EZ4000 Series Sulphide Analysers

Online automatic titration of Sulphide in water monitoring applications

State of the art titration platform

The EZ4000 Series Analysers are single-parameter titrators built on an industrial analytical platform. High precision dispensers, robust peristaltic pumps and carefully designed liquid pathways all add up to the highest performance for industrial and environmental analysis needs.

Unique flexibility in titration methods

Every application starts with the basics: the right titrimetric technique for the parameter of interest, the measuring range and the water matrix. Depending on the change in the specific variables, the EZ4000 Series run either acid-base, redox, precipitation or photocolorimetric titration allowing for a unique flexibility.

The EZ4000 Series Sulphide Analysers use precipitation titration. They combine unparalleled expertise in online titration with a set of unique analysis, control and communication features in a compact footprint:

- Wide standard measuring range of 0-1000 mg/L S^{2-}
- Smart automatic features
- Control and communication via industrial panel PC
- Analogue and digital output options
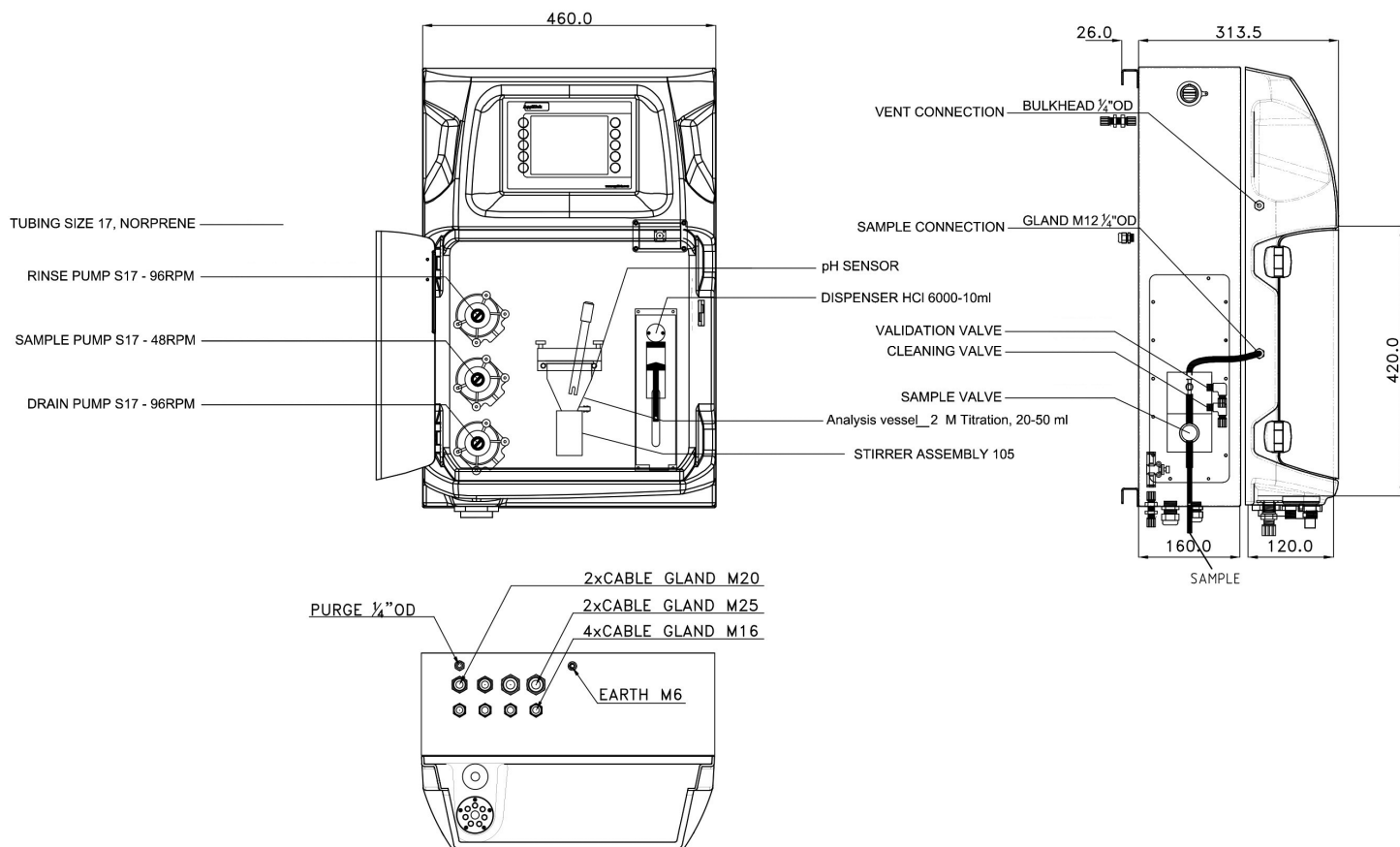- Multiple stream analysis (up to 8 streams)

