



Series 1400 Controller

Chlorination or Dechlorination Control

Microprocessor Operation

Back-lit LCD Display

4-20mA Output

Flow and Residual Inputs

Easy Installation



Description

The series 1400 Controller is a state-of-the-art automatic control for regulating the feed of gases or liquids typically used in water and wastewater treatment and other processes. The Series 1400 Controller uses standard 4 - 20 mA control loop inputs from flowmeters and/or residual analyzers, and it automatically adjusts the chemical feed rate based on these inputs. A 4-20 mA dc output corresponding to desired feed rate is a standard feature.

The series 1400 offers five field programmable control modes:

- Manual
- Flow Proportional
- Residual
- Compound Loop
- Feed Forward

The controller incorporates a user friendly, microprocessor based controller that assures unsurpassed accuracy and reliability. The control functions allow for regulation of chemical feed down to 1 % of maximum range in both manual and automatic modes. Mode transition is "stepless", preventing large changes in feed rate.

The controller has a non-volatile memory to retain settings during power failures, and will return to the previously selected operating mode when power is restored. All inputs are made via a 4 button user interface, there are no internal pots to adjust.

The Series 1400 features a 16 character, 2 line, backlit display which allows visual indication of application parameters including dosage ratio, residual, flow rate and feed rate.

The Series 1400 is applicable for 115 volt or 220 volt, 50/60 Hz single phase power. It is furnished for wall or panel mounting.

Features

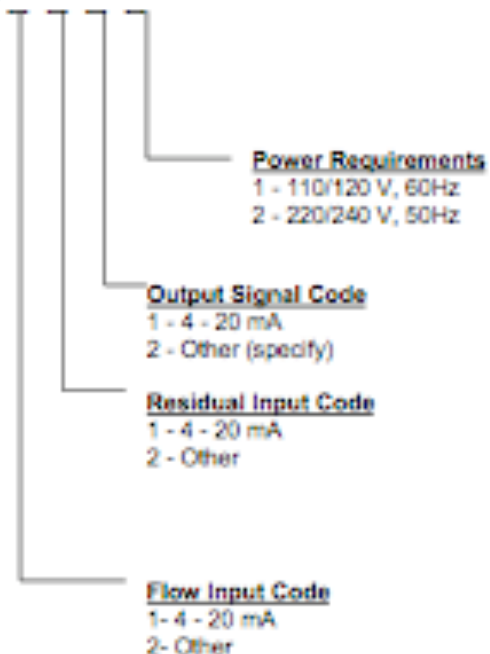
- **Economy** - At last, a high quality but economical controller
- **Construction** - The Series 1400 is constructed of corrosion resistant materials.
- **Reversion** - Provides automatic stepless mode reversion upon loss of input parameter(s).
- **Adjustable** - Fully field adjustable for gain, set point, deviation, dosage, and process time.

Technical Data

[Go To Next Page](#)

Ordering Information

Model 14 -



Accuracy: Within 1% of full scale range.

Dosage Range: 50% to 200%

Analyzer Range: 0 to 20 PPM

Process Lag Time Range: 0 to 999 seconds

Deviation Gain Range: 0 to 500

Operating Temperature: -10 °F to 130 °F

Alarm Outputs: Low Flow, High Deviation, Low Deviation

Alarm Contacts: N/O type, 5A@120/240VAC

Analog Output: 4 -20 mA into 600 Ohm max.

Analog Inputs: 4 - 20mA into 249 Ohms

Power Consumption: 10 watts max.

Weight: 4 lbs max.

Operational Description

A signal from a flowmeter and/or residual analyzer is received by the controller and processed .

The output transitions up or down until a balance results between the input signals and the feed rate. This balance is controlled by the parameters of the operating mode. For example, in flow mode the flow input modified by the dosage determines the output. In residual mode, the residual set point is used, as modified by the gain and process lag time. Compound mode uses both residual set point and flow inputs to determine the control output. Feed-forward mode multiplies residual and flow to determine the output.

The electronic controls allow the operator to select either automatic operation mode as described earlier or select manual feed rate control. In the manual mode the output can be adjusted manually from 0-100% in the event that there is a loss of input signal or a need for manual over-ride. Manual control will not affect automatic settings and the controller can be returned to the previous established mode by simply selecting the appropriate automatic mode position.

Options and Accessories

Scales	Manifolds
Gas Detectors	Isolating Valves
Corporation Stops	Automatic Controls
Gas Feed Systems	Floor and Wall Cabinets