

# EZ4000 Series Online Volumetric Sulfate Analyzers

## Applications

- Wastewater
- Drinking Water
- Surface Water



## Online automatic titration of Sulfate in water

### Results you can rely on

EZ4000 Series Analyzers 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 color 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, maximized uptime and negligible operator intervention. Sample lines and analysis vessel are cleaned with demineralized water to eliminate cross contamination between samples. Electronic and wet-chemical part of the analyzer are strictly separated. A transparent door allows for instant visual inspection of the wet part.

### Flexibility that meets your needs

EZ Series Sulfate Analyzers 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 analyzer to match your application and operational needs.

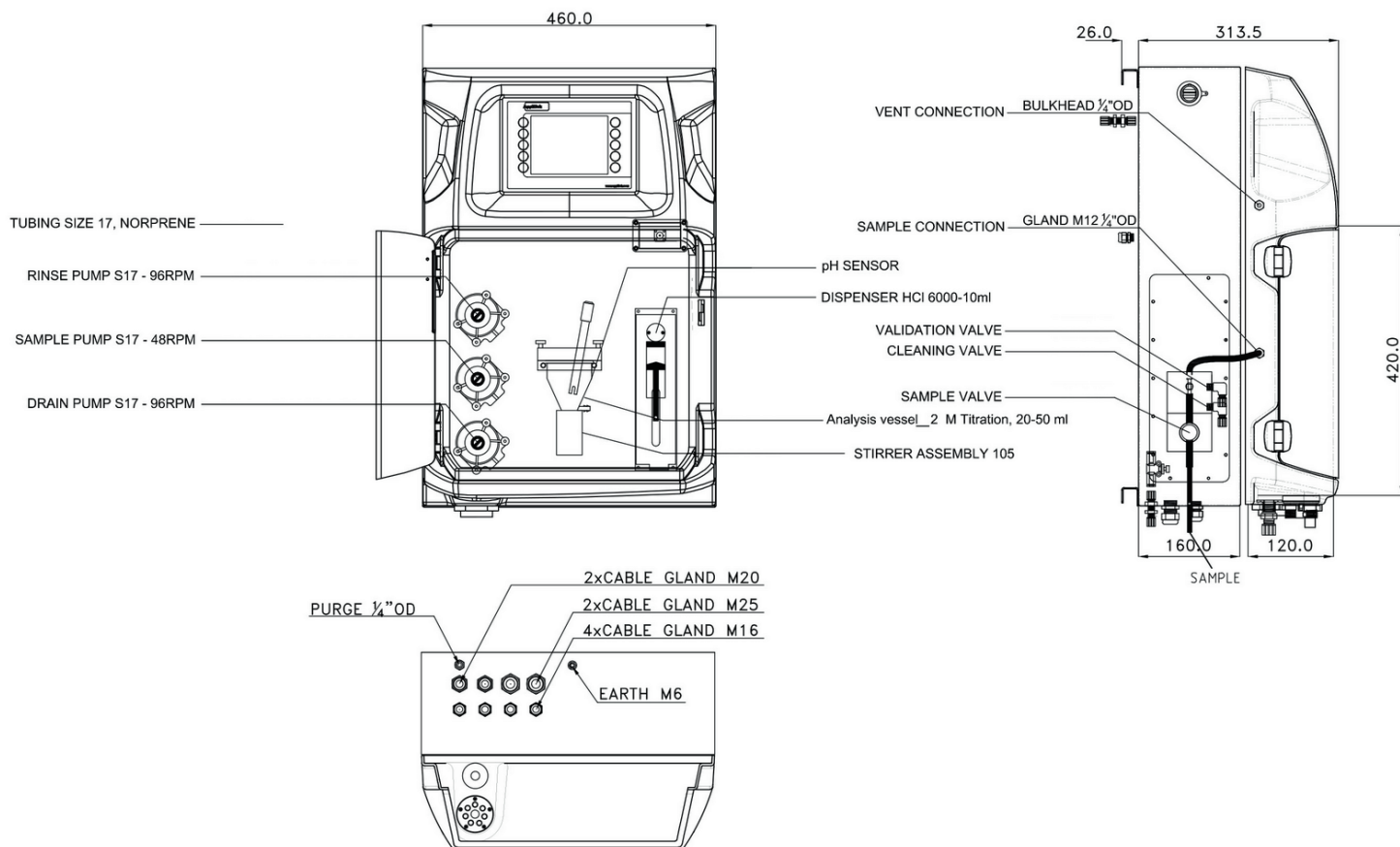
- The standard measuring range can be narrowed by a different calibration range or extended via internal dilution options.
- Analog and digital output options
- Multiple stream analysis for up to 8 sample streams

