EZ1000 Series Online Colorimetric Phosphate Analyzer

Online colorimetric analysis of Phosphate in water

Results you can rely on

EZ1000 Phosphate 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 μg/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 invervention. 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 Phosphate 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
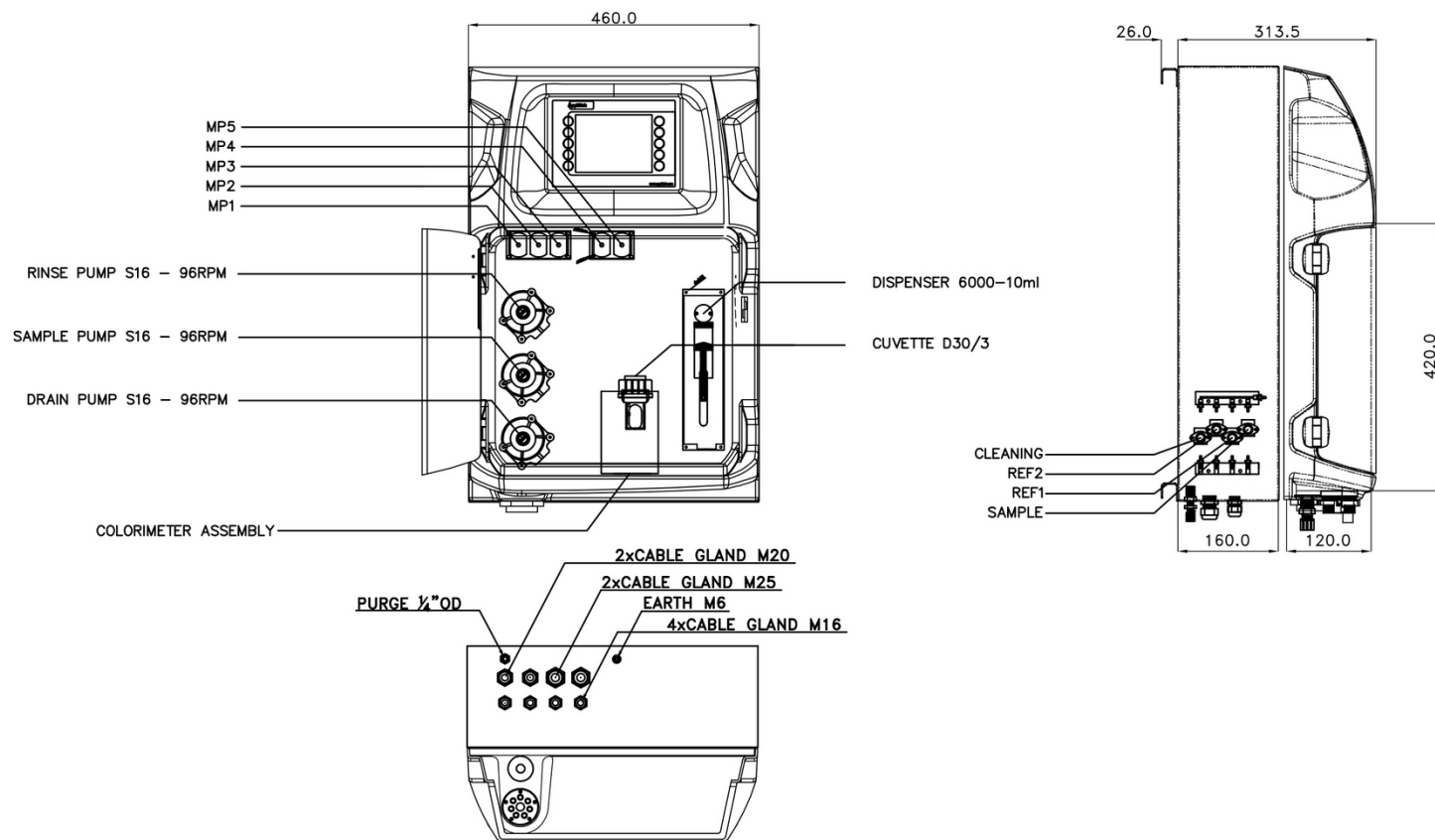- Multiple stream analysis for up to 8 sample streams

There are two models available: The EZ1031 uses the vanadate yellow method, the EZ1032 uses the molybdate blue method.

