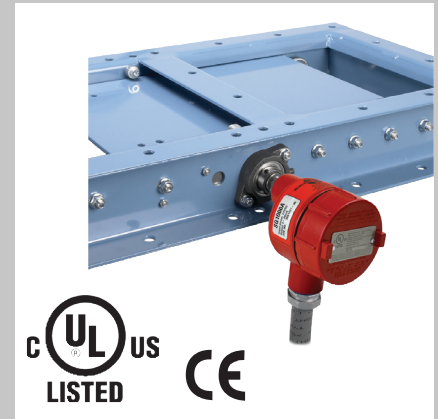


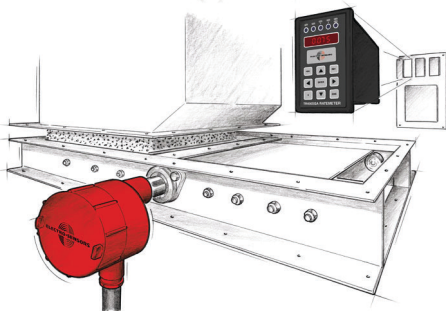
- Measures multi-turn shaft angle (rotational) position
- Translates linear position to 4-20 mA output
- Configurable measurement range (0-1/4 turn to 0-6 turns)
- Direct shaft attachment (3/8-16 UNC)
- Applications include electrically/manually-driven rack-and-pinion gates and valves
- 24 VDC powered
- Cast aluminum explosion proof (XP) housing
- UL Listed Class I, Div I (C, D) Class II, Div I (E, F, G)



## Description

The SG1000A is a Slide Gate/Valve position sensor with a 4-20 mA DC output signal. The SG1000A is a rugged encoder-based sensor that accurately monitors a slide-gate or valve position, allowing for precise product flow and blending operations. Once programmed for the application's fully-closed/fully-open positions, the SG1000A's output is 4 mA for fully-closed and 20 mA for fully-open. Any gate or valve position between the two end-point positions is represented by the output signal being proportionally between 4 and 20 mA.

The SG1000A's 4-20 mA output can be sent to a device such as a PLC or Electro-Sensors optional PM500 Remote Display to provide the operator with immediate at-a-glance information on the position of the gate or valve. The PM500 can be programmed to display from 0 percent at the fully-closed position through 100 percent at the fully-open position. The PM500 offers +24 VDC output power for the SG1000A, two relays, and an isolated 4-20 mA proportional output that can be used to pass the 4-20 mA signal along to another device.

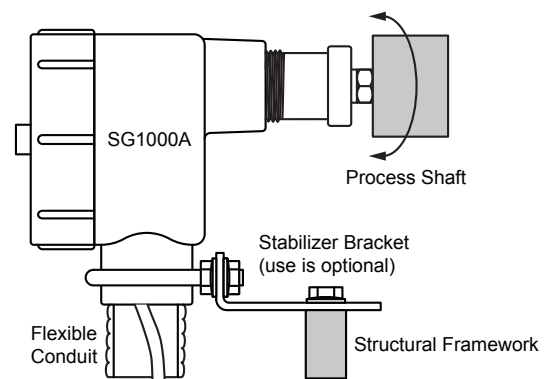


*The SG1000A with optional PM500 remote display*

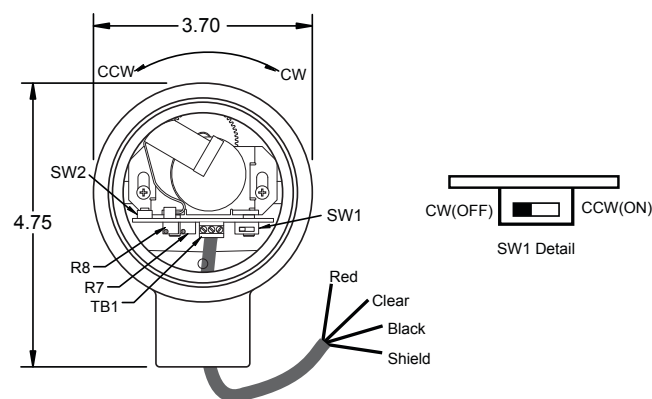
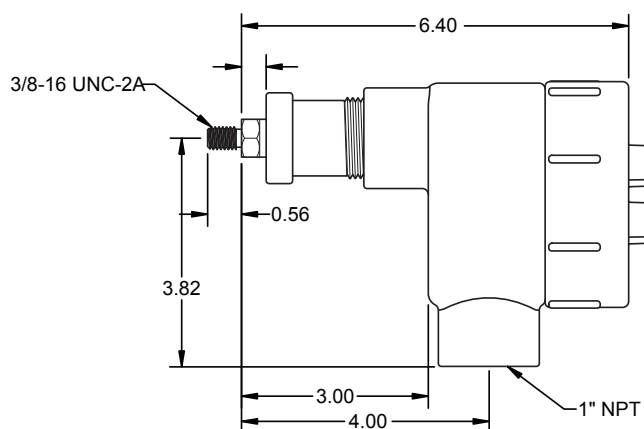
## Principle Of Operation

The SG1000A Slide Gate/Valve position sensor 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. A second switch (selects clockwise/counterclockwise rotation) enables the user to mount the SG1000A on either end of the application's drive shaft.

As the drive shaft rotates, the SG1000A measures the rotation and outputs the 4-20 mA signal to a PLC or the Electro-Sensors optional PM500 Remote Display. The SG1000A's output signal is 4 mA for fully-closed and 20 mA for fully-open. Any gate or valve position between the two end-point positions is represented by the signal being proportionally between 4 and 20 mA.



## Dimensions



## Product Specifications

Input Power	
Voltage	24 VDC $\pm$ 10%
Output	
Type	4-20 mA standard
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)
Terminal Block Wiring	10 feet of 3-conductor shielded cable - standard Red Wire = (+) 24 VDC Supply Clear Wire = 4-20 mA Output Signal Black Wire = (-) Return to 24 VDC Supply Cable Shield = Earth Ground
Material	Cast Aluminum
Enclosure Rating	NEMA 4X

Specifications subject to change without notice.

## Options

Optional remote slide gate display.

Options	Part Number
PM500, 115 VAC	800-004300
PM500, 230 VAC	991-000020
PM500, With 2 Relays	991-000021
PM500, With Analog Output	991-00023

## Ordering

All models come with a standard bracket for mounting.

Model Description	Part Number
SG1000A Slide Gate Sensor	800-010000

## Customization

If one of our standard products does not meet your specifications, please call one of our applications specialists. Many of our products can be customized to fit specific needs.

## Additional Information

For more information about product, please refer to SG1000A Installations and Operating Manual.

Email: [sales@electro-sensors.com](mailto:sales@electro-sensors.com)

Tel: (800)328-6170

Fax: (952)930-0130

We also have more information online at:

[www.electro-sensors.com](http://www.electro-sensors.com)