

# EZ1000 Series Online Colorimetric Iron Analyzer

## Applications

- Wastewater
- Drinking Water
- Power and steam generation
- Surface Water



## Online colorimetric analysis of dissolved Iron in water

### Results you can rely on

EZ1000 Iron Analyzers 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.

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

### Flexibility that meets your needs

EZ Series Iron Analyzers 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 analyzer 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.
- Analog and digital output options
- Multiple stream analysis for up to 8 sample streams

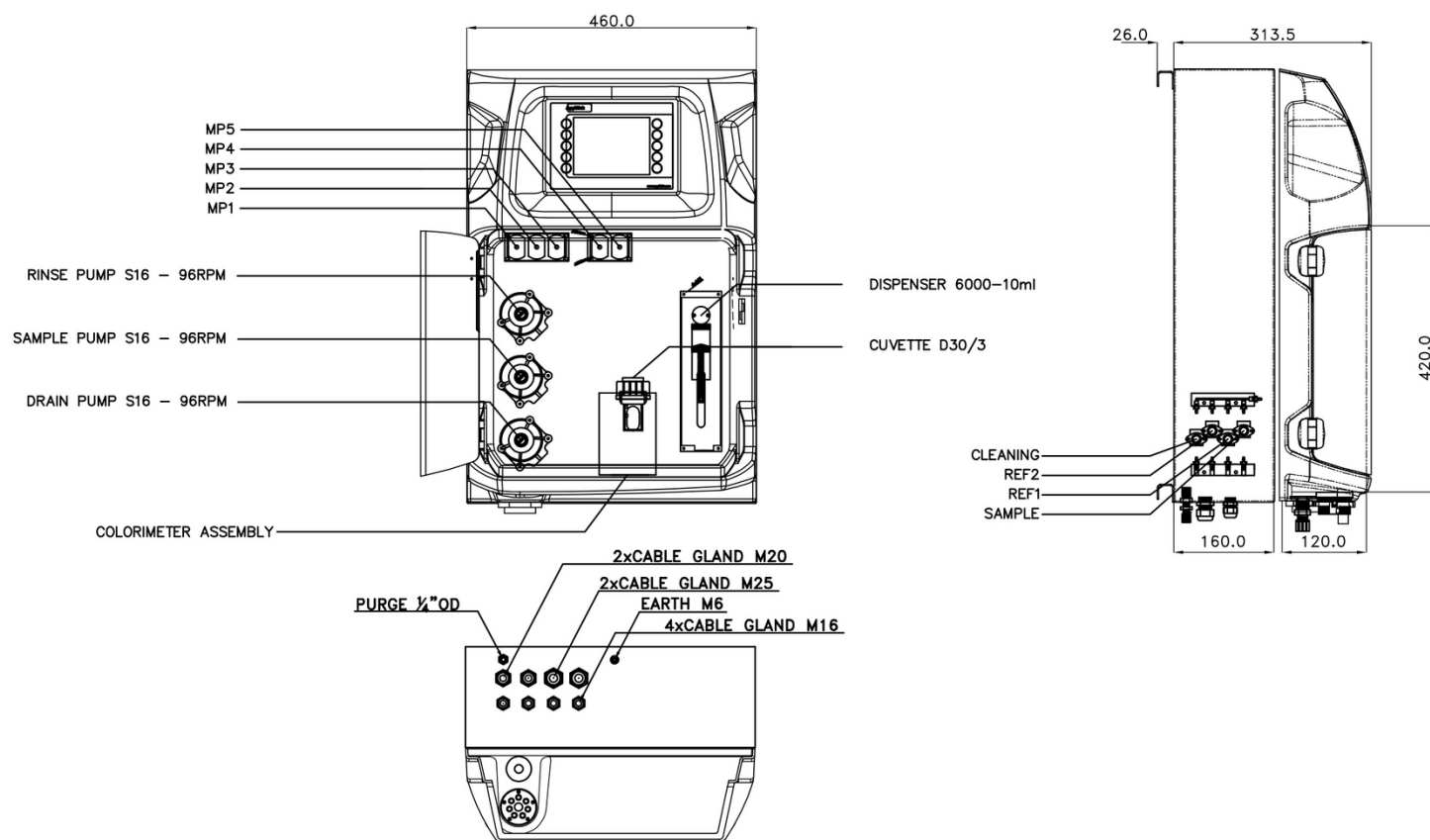
Options for the determination of Iron include: Iron Fe(II), dissolved; Iron Fe(III), dissolved; Iron Fe(II+III), total dissolved

