



TELEDYNE
ANALYTICAL INSTRUMENTS
A Teledyne Technologies Company



(주)엠씨마스터스
MC Masters
Measurement & Control

Model **FCA-220** Free Chlorine Analyzer

FEATURES

- Panel Mounted System Plumb and Play Design
- Automatic pH Compensation
- Automatic Flow Control
- LXT-220 Analyzer Capability

BENEFITS

- Complete System, Easy Installation, Ready to Use
 - No Expensive Reagents
 - Eliminates Pressure Regulators and Rotameters
 - Dual Measurements
- 24VDC or 110/220 VAC Power
XY Graphical Plot
Optional PID Control Output



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FCA-220 Free Chlorine Analyzer

The FCA-220 is a panel mounted, ready to use Free Chlorine Analyzer. It is designed to monitor free chlorine in drinking water, rinse water, cooling water or other fresh water samples from 0.05 – 20 ppm Cl₂. The FCA-220 features a plug and play design that incorporates a flow control device, a pH sensor, a chlorine sensor and the LXT-220 analyzer/controller conveniently mounted on a PVC panel. Connect the sample and drain lines, connect the power and outputs and it is ready to use. Calibration is accomplished by DPD comparison.

Free chlorine exists in solution as a pH dependent ratio of hypochlorous acid (~100% at pH 5) and hypochlorite ion (~100% at pH 10). The Free Chlorine Sensor measures only the hypochlorous acid component of the free chlorine and the analyzer calculates the balance using either the

measured pH or a user defined fixed value. The use of the pH sensor provides accurate compensation for samples between pH 6 and pH 9.5 and eliminates the need for an expensive sample conditioning system to control the pH of the solution. The LXT-220 allows either parameter to be graphically displayed with user defined ranges allowing easy trend analysis.

Amperometric chlorine sensors are flow sensitive, the minimum required flow by the sensor is 0.5 /sec, above this value the output is virtually flow independent. A “Constant head” Flow control Device (CFD) maintains the optimum flow by the sensor over a wide range of incoming sample flow rates. The minimum flow required for the CFD is 10 gal/hr and the maximum flow is 80 gal/hr with the sample going to drain at atmospheric pressure.

SPECIFICATIONS

Sensor and Flow Train

Sensor

Polarographic, Gold/Silver, PTFE membrane

Measurement Range

Chlorine: 0.05 to 20 ppm
pH: 0 to 14 pH

Operating Temperature

0° C to 50° C (32° F to 122° F)

Min/Max Flow

38 L/hr to 300 L/hr (10 gal/hr to 80 gal/hr)

Wetted Materials

PVC, PP, PVDF, PTFE, Glass, 316 SS

Process Connections

Input 1/4" barb fitting, Drain 3/4" barb fitting

Response Time

T90 in 2 minutes

Electrolyte Life

Up to 12 months

Electronics

Measurements

Chlorine: 0.05 to 20 ppm
pH: 0 to 14 pH
Temperature: 0° C to 100° C (32° F to 212° F)

pH Compensation

pH 5 - 10

Display

2.5" X 1.75" backlit LCD, 4 lines for Text & Graphical

Enclosure

NEMA 4X, LxWxD: 5.7" x 5.7" x 7

Outputs

4-20 mA for Free Chlorine; 800 ohm@24 VDC
Optional PID output and additional 4-20 mA outputs

Input Power

110/220 VAC @ 50/60 Hz
Optional 24 VDC (12 to 50 VDC) @ 0.25A

Alarm Relay Ratings

(2) SPDT 230 VAC/5A or 30 VDC/5A resistive max.
Optionally up to (8) Relays



16830 Chestnut Street
City of Industry, CA 91748, USA
TEL: (626) 934-1500 or (888) 789-8168
FAX: (626) 934-1651
E-MAIL: ask_tai@teledyne.com

www.teledyne-ai.com

Warranty

Instrument is warranted for one year against defects in material or workmanship

NOTE: Specifications and features will vary with application. The above are established and validated during design, but are not to be construed as test criteria for every product. All specifications and features are subject to change without notice.

