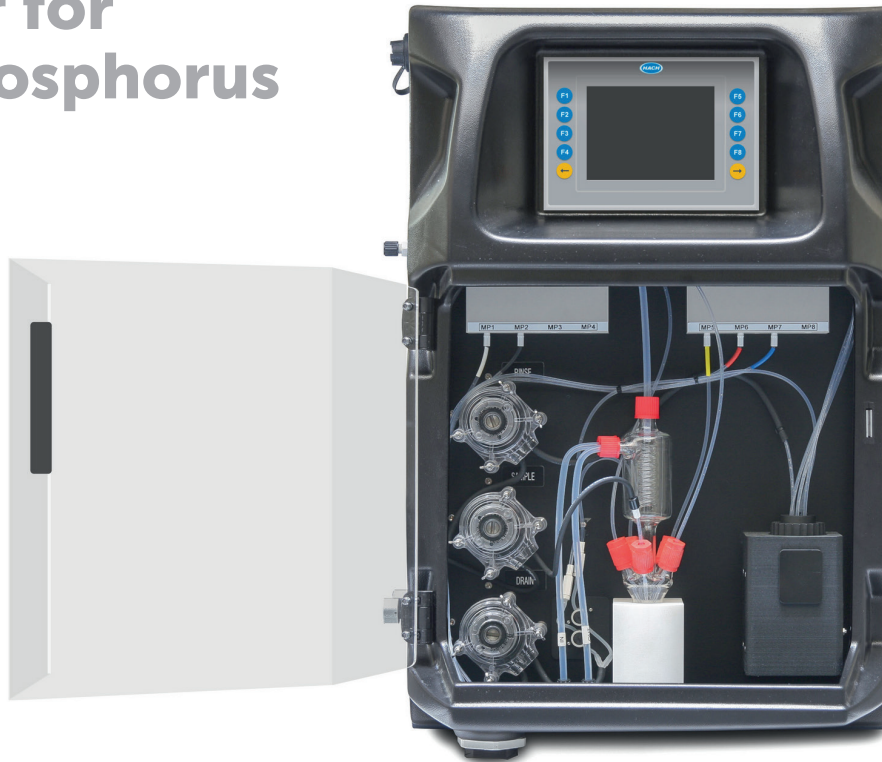


EZ7800 Series Online Colorimetric Analyzer for Total Phosphorus

Applications

- Wastewater
- Surface Water



Online, automatic monitoring of Total Phosphorus (TP) in water

The EZ7800 Series of Online TP Analyzers meet the needs for fast, convenient and reliable monitoring of the regulatory sum parameter Total Phosphorus in municipal and industrial wastewater as well as surface water applications. The EZ7800 Series share similar technology with the EZ7700 Series which monitor Total Nitrogen.

Phosphorus is often synonymous with phosphate but can be present in different forms: orthophosphate (O-phosphate), condensed phosphate (polyphosphate) or organically bonded phosphate. O-phosphate is often the only form that is measured with traditional test kits or even in laboratory, yet the organic form of phosphate can be an important constituent of industrial discharges, often deriving from corrosion control programs or use of fertilisers. In summary, knowing levels of TP can be an important added value to waste water operations.

The EZ7800 Online Total Phosphorus Analyzer allows operators of industrial and municipal water works to monitor and control in a convenient way the total portion of phosphorous, if needed combined with a free phosphate measurement. The analyser's industrial mainframe harnesses a proprietary sample digestion technique combined with seamless operation:

