



FC80 High Range Free Chlorine Analyzer



ELECTRO-CHEMICAL DEVICES

Features

- Panel Mounted System Plumb and Play Design
- Automatic pH Compensation
- Automatic Flow Control
- T80 Transmitter Capability
- High Range Free Chlorine Measurement for produce washwater and high dose applications

Benefits

- Complete System, Easy Installation, Ready to Use
- No Expensive Reagents
- Eliminates Pressure Regulators and Rotameters
- Dual Measurements, Single parameter or Dual parameter Displays, MODBUS RTU, Spray Cleaner (optional for fouling applications)



Model FC80 - High Range
Free Chlorine Analyzer

Description

The FC80 High Range (HR) is a panel mounted, ready to use Free Chlorine Analyzer. It is designed to monitor high range free chlorine for produce washwater and other high dose free chlorine applications. The analyzer's measurement range is 0.05 – 200 ppm Cl₂ where most applications commonly used concentrations of between 50 to 200 ppm Cl₂. For lower range free and total chlorine applications refer to the standard FC80 Free Chlorine and TC80 Total Chlorine Analyzers.

The FC80 HR features a plug and play design that incorporates a constant head flow control device, a pH sensor, a chlorine sensor and the T80 analyzer/transmitter 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 eliminating the need for expensive sample conditioning systems to control the pH of the solution.

The F80 HR is 110-240 VAC or 24 VDC powered and allows either parameter to be graphically displayed with user defined Line, Bar or Guage style graphs. The standard configuration has (2) 4-20 mA outputs, (3) alarm relays and MODBUS RTU.

Amperometric chlorine sensors are flow sensitive, the minimum required flow by the sensor is 0.5 ft/sec, above this value the output is virtually flow independent. A "Constant head" Flow control Device (CFD) maintains the optimum flow past 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 at atmospheric pressure.

An Auto Clean option includes which a solenoid actuated spray cleaner is also available.

FC80 Free Chlorine Analyzer

Specifications

Sensor and Flow Train

Sensor

Amperometric, Three Electrode, Digital communication

Measurement Range

Chlorine: 0.05 to 200 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 (1/4" FNPT), Drain 3/4" FNPT

Response Time

T90 in 2 minutes

Electrolyte Life

Up to 12 months

F80 Analyzer/Transmitter

Measurements

Chlorine: 000.0 to 999.9 ppb, ppm auto ranging

pH: 0 to 14 pH

Temperature: 0° C to 100° C (32° F to 212° F)

pH Compensation

pH 5 - 10 (accuracy degrades rapidly above 9 pH)

Display

128 x 64 pixels (2.75" x 1.5") LCD, Black on Grey background, Blue on White background with LED backlight

Enclosure

IP65, weatherproof, 1/2 DIN, (L x W x D) 5.7" X 5.7" X 3.5"

Outputs

(1) 4-20 mA for Free Chlorine, set to Sensors Range

(1) 4-20 mA for pH (Optional) , set 0-14 pH

Alarm Relay Ratings

Three (3) SPDT, 1 form C, 250 VAC, 10 Amp

Input Power

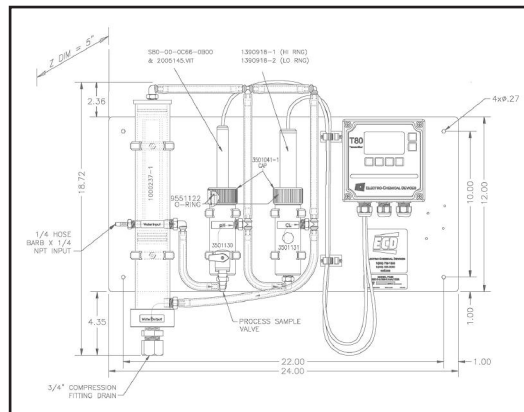
Code -1 24 VDC (18-36 VDC @ 250 mW minimum)

Code -2 100-240 VAC, 50/60 Hz, 4W, protected with 250V, 1A, Slow Blow fuse



Part No.	Model and Product Description
FC80-41-2200	Free Chlorine HR Analyzer (FC80 HR), 0.05-200 ppm, 100-240 VAC
FC80-41-2210	Free Chlorine HR Analyzer (FC80 HR), 0.05-200 ppm, with spray cleaner, 100-240 VAC
FC80-41-1200	Free Chlorine HR Analyzer (FC80 HR), 0.05-200 ppm, 24 VDC
FC80-41-2211	Free Chlorine HR Analyzer (FC80 HR), 0.05-200 ppm, spray cleaner, 100-240 VAC, installed in an enclosure

Part No.	Spare Parts and Accessories Description
1391110-1	Free Chlorine Sensor, High Range, 0.05-200 ppm
1000248-5	Membrane Replacement Kit with electrolyte
1000245-3	Membrane Replacement Kit
S80-00-0C66-0B00	pH Sensor, 316L SS body with Flange, 4' cable
2005145.VIT	Replacement pH Cartridge
3501131	Chlorine Flow Cell
3501130	pH Flow Cell
1000263	Cable assembly, Free Chlorine High Range Sensor



Specifications subject to change without notice.

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