JCS Industries Inc.

Innovative Chemical Feed Solutions

Model 4400 Residual Chlorine Analyzer

The JCS Industries Model 4400 Residual Chlorine Analyzer is an amperometric probe type analyzer that accurately measures both free and total chlorine in potable water. Its primary applications are in municipal and industrial water treatment. It can be used for waste water applications provided that proper filtering is installed in the sample feed line to condition the sample and to reduce suspended and dissolved solids. Digital electronics are incorporated into the controller to simplify operations. The controller provides a 32 character LCD back-lit display that permits operator configured engineering units via a simple four push button interface.

-An optical flow switch in the flow cell will alert operations personnel in the event of sample flow loss

-Integral flow control valve for sample water flow loss

-Both analog and digital user configurable outputs

-User friendly menu and operator interface

-Probe designed for buffer free operation

-RS232

-CL2 residual output signal in 4-20mA format

A LIQUA FLOW PRODUCT

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Technical Specifications Model 4400

Range	5,10 & 20 mg/l
Probe Type	Gold/Copper, Amperometric
Accuracy	+/- 2% of programmed range
Response Time	4 sec to display, 90 sec for residual change
Operating Temperature	35 degrees F to 120 degrees F
Sample Temperature	40 degrees F to 140 degrees F
Sample Flow Requirement	Up to 500 ml/min
Alarms	3, user programmable, adjustable to full scale
Relay Contacts	1.2A @ 110 VAC, or 5.0A @ 220 VAC
Analog Output	Isolated 4-20mA into 500 ohms max
Serial Output	RS 232
Display	Backlit LCD 16 characters X 2 lines
Connection Requirement	1/2" Tubing
Enclosure Protection	IP 66,67
Power Supply	110/220 VAC, 50/60 Hz
Dimensions	11.75"W x 31.0"H x 12.0"D
Weight	13 Lbs.

Characteristics

A liquid sample is delivered to the flow cell through the sample inlet and internal rotameter. The rate of flow is regulated by adjusting the sample inlet valve upstream of the rotameter. An optical sensor is mounted next to the rotameter to alert operations personnel in the event of sample flow loss. The sample then passes over the surface of the probe membrane and a direct current is generated in direct linear proportion to the amount of chlorine present in the liquid. The membrane of the probe is kept clean by the chlorine makeup of the sample itself along with the scouring action of the sample flow. Signal drift and the need for excessive probe recalibration are eliminated by this continuous flow across the membrane. A thermistor compensates for sample temperature variations. The chlorine sensor has a very low dependency on pH value, so it can be used in water with a high pH. The controller is located on the top of the panel, will display either free or total chlorine, depending upon the way it has been programmed. The controller is user friendly and simple to program through a menu driven operator interface. The digital display on the controller is back lit for convenience in dark locations.