There are two models available: the EZ4031 has a measuring range of 0-500 mg/L and uses silver nitrate. The EZ4032 has a measuring range of 0-1000 mg/L and uses uses iodine.

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Technical Data*

Parameter	Sulphide
Measurement method	Precipitation titration with silver nitrate ($AgNO_3$) or iodine, the latter conform with standard method APHA 4500-S2 (F)
Measuring range	Silver nitrate titration: 0 - 500 mg/L S^{2-} Iodine titration: 0 - 1,000 mg/L S^{2-}
Precision	Better than 2% full scale range for standard test solutions
Detection limit	Silver nitrate titration: ≤ 5 mg/L Iodine titration: ≤ 10 mg/L
Interferences	Oxidised forms of manganese interfere. Strong oxidising agents such as chlorine, bromine, chlorine dioxide, iodine, permanganate, hydrogen peroxide and ozone. However reduced forms of these components – bromide, chloride, iodide, manganous ion and oxygen – do not interfere. Reducing agents such as organic sulphites also interfere. Fats, oil, proteins, surfactants and tar.
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	110 - 240 VAC, 4 A, 50/60 Hz Max. power consumption: 150 VA
Instrument air	Dry and oil free according to ISA-S7.0.01-1996 quality standard for instrument air
Demineralised water	For rinsing purposes (application depending)
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

460.0

26.0 | 313.5

VENT CONNECTION ——— BULKHEAD ¼"OD

SAMPLE CONNECTION ——— GLAND M12 ¼"OD

TUBING SIZE 17, NORPRENE ———

RINSE PUMP S17 - 96RPM ———

SAMPLE PUMP S17 - 48RPM ———

DRAIN PUMP S17 - 96RPM ———

pH SENSOR

DISPENSER HCl 6000-10ml

VALIDATION VALVE
CLEANING VALVE

SAMPLE VALVE

Analysis vessel__2 M Titration, 20-50 ml

STIRRER ASSEMBLY 105

420.0

160.0 | 120.0

SAMPLE

PURGE ¼"OD

2xCABLE GLAND M20
2xCABLE GLAND M25
4xCABLE GLAND M16

EARTH M6

Be confident with Hach Service

Start-Up/Commissioning: Our service technicians visit your site and setup instrumentation, provide basic end-user training on operations and maintenance, and validate settings and performance to get you started.

Service Agreement: Hach provides on-site and in-factory repair, preventive maintenance, and calibration programs for your instruments to ensure reliability and instrument up-time. We have services to fit your specific needs.

Order Information - Part Number Configurator

Standard range, silver nitrate, 0-500 mg/L S^{2-} Standard range, iodine, 0-1,000 mg/L S^{2-}	EZ4031.99 EZ4032.99	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					
Customised		Z					
Power supply							
Standard 110 - 240 VAC; 50/60 Hz			0				
Customised			Z				
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		
Customised / combined					Z		
Specials							
No adaption, standard version						0	
Customer specific adaptions required, to specify						S	

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