

EZ6000 Series Copper Trace Metal Analysers

Applications

- Drinking water
- Surface water
- Industrial effluent



Trace metal analysis of dissolved and total Copper in water by online voltammetry

About the EZ6000 Series

The EZ6000 Series of online Trace Metal Analysers are based on the technology of stripping voltammetry, a sensitive analytical technique that can be automated for the determination of trace levels of metals in water. For many metals the EZ6000 Series boasts limits of quantification in the low ppb range.

EZ6000 Analysers can be equipped with an add-on sample digestion unit that has been designed specifically for samples with higher organic contents, suspended particles and changing composition. The optional combination with an external filtration system allows for detection and measurement of trace metals in a wide range of water matrices.

The **EZ6000 Series Analysers** combine tried and tested voltammetry technology in an industrial mainframe with prime features:

- Excellent selectivity and sensitivity
- Standard measuring ranges with optional internal dilution
- Smart automatic features
- Control and communication via industrial panel PC
- Analog and digital output options
- Multiple stream analysis

Options for the determination of **Copper** include: Copper, dissolved Cu(II) and Copper, total after digestion. A combined analysis is possible with **Cadmium** or **Lead**.

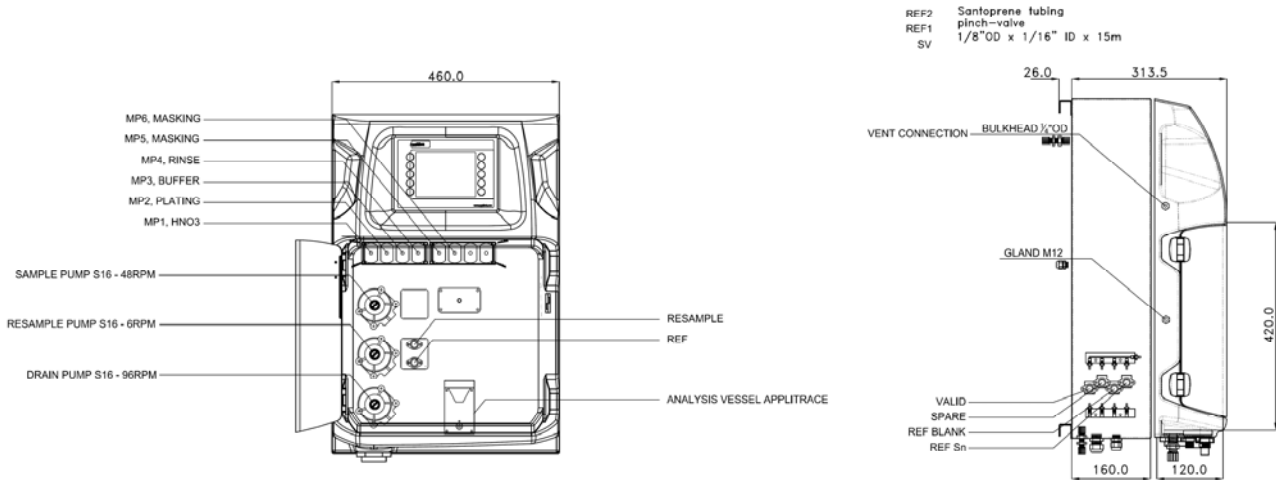
Technical data*

Analysis method	Stripping voltammetry using carbon electrode
Parameter	a) Copper, dissolved Cu(II); b) Copper, total after hot acid digestion
Measuring ranges	0 - 100 µg/L
Cycle time	a) 10 minutes (dilution +5 min.), b) 20 minutes (dilution +5 min.)
Limit of detection (LOD)	≤ 1 µg/L
Precision/Repeatability	Better than 5% 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	Antimony (III), bismuth (III), organic matter may interfere. 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); particles: maximum size 100 µm, <0.1 g/L; turbidity <50 NTU
Power	a) 110 - 240 VAC, 4 A, 50/60 Hz, max. power consumption 150 VA b) 220 - 240 VAC, 4 A, 50/60 Hz, max. power consumption 440 VA; 110 VAC version also available (see configurator)
Instrument air	Dry and oil free according to ISA-S7.0.01-1996 quality standard for instrument air
Demineralised water	For rinsing and/or dilution
Cooling water	a) Not required; b) Flow rate approx. 5L/h; temperature max. 30 °C (86 °F); pressure max. 0.5 bar
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	Analyser cabinet: IP55 / Panel PC: IP65
Materials, hinged part	Thermoform ABS, Door: plexiglass
Materials, wall section	Galvanised 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

