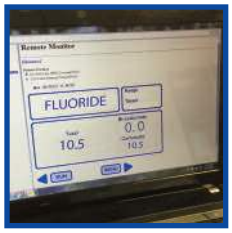
CA900 Fluoride Analyzer

The ECD 6 Point Advantage

ECD ELECTRO -CHEMICAL DEVICES

1. **Compact all in one measurement system,** conditions the sample to measure the Fluoride concentration.
2. **ISE based Fluoride Measurement** provides a wide measurement range, 0 to 200 using economical, easily replaceable electrode cartridges.
3. **Ionic Strength adjusted and compensated measurement** for accurate total Fluoride concentration.
4. **Auto Calibration** at user defined internals.
5. **Reliable Design – Touchscreen Interface**
   User-friendly menus and configurations, two separate compartments (Electronic and Hydralics Liquids).
6. **Cost effective Low Maintenance Cost**
   Low reagent consumption and easily replaceable electrode cartridges.



Description

The ECD CA900 Fluoride Analyzer is an all in one analyzer for the continuous measurement of fluoride concentration in aqueous media. Applications include: drinking water effluent, industrial waste water, semi-conductor manufacturing and waste water discharge compliance.

The CA900 Fluoride Analyzer 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 and optional benchtop stand is also available. Accessing information or customizing an analysis routine are easily accomplished with the simple, user friendly menu structure and large color touch screen interface.

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 touch screen interface. The bottom enclosure, called the LIQUIDS enclosure, includes all the components involved in the sample and reagent flow, mixing, and measurement.

The fluoride measurement is based on ECD industrial grade ion-selective electrode technology. The analyzer mixing chamber contains ECD fluoride ion and pH electrodes for the measurement. The analyzer uses TISAB reagent for an ionic strength adjustment to the sample to be measured, which breaks weak complexes formed with fluoride and certain metals such as aluminum or Iron (+3), to provide the fluoride concentration measurement. Additionally, the analyzer utilizes a pH compensation technique to provide accurate fluoride measurement in varying pH ranges. The CA900 Fluoride Analyzer has a configurable automatic calibration feature utilizing fluoride calibration standards that can be programmed for routine calibration cycles.

The CA900 Fluoride Analyzers is powered by 100 – 230 VAC, provides (4) 4 to 20 mA outputs, (4) configurable relays, serial output and can be web enables for remote access.

The ECD CA900 is easy to start up and maintain. First connect the Sample feed line, reagent lines and Drain line to the analyzer. Mount the sensors in the flow cell. Next connect the outputs, and supply power, a switched 110/220 VAC line. Prime the peristaltic pumps and start the measurement cycle. The touch screen display and 4-20 mA outputs will indicate the fluoride concentration. A digital display indicates the measurement and the 4-20 mA output values are captured in the measurement cycle and displayed until the next measurement cycle. Configurable relays provide remote user alarms and control.

ELECTRO-CHEMICAL DEVICES

CA900 Fluoride Analyzer

Specifications

Principle of Operation
Sequential sampling, Fluoride Selective Electrode, sample conditioned measurement

Measurement Range
0.1 - 200 mg/l (0.1 - 200 ppm)

Temperature Range
0˚ - 50˚C (32˚ - 120˚F) Measuring

Cycle Response Time
3, 6, 12 or 30 minutes, user selectable

Accuracy
± 100 ppb or 5 % of reading, whichever is greater

Repeatability
± 2 % of reading

Operating Conditions
Temperature: 10˚- 50˚C
Humidity: 5 to 95% noncondensing humidity

Calibration Standards
1 ppm Fluoride
10 ppm Fluoride

Reagents
TISAB

Calibration Standards
1 ppm Fluoride
10 ppm Fluoride

Hydraulic Connections
Sample Inlet: 1/8” ID tubing barb fitting
Drain Outlet: 1/4” ID tubing barb Fitting

Power Requirement
100/240 Vac, 50/60 Hz, switch selectable

Data Logging
Configurable Data Recording, Storage, and Output

Analog output
Four 4-20 mA outputs

Alarms
4 configurable relays SPDT 15A 250VAC

Connections
2 x 4-20 mA, Line Neutral and Ground for Power
All connections are to a terminal strip, Access through IP65 1/2” cable glands

Enclosure
Gray hot-molded fiberglass reinforced polyester transparent polycarbonate cover with non-metallic hinges. NEMA 4X, Protection degree IP65

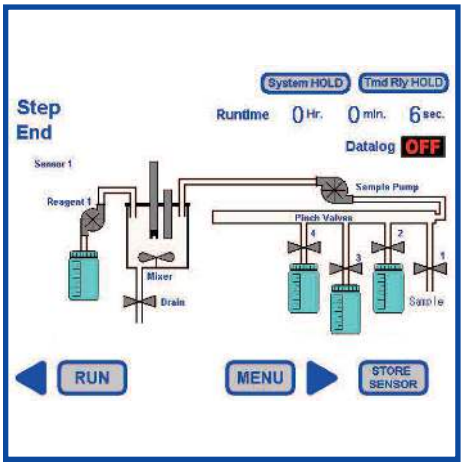
Mounting
Wall mounting or with optional bench support

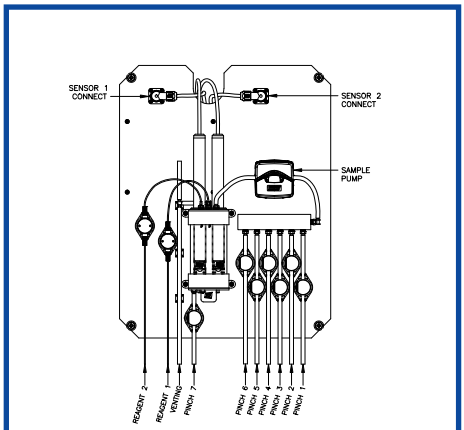
Operating temperature
5-50°C

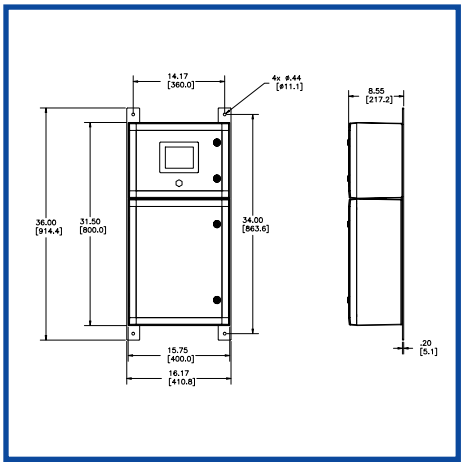
Cabinet
Non Metallic

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

Weight
Approx. 30 lbs (14 kg)







Specifications subject to change without notice

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CERTIFIED ISO9001 QUALITY SYSTEM