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Find the *Emerson / Rosemount Analytical 1055-01-10-S1-DM* at our website: *Click HERE*

GE Infrastructure
Water & Process Technologies

Rosemount Solu Comp II – Model 1055

Conductivity, pH / ORP, Amperometric Family of Analyzers

The Solu Comp II analyzers offer the choice of single or dual sensor input with measurement choices of pH/ORP, resistivity/conductivity/TDS, % concentration, ratio conductivity, total and free chlorine, dissolved oxygen, dissolved ozone, flow and temperature. Dual measurement analyzers offer a wide choice of measurement combinations thus reducing the cost per loop and needed panel space.

Field Commission Option:

The Solu Comp II can be ordered with the ability to commission measurements in the field. This added flexibility can greatly reduce the number of spare instruments required for field servicing.

Features:

> Broad selection of measurement choices include pH/ORP, Resistivity/Conductivity, % Concentration, Total and Free Chlorine, Dissolved Oxygen, Dissolved Ozone, Flow, and Temperature.

> Single or dual measurement with dual 4-20 mA outputs.

> Full complement of measurement combinations can be commissioned in the field.

> Three fully programmable alarms.

> Clear, easy-to-read, two-line back-lit display easily customized to read in English, French, German, Italian, Spanish, or Portuguese.

> Choice of enclosures for pipe, surface, and panel mounting meet NEMA 4X/CSA 4 (IP 65) requirements.

Quick Start Programming: Exclusive Quick Start screens appear the first time the Solu Comp II is powered up. Screen prompts direct the user to register the number of sensors, the measurement unit(s) and the language to display. Some measurement specific prompts are also displayed. The measurement loop is ready for use in a matter of minutes.

Menus: Menu screens for calibrating and registering choices are simple and intuitive. Plain language prompts guide the user through the procedures. There are no service codes to enter before gaining access to menus.



Dual Sensor Input and Output: The Solu Comp II accepts single or dual sensor input. The two 4-20 mA outputs can be independently programmed to correspond to any selected measurement or temperature. Output damping and linear or log output might also be field selected.

Alarms: The Solu Comp II has three fully programmable alarm relays that can be assigned to any selected measurement or temperature. Alarms can be configured as high, low, or USP 231. The third relay has the additional choice of fault alarm operation. When selected, a fault alarm will activate the relay when a sensor or analyzer fault occurs.

Enclosure: The panel mount version fits standard ½ DIN panel cutouts, and its shallow depth is ideally suited for easy mounting in Hoffman-type enclosures. A panel mount gasket is included to maintain the weather rating of the panel. Surface/pipe mount enclosure includes self-tapping screws for surface mounting. A pipe mounting accessory kit is available for mounting to a 2-inch pipe.

Display: The two-line, 16-character, back-lit display can be customized to meet user requirements. All operations and descriptive messages can be field selected for English, French, German, Italian, Spanish,

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or Portuguese. Informative screens, which permit data not shown in the regular display, may be seen at the push of a button.

Temperature: Most measurements (except ORP and flow) require temperature compensation. The Solu Comp II will automatically recognize either a Pt100 or Pt1000 RTD, normally built into the sensor. When this RTD is present, the Solu Comp II can be set up to display the temperature in °C or °F as well as set any one or more of the alarms and/or outputs to respond to this sensor input. If two measurements with temperature are present either can be chosen for each alarm and output selected.

Ratio Conductivity:

The dual conductivity Solu Comp II can function as a ratio analyzer or recovery device (% passage or % rejection. Product sensor 2s conductivity reading is always displayed.

Contacting Conductivity:

Measures conductivity in the range of 0 to 20,000 uS/cm. Display choices are conductivity, resistivity, and TDS (total dissolved solids). Three temperature corrections are available; high purity water (dilute sodium chloride), cation conductivity (dilute hydrochloric acid), and adjustable linear temperature coefficient (0 to 5.00%/°C). Temperature correction can be disabled, allowing the analyzer to display raw conductivity.

Performance Specifications

Range	Const.	Accuracy
0.055–9.99 uS/cm	0.01	0.9% of reading or ±0.002 uS/cm
10-50 uS/cm	0.01	±2% of reading
0.055-500 uS/cm	0.1	±2% of reading or ±0.1 uS/cm
0.055-5,000 uS/cm	1.0	±2% of reading or ±1 uS/cm
0-5 mS/cm	1.0	±2% of reading or ±1 mS/cm
0-20 mS/cm	10	±2% of reading or ±0.01 mS/cm

Toroidal Conductivity

When used with Model Series 200 Toroidal Conductivity Sensors, display choices are conductivity, resistivity, and percent concentration. The percent concentration selection includes the choice of four common solutions (0-12% NaOH, 0-15% HCl, and 0-25% or 96-100% H_2SO_4). The conductivity-concentration algorithms for these solutions are fully temperature compensated. For other solutions, a simple to use menu allows the customer to enter his own data. The analyzer accepts as many as five (5) data points and fits either a linear (two points) or a quadratic function (three or more points) to the data. Reference temperature and linear temperature slope may also be adjusted for optimum results.

