

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 sensitive 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 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 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, including sample preparation 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 integrated filter probe or second channel

The Amtax sc analyser is available with a low-maintenance filtration probe that removes particles larger than 0.15 μm . The filtrate is sent to the analyser 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 analyser is also available as two channel version for measurement at two different sampling points.



Be Right™

Technical Data*

	Range 1 (LXV421.99.4xxxx)	Range 2 (LXV421.99.1xxxx)	Range 3 (LXV421.99.2xxxx)	Range 4 (LXV421.99.3xxxx)
Measuring 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
Detection limit	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 analyser			
Weight	Without sample preparation system and without chemicals: 29 kg (ndoor model) or 31 kg (outdoor model)			
Material	ASA/PC UV-resistant			
Enclosure waterproof rating	Indoor model: IP54 Outdoor model: IP55			

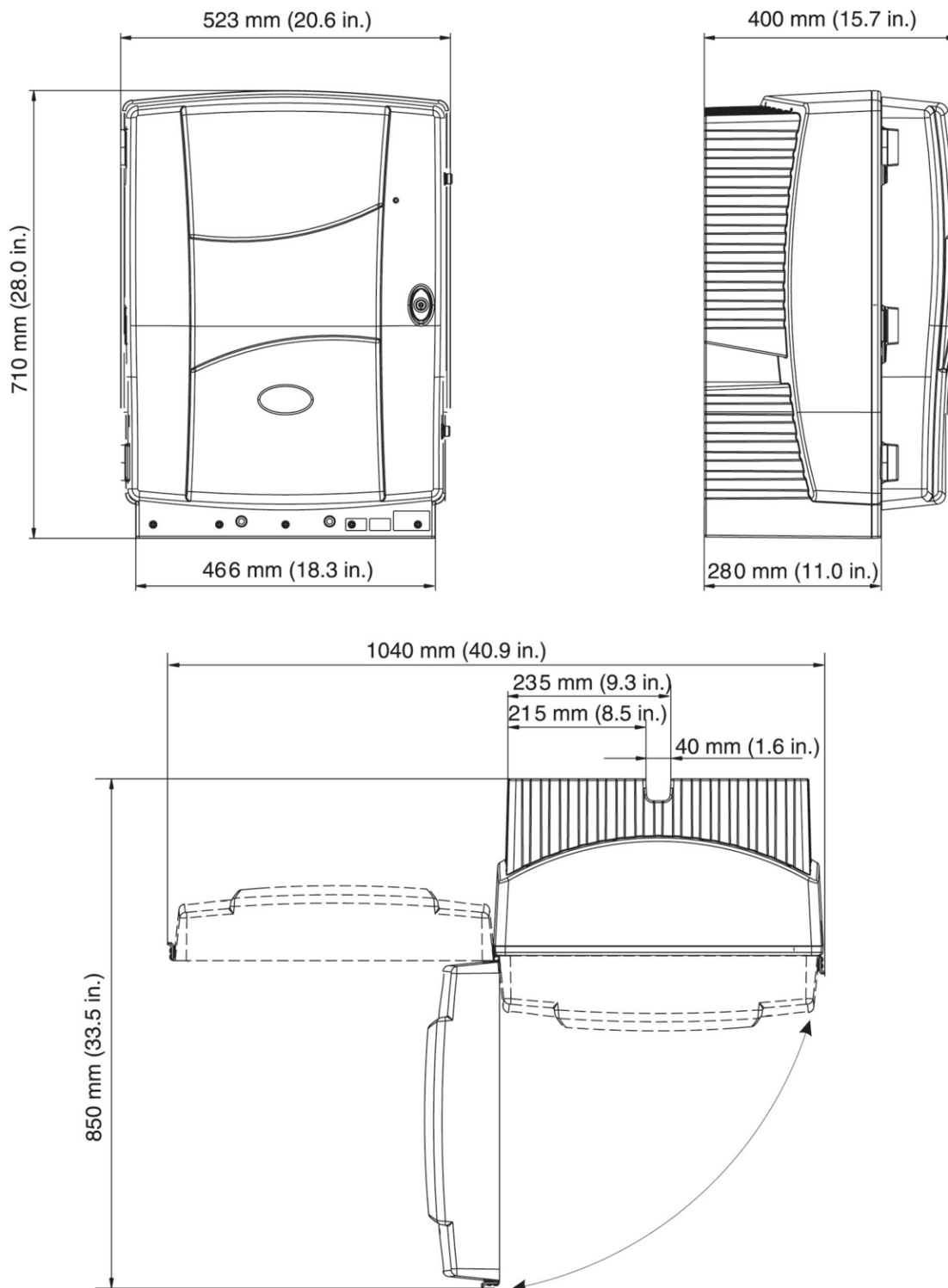
*Subject to change without notice.

Principle of Operation

The Amtax sc measures the ammonium concentration with a gas-sensitive electrode (GSE). The ammonium 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 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), is weatherproof and lockable.



Order Information

Analysers

- LXV421.99.43001** Amtax sc Ammonium analyser, outdoor, 0.02-5 mg/L NH₄-N, 1-channel, 230 V AC
- LXV421.99.13001** Amtax sc Ammonium analyser, outdoor, 0.05-20 mg/L NH₄-N, 1-channel, 230 V AC
- LXV421.99.23001** Amtax sc Ammonium analyser, outdoor, 1-100 mg/L NH₄-N, 1-channel, 230 V AC
- LXV421.99.33001** Amtax sc Ammonium analyser, outdoor, 10-1000 mg/L NH₄-N, 1-channel, 230 V AC

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 analyser without controller
- LZY286** Stand mounting kit for Amtax sc analyser with SC1000 controller
- LZX355** Wall mounting kit
- LZY285** Rail mounting kit for Amtax sc analyser with SC1000 controller

Reagents

- LCW889** Amtax sc Set of reagents, for range 0.02-5 mg/L NH₄-N
- LCW865** Amtax sc Set of reagents, for range 0.05-20.0 mg/L NH₄-N
- LCW871** Amtax sc Set of reagents, for range 1-100 mg/L NH₄-N
- LCW866** Amtax sc Set of reagents, for range 10-1,000 mg/L NH₄-N
- LCW867** Amtax sc Cleaning solution (250 mL)

Accessories

- LCW891** Amtax sc Electrode set (3x electrolyte and 3x membrane caps), for range 0.02-5.0 mg/L NH₄-N
- LCW868** Amtax sc Electrode set (3x electrolyte and 3x membrane caps), for range 0.05 - 1,000 mg/L NH₄-N
- LZY302** Heated drain/connecting hose, 2 m, 230 V
- LZY367** Cleaning set for SC analyser and filterprobe
- LZY431** Power extension cable for SC1000, 5 m, 115-230 V AC
- LQV155.99.00001** Power connection box for SC analysers
- LQV155.99.00011** Power connection box for SC analysers with EU power cord

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 maximise 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.

Start-Up:

Commissioning will ensure you get the best performance from your instrumentation from the first day you use it.

Service Agreements:

Hach offers a wide range of service agreements that can be tailored to you to help maximise your measurement reliability and instrument uptime.

Contact us to get a service offering designed for you.