

Key Features

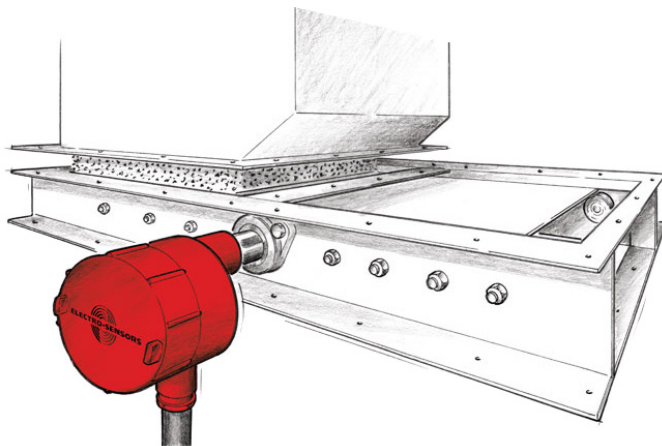
- Monitors a slide-gate's fully-open and fully-closed positions
- Open/closed positions indicated via 2-Relay output
- Configurable measurement range (0-1/4 turn to 0-6 turns)
- Direct shaft attachment (3/8-16 UNC)
- Applications include electrically/manually-driven rack-and-pinion gates and valves
- 115 - 230VAC $\pm 10\%$ (50-60 Hz) powered
- Cast aluminum explosion proof (XP) housing
- UL Listed Class I, Div I (C, D) Class II, Div I (E, F, G)



Description

The SG1000RA is a Slide Gate/Valve position monitor with a 2-Relay output signal. It is also a rugged encoder-based monitoring device that enables the end-user to very accurately monitor a slide-gate's fully-open and fully-closed positions. The SG1000RA has two modes: Calibration Mode, and Normal Operating Mode (see SG1000RA Specifications table for more information). A simple calibration procedure teaches (programs) the SG1000RA the fully-closed (0% open) and fully-open (100% open) gate positions.

Once programmed, the SG1000RA de-energizes one relay when the gate is in the fully-closed position, and de-energizes the other relay when the gate is in the fully-open position. Any gate position between fully-closed and fully-open is represented by both relays being energized.