## Technical Data\*

<b>Parameter</b>	Iron Fe(II), dissolved Iron Fe(III), dissolved Iron Fe(II+III), total dissolved
<b>Measurement Method</b>	Colorimetric measurement using TPTZ color solution
<b>Range</b>	Fe(II), Fe(II+III): 0.01 - 1 mg/L Optional: 0.002 - 0.1 mg/L 0.005 - 0.25 mg/L 0.005 - 0.5 mg/L 0.08 - 4 mg/L (with internal dilution) 0.16 - 8 mg/L (with internal dilution) 2 - 100 mg/L (with internal dilution)  Fe(III): 0.04 - 1 mg/L Optional: 0.01 - 0.1 mg/L 0.02 - 0.25 mg/L 0.02 - 0.5 mg/L 0.32 - 4 mg/L (with internal dilution) 0.64 - 8 mg/L (with internal dilution) 8 - 100 mg/L (with internal dilution)
<b>Precision</b>	Better than 2% full scale range for standard test solutions
<b>Lower Limit of Detection (LOD)</b>	Fe(II), Fe(II+III): $\leq 2 \mu\text{g/L}$ Fe(III): $\leq 10 \mu\text{g/L}$
<b>Interferences</b>	Metal ions like Lead > 10 mg/L, Zinc > 2 mg/L, Nickel > 2 mg/L, Copper > 5 mg/L. Strong oxidizing agents, Cyanide, Nitrite, Phosphate (polyphosphate more than orthophosphate), Chromium, Zinc in concentrations exceeding 10 times that of Iron. Bismuth, Cadmium, Mercury, Molybdate, and Silver precipitate Phenanthroline. Polyphosphate must be absent. Large amounts of color and turbidity interfere. Fats, oil, proteins, surfactants and tar.
<b>Cycle Time</b>	10 min Fe(II), Fe total dissolved (dilution + 5 min.) 15 min all combined parameters
<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 $\pm$ 4 °C deviation (50 - 86 °F $\pm$ 7.2 °F deviation) at 5 - 95% relative humidity (non-condensing)
<b>Reagent Requirements</b>	Keep between 10 - 30 °C (50 - 86 °F)
<b>Sample Pressure</b>	By external overflow vessel
<b>Sample Flow Rate</b>	100 - 300 mL/min
<b>Sample Temperature</b>	5 - 30 °C (41 - 86 °F)
<b>Sample Quality</b>	Maximum particle size 100 $\mu\text{m}$ , < 0.1 g/L; Turbidity < 50 NTU
<b>Power</b>	100 - 240 VAC, 50/60 Hz Max. power consumption: 120 VA
<b>Instrument Air</b>	Dry and oil free according to ISA-S7.0.01-1996 quality standard for instrument air
<b>Demineralized Water</b>	For rinsing / dilution
<b>Drain</b>	Atmospheric pressure, vented, min. $\varnothing$ 64 mm
<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>Analog 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>	Analyzer cabinet: IP55 / Panel PC: IP65
<b>Material</b>	Hinged part: Thermoform ABS, door: plexiglass Wall section: Galvanized steel, powder coated
<b>Dimensions (H x W x D)</b>	690 mm x 465 mm x 330 mm
<b>Weight</b>	25 kg (55 lbs.)
<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 maximize instrument uptime, ensure data integrity, maintain operational stability, and reduce compliance risk.

## Order Information - Part Number Configurator

Fe(II) 0.01-1 mg/L	EZ1023.99						
Fe(II+III) 0.01-1 mg/L	EZ1024.99	X	X	X	X	X	2
Fe(II) / Fe(II+III) 0.01-1 mg/L	EZ1302.99						
Fe(II) / Fe(II+III) 0.01-1 mg/L, Fe(III) 0.04-1 mg/L	EZ1303.99						
<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 8)		2					
Internal dispenser dilution (max. factor 100)		5					
<b>Power supply</b>							
Standard 100 - 240 VAC, 50/60 Hz			0				
<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	
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	
<i>*Combinations of up to 8x mA + Modbus are available.</i>							
No adaption, standard version							0