



Specification
RP -1000 Residual Chlorine Analyzer

6.0 Scope

This specification describes the RP -1000 Chlorine Residual Analyzer as manufactured by Eagle Microsystems, Inc.

7.0 Description

The analyzer shall continuously analyze a liquid sample using an amperometric-type membrane probe mounted in a transparent plastic flow-through assembly. The indicator/controller shall produce a current output proportional to the free chlorine/total chlorine residual of the sample. The range of the analyzer shall be 0-___ ppm (free) (total) chlorine. The output shall be continuous and suitable for control. Analyzers with delay time for reaction (colorimetric) shall not be acceptable.

8.0 Design

The analyzer shall be wall panel mounted. The sample shall be pumped to the flow-through assembly by a suitably sized sample pump provided by others. The flow-through assembly shall include a rotameter and rate control valve to permit adjustment of sample flow rate to the required rate for optimum operation. It shall also be provided with a loss of flow sensor, which shall actuate an alarm. Automatic temperature compensation shall be provided.

4.0 Sensing Element

The measuring probe shall be of the amperometric- type with a permeable membrane at the measuring interface. The probe signal shall be conveyed to the on-board monitoring/control instrument where it shall be conditioned for display and transmission to remote instrumentation. The output of the monitoring instrument shall be 4-20 mAdc into a maximum of 800 ohms.

5.0 Analyzer Range

The residual analyzer shall be available with probes for free chlorine in ranges 0-0.5 to 0.20 ppm and total chlorine in ranges 0-2 to 0-10 ppm.

6.0 Indicator/Controller

The indicator/controller shall be fully digital with microprocessor-based instructions. Indication of the residual value shall be provided through a 2-line by 16-character alphanumeric, backlit LCD display. The display and electronic components shall be housed in a UL-approved, NEMA 4X enclosure. The display shall be direct reading in mg/l. Where required by the application, the indicator/controller shall be capable of standard PID single loop residual control, or compound loop control, and the output of the instrument shall be a 4-20 mA dc signal suitable for control of a regulating valve or a metering pump. All parameters for setup, calibration and control shall be entered through the front panel mounted 4-pushbutton keypad. All controls and operator interface actions shall be menu driven.

7.0 Alarms

Separate, field adjustable high and low alarm contacts shall be provided. Alarms shall be settable over a range of 0-100% of instrument input. Each alarm set point shall be set through input of actual process values (mg/l) via the front panel mounted keypad, and set point values shall be displayed on the LCD indicator on the face of the unit. Each alarm shall have a corresponding relay contact rated at 1.2 amp @ 120 Vac. A total of four (4) user configurable alarms shall be provided.