

JCS Industries Inc.

Model 4400 Residual Chlorine Analyzer



- **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 driven Operator interface.**
- **Probe designed for buffer free operation**
- **Internal Data Logger**
- **Cl₂ residual output signal in 4-20 mA format.**

The JCS Industries Model 4400 Residual Chlorine Analyzer is an amperometric probe type analyzer that accurately measures both free and total residual chlorine in potable water. Its primary applications are in municipal and industrial water treatment applications. It can be used for wastewater 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.

Technical Specifications Model 4400

Range	➤	0.1 to 20 mg/l
Probe Type	➤	Gold/Copper, Polarog
Accuracy	➤	+/- 2% of programmed range
Response Time	➤	4 sec to display, 90 sec for residual change
Operating Temperature	➤	35° to 120°F
Sample Temperature	➤	40° to 140°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
Data Logger	➤	128K Memory
Display	➤	Backlit LCD, 16 characters X 2 lines
Connection Requirement	➤	0.5" supply
Enclosure Protection	➤	IP 66,67
Power Supply	➤	110/220VAC, 50/60 Hz
Dimensions (Including Mounting Board)	➤	11.75"W x 31.0"H x 12.0"D
Weight	➤	9 lbs (4.1 kg)

Characteristics

A liquid sample is delivered to the flow cell through the sample inlet and internal rotameter. The rate of flow is regulated by adjustment of 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, 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.