

EZ4000 Series Online Volumetric Ammonium Analysers

Applications

- Wastewater
- Surface water



Online automatic titration of Ammonium in water

Results you can rely on

EZ4000 Series Analysers are single-parameter titrators that achieve excellent precision and accuracy. Depending on the parameter of interest, the measuring range and the water matrix the EZ4000 Series may use either potentiometry i.e. acid-base, redox or precipitation titration, where the endpoint is determined by a change in a specific variable, or photolorimetry, where colour change is used to determine the endpoint of the titration. The high precision dispenser for addition, robust peristaltic pumps for sampling and drain, and carefully designed liquid pathways all add up to the highest performance for industrial and environmental analysis needs.

Smart automatic features for validation, priming and cleaning are embedded in the controller software and contribute to analytical performance, maximised uptime and negligible operator intervention. Sample lines and analysis vessel are cleaned with demineralised water to eliminate cross contamination between samples. Electronic and wet-chemical part of the analyser are strictly separated. A transparent door allows for instant visual inspection of the wet part.

Flexibility that meets your needs

EZ Series Ammonium Analysers come in an attractive, ergonomic mainframe with a compact footprint. All hardware is controlled by the integrated industrial panel PC. The modular build allows for the analyser to match your application and operational needs.

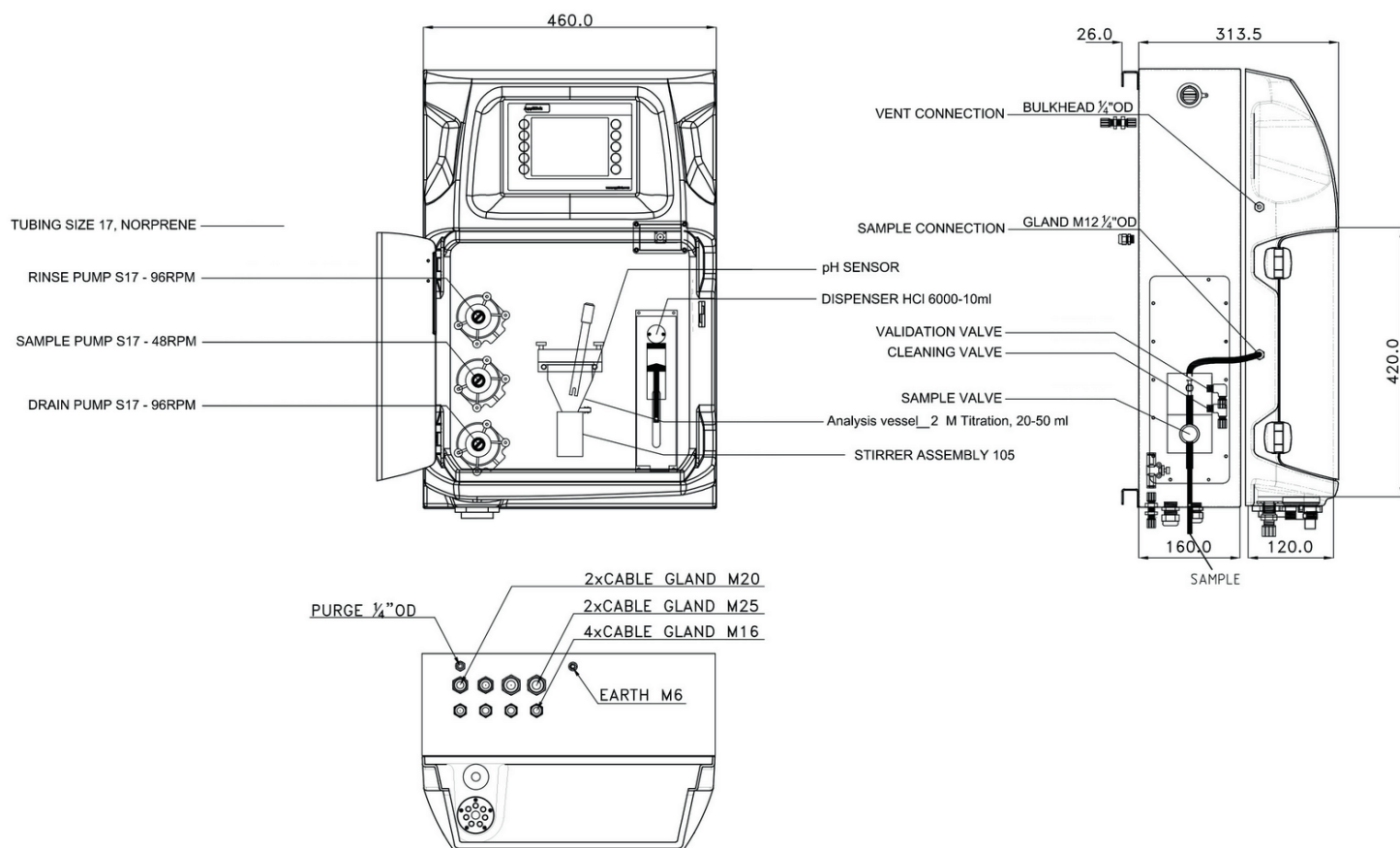
- The standard measuring range can be narrowed by a different calibration range or extended via internal dilution options.
- Analogue and digital output options
- Multiple stream analysis for up to 8 sample streams

