

EZ3500 SERIES

On-line ISE/SA Analyzers Analysis of Sulphide

Applications

- Waste water
- Process Water



On-line, automatic ion-selective/standard addition measurements for industrial applications

ISE technology for complex water matrices

The **EZ3500 Series** are used for water monitoring applications where ion-selective electrodes are the preferred analytical technique, but specifically for complex water matrices such as industrial effluent. Standard addition is used to minimize matrix interferences that may contribute to the output signal of the electrode.

Discontinuous, automatic standard addition

Similar to the **EZ3000 Series** with direct ISE, the **EZ3500 Series** run discontinuous measurements with careful addition of a known standard in an analysis vessel. Discontinuous ISE analysis enhances control over the potentiometry, eliminates cross-contamination between cycles and reduces overall consumption of reagents.

The **EZ3500 Series** combine unique ISE technology with a set of analysis, control and communication features in an industrial analyzer mainframe designed for the highest performance:

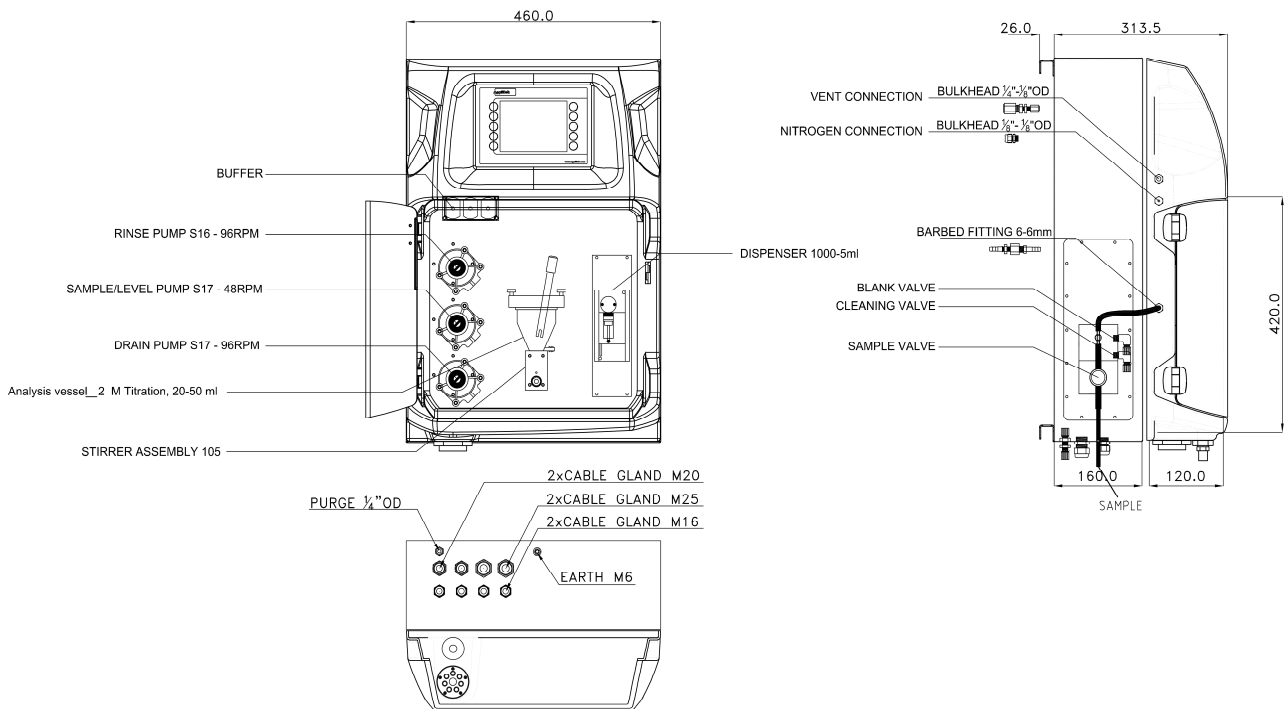
- Automatic ion-selective analysis by standard addition
- Smart automatic features
- Control and communication via industrial panel PC
- Standard 4 - 20 mA signal output with alarm processing
- Communication ports supporting connectivity to Modbus
- Multiple stream analysis

Technical data*

Analysis method	Discontinuous measurement by combined ion-selective electrode with standard addition, conform with standard method ASTM D4658-15 (direct ISE)
Parameter	Sulphide
Measuring ranges	1 – 10 mg/L; 10 – 100 mg/L; 100 – 1,000 mg/L S ²⁻
Cycle time	8 minutes
Limit of quantification (LOQ)	≤ 1 mg/L
Precision/Repeatability	Better than 2% full scale range for standard test solutions
Cleaning	Automatic; frequency freely programmable
Calibration	Automatic, 2-point; frequency freely programmable
Validation	Automatic; frequency freely programmable
Interferences	Silver [(Ag) ⁺] and mercury [(Hg) ²⁺] have very high interference and can only be tolerated in very low concentrations relative to the sulphide - ideally they should be absent. Fats, oil, proteins, surfactants and tar.
Ambient operating conditions	10 °C – 30 °C +/- 4 °C deviation (50 °F – 86 °F +/- 7.2 °F deviation) at 5 - 95% relative humidity non-condensing
Reagent temperature	Keep between 10 °C - 30 °C (50 °F - 86°F)
Sample pressure	By external overflow vessel
Sample flow rate	100 - 300 ml per minute
Other sample requirements	Temperature: 10 °C – 30 °C (50 °F – 86 °F); Maximum 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
Deminerlized 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 (option)	MODBUS, RS232, RS485
Alarms	1 x malfunctioning, 4 x user-configurable, max. 24 VDC/0.5 A, potential free contacts
Protection class	Analyzer cabinet: IP55 / Panel PC: IP65
Materials, hinged part	Thermoform ABS, Door: plexiglass
Materials, wall section	Galvanized steel, powder coated
Dimensions (H X W X D)	69 cm (27.2") x 46.5 cm (18.3") x 33 cm (13")
Total weight	25 kg (55 lbs.)
Certification	CE compliant / UL certified
Warranty	2 years

* Subject to change without further notice.

Dimensions - Drawings



Service packages

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.

Contact us to learn about what Hach Service option is right for you.

Order information

EZ3518.99XXXXX	EZ3500 Series, Sulphide, 1 - 10 mg/L
EZ3519.99XXXXX	EZ3500 Series, Sulphide, 10 - 100 mg/L
EZ3520.99XXXXX	EZ3500 Series, Sulphide, 100 - 1,000 mg/L

All options (see Configurator)

E	Z	3	5	X	X	.	9	9	X	X	X	X	X	2
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Measurement range settings / Dilution options

25% of standard range	B
50% of standard range	C
standard range	0
customized	Z

power supply

Standard 110 - 220 VAC ; 50/60 Hz	0
Customized	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
Customized / combined	Z

Specials

no adaption, standard version	0
customer specific adaptations required, to specify	S