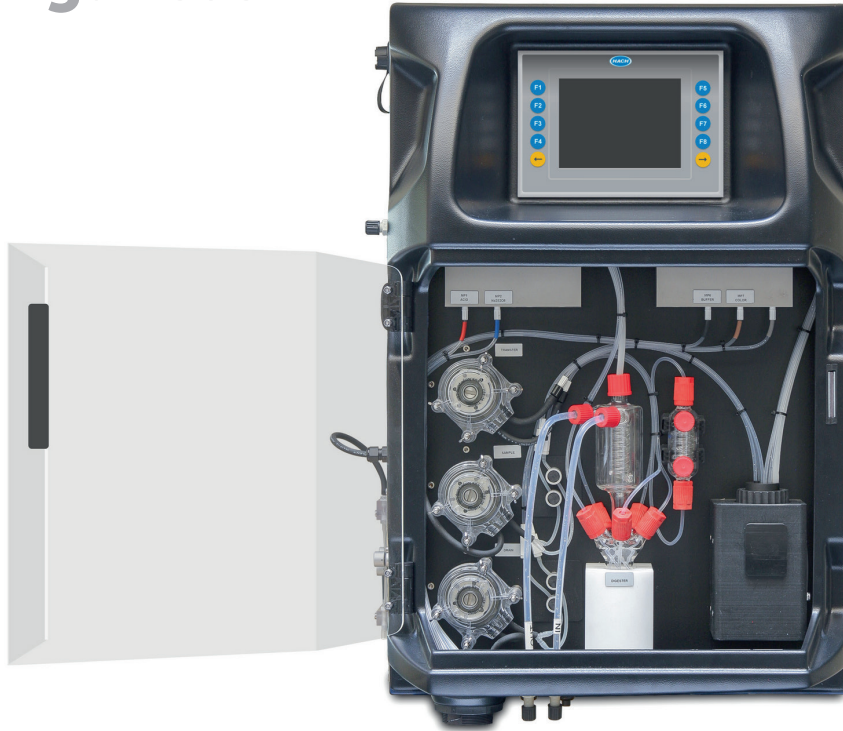


# EZ2000 Series Online Colorimetric Analyser for Total Manganese

## Applications

- Wastewater
- Drinking water
- Power
- Surface water



## Single and multiple parameter water analysis for industrial and environmental applications

Since their introduction in 2009 the EZ2000 Series of Online Colorimetric Analysers have served in hundreds of industrial water, drinking water and municipal water applications. The flexible analyser mainframe allows a perfect online duplicate of any standard/laboratory wet-chemical method, with outstanding precision and accuracy.

Contrary to the EZ1000 Series, the EZ2000 has an internal sample digestion unit. This additional step prior to analysis allows to measure non-soluble or complexed metal species, a typical behavior of some metals in drinking water or natural waters.

The EZ2000 Series online analysers stem from many years of analytical expertise and application knowledge in colorimetry in an attractive, yet rugged mainframe with a compact footprint, harnessing the following features:

