



EZ7800 Series Online Analyzer for Total Phosphorus and Orthophosphate

Applications

- Wastewater
- Surface Water



The full picture of Phosphorus removal: Total Phosphorus and Orthophosphate

You spend a lot of time looking at your data and your process, so you never come close to any compliance issues while managing your environmental and regulatory goals. When you choose the new EZ Series Total Phosphorus and Orthophosphate analyzer from Hach®, you'll get industry-leading technology with the power to measure both parameters in one analyzer for a full picture of your Phosphorus removal process. Full process insight gives you the confidence to take action.

Stay in control

Monitor your Phosphorus removal process with the reliable data and insights you need to act quickly and with confidence. Phosphorus discharge permits evolve, and the EZ Series Total Phosphorus and Orthophosphate analyzer helps you quickly and accurately get both measurements to ensure permit compliance.

See the total picture

Be confident in your process. You employ biological treatment and/or chemical precipitation to remove Phosphate, but the ratio of effluent TP vs. ortho-PO₄ may vary throughout the day. The new TP/PO₄ analyzer will get you actionable data for both parameters with one device. Continuous monitoring will enable you to detect trends. You'll always see both forms of Phosphorus in your water.

This isn't simple, but we'll help you simplify

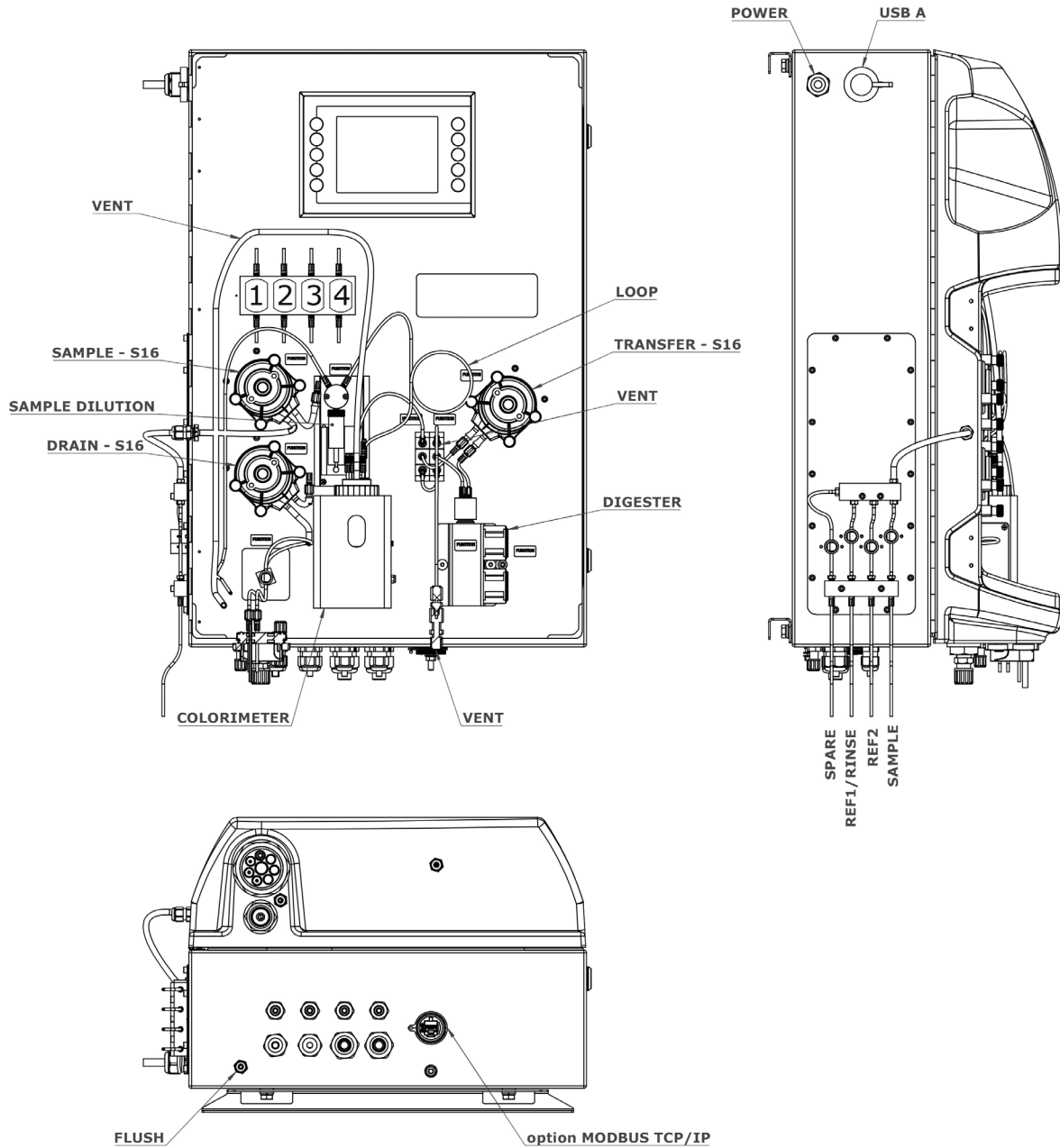
Sampling for lab analysis can be time-consuming, costly, and incurs a delay, whereas continuous monitoring helps you to understand the process conditions much faster. The new combined analyser will make your day easier with features that help you save hands-on time. Cooling water is no longer needed. You'll enjoy the autocalibration, self-cleaning and automatic validation this analyzer provides. Ready to use reagents and the unparalleled Hach service and support are there to help you optimize your work.

