CA-6 OnLine Analyzers

ELECTRO-CHEMICAL DEVICES

Colorimetric Analyzers

- **Simple**
  - Easy Installation
  - User Friendly Menu Structure
  - Touchscreen Interface
  - Easy Process Configuration
- **Reliable**
  - Epoxy Powder Coated
  - Rugged Cold Rolled Steel Cabinet
  - Two separate Compartments (Electronics and Hydraulics)
  - Loss of Sample and Low Reagent Alarms
- **Cost Effective**
  - Low Maintenance
  - Adjustable Cycle Time to minimize Reagent usage

Aluminum
Ammonia
Chloride
Chlorine
Chromium VI
Copper
Cyanide
Hardness
Hydrazine
Iron
Manganese
Nickel
Nitrite
Phenoyl
Phosphate
Total Phosphate
Silica
Sulfate
Zinc

Description

The CA-6 Series Analyzers are a family of on-line sequential sampling analyzers that use Colorimetric technology to perform an analysis. The analyzers can be configured to perform most colorimetric analysis that use up to four reagents.

The CA-6 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 benchtop 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 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 and reagent flow, mixing and reaction stages (sampling pump, reagent Micro Pumps and colorimetric reaction cell). Numerous analysis configurations can be programmed, depending on the accessories and the number of micropumps mounted in the Liquids enclosure.

The colorimetric analysis are based on the measurement of color formation in the sample after the addition of reagents. The absorbance of the solution is measured though a Quartz Reaction Cell at a specific wavelength using a long life LED light source and a photometer. The absorbance is related to the sample concentration according to 'Lambert-Beer Law'.

The CA-6 Colorimeters make two measurements during an analysis cycle. The first measurement, the Reference, sets the base line for the raw sample, measuring the color, turbidity and optical characteristics of the cell. The second measurement, the Reading, occurs after the color forming reagents have been added to the sample, mixed and adequate time has past to allow for color formation. The concentration is calculated using the difference between the two absorbance measurements and the stored calibration information in the analyzer.

The CA-6 analyzers typically make a single measurement per analysis cycle, although a user defined calibration or cleaning sequence, an Extra Cycle, can be added to preceed the measurement every “X” number of measurement cycles. A standard program sequence consists of a drain cycle, 3 rinse cycles, sample acquisition, reference measurement, addition of reagents, mixing time, waiting period and measurement. Higher Range samples are accomodated using the optional Dilution Module providing 10:1 or 50:1 dilution ratios.

The CA-6 Analyzer home screen displays the measured parameter, the status or operation being performed, % reagent volumes and Menu choices, RUN, DISPLAY, PROGRAM, SERVICE and HELP. The on screen HELP menu includes information on how to Start Up, Shut Down and Calibrate the CA6. It also defines each of the analyzer’s Functions, the Start/Stop Commands, Maintenance and Troubleshooting. Outputs include two Alarm Relays and a 4-20 mA channel.

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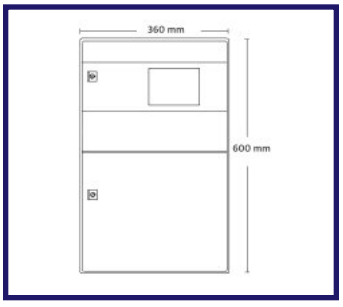
Parameter	Range	Model #	Parameter	Range	Model #
Aluminum	(A) 0-1.00 mg/L (B) 0-10.0 mg/L (C) 0-50.0 mg/L	CA6-01-X X = A,B or C	**Nickel**	(A) 0-3.0 mg/L (B) 0-30.0 mg/L (C) 0-150.0 mg/L	CA6-11-X X = A,B or C
Ammonia	(A) 0-1.0 mg/L (B) 0-10.0 mg/L (C) 0-50.0 mg/L	CA6-02-X X = A,B or C	**Nitrite**	(A) 0-600 µg/L (B) 0-6.0 mg/L (C) 0-30.0 mg/L	CA6-13-X X = A,B or C
Chloride	(A) 0-3.0 mg/L (B) 0-30.0 mg/L (C) 0-150.0 mg/L	CA6-03-X X = A,B or C	**Hydrazine**	(A) 0-500 µg/L (B) 0-5.0 mg/L (C) 0-20.0 mg/L	CA6-14-X X = A,B or C
Chlorine (free-total)	(A) 0-3.0 mg/L (B) 0-30.0 mg/L (C) 0-150.0 mg/L	CA6-04-X X = A,B or C	**Phosphate**	(A) 0-5.0 mg/L (B) 0-50.0 mg/L (C) 0-200 mg/L	CA6-15-X X = A,B or C
Chromium VI	(A) 0-1.0 mg/L (B) 0-10.0 mg/L (C) 0-50.0 mg/L	CA6-05-X X = A,B or C	**Total Phosphorus**	(A) 0-2.0 mg/L (B) 0-20.0 mg/L (C) 0-100 mg/L	CA6-16-X X = A,B or C
Copper	(A) 0-5.0 mg/L (B) 0-50.0 mg/L (C) 0-250.0 mg/L	CA6-06-X X = A,B or C	**Silica**	(A) 0-1.0 mg/L (B) 0-10.0 mg/L (C) 0-50.0 mg/L	CA6-17-X X = A,B or C
Cyanide (free)	(A) 0-200 µg/L (B) 0-2.0 mg/L (C) 0-10.0 mg/L	CA6-07-X X = A,B or C	**Sulfate**	(A) 0-50 mg/L (B) 0-500 mg/L (C) 0-2500 mg/L	CA6-18-X X = A,B or C
Hardness	(A) 0-1.0 mg/L (B) 0-10.0 mg/L (C) 0-50.0 mg/L	CA6-08-X X = A,B or C	**Zinc**	(A) 0-1.0 mg/L (B) 0-20.0 mg/L (C) 0-100 mg/L	CA6-20-X X = A,B or C
Iron	(A) 0-0.1 mg/L (B) 0-1.0 mg/L (C) 0-5.0 mg/L	CA6-09-X X = A,B or C	**Phosphate & Total Phosphorus**	(A) 1.0 - 100 mg/L	CA6-21-A
Manganese	(A) 0-100 µg/L (B) 0-1.0 mg/L (C) 0-5.0 mg/L	CA6-10-X X = A,B or C	**Phenoyl**	(A) 1.0 - 100 mg/L (B) 0 - 200.0 mg/L	CA6-22-X

Ranges (B) and (C) require the addition of the Dilution Module Option

CA-6 Analyzers Specifications:

Method: Photometric differential absorbance or ISE
Measuring range: Refer to the specific parameter for the colorimetric measurement range
Response time: Dependent on the specific colorimetric measurement
Repeatability: +/- 2% on absorbance value with turbidity < 80 NTU
Drift: +/- 2% per month on the absorbance measurement
Power supply: 110-220VAC, 50-60 Hz, 80 VA
Mounting: Wall mounting or with optional bench support
Operating temperature: 5-50°C
Cabinet: Cold rolled steel epoxy powder coated

Dimensions: 380L x 600H x 210D mm (15"x 24"x 8.25"in.)
Weight: Approx. Kg. 17 kg.(37.5 lbs)
Reagent consumption: Dependent on the specific colorimetric measurement, approximately 2500 tests per liter of reagent.
Analog output: 4-20 mA
Alarms: 2 configurable relays
Sample
Inlet sample pressure: Atmospheric
Outlet sample pressure: Atmospheric, waste tubing O.D.⅜
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.

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CERTIFIED ISO9001 QUALITY SYSTEM