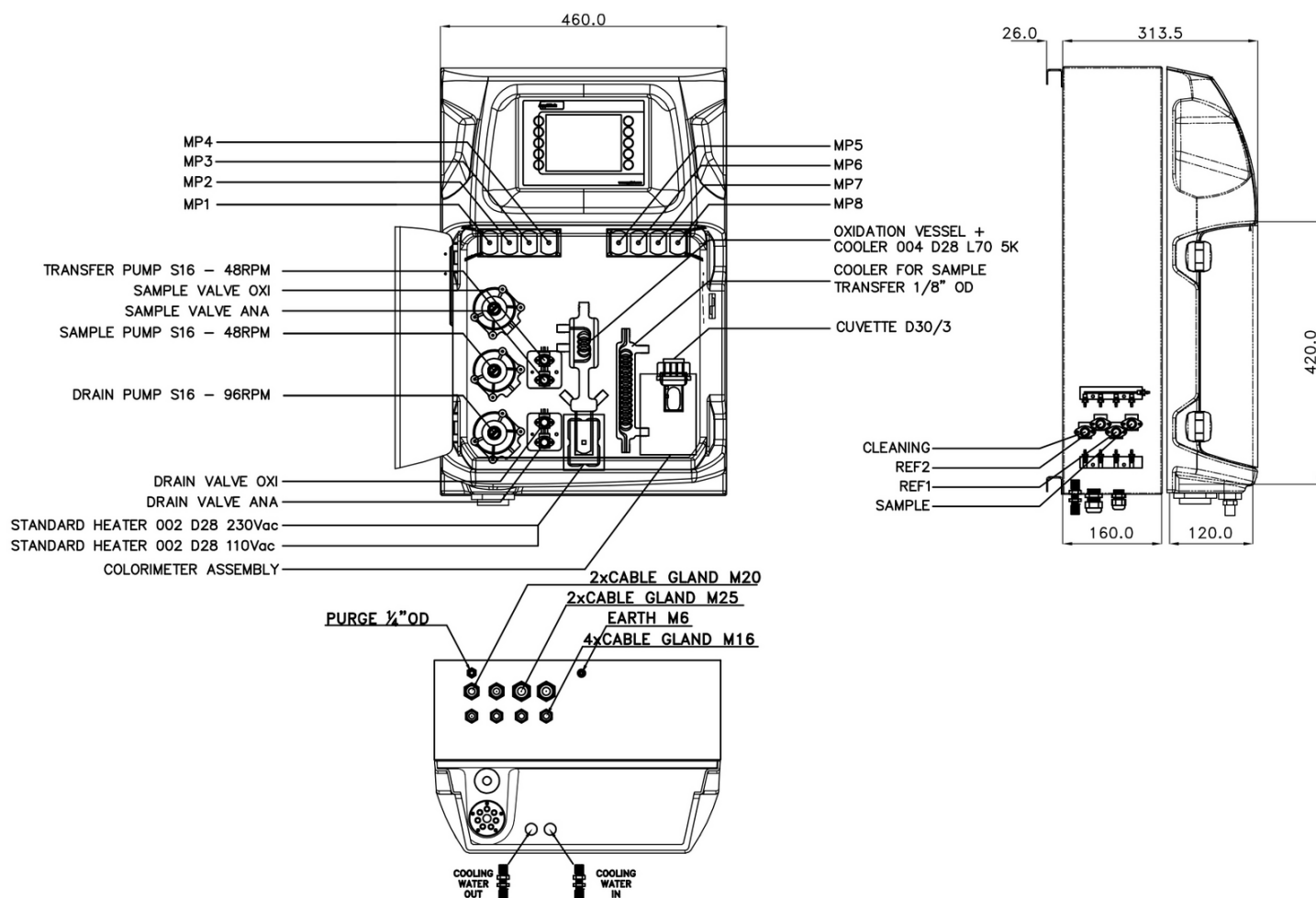
- Excellent analytical performance
- Built-in sample digestion unit
- Smart automatic features
- Control and communication via industrial panel PC
- Standard 4 - 20 mA signal output with alarm processing
- Communication supporting Ethernet connectivity to Modbus TCP/IP
- Higher measuring ranges: internal sample dilution
- Multiple stream analysis

## Technical Data\*

<b>Parameter</b>	Total Manganese Manganese Mn(II), dissolved
<b>Measurement method</b>	Colorimetric measurement using formaldoxime method at 450 nm
<b>Measuring range</b>	0 - 1 mg/L Mn
<b>Precision</b>	Better than 2% full scale range for standard test solutions
<b>Detection limit</b>	≤ 2 µg/L
<b>Interferences</b>	Large amounts of colour and turbidity interfere. Fats, oil, proteins, surfactants and tar.
<b>Cycle time</b>	20 min Total Mn (dilution + 5 min) 30 min Total Mn & Mn(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>	220 - 240 VAC, 4 A, 50/60 Hz Max. power consumption: 440 VA Other voltages available on request
<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 and/or 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: RS232, 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: IP55 / Panel PC: IP65
<b>Material</b>	Hinged part: Thermoform ABS, door: plexiglass 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 / 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

Total Mn, 0-1 mg/L	EZ2003.99	X	X	X	X	X	2
Total Mn / Mn (II), 0-1 mg/L	EZ2303.99						
<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 EZ2003)	4						
Customised	Z						
<b>Power supply</b>							
220 VAC / 50 Hz	A						
110 VAC / 60 Hz	B						
Customised	Z						
<b>Number of sample streams</b>							
1 stream				1			
2 streams				2			
3 streams				3			
4 streams				4			
5 streams				5			
6 streams				6			
7 streams				7			
8 streams				8			
<b>Outputs</b>							
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		
<b>Specials</b>							
No adaption, standard version						0	
Customer specific adaptations required, to specify						S	