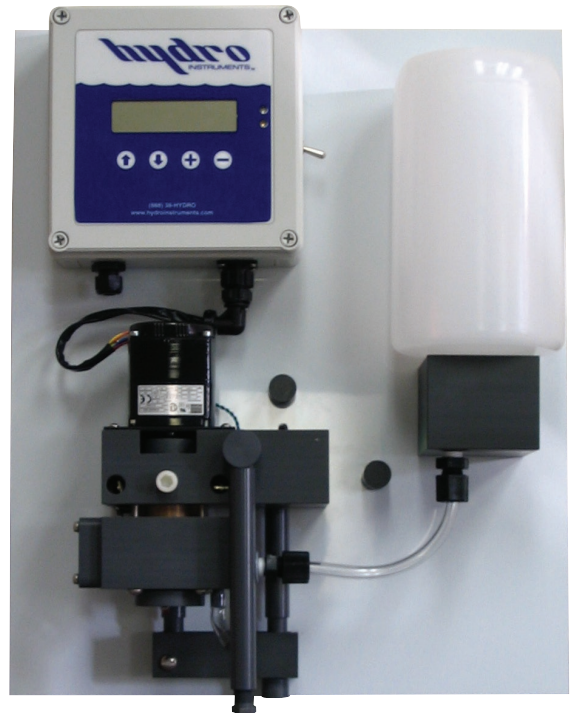




## Series RAH-210 Residual Chlorine Analyzer

- Amperometric Residual Analyzer
- Available with pH & temperature compensation without buffer chemicals for Free Chlorine
- Free Chlorine, Total Chlorine, Chlorine Dioxide, Bromine, and Iodine
- Available with optional complete PID controller
- Alarm Contact Relay Provided for Low Residual, High Residual or Cell Signal Loss
- Adjustable measurement range
- Continuous Measurement/Fast Response
- Continuous sensor cleaning mechanism



### DESCRIPTION:

The Series RAH-210 Analyzer makes use of the Amperometric method to determine residual levels in the sample water. The measurement cell consists of large Gold and Copper electrodes in direct contact with the sample water. The measurement is continuous, not relying on sample and hold methods, thereby allowing for better process control. A continuously driven cleaning system is employed to prevent the build up of impurities on the surface of the electrodes and reduce the need for maintenance.

The Series RAH-210 Free Chlorine Analyzer is available with pH & Temperature compensation performed in software. For applications with consistent pH levels in the process water, the known pH value value can be manually input for software compensated residual analysis. A gravity driven buffer feed system is also available to inject the required chemicals for measuring Total Chlorine, Chlorine Dioxide, Iodine and Bromine. For Free Chlorine measurement, vinegar can be used as the pH buffer reagent. The measurement range is field adjustable through menu driven digital programming.

Set-point and PID controllers are also available from Hydro Instruments.



INSTRUMENTS





# Series RAH-210 Residual Chlorine Analyzer

## Basic Specifications:

### MEASUREMENT

|                         |   |
|-------------------------|---|
| Temperature Range:      | 0 to 50 C (32 to 120 F)                                   |
| Sample Water Flow Rate: | 500 ml/minute (0.13 GPM or 8 gal/hr)                      |
| Sample Pressure:        | 5 psig (0.3 bar) maximum at inlet point.                  |
| Sample Supply:          | Continuous. Electrodes must be kept wet with fresh water. |
| Speed of Response:      | 4 seconds. Full-scale residual change 90 to 120 seconds.  |
| Sample Water:           | Metal ions or corrosion inhibitors effect operation.      |
| Range:                  | 0 to 0.1 to 0 to 20 mg/l (PPM). Field adjustable.         |
| Accuracy:               | 0.003 mg/l or +/-1% of range, whichever is larger.        |
| Sensitivity:            | 0.001 mg/l (1 ppb)  |

### ELECTRICAL

|                     |   |
|---------------------|---|
| Power Consumption:  | 10 W max  |
| Power Requirements: | 120VAC, 50/60 Hz or 240VAC, 50/60 Hz, single phase                            |
| Output Signal:      | 4-20 mA   |
| Relay Contact:      | 10 Amps @ 120 VAC or 24 VDC, resistive load, 5 Amps @ 240 VAC, resistive load |

### REAGENT REQUIREMENTS

#### Measured Chemical Residual

|                                     |
|-------------------------------------|
| Free Chlorine (pH Compensated):     |
| Free Chlorine (not pH Compensated): |
| Total Chlorine:                     |
| Chlorine Dioxide:                   |
| Bromine Chloride:                   |
| Iodine:                             |

#### Reagents Required

|   |
|---|
| None  |
| pH Buffer or CO <sub>2</sub> gas                      |
| pH Buffer or CO <sub>2</sub> gas and Potassium Iodide |
| pH Buffer and Glycine                                 |
| pH Buffer or CO <sub>2</sub> gas and Potassium Iodide |
| pH Buffer or CO <sub>2</sub> gas.                     |



INSTRUMENTS

