

Key Features

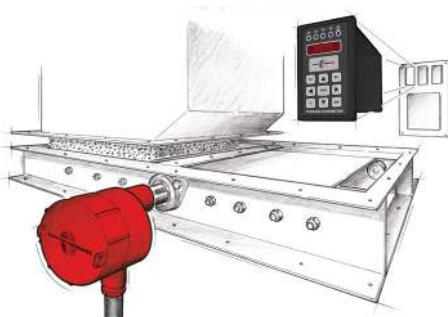
- Measures multi-turn shaft angle (rotational) position
- Translates linear position to 4-20 mA output
- Configurable measurement range (0-1/4 turn to 0-6 turns)
- Direct shaft attachment (3/8-16 UNC)
- Applications include electrically/manually-driven rack-and-pinion gates and valves
- 24 VDC powered
- 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.

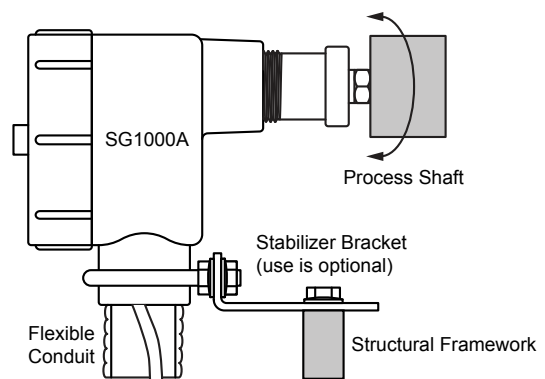


The SG1000A with optional PM500 remote display

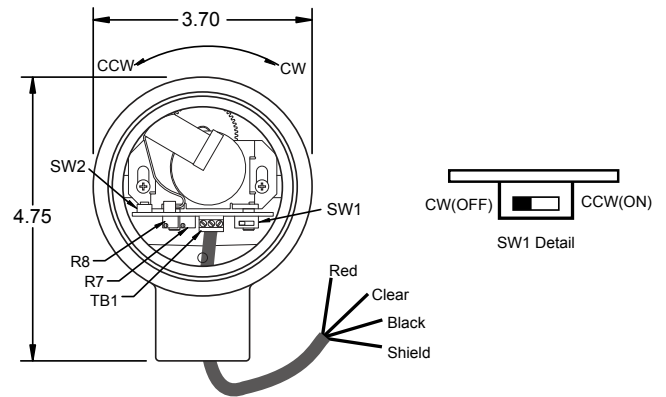
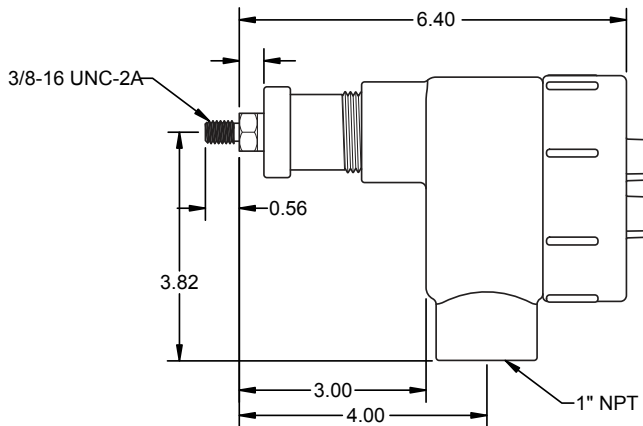
Principle of Operation

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.



SG1000A Dimensions



SG1000A 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.

Ordering

All models come with a standard bracket for mounting.

Model Description	Part Number
SG1000A Slide Gate Sensor	800-010000

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

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

See SG1000A Installation and Operating Manual for complete details, specifications, and programming instructions.