

ChemScan® mini oP XR (Extended Range)

ORTHO-PHOSPHATE ANALYZER

Monitor Your Process with Real-time Data and Control Costs!

The new single parameter in-line analyzer family utilizes years of ChemScan experience and proven technology to provide reliable and accurate analysis of water and wastewater. This device has been designed from the ground up to reduce maintenance requirements, includes large ID sample tubing to minimize plugging and only needs quarterly reagent refills.

FEATURES

- Automatic Analysis Utilizing ChemScan's Proven VMO Method
- Low Maintenance
- Proven Sample Handling with Large I.D. Flow Paths
- Simple Field Adjustable Calibration
- Sample Blank to Eliminate Background Interference
- Automatic Cleaning

CAPABILITIES

- Automatic Analysis
- Continuous Output
- Multiple Data Communication Interface Options

APPLICATIONS

- Potable Water
- Wastewater Effluent

BENEFITS

- High Reliability
- Low Capital Cost
- High Accuracy
- Low Operating Cost
- EPA Recognized Analysis Method



SPECIFICATIONS

Range (as P):	0.1 - 20.0 mg/L (Method 1069)
Range (as PO ₄):	0.3 - 60.0 mg/L (Method 1070)
	Additional Ranges Available
Accuracy:	2% of value or 2x detection limit (whichever greater)
Cycle Interval:	5 minutes to 9999 minutes (field programmable)
Environment:	5 - 50 degrees C (method dependent)
Power:	100 - 240 VAC, 50 W
Enclosure:	NEMA 4X
Safety Approval:	CSA-US
Sample Requirements:	0.5 - 1 Liter/analysis, pressure 2 to 10 psi, <150 mg/L TSS, <60 NTU
Maintenance:	Reagent replacement every 3 months, pump kit yearly
Relay Contacts:	1 SPDT Concentration, 1 SPDT Programmable
Serial Interface:	RS-232 Maintenance Port
Analog Output:	Isolated 4-20 mA

ChemScan
An In-Situ Brand

"Monitoring a World of Water"

REPRESENTED BY:
CCLYNCH
& ASSOCIATES
The Water Monitoring People

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Orthophosphate Monitoring ChemScan® mini oP XR Technical Specification¹

FUNCTIONS AND OUTPUTS

Parameter	Orthophosphate (oPO ₄ -P) or (PO ₄)
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	5 to 9999 minutes
Response Time	5 minutes minimum
Range – Method 1069	Orthophosphate (oPO ₄ -P) 0.1 - 20.0 mg/L
Range – Method 1070	Orthophosphate (PO ₄) 0.3 - 60.0 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)
Sample Flow	0.5 to 5.0 l/min. 1.5 L flush per sample (0.13 to 1.32 gpm – 0.4 gallon flush)
Filtration Requirement	None (For samples meeting turbidity and solids requirements)
Strainer Requirement	#20 Mesh - Openings of 0.7 mm (0.03 inches) provided
Sample Temperature	1 ^o - 60 ^o C (34 – 140 ^o F)
Sample Turbidity	0 - 60 NTU (Standard)
Sample Suspended Solids	0 - 150 mg/l TSS

MAINTENANCE

Reagent Replacement	As Required (3 months at 17 minutes Internal - Default)
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)

