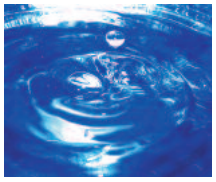
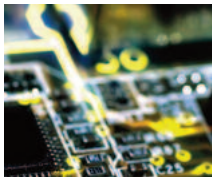
System 22 Controller

SOLTECH LTDA

Tecnologías e Ingeniería de Control

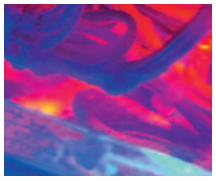
ELECTRO-CHEMICAL DEVICES





Model C22 Controller

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



Model C22 Controller

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

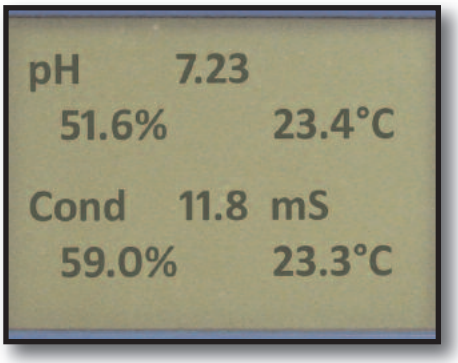
The Model C22 multi-channel controller/monitor provides simplicity in a powerful package. The Model C22 allows for incredible flexibility in the selection of inputs and outputs. From a simple single input design with one output to a multiple input system with linear outputs, PID control outputs and relays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

Model C22 Controller

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.

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

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.

Relays

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

Model C22 Controller

Controllers

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

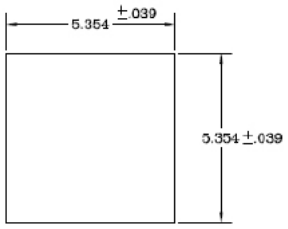
Input / Output Isolation
Maximum 300 volts between process input and any 4-20 mA output. No Isolation between inputs on multiple channel instruments.

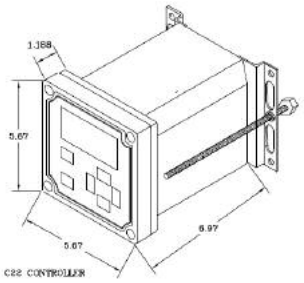
Control Functions
PID and programable logic functions

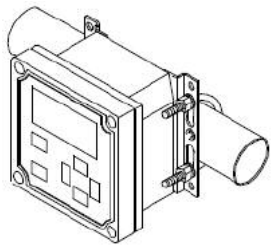
Enclosure
NEMA 4X, weatherproof, ½ DIN, (L x W x D) 5.7" X 5.7" X 7.0" (14.4cm X 14.4cm X 17.8cm)

Shipping Weight
4 lbs (1.85kg)

Mounting Dimensions - (inches)







Specifications subject to change without notice.

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