Technical Data*

Parameter	Ammonium
Measurement method	Acid-base titration with sulphuric acid, conform with standard method APHA 4500-NH3 (C)
Measuring range	100 - 5000 mg/L NH ₄ -N Optional: 10 - 500 mg/L NH ₄ -N 25 - 1250 mg/L NH ₄ -N 50 - 2500 mg/L NH ₄ -N
Precision	Better than 2% full scale range for standard test solutions
Detection limit	≤ 10 mg/L
Interferences	Soaps, oily matter, suspended solids or precipitates may coat the glass electrode and cause a sluggish response. Allow additional time between titrant additions to let the electrode come to equilibrium or clean the electrodes occasionally. Alkaline compounds may interfere with the titration.
Cycle time	10 - 15 minutes
Automatic cleaning	Yes
Calibration	N.A.
Validation	Automatic; frequency freely programmable
Ambient temperature	10 - 30 °C ± 4 °C deviation at 5 - 95% relative humidity (non-condensing)
Reagent requirements	Keep between 10 - 30 °C
Sample pressure	By external overflow vessel
Flow rate	100 - 300 mL/min
Sample temperature	10 - 30 °C
Sample quality	Maximum particle size 100 µm, < 0.1 g/L; Turbidity < 50 NTU
Power	100 - 240 VAC, 50/60 Hz Max. power consumption: 120 VA
Instrument air	Dry and oil free according to ISA-S7.0.01-1996 quality standard for instrument air
Demineralised water	For rinsing / dilution
Drain	Atmospheric pressure, vented, min. Ø 64 mm
Earth connection	Dry and clean earth pole with low impedance (< 1 Ohm) using an earth cable of > 2.5 mm ²
Analogue outputs	Active 4 - 20 mA max. 500 Ohm load, standard 1, max. 8 (option)
Digital outputs	Optional: RS232, Modbus (TCP/IP, RS485)
Alarm	1 x malfunctioning, 4 x user-configurable, max. 24 VDC/0.5 A, potential free contacts
Protection class	Analyser cabinet: IP55 / Panel PC: IP65
Material	Hinged part: Thermoform ABS, door: plexiglass Wall section: Galvanised steel, powder coated
Dimensions (H x W x D)	690 mm x 465 mm x 330 mm
Weight	25 kg
Certifications	CE compliant / UL certified

*Subject to change without notice.

Dimensions



Hach Service

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.

Order Information - Part Number Configurator

Standard range, 100-5000 mg/L NH ₄ -N	EZ4005.99	X	X	X	X	X	2
Measurement range settings / Dilution options							
10% of standard range		A					
25% of standard range		B					
50% of standard range		C					
Standard range		0					
Power supply							
Standard 100 - 240 VAC, 50/60 Hz			0				
Number of sample streams							
1 stream					1		
2 streams					2		
3 streams					3		
4 streams					4		
5 streams					5		
6 streams					6		
7 streams					7		
8 streams					8		
Outputs							
1x mA						1	
2x mA						2	
3x mA						3	
4x mA						4	
5x mA						5	
6x mA						6	
7x mA						7	
8x mA						8	
RS232						A	
Modbus TCP/IP						B	
Modbus RS485						C	
1x mA + Modbus RS485						E	
2x mA + Modbus RS485						F	
3x mA + Modbus RS485						G	
4x mA + Modbus RS485*						H	
1x mA + Modbus TCP/IP						I	
2x mA + Modbus TCP/IP						J	
3x mA + Modbus TCP/IP						K	
4x mA + Modbus TCP/IP*						L	
*Combinations of up to 8x mA + Modbus are available.							
No adaption, standard version							0