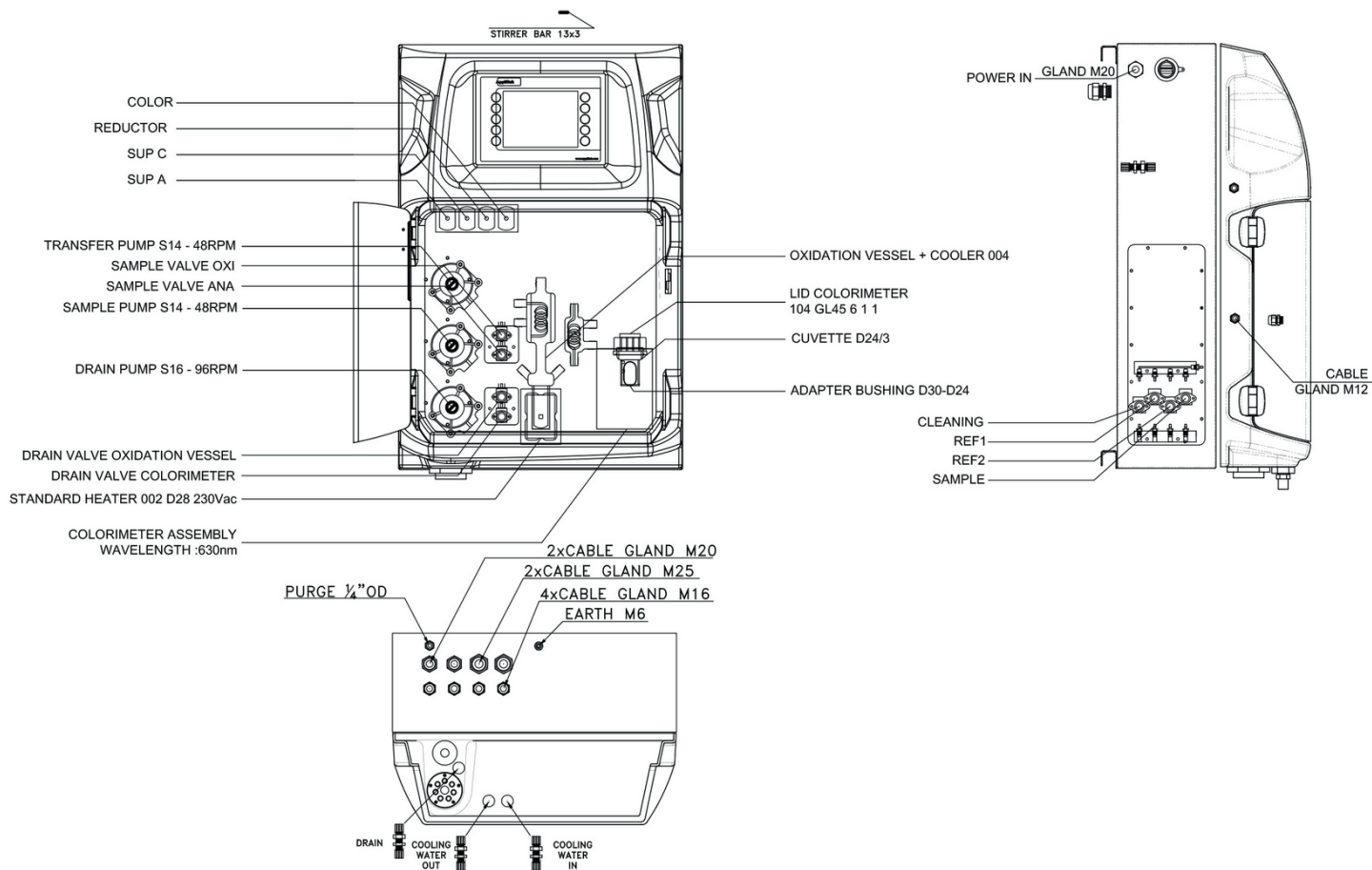
- Full oxidation of all complexed phosphate
- Smart automatic features
- Control and communication via industrial panel PC
- Standard 4 - 20 mA signal output with alarm processing
- Communication supporting Ethernet connectivity to Modbus TCP/IP
- Multiple stream analysis

Technical Data*

Parameter	Total Phosphorus, free PO ₄
Measurement Method	Colorimetric measurement at 630 nm using ascorbic acid reduction and molybdate color solution after persulphate digestion in acidic medium, conform with APHA 4500-P
Range	0.01 - 2 mg/L TP 0.025 - 5 mg/L TP 0.05 - 10 mg/L TP 0.1 - 20 mg/L TP 0.01 - 2 mg/L TP & 0.005 - 1 mg/L PO ₄ -P 0.025 - 5 mg/L TP & 0.005 - 1 mg/L PO ₄ -P
Precision	Better than 2% full scale range for standard test solutions
Lower Limit of Detection (LOD)	≤ 10 µg/L
Interferences	Arsenic (V), Chromium (VI), Copper (II) > 10 mg/L, Iron (III) > 10 mg/L, Sulfide > 2 mg/L, and Vanadium (V), Silica > 60 mg/L. Large amounts of color and turbidity interfere. Fats, oil, proteins, surfactants and tar.
Cycle Time	30 min including digestion of 10 min (standard)
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	10 - 30 °C (50 - 86 °F)
Sample Quality	Maximum particle size 100 µm, < 0.1 g/L; Turbidity < 50 NTU
Power	120 VAC, 50/60 Hz Max. power consumption: 440 VA
Instrument Air	Dry and oil free according to ISA-S7.0.01-1996 quality standard for instrument air
Demineralized Water	For rinsing
Drain	Atmospheric pressure, vented, min. Ø 64 mm
Cooling Water	Flow rate approx. 5 L/h; temperature max. 30 °C; pressure max. 0.5 bar
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 RS232, 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

Total Phosphorus, 0.01-2 mg/L TP	EZ7800.99						
Total Phosphorus, 0.025-5 mg/L TP	EZ7801.99						
Total Phosphorus, 0.05-10 mg/L TP	EZ7802.99	X	X	X	X	X	2
Total Phosphorus, 0.1-20 mg/L TP	EZ7803.99						
Total Phosphorus, 0.01-2 mg/L TP / 0.005-1 mg/L PO ₄ -P	EZ7850.99						
Total Phosphorus, 0.025-5 mg/L TP / 0.005-1 mg/L PO ₄ -P	EU7851.99						

Measurement range settings / Dilution options							
Standard range		0					
Power supply							
230 VAC, 50/60 Hz			A				
120 VAC, 50/60 Hz			B				
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	
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	
No adaption, standard version							0