



## **FX-1000P-CS *NEW!*** **Combination Chlorine Residual Analyzer w/Integral Controller**

The Foxcroft Model FX-1000P-CS helps to keep you in compliance, control your chlorine residual, and your chemical cost in one compact enclosure. The FX-1000P-CS combines the accuracy and reliability of our FX-1000P amperometric chlorine residual analyzer with the flexible control of our FX-8500 single loop controller.

The Foxcroft model FX-1000P-CS use the most accurate online test method to determine free or total chlorine residual levels, providing instantaneous readings constantly without the delay inherent with the sample and hold test method.

The integral controller allows time-compensated changes, the process interval between chlorine injection and downstream sampling, based on residual feed back from the chlorine analyzer to minimize overshoot of the desired set-point.

### **PRODUCT FEATURES**

- EPA approved online amperometric test method.
- Automatic unattended measurement and control of free or total chlorine residuals.
- Designed for extreme accuracy eliminating spiking, wasted chemicals and process uncertainty.
- Continuous, isolated, 4-20 milliamp output signal suitable for control or monitoring applications.
- Built-in high and low alarm relays.
- Operating range is field-adjustable from 0-0.5 ppm (mg/l) through 0-60 ppm (mg/l)
- High range capabilities to 60 ppm (mg/l) without dilution, or higher with optional dilution system.
- Two-line display shows residual and set-point.
- Controller includes (1) 4-20mA Control Output, (1) auxiliary output; Auxiliary relay alarms - high and low.
- Manual or automatic tuning.
- Available controller options include digital input, additional output and alarms, RS485 or Ethernet communication, and control via remote computer or SCADA system.



## FX-1000P Amperometric Chlorine Analyzer

### CHLORINE ANALYZER MODULE SPECIFICATIONS

#### GENERAL

Type of Measurement:	Amperometric, free or total chlorine
Readout:	Digital, red L.E.D.
Instrument Ranges:	Field adjustable from 0-0.1 to 0-60 PPM (mg/l), factory set for 0-5 PPM
Resolution:	0.001PPM (mg/l) for ranges to 0.5 PPM, or 0.01 PPM (mg/l) for ranges above 0.5 PPM
Sensitivity:	0.001 PPM (mg/l)
Accuracy:	+/- 0.25% of full scale
Repeatability:	0.004 PPM (mg/l) or 1% of full scale, whichever is greater
Stability:	+/- 1% of full scale per month
Speed of Response:	4 seconds from sample entry to display and signal response
Full Scale Response:	1.5 to 2 minutes
Sample Temperature:	32-120o F (0-49o C)
Sample Flow Requirements:	250 ml/min minimum (includes overflow)
Sample Cell Use:	120 ml/min., fixed
Sample pH:	3.0 to 10.0
Sample Alkalinity:	0.05 to 300 PPM (total)
Sample Turbidity:	Less than 250 NTU
Buffer Requirements:	5% Food-Grade Distilled White Vinegar (add Potassium Iodide for total chlorine residual readings)

#### ELECTRICAL

Power Requirements:	120 Volts AC, 60 hz., 30 watts; 220 VAC, 50 hz optional
Alarm Relays:	2 SPDT, contact rating 1 amp @ 120 Volts AC
Signal Output:	Isolated 4-20 milliamps DC, 600 ohms load max.
Electrical Isolation:	to 750 volts RMS

#### MECHANICAL

Instrument Mounting:	Wall Mount
Buffer Mounting:	1 gallon bottle wall bracket, included
Electronics Enclosure:	NEMA 4X
Sample Line:	1/4" x 3/8" flexible PVC tubing, 6 feet included
Drain Lines:	5/8" x 3/4" flexible PVC tubing, two 3 foot pieces included
Overall Dimensions:	12" high x 16" wide x 6" deep (approx. plus mounting tabs)

#### WARRANTY

One year from date of factory shipment.  
Design & specifications subject to change without notice.



## FX-1000P-CS Combination Chlorine Residual Analyzer

### CONTROLLER MODULE SPECIFICATIONS

#### GENERAL

Configuration:	Via keypad and easily understandable prompts with lockout feature. (English, Spanish, German, French, & Italian)
Control Algorithm:	PID-A/ Proportional Band
Tuning:	Manual or Automatic
Engineering Units:	Programmable (typically set to match chlorine analyzer range)
Process Time Interval:	(reset) can be set from 0.02 to 50 minutes (however, best system operation is usually achieved between 1 and 10 minutes of total process time, from injection of chlorine to sample)
Setpoint:	1 or 2, selectable and limitable within input range of chlorine analyzer
Input Filtering:	0 to 120 seconds plus fuzzy logic filtering mode
Proportional Band:	0.1 to 1000% (determines how "tight" and responsive the control is) Adjustable output control ratio of residual control vs. flow control (factory set for 50/50).
Other Settings:	Many other programmable settings and options too numerous to list, are available on request.
Selector Switch:	Flow Control Only, Residual Control Only, Flow and Residual Control Only

#### ELECTRICAL

Flow Signal Input:	4-20mADC, 220 Ohms Impedance
Residual Signal Input:	4-20mADC, 220 Ohms Impedance
Control Output Signal:	Powered 4-20mADC into 750 Ohms maximum
Power Requirements:	120/ 220 Volts AC, 50/60 Hz.



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