

Orthophosphate Monitoring ChemScan® mini oP Technical Specification¹

FUNCTIONS AND OUTPUTS

Parameter	Orthophosphate - High Range or Low Range (See below)
Measurement Principle	Optical Absorbance
Detector	Photodiode
Spectral Range	400 nm
Calibration Technique	Factory calibrated for VMO reagent-based absorbance
Number of Parameters	One – Orthophosphate (See UV- Series ChemScan Analyzers for multiple parameter
Data Communications	Isolated 4-20 mA Analog (2 outputs available), RS-232
Data Log	10,000 Values Time / Date Stamped
Auto Zeroing	Yes (Standard)
Auto Cleaning	Yes (Standard)
Analyzer Sample Pump	No – Pressurized sample required – See below
Reagent Addition	Yes (Standard), Direct Reagent Injection
Number of Sample Lines	One (See UV- Series ChemScan Analyzers if multiple sample lines are required)

PERFORMANCE SPECIFICATIONS²

Reading Interval	Low Range 5 to 9999 minutes, High Range 10- 9999 minutes
Response Time	5 minutes minimum
Range - Method 1003	Orthophosphate (OPO4-P) Low Range 0.03 - 3.0 mg/L
Range - Method 1004	Orthophosphate (OPO4-P) High Range 0.1 – 6.0 mg/L
Range - Method 1005	Orthophosphate (PO4) Low Range 0.1 - 9.0 mg/L
Range - Method 1006	Orthophosphate (PO4) High Range 0.3 - 18.0 mg/L
Accuracy	2% of value or 2x detection limit (whichever is greater)
Precision	Less than 0.5% of Range
Zero Drift	Less than 0.5% of Range (with Auto Zero)

SAMPLE PARAMETERS

Sample Pressure	Pressurized Sample Line Required Regulated to 15-70 kPa (2-10 psi), (Sample extraction accessory available – Pump and Sample Circulation Loop Assembly) 0.5 to 5.0 l/min. 1.5 L flush per sample (0.13 to 1.32 gpm – 0.4 gallon flush)
Sample Flow	None (For samples meeting turbidity and solids requirements)
Filtration Requirement	#20 Mesh - Openings of 0.7 mm (0.03 inches) provided
Strainer Requirement	1 ^o - 60°C (34 – 140° F)
Sample Temperature	0 - 60 NTU (Standard)
Sample Turbidity	0 - 150 mg/l TSS
Sample Suspended Solids	

MAINTENANCE

Reagent Replacement	As Required (4 weeks typical)
Cleaning Solution Refill	As Required (4 weeks typical)
Peristaltic Mixing Pump Head	Replace after six months of operation
Peristaltic Mixing Pump Full Assembly	Replace after twelve months of operation
Peristaltic Zeroing/Cleaning Pump Head	Replace after two years of operation

INSTRUMENT SPECIFICATIONS

Size	66 cm tall x 24 cm wide x 18 cm deep (26" tall x 9.5" wide x 7" deep)
Weight	12.25 kg (27 lbs)
Mounting	Wall (Standard)
Finish Coating / Material	Fiberglass Reinforced Plastic (FRP)
Power	120-240 VAC ±10%, 50-60 Hz, 70 VA
Power Connection	120 VAC US cord / plug set (Standard) (conduit connection optional)
Power Condition	Dedicated Branch Circuit Free From: Surges/Dips > 10%, RF and Switching Noise
Operator Interface	2 x 20 LCD and 4 x 4 Keypad
Sample Cell Material	Polymer Body with Quartz Windows
Sample Connection	¼" FNPT Fitting
Waste Connection	6 foot length of 5/8" ID clear vinyl tube provided (route to open drain)
Cleaning Solution Container	10 Liters (2.5 gallon) Typical location is on the floor below the analyzer
Reagent Container	4 Liter (1 gallon) Wall-mounted, PVC rack (provided)

OPERATING ENVIRONMENT

Enclosure Ratings	Upper Enclosure: NEMA 4X (Fiberglass Reinforced Plastic) Polyester, Acrylic window Lower Enclosure NEMA 4X (Fiberglass Reinforce Plastic) Polyester
Ambient Temperature	5 - 35°C (41 – 95°F)
Relative Humidity	0 - 100% (Non-Condensing) For installation in an indoor or sheltered location

SAFETY APPROVAL

CSA - US

1. Technical Specifications are subject to change without notice.

2. All performance specifications are based on analysis of water standards under factory conditions.

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