

# SAMPLE SEQUENCER® 5 Sample Sharing Controller

*Time Share Four Analyzers Among Multiple Process Streams* 



## **Features**

- Improves efficiency—sequences up to four (4) analyzers from one interface
- Eliminates errors between analyzers and helps keep reagent costs to a minimum
- Intuitive touchscreen interface and easy-touse widgets (icons) let you manage streams simply and quickly
- MODBUS<sup>®</sup> TCP/IP Ethernet connection lets you interface directly with a network server or laptop computer for greater productivity
- Increased valve current enables greater flexibility when selecting compatible solenoid valves.



Manifold Sample Valve (4 or 8 stream) assures a representative sample. Please reference Bulletin 5.5.20.

## Description

The Sample Sequencer<sup>®</sup> 5 is a microprocessor-based system capable of electronically switching a maximum of eight sample streams between four analyzers. Time-sharing of analyzers lowers both acquisition and ongoing maintenance and reagent costs while providing performance advantages.

Time-sharing samples helps eliminate errors between analyzers and provides a precise comparison of relative values between four or more streams. For example, a single sodium analyzer, alternating between condensate polisher inlet and outlet, can resolve the onset of exhaustion with fractional ppb precision. The onset may otherwise be masked by the normal range of variation with independent analyzers. Colorimetric analyzers are subject to upscale zero drift due to cell fouling. Time-sharing samples permits visual inspection by identifying relative zero and exposing zero shift when both values migrate upscale by equivalent amounts. Relative zero can be re-established without servicing the analyzer.

Sentry's Sample Sequencer 5 is capable of operating in a continuous or batch mode. The analyzer outputs are connected to the Sample Sequencer where various individual stream signal outputs are available including:

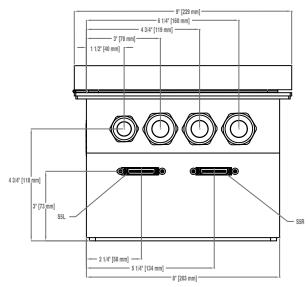
- Digital outputs for point number indication
- Individual stream analog output signals with track and hold
- Digital transmission via TCP/IP Ethernet connection
- Embedded security protocols

With its MODBUS® TCP/IP capability, one can connect easily to a network or PC via an ethernet cable, enabing remote monitoring of one or more sequencers.

Individually programmable sample timers and custom sequence allows the sequencer to conform to your unique sampling requirement. A built-in data logger allows values to be stored on a removeable SD memory card. Any sample points not being used can time-share up to four analyzers.

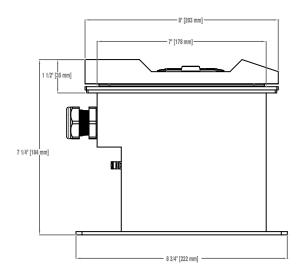
An easy-to-use touchscreen display shows user configurable sample names and analyzer descriptions; analyzer readings displayed in engineering units; and the status of each analysis.

## SAMPLE SEQUENCER<sup>®</sup> 5 TECHNICAL DATA



8

4



### **SPECIFICATIONS**

#### Maximum Number of Samples:

#### Maximum Number of Analyzers:

#### Power:

- Input Voltage: 100 240 VAC
- Frequency Range: 50/60 Hz
  - 1 A / 115 V 0.72 A / 230 V

#### Inputs from Analyzer:

Input Current:

- Four (4) analog inputs: 4-20 mA (100 Ohm load)
- Four (4) digital inputs for end-of-analysis indication
- Four (4) digital inputs for calibration indication
- Four (4) digital inputs for analyzer system alarm indication *Outputs:*
- MODBUS<sup>®</sup> TCP/IP or embedded web communication via Ethernet
- Valve outputs (12 VDC) to control a maximum of eight solenoid valves for sample stream switching capable of handling up to 2A
- Twelve (12) digital outputs for point number indication and replicated Analyzer Alarms
- Current Outputs: Eight (8) outputs (4–20 mA; 550 Ohm load)

### Nominal Accuracy:

- Analog Inputs:
- Analog Outputs:

#### Resolution:

- Analog Inputs: 10 μA/Least Significant Bit
- Analog Outputs: 10 μA/Least Significant Bit
- Data Logging: Virtually unlimited; determined by SD memory card size; a 4GB card is included that can handle up to 100 million logged events

 $\pm$  0.2% full scale

 $\pm$  0.2% full scale

- *User Interface:* 4.3", 65k-color touchscreen display
- Enclosure: NEMA 4X (indoor), IP 65
  - Dimensions:
     7" H x 8" W x 7" D (177.8 mm H x 203.2 mm W x 177.8 mm)

     Mounting:
     Panel or surface
  - Ambient Temperature: -4–113°F (20–45°C); 5–95% relative humidity

Shipping Weight:	15 lbs (6.8 kg)
Agency Approvals:	CE, FCC, SGS



European Authorized Rep: OBELIS Bd. General Wahis 53-1030 Brussels Belgium

#### AWARNING

It is solely the responsibility of the end-user, through its own analysis and testing, to select products and materials suitable for their specific application requirements, ensure they are properly installed, safely applied, properly maintained, and limit their use to their intended purpose. Improper selection, installation, or use may result in personal injury or property damage.



### SENTRY EQUIPMENT CORP

966 Blue Ribbon Circle North Oconomowoc, WI 53066 USA Tel: 262-567-7256 • Fax: 262-567-4523

E-mail: sales@sentry-equip.com

Website: www.sentry-equip.com QUALITY MANAGEMENT SYSTEM CERTIFIED BY DNV ISO 9001:2008 For further information, contact: