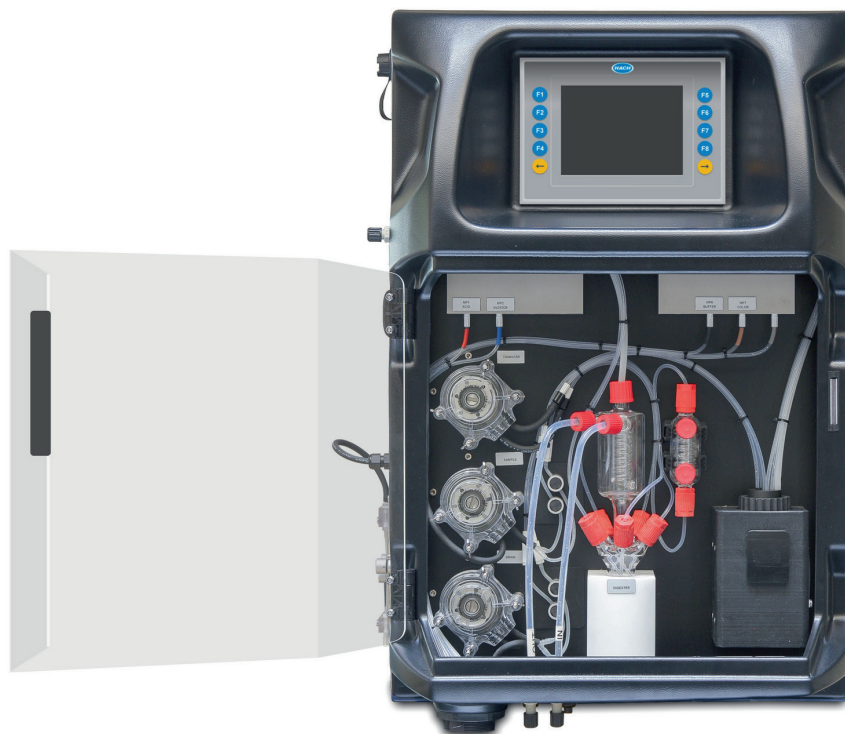


# EZ2000 Series Online Colorimetric Analyser for Total Copper

## Applications

- Wastewater
- Drinking Water
- Surface Water



## Online colorimetric analysis of Total Copper + Dissolved Copper Cu(II) in water

### Results you can rely on

EZ2000 Total Copper Analysers achieve excellent precision and accuracy. At the heart of the colorimeter there is a compact photometer assembly developed especially for the EZ Series. Consumption of reagents is reduced by low volume analysis, yet high sensitivity is assured by a long optical path length. The limit of detection is in the low  $\mu\text{g/L}$  range.

EZ2000 Total Copper Analysers have an internal digestion unit. This additional step prior to analysis allows to measure non-soluble or complexed metal species.

Smart automatic features for calibration, validation, priming and cleaning are embedded in the controller software and contribute to analytical performance, maximised uptime and negligible operator intervention. Precision micropumps dose all reagents. Sample lines and analysis vessel are cleaned with demineralised water to eliminate cross contamination between samples. Electronic and wet-chemical part of the analyser are strictly separated. A transparent door allows for instant visual inspection of the wet part.

### Flexibility that meets your needs

EZ Series Copper Analysers 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 analyser 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.
- Analogue and digital output options
- Multiple stream analysis for up to 8 sample streams

