



## FX-421-C pH Analyzer with Compound Loop Controller

Control your pH and chemical cost with the Foxcroft FX-421-C pH Analyzer with integral Controller. It can provide unattended automation to your pH adjustment in food processing, potable water, wastewater, and industrial applications.

With its unique design and microelectronic technology the FX-421-S provides labor savings during installation, start-up, and operation.

The ISFET electrode element is faster to respond, allowing tighter control and stability, requiring less frequent calibration.

Modular construction allows the electrode to be safely removed without disrupting power to the electronics.

The electronics provide a 4-20mA output signal as well as a high and low relay. All are sealed in a plastic, weatherproof, corrosion-resistant housing.

The Compound Loop Control Model can adjust pH based on two variables such as ph, flow, or both at the same time.

Manually or automatically tune data parameters via the built-in keypad and display. The setup prompts and menus are easy to follow and are available in five languages.

Available controller options include digital input, additional output and alarms, RS485 or Ethernet communication, control via remote computer or SCADA system.

### FEATURES

#### pH Analyzer Module

- Solid State, non—glass sensor suitable for food processing applications
- Local 4-Digit Display of pH and Temperature. 3-Button Keypad
- Sample or Auto Buffer Recognition, 1 or 2 point calibration
- (1) 4-20mA Control Output, (1) auxiliary output
- Auxiliary Relay Alarms - High and Low
- Integral Mount for Pipe Insertion Standard
- Remote Monitor Can Be Located Up to 2000 ft. Away
- Submersible Sensor Up to 20 Feet Deep Available
- Sensor and Electronics Diagnostics
- Modular Construction Simplifies Electrode Replacement

#### Controller Module

- Provides accurate single or compound loop set-point control
- Accepts two 4-20mA inputs as standard
- 3 control modes: Flow, pH, or Both
- 4-20mA output
- 2-line display shows process variable or set-point and output.
- Auto/Manual output control.
- Non-volatile memory maintains all preset data.
- Two electromechanical alarm relays



**FX-421-C  
pH Analyzer with  
Compound Loop Controller**

**SPECIFICATIONS**

**ph Module**

Display Process Variable pH:	0-14 pH
Displayed Temperature Range	-10°C to +110°C (14o F to 230o F)
Display Accuracy pH:	0.02 pH
Process Temperature	-10°C to +110°C (14o F to 230o F)
Sensor Survivable Temp.	-10°C to +130°C (14o F to 266o F)
Electronics Module Ambient Temp.	-20°C to +85°C (-4o F to 185o F)
Output Type	4-20mA, 600 ohm maximum
Output Scale	0-14 pH
Remote Mounting Sensor (optional)	Submersible to 20 feet
Sensor Distance	25 ft. std (option up to 2000 ft)
Auxiliary Relay Contacts	High Alarm - SPDT 5A @125VAC non-latching Low Alarm - SPDT 5A @125VAC non-latching
Local Display and Buttons	LCD 4-digit, 7-segment
Remote Display	LED 3-digit
Engineering Units	pH, mV, Deg. F and Deg. C
Calibration Options	(pH) 1 point Sample or 2 point Sample
Auto Buffer	Recognition
Remote display	NEMA 4X enclosure
Power	110 or 220 VAC - 50/60 Hz 300mA
Dimensions:	Sensor H 4.84" x W 1.89" x D 1.18"
Dimensions:	Local Display / electronics H 5.00" x W 7.00 x D 2.00"

**Controller Module**

Configuration:	Via keypad with lockout feature.
Control Algorithm:	PID-A/ Proportional Band
Tuning:	Manual or Automatic
Engineering Units:	Programmable (typically process analyzer range)
Process Time Interval:	(reset) can be set from 0.02 to 50 minutes
Set-point:	1 or 2, selectable and limitable within input range of analyzer
Input Filtering:	0 to 120 seconds plus fuzzy logic filtering mode
Proportional Band:	0.1 to 1000%. Adjustable output control ratio
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.
Instrument Mounting:	Wall Mount
Electronics Enclosure:	NEMA 4X
Overall Dimensions:	12" high x 9" wide x 7" deep (approx. plus mounting tabs)
Instrument Mounting:	Wall Mount



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