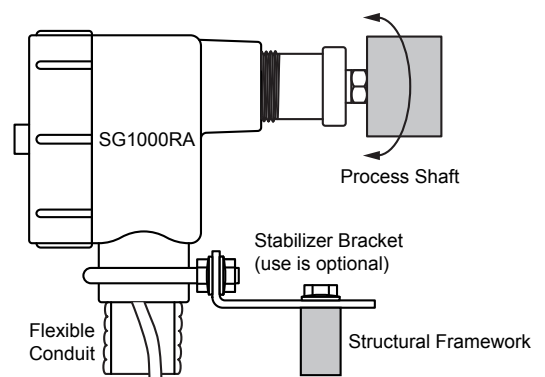


SG1000RA Slide Gate Application

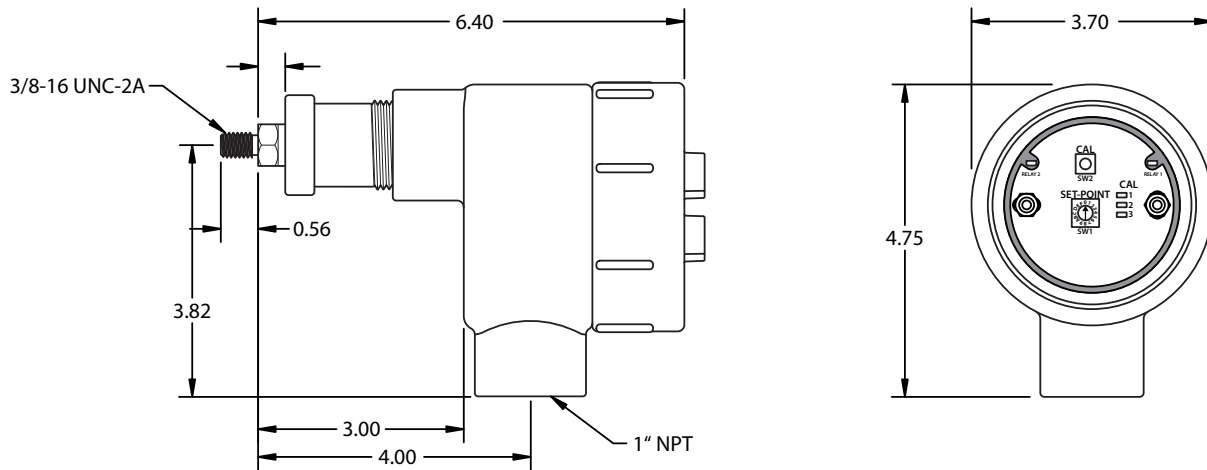
Principle of Operation

The SG1000RA Slide Gate/Valve position monitor mounts directly to the end of the drive shaft of a slide gate or valve and is easily calibrated with a single push-button switch for setting the application's fully-closed/fully-open positions. It can automatically determine clock-wise or counter clock-wise rotation which enables the user to mount the SG1000RA on either end of the application's drive shaft.

As the drive shaft rotates, the SG1000RA indicates if the slide gate is either fully open or fully closed with the use of two dedicated relays. The relay signals can then be sent to a facilities PLC and can be used to control equipment, lights, horns, or other types of facility alarm systems.



SG1000RA Dimensions



SG1000RA Specifications

| Input Power | |
|--|---|
| Voltage | 115 - 230VAC \pm 10% (50-60 Hz) |
| Output | |
| Type | Two Form C Relays, w/programmable end-points |
| General Specifications | |
| Calibration Span | 1/4 turn minimum, 6 turns maximum |
| Resolution | 0.2% to 5% dependent upon calibration span |
| Installation | Center drill and tap the shaft to a depth of 0.625" for a 3/8-16 UNC thread. The use of a stabilizer bracket is recommended, but may not be required in all applications. |
| Operating Temperature | -40 °C to + 65 °C (-40 °F to 149 °F) |
| Material | Cast Aluminum |
| Enclosure Rating | NEMA 4X |
| Operation Modes | |
| Normal Operating Mode: <i>(output relays per gate position)</i> | |
| <ul style="list-style-type: none"> Output: Energize/de-energize two relays as per gate position, for a properly calibrated SG1000R Output: Both relays remain de-energized for an uncalibrated or mis-calibrated SG1000R | |
| Calibration Mode: <i>(calibrate for fully-closed / fully-open gate end-point positions, and select Relay end-point hysteresis)</i> | |
| <ul style="list-style-type: none"> Output: Both relays remain de-energized in this mode | |

| Terminal Block Wiring | | |
|-----------------------|---|---|
| TB1 | Description | |
| 1 | Relay 2 N.C. | De-energizes when Gate at Fully Open End-Point Position |
| 2 | Relay 2 N.O. | |
| 3 | Relay 2 COM | |
| 4 | VAC HOT Line 1 Jumper to Relay 2 COM (Optional) | |
| 5 | VAC 115V or 230V HOT Line 1 | |
| 6 | VAC 115V Neutral or 230V HOT Line 2 | |
| 7 | Relay 1 N.C. | De-energizes when Gate at Fully Closed End-Point Position |
| 8 | Relay 1 N.O. | |
| 9 | Relay 1 COM | |
| 10 | VAC HOT Line 1 Jumper to Relay 1 COM (Optional) | |

Specifications subject to change without notice.

Ordering

All models come with a standard bracket for mounting.

| Model Description | Part Number |
|-----------------------------|-------------|
| SG1000RA Slide Gate Monitor | 800-013000 |

Additional Information

See SG1000RA installation and operating manual for complete details, specifications, and programming instructions.