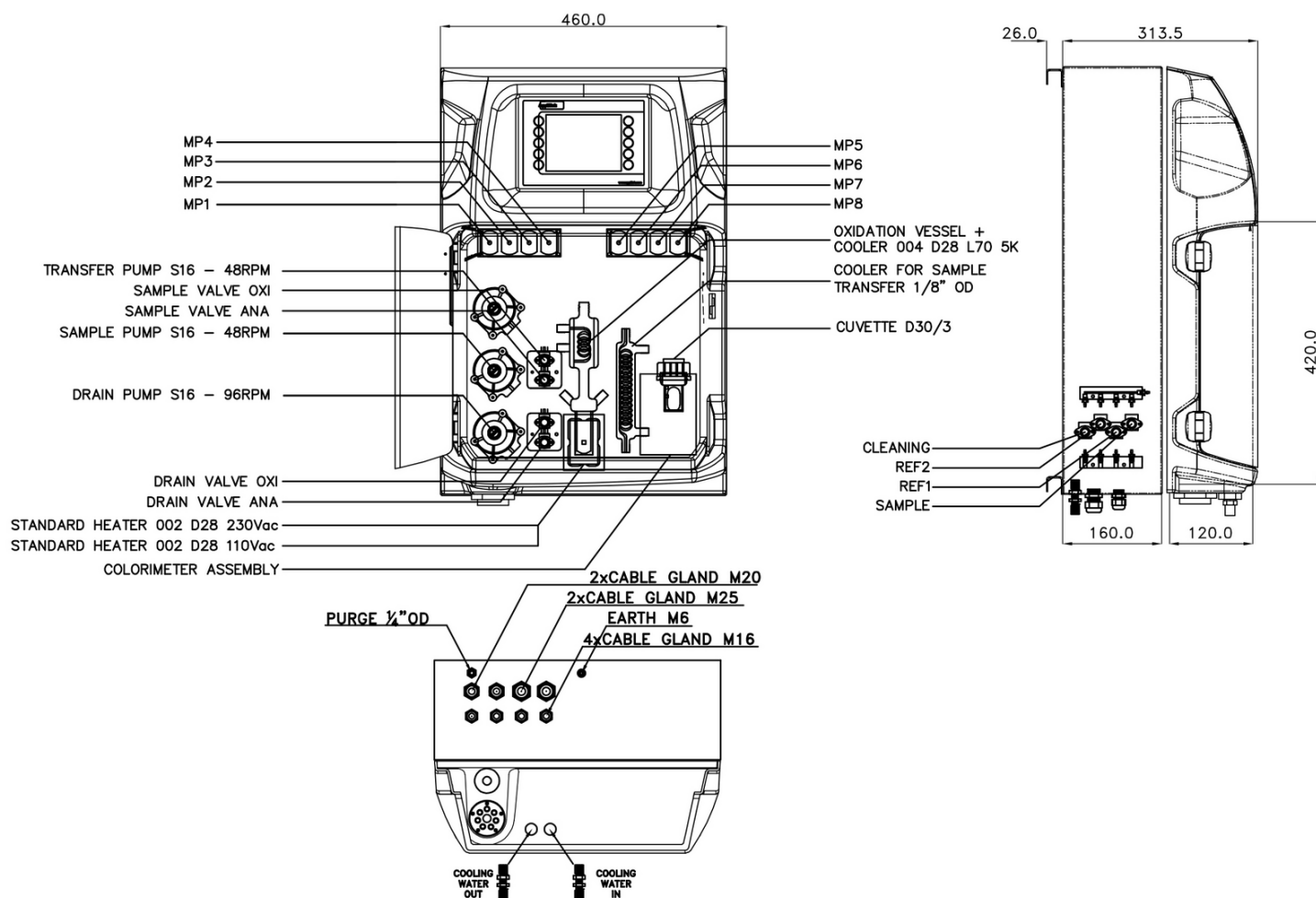
Options for the determination of Copper include:  
Total Copper, Total Copper & Copper Cu(II), dissolved

