Simple, Accurate, and Reliable Single-Parameter Analysis

ChemScan mini FreeAm Analyzer

The ChemScan mini FreeAm Analyzer provides operators with reliable process chemistry measurements. The analyzer data ensures proper control of free ammonia concentration in chloramination processes. This reduces the need for frequent manual sampling or laboratory analysis while producing the best water quality.

APPLICATIONS

- Analysis of free ammonia in chloramination processes for potable water, wastewater and industrial water

FEATURES

- Robust design for demanding operating environments
- Blockage-resistant internal sample tubing
- No filtration required on samples with low solids
- Minimal replacement parts for low maintenance
- Sample Blank eliminates electrical/optical drift
- Simple field-adjustable calibration
- Separate enclosures for electronics and sample handling
- LED light source for 10+ years of life
- Self-cleaning to eliminate internal fouling
- Separate external-sample line cleaning available
- Full range of sampling accessories available for all applications

BENEFITS

- Assure process conformance
- Control energy and chemical costs
- Confirm plant compliance in real time
- Improve process performance
- Reduce reagent and maintenance costs

ACCESSORIES

Sample-Extraction Accessory
Provides a continuous flow of fresh sample to the ChemScan mini analyzer. Designed to reject algae and other larger solids.

ChemScan Cartridge Filter Wand
For high-solids applications. No pressurized air, water or chemicals required for cleaning.

ChemScan mini Outdoor Enclosure
A turnkey solution for mounting the ChemScan analyzer and related items.

Submersible Pump
Provides a continuous flow of fresh sample to sample-extraction accessory.

Deck-Mounted, Self-Priming Pump
Provides a continuous flow of fresh sample to sample-extraction accessory (when submersible pump is not applicable).

Discuss with your ChemScan representative the most suitable accessories for your application.

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Mini FreeAm Technical Specifications[1]

FUNCTIONS AND OUTPUTS	
ANALYZER OPERATION	Automated, Continuous Analysis of Water and Wastewater
MEASUREMENT PRINCIPLE	Reagent-Assisted Optical Absorbance with sample zero correction
NUMBER OF PARAMETERS	One
PARAMETER OPTION	Free Ammonia
ALARM OUTPUTS SPDT, 5 AMP, INDIVIDUALLY FUSED	Alarm 1: High/low concentration Alarm 2: Programmable, high/low concentration or operates with sample valve (for external sample pump)
DATA COMMUNICATIONS	4-20 mA (2 outputs)
DATA LOG	Time Date, Date, Concentration, Diagnostic Info, 5,000 events
NUMBER OF SAMPLE LINES	One
REAGENT ADDITION	YES, Direct Reagent Injection
AUTO MAINTENANCE	Auto Clean
CALIBRATION	Factory calibrated for reagent response, field adjustable

SAMPLE PARAMETERS	
SAMPLE PRESSURE	Pressurized sample line required regulated to 2-10 psi (15-70 kPa), (sample conditioning and pressurizing accessories available)
SAMPLE FLOW	0.5 to 1.0 l/min. 1 L Flush Per Sample (0.13 to 0.26 GPM - 0.26 Gallon Flush)
FILTRATION REQUIREMENT	For samples with more than 150 mgl TSS (filter required for WW influent and primary effluent)
STRAINER REQUIREMENT	#20 Mesh - Opening of 0.7 mm (0.027 inches) Provided
SAMPLE TEMPERATURE	10 - 60°C (50 -140°F)
SAMPLE TURBIDITY	60NTU or 150mg/l Suspended Solids

OPERATING ENVIRONMENT	
ENCLOSURE RATINGS	Upper Enclosure: NEMA 4X Fiberglass Reinforced Polyester, Acrylic window Lower Enclosure NEMA 4X Fiberglass Reinforced Polyester
AMBIENT TEMPERATURE	5 - 45°C (41 – 113°F)
RELATIVE HUMIDITY	0 - 100% (Non-Condensing)
INSTALLATION	Indoor or Sheltered (from rain and sun) Location

PERFORMANCE SPECIFICATIONS[2]	
READING INTERVAL	18 to 5999 minutes
DEFAULT READ INTERVAL	22 minutes
RESPONSE TIME	18 minutes minimum
ACCURACY	2% of value or 2x detection limit (whichever is greater) Per EPA SP 846 (The detection limit is the low concentration stated in ranges below)
PRECISION	Less than 0.5% of Range
ZERO DRIFT	Less than 0.5% of Range
RANGES	Method 1036 0.01 - 2.0 mg/L

INSTRUMENT SPECIFICATIONS	
SIZE	66 cm tall x 24 cm wide x 18 cm deep (26 in tall x 9.5 in wide x 7 in deep)
WEIGHT	12.25 kg (27 lbs)
FINISH COATING MATERIAL	Fiberglass Reinforced Polyester (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 CONNECTION	¼ in FNPT Fitting
WASTE CONNECTION	1.83 m length of 15 mm (6 ft length of 5/8 in) ID clear vinyl tube provided (route to open drain)
MOUNTING	Wall (Standard)

MAINTENANCE	
REAGENT REPLACEMENT	As required (1 month typical)
CLEANING SOLUTIONS REFILL	As required (3 months 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

MADE IN USA

Notes:
1. Technical Specifications are subject to change without prior notice.
2. All performance specifications are based on analysis of drinking water standards under factory conditions.

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