Technical Data*

Parameter	Total Phosphorus (TP) and/or Orthophosphate (PO ₄ -P)
Measurement Method	Colorimetric measurement at 700 nm using ascorbic acid reduction and molybdate color solution after persulfate digestion in acidic medium, conform with APHA 4500-P
Range	EZ782x: Starting from 0.005 - 1 mg/L TP up to 0.5 - 50 mg/L TP (see page 4) EZ786x: Starting from 0.005 - 1 mg/L TP/PO ₄ -P up to 0.5 - 50 mg/L TP/PO ₄ -P (see page 4)
Precision	Better than 2% full scale range for standard test solutions
Lower Limit of Detection (LOD)	≤ 0.005 mg/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 iron and turbidity interfere. Fats, oil, proteins, surfactants and tar.
Cycle Time	Standard measurement cycle time for TP or both TP & Orthophosphate: 30 minutes
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	230 VAC, 50/60 Hz 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 / 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: IP44 / 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 / 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

Total Phosphorus, 0.005-1 mg/L TP	EZ7821.99						
Total Phosphorus, 0.01-2 mg/L TP	EZ7822.99						
Total Phosphorus, 0.025-5 mg/L TP	EZ7823.99						
Total Phosphorus, 0.05-10 mg/L TP	EZ7824.99						
Total Phosphorus, 0.1-20 mg/L TP	EZ7825.99						
Total Phosphorus, 0.5-50 mg/L TP	EZ7826.99						
Total Phosphorus/Orthophosphate, 0.005-1 mg/L TP/PO ₄ -P	EZ7861.99	X	X	X	X	X	2
Total Phosphorus/Orthophosphate, 0.010-2 mg/L TP/PO ₄ -P	EZ7862.99						
Total Phosphorus/Orthophosphate, 0.025-5 mg/L TP/PO ₄ -P	EZ7863.99						
Total Phosphorus/Orthophosphate, 0.05-10 mg/L TP/PO ₄ -P	EZ7864.99						
Total Phosphorus/Orthophosphate, 0.10-20 mg/L TP/PO ₄ -P	EZ7865.99						
Total Phosphorus/Orthophosphate, 0.50-50 mg/L TP/PO ₄ -P	EZ7866.99						

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

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

Homogenization

1

