



ECD

System 22 Controller



SOLTECH LTDA

Tecnologías e Ingeniería de Control

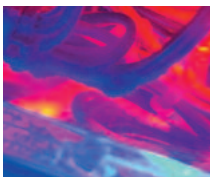
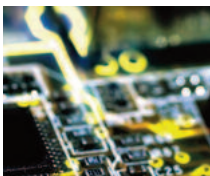
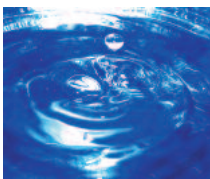


ELECTRO-CHEMICAL DEVICES



Model C22 Controller

pH, ORP, Specific Ion, Dissolved Oxygen,
Conductivity and Resistivity Measurements



Features

- Choice of multiple measurement parameters
- Multi-Channel Capability
- SENTINEL Diagnostics
- Isolated Outputs
- Auto Buffer Calibration
- Dual Channel Comparisons
- Graphical Display
- Multiple Mounting Configurations

Benefits

- Measure pH, ORP, Specific Ion, Dissolved Oxygen, Conductivity, and Resistivity
- Lower cost with multi sensor operation
- Predictive “insitu” sensor diagnostics reduces down time and maintenance
- Protects overall system inputs and outputs
- Ease of Maintenance
- Improved Accuracy and Data
- Allows Viewing of Historical Data
- Pipe, Wall, Handrail, or Panel Installation choices

Description

The Model C22 multi-channel controller/monitor provides simplicity in a powerful package. The Model C22 allows for incredible flexibility in the selection of inputs and outputs. From a simple single input design with one output to a multiple input system with linear outputs, PID control outputs and relays for alarm or control functions.

The Multi-Bus Architecture allows up to four sensor inputs, six outputs and eight relays to be configured into the C22 Controller. The choice of process measurements includes pH, ORP, pION, Dissolved Oxygen, Conductivity including % concentration and Resistivity. External analog inputs and other events can also be integrated into the C22’s measurement parameters.

The Graphical Display mode allows any of the resident parameters, inputs, outputs, control or temperature to be displayed with user defined ranges of sensitivity and time. In addition to the enhanced visualization of the process or control dynamics, the graphical display also facilitates reliable calibrations and diagnostic capabilities.



Multi-Channel and Sensor Options

pH, ORP, pION



**SENTINEL
“prepHault”
Sensor Diagnostics**

Model C22 Controller

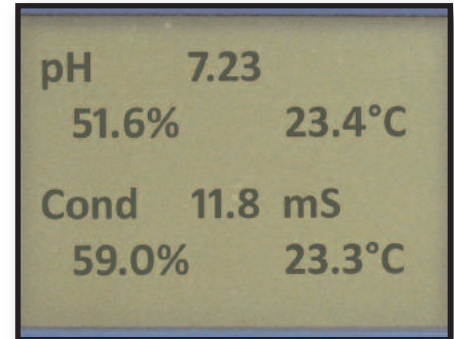
Controllers

The SENTINEL is a “next generation” sensor technology. By utilizing the SENTINEL reference electrode diagnostic the user can visually monitor the reference electrode’s degradation due to depletion of electrolyte or process contamination. The Pre-pHault indication is clearly displayed as a bar graph on the main menu. The bar increases in size as the electrode degrades and begins flashing when the sensor needs replacing. This feature allows the electrode to be replaced before it fails eliminating any unforeseen downtime.

Multi-Channel Comparison of measurements or inputs can improve the accuracy or usability of the measured parameter. Many ions are affected by changes in the pH of a solution, chlorine and fluoride are two commonly measured examples. Accurate measurements are only possible if both parameters are measured and the appropriate compensation algorithms are processed. Differential conductivity measurements are also common in filtration and reverse osmosis applications, with % rejection across the membrane being the desired output. The Model C22’s processing power can easily handle these or other custom measurements.

