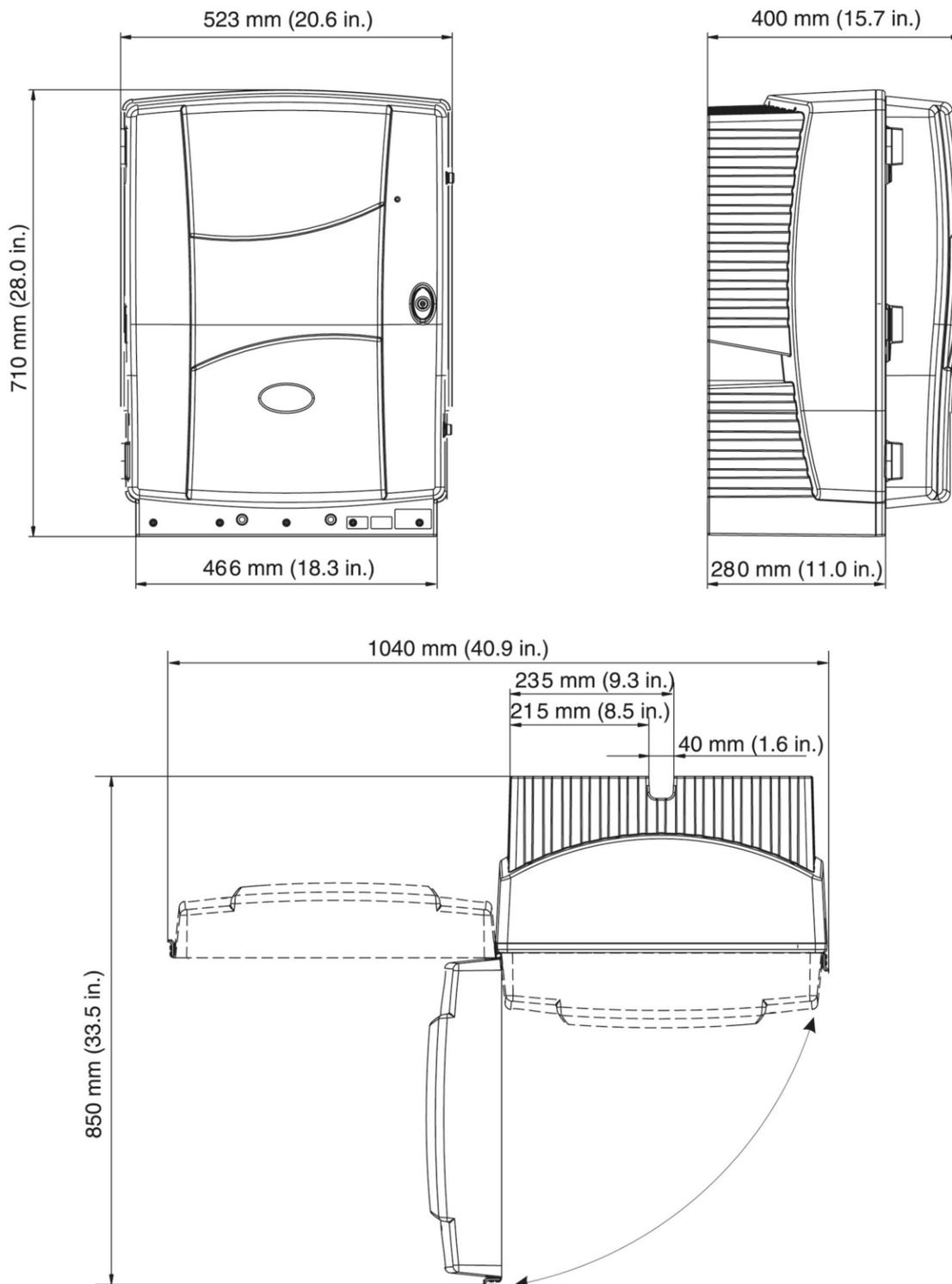
\*Subject to change without notice.

## Principle of Operation

The Amtax sc measures the ammonium concentration with a gas-selective electrode (GSE). The ammonium in the sample is first converted to gaseous ammonia. Only the  $\text{NH}_3$  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 ammonium analyser is designed for wall mounting, outdoor or indoor. Rail- and stand-mounting options are available. The enclosure is rated to IP55 (outdoor model) or IP54 (indoor model), is weatherproof and lockable.



## Order Information

### Analysers

- LXV421.99.43001** Amtax sc Ammonium analyser, outdoor, 0.02-5 mg/L NH<sub>4</sub>-N, 1-channel, 115-230 VAC
- LXV421.99.13001** Amtax sc Ammonium analyser, outdoor, 0.05-20 mg/L NH<sub>4</sub>-N, 1-channel, 115-230 VAC
- LXV421.99.23001** Amtax sc Ammonium analyser, outdoor, 1-100 mg/L NH<sub>4</sub>-N, 1-channel, 115-230 VAC
- LXV421.99.33001** Amtax sc Ammonium analyser, outdoor, 10-1000 mg/L NH<sub>4</sub>-N, 1-channel, 115-230 VAC

*There are additional options available, such as indoor version, 2 channel version etc. Please contact Hach for more information.*

*Please note: An SC controller is required for operation of the Amtax sc.*

### Mounting Hardware

- LZY287** Stand mounting kit for SC analyser without SC controller
- LZY286** Stand mounting kit for SC analyser with SC controller
- LZY316** Rail mounting kit for SC analyser without SC controller
- LZY285** Rail mounting kit for SC analyser with SC controller

### Reagents

- LCW889** Amtax sc Set of reagents, for range 0.02-5 mg/L NH<sub>4</sub>-N
- LCW865** Amtax sc Set of reagents, for range 0.05-20.0 mg/L NH<sub>4</sub>-N
- LCW871** Amtax sc Set of reagents, for range 1-100 mg/L NH<sub>4</sub>-N
- LCW866** Amtax sc Set of reagents, for range 10-1,000 mg/L NH<sub>4</sub>-N
- LCW867** Amtax sc Cleaning solution (250 mL)

### Accessories

- LCW891** Amtax sc Electrode set (3x electrolyte and 3x membrane caps), for range 1 (0.02-5.0 mg/L NH<sub>4</sub>-N)
- LCW868** Amtax sc Electrode set (3x electrolyte and 3x membrane caps), for ranges 2, 3, 4 (0.05 - 1,000 mg/L NH<sub>4</sub>-N)
- LZY302** Heated drain/connecting hose, 2 m, 230 V
- LZY303** Heated drain/connecting hose, 2 m, 115 V
- LZY431** Power extension cable for SC1000/SC1500, 5 m, 115-230 VAC
- LQV155.99.00001** Power connection box for SC analysers, without power cord
- LQV155.99.00011** Power connection box for SC analysers, with power cord

*To order a digital SC controller or a Filtrax sample preparation system please contact Hach.*



This instrument connects to Claros, Hach's innovative Water Intelligence System. Claros allows you to seamlessly connect and manage instruments, data, and process – anywhere, anytime. The result is greater confidence in your data and improved efficiencies in your operations. To unlock the full potential of Claros, insist on Claros Enabled instruments.



With Hach Service, you have a global partner who understands your needs and cares about delivering timely, high-quality service you can trust. Our Service Team brings unique expertise to help you maximise instrument uptime, ensure data integrity, maintain operational stability, and reduce compliance risk.