

FEATURES:

- Controls sequencing of up to 6 input streams to gas or liquid process analyzers. 5 amp Form C relays are provided for switching stream sample valves
- Large LED readout displays analyzer data for the selected stream including stream #, engineering units and value. Small LCD readout provides operator interface and diagnostics
- 3 independent alarm levels per stream with 5 amp Form C relay outputs. *Relay Acknowledge* feature allows silencing of external audible devices during existing alarm conditions
- Standard SPDT common alarm relays for Horn, HIGH, WARN & FAULT. Optional discrete stream alarm relays also available
- Options such as 4-20mA outputs, discrete alarm relays and others are supported via an I²C expansion bus
- *Cal Mode* offers pushbutton zero / span analyzer calibration from the ST-80 front panel. *Authorization Mode* allows locking of critical configuration variables
- Dual Modbus serial ports for simultaneous master / slave operation
- Magnetic keypad available for non-intrusive operation in potentially hazardous locations
- NEMA 4X, Explosion-Proof, surface mount, panel and rack mount packaging options available



NEMA 4X Wall Mount



Panel / Rack Mount

The R. C. Systems Co., Inc. Model ST-80 Six Stream Sequencer is designed to time share a process gas, or liquid analyzer, between as many as 6 sample streams. Integral timers determine how long any stream is being sent to the analyzer. A large LED display, and 3 adjustable alarm levels for each stream are standard. Relay outputs allow control of stream valve manifolds, alarm beacons, horns and other events.

Input signal from the analyzer is typically accepted by the analog input. Six 4-20mA outputs utilizes *track / hold* features to provide discrete output signals for each stream. A seventh 4-20mA output indicates stream ID of the selected stream.

The ST-80 is easy to configure and user friendly. Large LED characters indicate stream #, engineering units and values. A 2 x 16 LCD readout provides operator interface and diagnostic functions. Measurement ranges in engineering units, adjustable alarm set-points, dual serial interfaces and many other

features combine to allow the ST-80 satisfy the needs of many difficult applications. It is often applied when continuous stream analysis is not required and it is desirable to share the analyzer in order to reduce procurement and installation costs.

A RS-485 Modbus slave port allows up to 128 ST-80's to be multidropped onto a single data highway for interrogation by another Modbus master. ST-80's may also be cascaded by connecting one unit's master port to another's slave port.

ST-80 options such as discrete alarm relays per channel, 4-20mA I/O, direct sensor input conditioning and others are added by connecting to the economical I²C expansion bus. Familiar "telephone style" cables and connectors interface to this bus. This method allows versatile system configuration of options satisfying the most unusual user applications.

Nonvolatile memory retains all configuration data indefinitely.

SPECIFICATIONS

ANALOG INPUT

12 bit 4-20mA into 100 ohms input impedance

ANALOG OUTPUTS (OPTIONAL)

Seven 10 bit 4-20mA outputs for each stream and stream ID

STREAM SELECTION RELAYS TO DRIVE VALVES

5 amp 30VDC or 250VAC resistive Form C

COMMON ALARM RELAYS

5 amp 30VDC or 250 VAC resistive Form C

DISCRETE ALARM RELAYS (OPTIONAL)

5 amp 30VDC or 250 VAC resistive Form C

SERIAL PORTS

Master & Slave RS-485 half or full duplex ports equipped with Tx / Rx LED's. Protocol = Modbus® RTU.

DISPLAYS

.6" tall, 12 digit alphanumeric LED readout indicates channel #, polarity, up to 4 digit resolution value and 6 digits of engr units.

2 line by 16 character LCD readout provides operator interface to Channel & System configuration menus.

AMBIENT TEMPERATURE RANGE

-20 - 60 degrees C.

POWER SUPPLY

10 - 30VDC (24VDC nominal) 12 watts max

HOUSING OPTIONS

NEMA 4X fiberglass wall mount (shown below)

1/2 length 19 inch rack / panel mount (shown below)

NEMA 7 explosion-proof wall mount (see instruction manual)

ORDERING INFORMATION

080-00 = Model ST-80PM panel / rack mount housing

080-01 = Model ST-80N4 NEMA 4X wall mount

080-02 = Model ST-80XP NEMA 7 wall mount explosion-proof housing (includes magnetic keypad for non-intrusive control)

AVAILABLE OPTIONS:

10-0144 = Auxiliary Alarm 1, Alarm 2 & Horn relay board adds 5 amp Form C common relays (piggybacks standard common alarm board)

10-0167 = 8 channel 10bit 4-20mA analog output board

10-0146 = 6 channel discrete 5 amp Form C relay board configurable for Alarm 1, Alarm 2 or FAIL with adjacent channel zoning capability

10-0153 = 24VDC 60 watt power supply

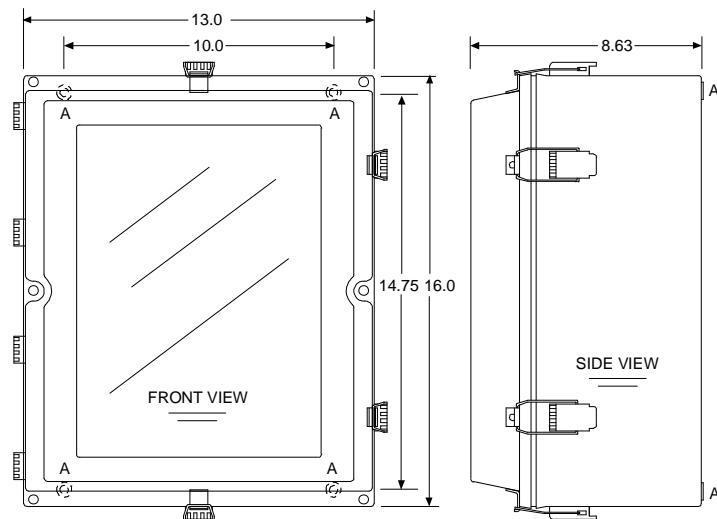
10-0154 = Non-Intrusive magnetic keypad

10-0178 = Expansion NEMA4X enclosure for 8 options

10-0177 = RS-485 to RS-232 Converter

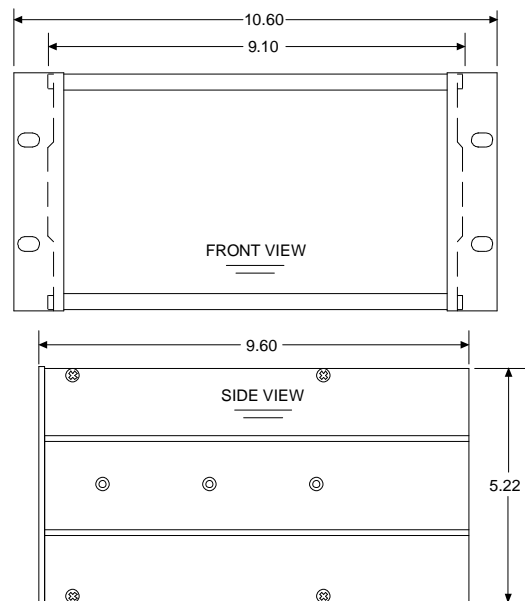
ST-51A = DIN Rail Loop Powered 4-20mA Isolator (isolates 4-20mA inputs or outputs)

Dimensions in Inches



Note: 4 'A' mounting holes are .31 dia.

NEMA 4X WALL MOUNT



Note: Panel cut-out = 5.25 X 9.20

RACK / PANEL MOUNT
(19" RACK SPREADER PLATES &
PANEL MOUNT BEZEL NOT SHOWN)