The **2.5”X 1.75” Backlit LCD Home Menu** displays the measured parameter, the engineering units, the % output and the temperature for each measurement. Three other menus provide access to the C22’s other functions. The Calibration menu allows sensor standardization and the setting of the relay set points. The Diagnostic menu displays sensing parameters. The Configuration menu assigns alarm and control functions, configures outputs and defines the graphical display. The Configuration menu can be password protected.

The **Model C22** is a line powered instrument, 110/220 VAC, and can also be powered with 24 VDC. The polycarbonate NEMA 4X enclosure is the convenient ½ DIN size that can be panel mounted, pipe or handrail mounted. The 4-20 mA outputs are isolated; up to four of the outputs can be current outputs with two as PID control outputs. The field configurable relays are either SPDT 230VAC/5A or 30VDC/5A resistive maximum.



Isolated Outputs

Up to 4 independent
4 to 20 mA signals
and 2 PID outputs

Assignable to:

PV #1 or PV #2
Temperature
SENTINEL Diagnostic
Differential
Average
Ratio



Relays

Up to (8) SPDT relays
with Clocks and Timers
230VAC/5A
or
30VDC/5A

Specifications

Measurement Range

pH: -2 to 14.5 pH
 ORP: -1000 to 1000 mV
 Specific Ion: 1 to 1000 ppb, ppm, ppt
 Dissolved O2: 0 to 40 ppm, mg/l or % saturation
 Conductivity: 0 to 2 Siemens
 Resistivity: 0 to 2 meg-ohms
 0 to 20 meg-ohms

Display

Menu driven 2.5" X 1.75" backlit Supertwist LCD, The main menu displays ; (1) Process Identity, (2) Process Value and Engineering Units, (3) Percent Output, (4) Temperature in °C or °F, for each channel

Operating Temperature

-20° C to 70° C (-4° F to 158° F)

Temperature Compensation

Automatic with RTD, -30°C to 140°C (-22°F to 284°F) Accuracy within +/- 0.1° C from 0° to 100°C (32°F to 212°F).

Outputs

4-20 mA or 20-4 mA, linear and expandable. Up to a maximum of four outputs and two PID outputs. Optional Hart and RS232

Input Power

110/220 VAC @ 50-60Hz, Optional +24 VDC nominal @ 0.25A

Relay Ratings (optional)

Up to (8) SPDT, 230VDC / 5A or 30 VDC/5A resistive maximum.

Max Loop Impedance 800 ohms @

24 VDC for 4-20 mA compliance on primary output; approximately 800 ohms on additional outputs.

Accuracy

+/- 0.10% of full scale

Linearity

+/- 0.05% of full scale

Sensitivity

+/- 0.05% of full scale

Repeatability

+/- 0.1%

Response Time

T90 in 1 second

Noise Rejection 50/60 Hz

Greater than 70 db

Input / Output Isolation

Maximum 300 volts between process input and any 4-20 mA output. No Isolation between inputs on multiple channel instruments.

Control Functions

PID and programable logic functions

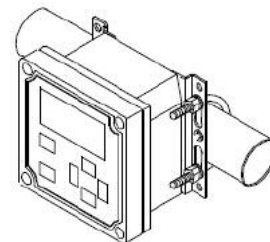
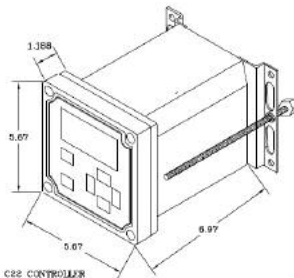
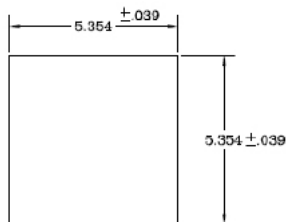
Enclosure

NEMA 4X, weatherproof, ½ DIN, (L x W x D) 5.7" X 5.7" X 7.0" (14.4cm X 14.4cm X 17.8cm)

Shipping Weight

4 lbs (1.85kg)

Mounting Dimensions - (inches)



Specifications subject to change without notice.

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