## Technical Data\*

<b>Parameter</b>	Total Copper Copper Cu(II), dissolved
<b>Measurement method</b>	Colorimetric measurement at 546 nm using bicinchoninate method, conform with Hach Method 8506
<b>Measuring range</b>	Total Copper 0.03 - 3 mg/L Cu Optional: 0.003 - 0.3 mg/L 0.02 - 0.75 mg/L 0.02 - 1.5 mg/L 0.2 - 12 mg/L (with internal dilution) 0.5 - 30 mg/L (with internal dilution) 3 - 60 mg/L (with internal dilution)  Total Copper & Copper Cu(II), dissolved 0.03 - 3 mg/L Cu Optional: 0.003 - 0.3 mg/L 0.02 - 0.75 mg/L 0.02 - 1.5 mg/L 0.2 - 12 mg/L (with internal dilution) 0.5 - 30 mg/L (with internal dilution)
<b>Precision</b>	Better than 2% full scale range for standard test solutions
<b>Detection limit</b>	≤ 3 µg/L
<b>Interferences</b>	Acidity, metal ions like Aluminium (III) > 10 mg/L, Cyanide, Hardness, Iron (III) > 10 mg/L, Nickel (II) and Silver (II). Large amounts of colour and turbidity interfere. Fats, oil, proteins, surfactants and tar.
<b>Cycle time</b>	20 min Total Cu (dilution + 5 min) 30 min Total Cu & Cu(II)
<b>Automatic cleaning</b>	Yes
<b>Calibration</b>	Automatic, 2-point; frequency freely programmable
<b>Validation</b>	Automatic; frequency freely programmable
<b>Ambient temperature</b>	10 - 30 °C ± 4 °C deviation at 5 - 95% relative humidity (non-condensing)
<b>Reagent requirements</b>	Keep between 10 - 30 °C
<b>Sample pressure</b>	By external overflow vessel
<b>Flow rate</b>	100 - 300 mL/min
<b>Sample temperature</b>	10 - 30 °C
<b>Sample quality</b>	Maximum particle size 100 µm, < 0.1 g/L; Turbidity < 50 NTU
<b>Power</b>	230 VAC, 50/60 Hz 120 VAC, 50/60 Hz Max. power consumption: 440 VA
<b>Instrument air</b>	Dry and oil free according to ISA-S7.0.01-1996 quality standard for instrument air
<b>Demineralised water</b>	For rinsing / dilution
<b>Drain</b>	Atmospheric pressure, vented, min. Ø 64 mm
<b>Cooling water</b>	Flow rate approx. 5 L/h; temperature max. 30 °C; pressure max. 0.5 bar
<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>Analogue outputs</b>	Active 4 - 20 mA max. 500 Ohm load, standard 1, max. 8 (option)
<b>Digital outputs</b>	Optional: 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>	Analyser cabinet: IP44 / Panel PC: IP65
<b>Material</b>	Hinged part: Thermoform ABS, door: PMMA Wall section: Galvanised steel, powder coated
<b>Dimensions (H x W x D)</b>	690 mm x 465 mm x 330 mm
<b>Weight</b>	25 kg
<b>Certifications</b>	CE compliant / ETL 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 maximise instrument uptime, ensure data integrity, maintain operational stability, and reduce compliance risk.

## Order Information - Part Number Configurator

Total Cu, 0.03 - 3 mg/L	EZ2002.52	X	X	X	X	X	2
Total Cu & Cu(II), 0.03 - 3 mg/L	EZ2302.52						
<b>Measurement range settings / Dilution options</b>							
10% of standard range		A					
25% of standard range		B					
50% of standard range		C					
Standard range		0					
Internal micropump dilution (factor 4)		1					
Internal micropump dilution (factor 10)		3					
Internal micropump dilution (factor 20) (only EZ2002)		4					
<b>Power supply</b>							
230 VAC, 50/60 Hz			A				
120 VAC, 50/60 Hz			B				
<b>Number of sample streams</b>							
1 stream				1			
2 streams				2			
4 streams				4			
8 streams				8			
<b>Outputs</b>							
1x mA					1		
2x mA					2		
4x mA					4		
8x mA					8		
1x mA + Modbus RS485					E		
2x mA + Modbus RS485					F		
4x mA + Modbus RS485					H		
8x mA + Modbus RS485					P		
1x mA + Modbus TCP/IP					I		
2x mA + Modbus TCP/IP					J		
4x mA + Modbus TCP/IP					L		
8x mA + Modbus TCP/IP					T		
No adaption, standard version							0