



CA900 Alkalinity Analyzers



ELECTRO-CHEMICAL DEVICES

Alkalinity Measurement

- **Simple** Easy Installation
User Friendly Menus & Configurations
Touchscreen Interface
Web Enabled Functionality
- **Reliable** Automated Titration Technology
Complete System Non-Metallic Enclosure
Two separate Compartments
(Electronics and Hydraulics Liquids)
Multiple Output Selections
- **Cost Effective** Low Maintenance
Data Logging
Adjust Cycle Times lowers Reagent usage



Description

The CA900 Series Analyzers are a family of on-line sequential sampling analyzers that use various automated analytical technologies to perform an analysis. When configured for alkalinity measurements, titration technology is used for the most cost effective, ease of use and low maintenance method.

The CA900 Alkalinity Analyzers are easy to start up and use, simply connect the sample, waste and reagent lines and then power up the Factory Calibrated analyzer. Wall mounting hardware is standard but an optional bench top stand with reagent holder is also available. Accessing information or customizing an analysis routine are easily accomplished with the simple, user friendly menu structure and touch screen interface. The analyzer can be “web enabled” for remote monitoring and interfacing with personal handheld devices and computers.

The analyzer has two separated enclosures with lockable doors. The Top enclosure, called the ELECTRICAL enclosure, includes the main power supply, the controller PCB assembly and the touchscreen interface. The Bottom enclosure, called the LIQUIDS enclosure, includes all the components involved in the sample collection and analysis: pH sensor, reagent pump, sample pump, and sample reaction cell. Numerous analysis configurations can be easily setup and programmed depending on the specific application for control and/or compliance requirements.

Alkalinity is a measure of the capacity of water to neutralize acids. Alkaline compounds such as bicarbonates, carbonates, and hydroxides remove hydrogen ions and lower the acidity of the water. This is done by combining the Hydrogen ions to make new compounds. Alkalinity is influenced by rocks and soils, salts, certain plant activities, and possible industrial wastewater discharges.

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Total alkalinity is measured by measuring the amount of acid needed to bring the sample to a specified pH endpoint. At this pH, all the alkaline compounds in the sample are “used up”. The result is reported as ppm or milligrams per liter of calcium carbonate (ppm or mg/l CaCO_3).

The CA900 Alkalinity Analyzer calculates alkalinity by accurately dispensing “shots” of a known concentration of titrant into the reaction cell. An accurately prepared sulfuric acid solution is typically used as the titrant. The pH is monitored throughout the analysis cycle by using the included pH sensor, and this is done until the sample reaches the pH endpoint. The CA900 analyzer uses the titrant concentration and the amount dispensed to

calculate the result.

The CA900 Alkalinity Analyzer typically makes a single measurement per analysis cycle. A Standard Program sequence consists of a cleaning cycle, sample acquisition, monitoring of pH, addition of titrant, mixing, calculation of results and data storage. Frequency of analysis between each cycle can easily be configured. Accessing information or customizing an analysis routine are easily accomplished with the simple user friendly menu structure and touch screen interface. 4 different ranges can be configured: 0-50ppm, 50-200ppm, 200-1000ppm, and 0 to >5000ppm. The analyzer comes with four 4-20 analog output, Ethernet digital output, and 4

CA900 Analyzer Specifications:

Method: Titration of Single or Dual endpoints, pH inflection

Measuring range: 0 to >1000, 200 to 1000, 50 to 200, and 0 to 50 ppm or mg/l

Response time: Dependent on the specific titration measurement

Repeatability: +/- 2%

Power supply: 110-220VAC, 50-60 Hz, 80 VA

Mounting: Wall mounting or with optional bench support

Operating temperature: 5-50°C

Cabinet: Non Metallic

Dimensions: 17”L x 32”H x 9”D (43cm x 81cm x 23cm)

Weight: Approx. 30 lbs (14 kg)

Reagent Used: Up to 2

Data Logging: Configurable Data Recording, Storage and Output

Analog output: Four 4-20 mA outputs

Alarms:

4 configurable relays SPDT 15A 250VAC

Sample Temperature: 5 to 70 °C

Inlet sample pressure: Atmospheric

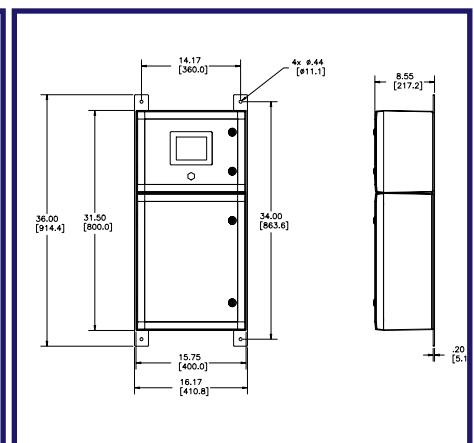
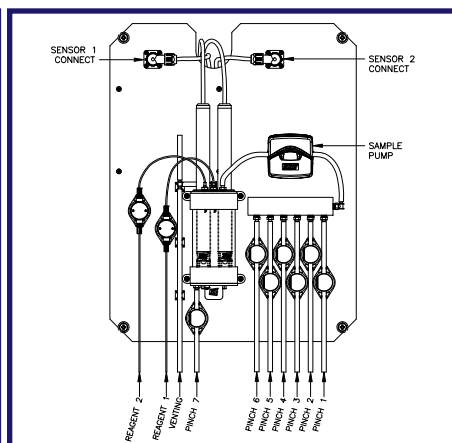
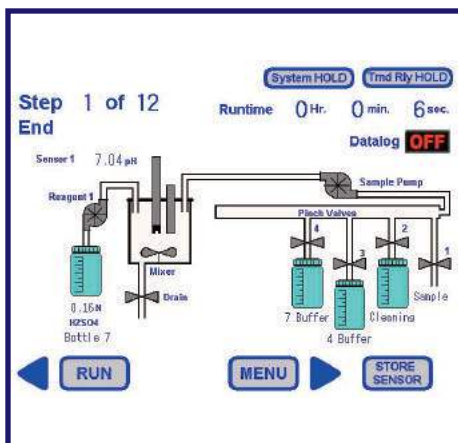
Outlet sample pressure: Atmospheric, waste tubing O.D. 3/8

Sample flow for the fast loop reservoir:

100-500 ml / min

Connections:

To the fast loop reservoir with flexible tubing O.D. 1/4”



Specifications subject to change without notice.

Represented by:

Electro-Chemical Devices

1500 North Kellogg Dr.

Anaheim, California, USA 92807

Phone: +1-714-695-0051

+1-800-729-1333

Fax: +1-714-695-0057

email: sales@ecdi.com

web: www.ecdi.com