Accuracy: ±1% of reading and ±0.01 uS/cm

PH/ORP

For use with any standard pH or ORP sensor and all Uniloc sensors and junction boxes with built in diagnostic style preamplifiers. Display choices are pH, ORP, and Redox. The automatic buffer values and their temperature curves for the most common buffer standards available worldwide. The analyzer will recognize the value of the buffer being measured and perform a self-stabilization check on the sensor before completing the calibration. Manual or automatic temperature compensation is keypad selectable. Change in pH due to process temperature can be compensated using a programmable temperature coefficient or isopotential point. Measurement and display of pH glass and reference impedance helps alert the user to sensor maintenance needs.

Accuracy: ±0.01 pH unit

Flow:

For use with most pulse signal flow sensors, the Solu Comp II's user selectable units of measure include flow rates in GPM (gallons per minute) LPM (liters per minute), or m2/hr (cubic meters per hour), and velocity in ft/sec or m/sec. When configured to measure flow, the unit also acts as a totalizer in the chosen unit (gallons, liters, or cubic meters).

Dual flow instruments can be configured as a % recovery device or a flow difference device.

To measure flow, use, a sensor such as the +GF+Signet 515 Rotor-X Flow Sensor.

Free and Total Chlorine:

The Solu Comp II is compatible with the Model 499ACL-01 free chlorine sensor and the Model 499ACL-02 total chlorine sensor. The Model 499ACL-02 sensor **must** be used with the Model SCS921 sample conditioning system. Both sensors are membrane covered amperometric sensors. For more information concerning the use and operation of chlorine amperometric sensors, refer to the sensor product data sheets.

The Solu Comp II fully compensates free and total chlorine readings for changes in membrane permeability caused by temperature changes. A Pt 100 RTD in the sensor measures temperature.

For free chlorine measurements, both automatic and manual pH correction are available. pH correction is necessary because amperometric chlorine sensors measure only hypochlorous acid. To measure free chlorine (hypochlorous acid plus hypochlorite ion) most competing analyzers add acid to the sample. Acid lowers the pH and converts hypochlorite to hypochlorous acid. The Solu Comp II eliminates messy and expensive chemicals by using the measured pH to correct the chlorine sensor signal. If the pH is relatively constant, a fixed pH correction can be used. If the pH is greater than 7 and fluctuates more than about 0.2 units, continuous measurement of pH and automatic pH correction is necessary. Corrections are valid to pH 9.5. For automatic pH correction select code -32 and an appropriate pH sensor.

An input filter allows the user to configure the analyzer for rapid response or low noise. The low noise option is recommended for samples containing less than 0.1 ppm chlorine.

Chlorine solutions are unstable, so chlorine standards are not generally available. Instead, chlorine sensors must be calibrated against the results of a chemical test run on a grab sample.

Dissolved Oxygen:

The Solu Comp II is compatible with the Model 499ADO, 499ATrDO, Hx438, and Gx438 dissolved oxygen sensors. The sensors are membrane-covered amperometric sensors. For more information concerning the use and operation of the amperometric oxygen sensors, refer to the product data sheets.

The Solu Comp II displays dissolved oxygen in ppm, ppb, or percent saturation.

The Solu Comp II fully compensates oxygen readings for changes in membrane permeability caused by temperature changes. In the Model 499ADO and 499ATrDO sensors temperature is measured by a Pt 100 RTD. The Hx438 and Gx438 sensors use a 22kNTC.

Calibration is easy. Simply expose the sensor to water saturated air. Wait until readings are stable and press a few keys. The analyzer measures the temperature and barometric pressure and automatically completes the calibration. If removing the sensor from the process liquid is impractical, the analyzer can be calibrated against a standard instrument. Calibration can be corrected for process salinity.

Other Specifications:

See Rosemount Solu Comp II – Model 1055 Product Data Sheet for additional detailed specifications.

Probes and mounting kits must be ordered separately. Contact Equipment Technical Support for correct selection.

Other configurations are available. Discuss with Equipment Technical Support for details

Ordering Information

Part #	Model	Description
2049896	1055-01-10-22	Single: pH/ORP, 115/230VAC, 56/60Hz, Panel mounting enclosure
2049773	1055-01-11-22	Single: pH/ORP, 115/230VAC, 56/60Hz, Pipe or surface mounted enclosure
2051125	1055-01-11-21	Single: Toroidal conductivity, 115/230VAC, 56/60Hz, Pipe or surface mounted enclosure
2049646	1055-01-11-21-32	Dual: toroidal conductivity & pH/ORP, 115/230VAC, 56/60Hz, Pipe or surface mounted enclosure
2052683	1055-01-10-22-32	Dual: pH/ORP & pH/ORP, 115/230VAC, 56/60Hz, Panel mounting enclosure
2052064	1055-01-11-21-31	Dual: toroidal conductivity, 115/230VAC, 56/60Hz, Pipe or surface mounted enclosure
2049825	1055-01-10-S2-DM	Dual: Field Commissioned (Suite 2 - basic), 115/230VAC, 56/60Hz, Panel mounting enclosure

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