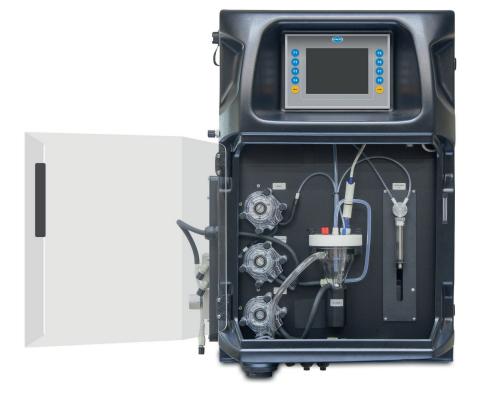
## EZ4000 Series Sulphide Analysers

#### Applications

- Wastewater
- Drinking water
- Surface water



# 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<sup>2-</sup>
- 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.

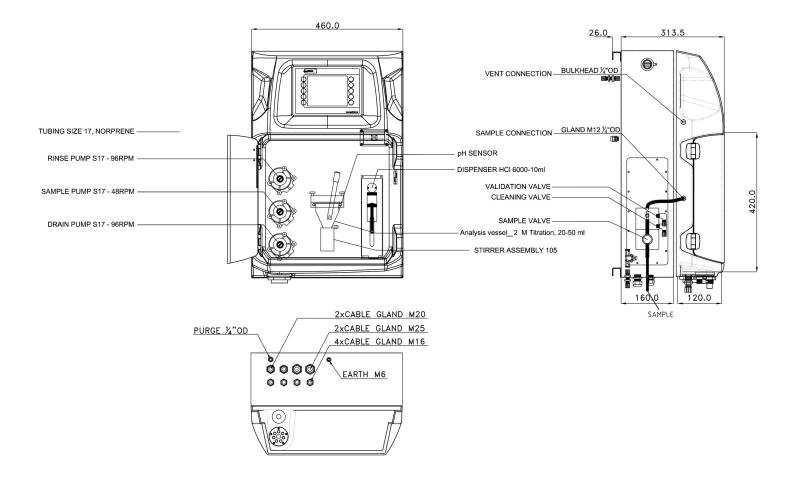


#### Technical Data\*

Parameter	Sulphide					
Measurement method	Precipitation titration with silver nitrate (AgNO <sub>3</sub> ) or iodine, the latter conform with standard method APHA 4500-S2 (F)					
Measuring range	Silver nitrate titration: 0 - 500 mg/L S <sup>2-</sup> lodine titration: 0 - 1,000 mg/L S <sup>2-</sup>					
Precision	Better than 2% full scale range for standard test solutions					
Detection limit	Silver nitrate titration: $\leq$ 5 mg/L lodine titration: $\leq$ 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 $> 2.5 \text{ mm}^2$					
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**