## Technical Data\*

<b>Parameter</b>	Sulphate
<b>Measurement Method</b>	Colorimetric titration by EDTA using colour indicator calmagite at 610 nm after barium sulphate precipitation
<b>Range</b>	20 - 200 mg/L SO <sub>4</sub> Optional: Internal dispenser dilution (max. factor 100)
<b>Precision</b>	Better than 2% full scale range for standard test solutions
<b>Lower Limit of Detection (LOD)</b>	≤ 20 mg/L
<b>Interferences</b>	Some metal ions interfere by causing fading or indistinct end points or by stoichiometric consumption of EDTA. Silica > 500 mg/L interferes. Suspended or colloidal organic matter also may interfere with the end point. Large amounts of colour and turbidity interfere. Fats, oil, proteins, surfactants and tar.
<b>Cycle Time</b>	10 - 15 minutes
<b>Automatic cleaning</b>	Yes
<b>Calibration</b>	N.A.
<b>Validation</b>	Automatic; frequency freely programmable
<b>Ambient Temperature</b>	10 - 30 °C ± 4 °C deviation (50 - 86 °F ± 7.2 °F deviation) at 5 - 95% relative humidity (non-condensing)
<b>Reagent Requirements</b>	Keep between 10 - 30 °C (50 - 86 °F)
<b>Sample Pressure</b>	By external overflow vessel
<b>Sample Flow Rate</b>	100 - 300 mL/min
<b>Sample Temperature</b>	10 - 30 °C (50 - 86 °F)
<b>Sample Quality</b>	Maximum particle size 100 µm, < 0.1 g/L; Turbidity < 50 NTU
<b>Power</b>	100 - 240 VAC, 50/60 Hz Max. power consumption: 120 VA
<b>Instrument Air</b>	Dry and oil free according to ISA-S7.0.01-1996 quality standard for instrument air
<b>Demineralized Water</b>	For rinsing / dilution
<b>Drain</b>	Atmospheric pressure, vented, min. Ø 64 mm
<b>Earth Connection</b>	Dry and clean earth pole with low impedance (< 1 Ohm) using an earth cable of > 2.5 mm <sup>2</sup>
<b>Analog Outputs</b>	Active 4 - 20 mA max. 500 Ohm load, standard 1, max. 8 (option)
<b>Digital Outputs</b>	Optional: RS232, Modbus (TCP/IP, RS485)
<b>Alarm</b>	1 x malfunctioning, 4 x user-configurable, max. 24 VDC/0.5 A, potential free contacts
<b>Protection Class</b>	Analyzer cabinet: IP55 / Panel PC: IP65
<b>Material</b>	Hinged part: Thermoform ABS, door: plexiglass Wall section: Galvanized steel, powder coated
<b>Dimensions (H x W x D)</b>	690 mm x 465 mm x 330 mm
<b>Weight</b>	25 kg (55 lbs.)
<b>Certifications</b>	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 maximize instrument uptime, ensure data integrity, maintain operational stability, and reduce compliance risk.

## Order Information - Part Number Configurator

Standard range, 20-200 mg/L SO <sub>4</sub> <sup>2-</sup>	EZ4039.99	X	X	X	X	X	2
<b>Measurement range settings / Dilution options</b>							
Standard range		0					
Internal dispenser dilution (max. factor 100)		5					
<b>Power supply</b>							
Standard 100 - 240 VAC, 50/60 Hz			0				
<b>Number of sample streams</b>							
1 stream					1		
2 streams					2		
3 streams					3		
4 streams					4		
5 streams					5		
6 streams					6		
7 streams					7		
8 streams					8		
<b>Outputs</b>							
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