HACH ®

Be Right™

Technical Data*

Model	EZ1031	EZ1032
Measurement Method	Colorimetric measurement using vanadate yellow method (450 nm)	Molybdate blue method (630 nm), conform with APHA 4500-P (C) and (E)
Range	0.1 - 10 mg/L PO_4-P Optional: 0.02 - 1 mg/L 0.05 - 2.5 mg/L 0.05 - 5 mg/L 0.8 - 40 mg/L (with internal dilution) 1.6 - 80 mg/L (with internal dilution) 10 - 1000 mg/L (with internal dilution)	0.005 - 1 mg/L PO_4-P Optional: 0.001 - 0.1 mg/L 0.0025 - 0.25 mg/L 0.0025 - 0.5 mg/L 0.04 - 4 mg/L (with internal dilution) 0.08 - 8 mg/L (with internal dilution) 0.5 - 100 mg/L (with internal dilution)
Precision	Better than 3% full scale range for standard test solutions	1% full scale range for standard test
Lower Limit of Detection (LOD)	≤ 20 µg/L	≤ 1 µg/L
Interferences	Positive interference is caused by Silica Arsenate if the sample is heated. Negative interferences are caused by Arsenate, Fluoride, Thorium, Bismuth, Sulphide, Thiosulphate, Thiocyanate or excess of Molybdate. Blue color is caused by Ferrous Iron but this does not affect results for Ferrous Iron concentrations < 100 mg/L. If Nitric Acid is used, Chloride interferes from 75 mg/L. Large amounts of color and turbidity interfere. Fats, oil, proteins, surfactants and tar.	Arsenic (V), Chromium (VI), Copper (II) > 10 mg/L, Iron (III) > 10 mg/L, Sulphide > 2 mg/L, Vanadium, Silica > 60 mg/L. Large amounts of color and turbidity interfere. Fats, oil, proteins, surfactants and tar.
Parameter	Phosphate PO_4P, dissolved	
Cycle Time	10 min (dilution + 5 min)	
Automatic cleaning	Yes	
Calibration	Automatic, 2-point; frequency freely programmable	
Validation	Automatic; frequency freely programmable	
Ambient Temperature	10 - 30 °C ± 4 °C deviation (50 - 86 °F ± 7.2 °F deviation)at 5 - 95% relative humidity (non-condensing)	
Reagent Requirements	Keep between 10 - 30 °C (50 - 86 °F)	
Sample Pressure	By external overflow vessel	
Sample Flow Rate	100 - 300 mL/min	
Sample Temperature	5 - 30 °C (41 - 86 °F)	
Sample Quality	Maximum particle size 100 µm, < 0.1 g/L; Turbidity < 50 NTU	
Power	100 - 240 VAC, 50/60 Hz Max. power consumption: 120 VA	
Instrument Air	Dry and oil free according to ISA-S7.0.01-1996 quality standard for instrument air	
Demineralized Water	For rinsing / dilution	
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	
Analog Outputs	Active 4 - 20 mA max. 500 Ohm load, standard 1, max. 8 (option)	
Digital Outputs	Optional: Modbus (TCP/IP, RS485)	
Alarm	1 x malfunctioning, 4 x user-configurable, max. 24 VDC/0.5 A, potential free contacts	
Protection Class	Analyzer cabinet: IP55 / Panel PC: IP65	
Material	Hinged part: Thermoform ABS, door: plexiglass Wall section: Galvanized steel, powder coated	
Dimensions (H x W x D)	690 mm x 465 mm x 330 mm	
Weight	25 kg (55 lbs.)	
Certifications	CE compliant / UL 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

| Vanadate Yellow, 0.1-10 mg/L PO_4-P | EZ1031.99 | X | X | X | X | X | 2 |
Molybdate Blue, 0.005-1 mg/L PO_4-P	EZ1032.99						
Measurement range settings / Dilution options							
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					
Power supply							
Standard 100 - 240 VAC, 50/60 Hz			0				
Number of sample streams							
1 stream				1			
2 streams				2			
3 streams				3			
4 streams				4			
5 streams				5			
6 streams				6			
7 streams				7			
8 streams				8			
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		
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		
Combinations of up to 8x mA + Modbus are available.							
No adaption, standard version						0	

HACH®

Be Right™