#### **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**

Measurement range settings / Dilution options     A       25% of standard range     A       25% of standard range     C       Standard range <th>Standard range, silver nitrate, 0-500 mg/L S<sup>2-</sup> Standard range, iodine, 0-1,000 mg/L S<sup>2-</sup></th> <th>EZ4031.99 EZ4032.99</th> <th>x</th> <th>x</th> <th>x</th> <th>x</th> <th>x</th> <th>2</th>	Standard range, silver nitrate, 0-500 mg/L S <sup>2-</sup> Standard range, iodine, 0-1,000 mg/L S <sup>2-</sup>	EZ4031.99 EZ4032.99	x	x	x	x	x	2
10% of standard range   A     25% of standard range   B     25% of standard range   C     Customised   C     Standard range   C     Standard range <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
26% of standard range   B     50% of standard range   C     50% of standard range   C     50% of standard range   C     Customised   Z     Power supply   0     Standard 110 - 240 VAC; 50/00 Hz   0     Outsomised   Z     Number of sample streams   1     1 stream   1     2 streams   3     4 streams   5     5 streams   6     5 streams   6     7 streams   1     2 xmA   2     3 streams   8     Outputs   1     2 xmA   2     3 streams   8     0 xmA   2     3 xmA   2	Measurement range settings / Dilution options							
60% of standard range   C     Standard range   0     Customised   Z     Power supply   0     Standard 11/2 / 20 WAC; 50/60 Hz   0     Customised   Z     Number of sample streams   0     1 stream   1     2 streams   2     3 streams   3     4 streams   4     5 streams   6     7 streams   7     8 streams   5     6 streams   6     7 streams   7     8 streams   6     7 streams   3     4 streams   4     2 streams   5     6 streams   6     7 streams   7     8 streams   8     9 streams   8     9 streams   7     8 streams   8     9 streams   8     9 streams   1     10	10% of standard range		А					
Standard range   0     Customised   2     Power supply   0     Standard 110 - 240 VAC; 50/60 Hz   0     Customised   2     Number of sample streams   1     1 stream   1     2 streams   2     3 dtreams   3     4 streams   4     6 streams   5     6 streams   6     7 staams   7     8 streams   8     NumA   1     2x mA   8     NamA   1     2x mA   2     Streams   7     8 streams   8     7 streams   7     8 streams   8     7 streams   7     8 streams   8     8 streams   8 <	25% of standard range		В					
Customised   2     Power supply   0     Standard 110 - 240 VAC; 50/60 Hz   0     Customised   2     Number of sample streams   1     1 stream   1     2 streams   2     3 streams   3     4 streams   4     5 streams   6     7 streams   6     7 streams   7     8 streams   8     8 streams   8     8 streams   8     8 streams   6     7 streams   7     8 streams   8     8 streams   8     8 streams   8     8 streams	50% of standard range		С					
Power supply     0       Standard 110 - 240 VAC; 50/60 Hz     0       Customised     0       Stream     1       1 stream     1       2 streams     2       3 streams     2       3 streams     3       4 streams     4       5 streams     5       6 streams     6       7 streams     7       8 streams     7       8 streams     7       8 streams     6       A mA     2       XmA     3       XmA	Standard range							
Standard 110 - 240 VAC; 50/60 Hz   0     Customised   2     Number of sample streams   1     1 stream   1     2 streams   2     3 streams   3     4 streams   4     5 streams   5     6 streams   6     7 streams   7     8 streams   1     2 xmA   3     4 xmA   4     5 xmA   5     8 xmA   8     8 xmA   8     8 xmA   8     8 xmA   8     8 xmA   6     7 xmA   7     8 xmA   8     8 xm	Customised		Z					
Standard 110 - 240 VAC; 50/60 Hz   0     Customised   2     Number of sample streams   1     1 stream   1     2 streams   2     3 streams   3     4 streams   4     5 streams   5     6 streams   6     7 streams   7     8 streams   1     2 xmA   3     4 xmA   4     5 xmA   5     8 xmA   8     8 xmA   8     8 xmA   8     8 xmA   8     8 xmA   6     7 xmA   7     8 xmA   8     8 xm	Power supply							
Customised   Z     Number of sample streams   1     1 stream   1     2 streams   2     3 streams   3     4 streams   4     5 streams   6     6 streams   6     7 streams   7     8 streams   6     7 streams   1     2 mA   1     2 mA   2     3 mA   3     4 mA   6     5 kmA   6     5 kmA   6     7 mA   8     Nodbus TOP/IP   8     Modbus RS485   6     2 mA + Modbus RS485   6     2 mA + Modbus RS485   6     3 mA + Modbus RS485   6     3 mA + Modbus RS485   1     2 mA + Modbus RS485 <t< td=""><td></td><td></td><td></td><td>0</td><td></td><td></td><td></td><td></td></t<>				0				
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1 stream   1     2 streams   2     3 streams   2     3 streams   4     5 streams   6     6 streams   6     7 streams   7     8 streams   7     9 streams   7     9 streams   1     2 xmA   1     2 xmA   3     4 xmA   4     5 xmA   6     6 xmA   7     8 xmA   8     RS232   A     Modbus TCP/IP   8     Modbus RS485   6     5 xmA + Modbus RS485   6     3 xm A + Modbus RS485   6     4 xmA + Modbus RS485   7     3 xm A + Modbus RS485   6     4 xmA + Modbus TCP/IP   1     1 xmA + Modbus TCP/IP   1     2 xmA + Modbus TCP/IP   1     3 xm A + Modbus TCP/IP   1     3 xm A + Modbus TCP/IP   1 <	Number of sample streams							
2 streams   2     3 streams   3     4 streams   3     5 streams   6     5 streams   6     7 streams   7     8 treams   7     8 treams   7     8 treams   7     9 treams   1     10 treams   1     11 treams   1     12 treams   1     13 treams   1     14 treams   1     15 treams					1			
3 streams   3     4 streams   4     5 streams   5     6 streams   6     7 streams   7     8 streams   8     7 streams   7     8 streams   8     7 streams   1     2 streams   2     8 streams   1     2 streams   3     4 streams   1     2 streams   3     4 streams   1     2 streams   3     3 streams   3     4 streams   1     2 streams   3     3 streams   3     4 streams   2     3 streams   3     4 streams   3     5 streams   6     7 streams   7     8 streams   8     8 streams   8     8 streams   8     8 streams   6     7 streams   6     7 streams   6     8 streams   8     8 streams   6     8								
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6 streams   6     7 streams   7     8 streams   7     Streams   7     Streams   1     2 xmA   2     3 xmA   4     4 xmA   4     5 xmA   3     6 xmA   6     7 xmA   8     8 xmA + Modbus RS485   8     9 xmA + Modbus RS485   1     10 xmA + Modbus RS485   1     10 xmA + Modbus RS485   1					4			
7 streams   7     8 streams   8     Outputs   1     1x mA   1     2x mA   2     3x mA   3     4x mA   4     5x mA   3     4x mA   4     5x mA   6     7x mA   6     7x mA   7     8x mA   8     8x mA   8     8x mA   8     8x mA   8     Nodbus TOP/IP   8     Nodbus TOP/IP   8     Nodbus RS485   6     1x mA + Modbus RS485   1     2x mA + Modbus RS485   1     3x mA + Modbus RS485   1     3x mA + Modbus RS485   1     2x mA + Modbus RS485   1     3x mA + Modbus RS485   1     3x mA + Modbus RS485   1     3x mA + Modbus RCP/IP <t< td=""><td>5 streams</td><td></td><td></td><td></td><td>5</td><td></td><td></td><td></td></t<>	5 streams				5			
8 streams   8     Outputs   1     1 x mA   1     2 x mA   2     3 x mA   3     4 x mA   4     5 x mA   4     5 x mA   6     7 x mA   6     7 x mA   7     8 x mA   6     7 x mA   7     8 x mA   8     Nodbus TCP/IP   8     Nodbus RS485   6     1 x mA + Modbus RS485   6     2 x mA + Modbus RS485   6     3 x mA + Modbus RS485   6     1 x mA + Modbus RS485   1     1 x mA + Modbus RS497   1     2 x mA + Modbus RS497   1     3 x mA + Modbus RS497	6 streams				6			
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1 x mA   1     2x mA   2     3x mA   3     4x mA   4     5x mA   5     6x mA   6     7x mA   6     7x mA   7     8x mA   8     8x mA + Modbus RS485   6     9x mA + Modbus RS485   8     9x mA + Modbus RS485   8     9x mA + Modbus RS485   1     10 x mA + Modbus ROP/IP   1     2x mA + Modbus TOP/IP   1     3x mA + Modbus TOP/IP   1     4x mA + Modbus TOP/IP   1     4x mA + Modbus TOP/IP   1     5x mA + Modbus TOP/IP   1     4x mA + Modbus TOP/IP   1     5x mA + Modbus TOP/IP   1	8 streams				8			
1 x mA   1     2x mA   2     3x mA   3     4x mA   4     5x mA   5     6x mA   6     7x mA   6     7x mA   7     8x mA   8     8x mA + Modbus RS485   6     9x mA + Modbus RS485   8     9x mA + Modbus RS485   8     9x mA + Modbus RS485   1     10 x mA + Modbus ROP/IP   1     2x mA + Modbus TOP/IP   1     3x mA + Modbus TOP/IP   1     4x mA + Modbus TOP/IP   1     4x mA + Modbus TOP/IP   1     5x mA + Modbus TOP/IP   1     4x mA + Modbus TOP/IP   1     5x mA + Modbus TOP/IP   1								
1 x mA   1     2x mA   2     3x mA   3     4x mA   4     5x mA   5     6x mA   6     7x mA   6     7x mA   7     8x mA   8     8x mA + Modbus RS485   6     9x mA + Modbus RS485   8     9x mA + Modbus RS485   8     9x mA + Modbus RS485   1     10 x mA + Modbus ROP/IP   1     2x mA + Modbus TOP/IP   1     3x mA + Modbus TOP/IP   1     4x mA + Modbus TOP/IP   1     4x mA + Modbus TOP/IP   1     5x mA + Modbus TOP/IP   1     4x mA + Modbus TOP/IP   1     5x mA + Modbus TOP/IP   1	Outputs							
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	Customer specific adaptions required, to specify						S	