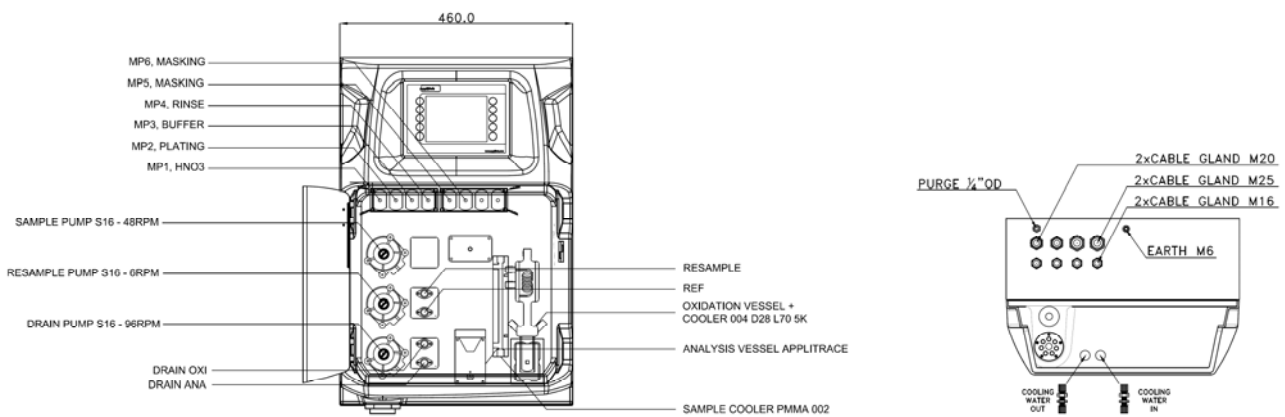
* Subject to change without further notice.

Dimensions - Drawings

a) Copper, dissolved Analyser



b) Total Copper Analyser with digestion unit



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 - Part Number Configurator

- EZ6004.99XXXXX** Copper, dissolved; standard range: 0 - 100 µg/L Cu(II)
EZ6103.99XXXXX Copper dissolved & Cadmium, dissolved; standard range: 0 - 100 µg/L Cu(II), 0 - 100 µg/L Cd(II)
EZ6105.99XXXXX Copper, dissolved & Lead, dissolved; standard range: 0 - 100 µg/L Cu(II), 0 - 100 µg/L Pb(II)
EZ6108.99XXXXX Copper, dissolved & Cadmium, dissolved & Lead, dissolved; standard range: 0 - 100 µg/L Cu(II), 0 - 100 µg/L Cd(II), 0 - 100 µg/L Pb(II)

E	Z	6	X	X	X	.	9	9	X	X	X	X	X	X	2
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Measurement range settings / Dilution options

Standard range	0
Internal micropump dilution (factor 4)	1
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

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 adaptations required, to specify	S

Order information

EZ6202.99XXXXX **Copper, total**; standard range: 0 - 100 µg/L Total Cu

EZ6302.99XXXXX **Copper, total & Cadmium, total**; standard range: 0 - 100 µg/L Total Cu, 0 - 100 µg/L Total Cd

EZ6304.99XXXXX **Copper, total & Lead, total**; standard range: 0 - 100 µg/L Total Cu, 0 - 100 µg/L Total Pb

EZ6307.99XXXXX **Copper, total & Cadmium, total & Lead, total**; standard range: 0 - 100 µg/L TotalCu, 0 - 100 µg/L Total Cd, 0 - 100 µg/L Total Pb

E	Z	6	X	X	X	.	9	9	X	X	X	X	X	2
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Measurement range settings / Dilution options

Standard range	0
Internal micropump dilution (factor 4)	1
Internal micropump dilution (factor 10)	3
Internal micropump dilution (factor 20)	4
Customised	Z

Power supply

220 VAC / 50 Hz	A
110 VAC / 60 Hz	B
Customised	Z

Number of sample streams

1 stream	1
2 streams	2
3 streams	3
4 streams	4
5 streams	5
6 streams	6

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
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