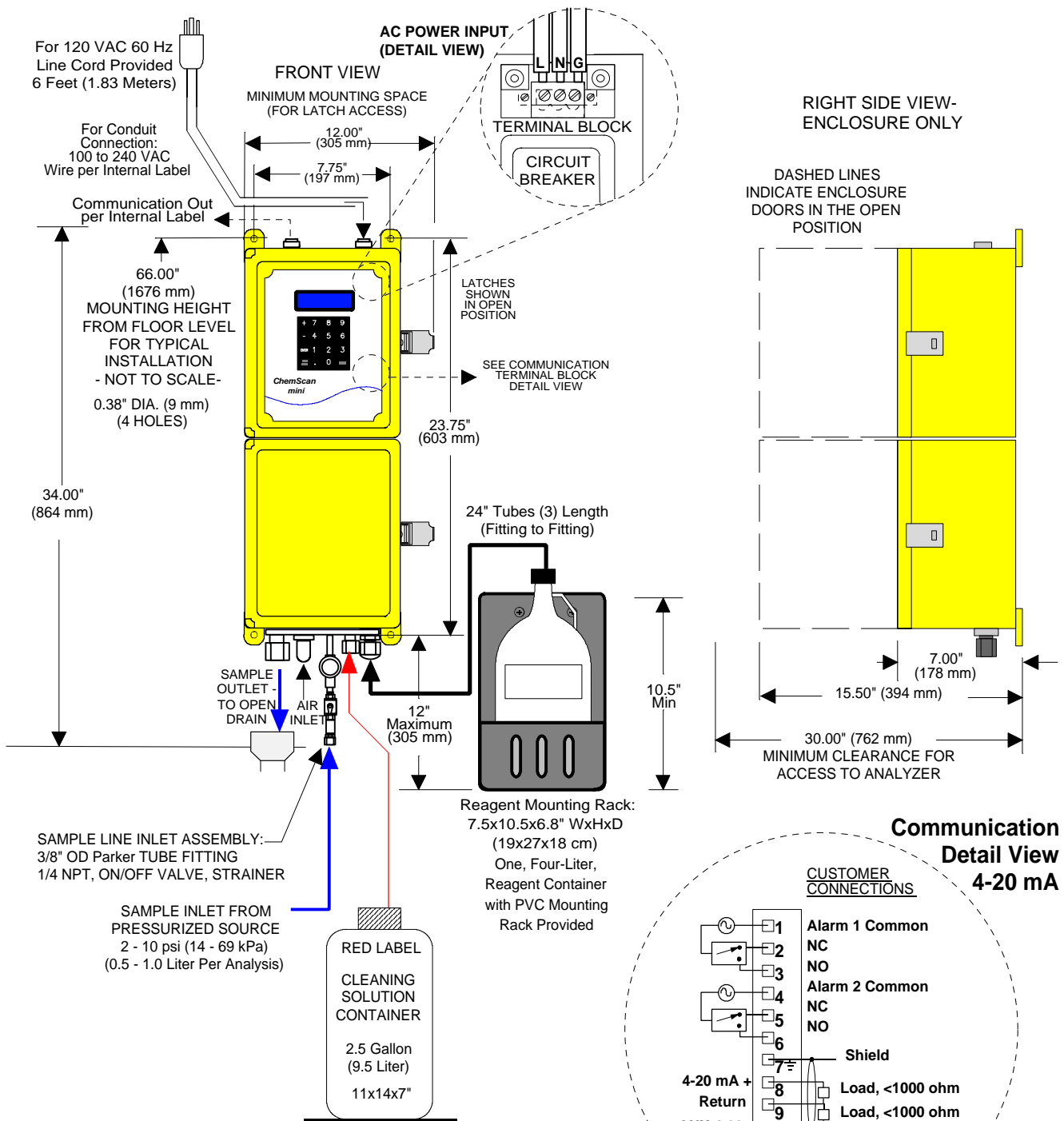
OPERATING ENVIRONMENT

Enclosure Ratings	Upper Enclosure: NEMA 4X (Fiberglass Reinforced Plastic) Polyester, Acrylic window Lower Enclosure NEMA 4X (Fiberglass Reinforce Plastic) Polyester
Ambient Temperature	5 - 35 ^o C (41 – 95 ^o 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.



- **ChemScan mini oP Analyzer for Orthophosphate Monitoring**
 WEIGHT: 27 lbs (12.25 kg)
 DIMENSIONS: 26.0 x 9.50 x 7.0" DEEP, (66 x 24 x 18 cm)
 POWER: 100 - 240 VAC, 50 / 60 Hz, 1 AMP
 ENCLOSURE: NEMA Type 4X Fiberglass Enclosure
 Intended for Installation Indoors

ChemScan mini oP Analyzer Orthophosphate Installation Diagram

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