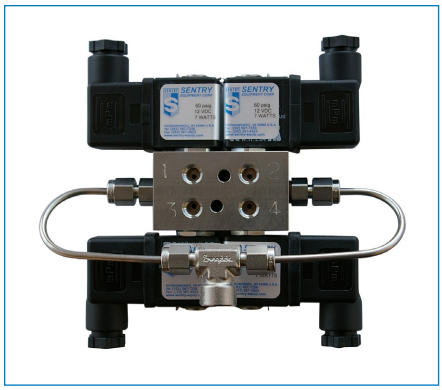
SAMPLE SEQUENCER® IV
SAMPLE SHARING CONTROLLER

Time Share Two Analyzers Among Multiple Process Streams

Features

- Lower reagent costs
- Eliminate errors between analyzers
- Broad sampling applications include:
  - ⇨ Power Plant Cycle Chemistry
  - ⇨ Water and Wastewater
  - ⇨ Industrial Processes



Assure a representative sample with a Manifold Sample Valve (4 or 8 stream). See Bulletin 5.5.20.

Description

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

Time-sharing samples can eliminate possible errors between analyzers and provide a precise comparison of relative values between two 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.

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

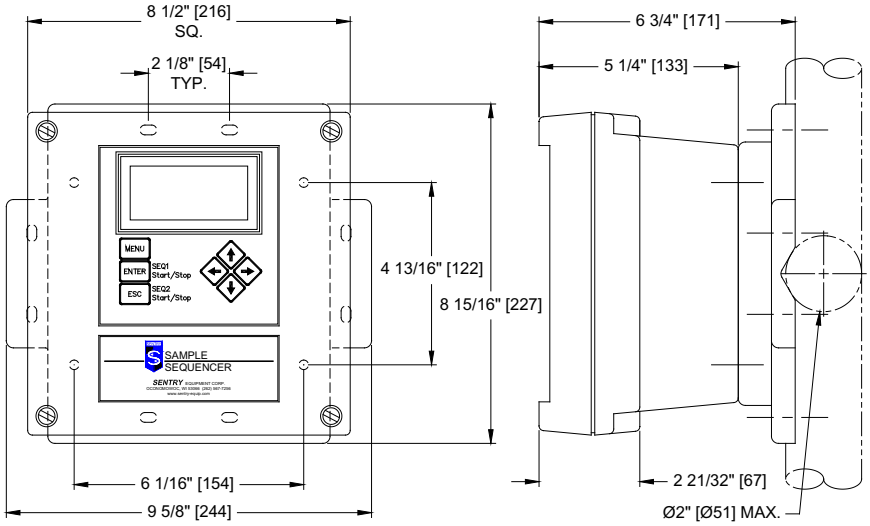
- DPDT relays for point number indication
- Individual stream analog output signals with track and hold
- Digital transmission via MODBUS® and RS-485 serial port

Using the MODBUS® capability, one can connect a PC via twisted pair cable to one or more Sample Sequencer® IV for remote monitoring, control and data acquisition.

Individually programmable sample timers and custom sequence allows the Sample Sequencer® IV to conform to your unique sampling requirement. A built-in data logger allows for the most recent 255 values to be viewed. Remaining sample points not used may be used to time-share a second analyzer.

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

SAMPLE SEQUENCER® IV TECHNICAL DATA



SPECIFICATIONS

Maximum Number of Samples: 8

Maximum Number of Analyzers: 2

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

Inputs from Analyzer:
- Two analog inputs: 0-20 mA or 4-20 mA (59 Ohm load)
- Two digital inputs for end-of-analysis indication
- Two digital inputs for calibration indication
- Two digital inputs for analyzer system alarm indication

Outputs:
- MODBUS® communication port on an RS-485 network.
- Valve outputs (12 VDC) to control a maximum of eight solenoid valves for sample stream switching.
- Ten (10) DPDT relays for point number indication and replicated Analyzer Alarms. Contact ratings:
  - ⇨ Maximum operating voltage: 250 VAC, 220 VDC
  - ⇨ Maximum operating voltage: 130 V (CSA certification)
  - ⇨ Maximum switching capacity: 30 W, 62.5 VA inductive; 60 W, 125 VA resistive
- Current Outputs:
  Eight (8) isolated 0 - 20 or 4 - 20 mA outputs
  - ⇨ Isolation: 550 VAC
  - ⇨ Maximum Load: 600 Ohm

Nominal Accuracy:
- Analog Inputs: ± 0.0015% full scale
- Analog Outputs: ± 0.2% full scale

Resolution:
- Analog Inputs: 0.038 µA/Least Significant Bit
- Analog Outputs: 0.331 µA/Least Significant Bit

Data Logging: 255 records

Keypad: Seven tactile feedback membrane switches.

Display: Four line by 20 character Vacuum Fluorescent Display (VFD)

Enclosure: NEMA 4X (indoor), IP 66

Dimensions: 8.93" H x 9.63" W x 6.76" D
226.8 mm H x 244.6 mm W x 171.7 mm D
(with mounting bracket)

Mounting: Panel, surface or pipe mount

Ambient Temperature: 0-50° C; RH 95% max.
non-condensing at 40° C max.

Shipping Weight: 6 lbs (2.72 kg)

Agency Approvals: CE, CSA

⚠WARNING

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.

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