

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**
- **Includes complete PID control program (standard)**
- **Provides two analog outputs (selectable between residual, pH and control signals) and one alarm relay**
- **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 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.

This analyzer includes a complete PID control program as a standard feature.

Uraian

Analyzer Series RAH-210 menggunakan metode Amperometrik untuk menentukan tingkat chlorine residu dalam air sampel. Sel pengukuran terdiri dari elektroda emas dan tembaga yang besar yang berhubungan langsung dengan air sample. Pengukurannya terus menerus, tidak bergantung pada sample dan metode yang ada, sehingga memungkinkan kontrol proses menjadi lebih baik. Sistem pembersih yang bekerja secara terus menerus berfungsi untuk mencegah penumpukan kotoran di permukaan elektroda dan mengurangi kebutuhan akan pemeliharaan.

Free Chlorine Analyzer Series RAH-210 tersedia bersama pengimbang pH & Suhu yang dijalankan dengan Software. Untuk pemakaian dengan tingkat pH yang bersifat tetap dalam air proses, nilai pH yang diketahui bisa di input secara manual untuk analisis residu yang dilakukan software. Sistem umpan penyangga yang digerakkan gaya tarik bumi/gravity juga tersedia untuk menyuntikkan zat kimia yang diperlukan untuk mengukur total Chlorine, Chlorine dioksida, Iodine dan Bromine. Untuk pengukuran Chlorine bebas, bisa digunakan cuka sebagai bahan reaksi (reagent) penyangga pH. Rentang pengukuran bisa diatur dilapangan/lokasi melalui program digital yang dikendalikan menu.

Analyzer ini termasuk program kontrol PID yang lengkap sebagai fitur standar.

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	: (2) 4-20 mA
Relay Contact	: 10 Amps @ 120 VAC or 24 VDC, resistive load, 5 Amps @ 240 VAC, resistive load

Reagent Requirements

<u>Measured Chemical Residual</u>	<u>Reagents Required</u>
Free Chlorine (pH Compensated)	: None
Free Chlorine (not pH Compensated)	: pH Buffer or CO ₂ gas
Total Chlorine	: pH Buffer or CO ₂ gas and Potassium Iodide
Chlorine Dioxide	: pH Buffer and Glycine
Bromine Chloride	: pH Buffer or CO ₂ gas and Potassium Iodide
Iodine	: pH Buffer or CO ₂ gas

Ordering Guide Series 210 Residual Analyzer Amperometric Cell Type

Model: RAH-210 - - - - - IS

PH / REAGENT OPTION

1. None
2. Reagent Feeder
3. pH Probe

MEASUREMENT TYPE

1. Free Chlorine (Requires pH buffer or compensation)
2. Total Chlorine (Requires pH buffer and KI reagent)
3. Chlorine Dioxide (Requires pH buffer and Glycerine reagent)
4. Bromine Chloride (Requires pH buffer and Potassium Iodide)
5. Iodine (Requires pH buffer)

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SAMPLE CONTROL (NEEDLE) VALVE

1. Not Included
2. Included

POWER REQUIREMENTS

1. 120V 60Hz
2. 240V 50Hz

MEASUREMENT RANGE (For Factory Pre-setting)

Enter Span Value (i.e., for 0 to 0.5, enter 0,5)

This can be changed in the field

