

Key Features

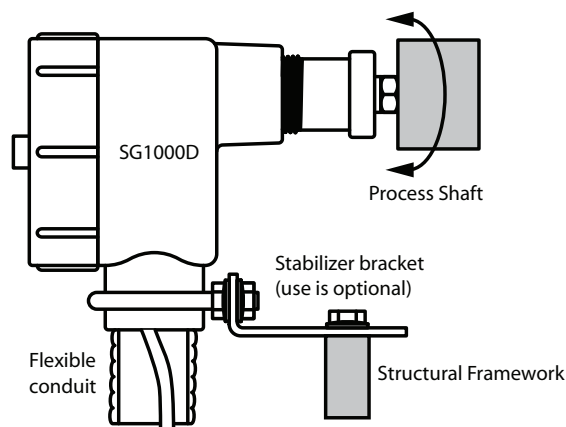
- Valve position feedback — 0° up to 359°
- Precisely measures valve shaft rotary movement
- Works on powered or manually driven valve shafts
- Retains valve position in the event of a power loss
- Interface with PLC or optional PM 500 Remote Display Unit
- Class I, Div I (C, D) Class II, Div I (E, F, G)



Description

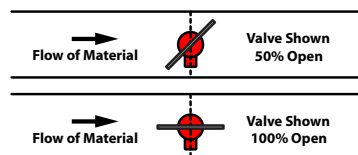
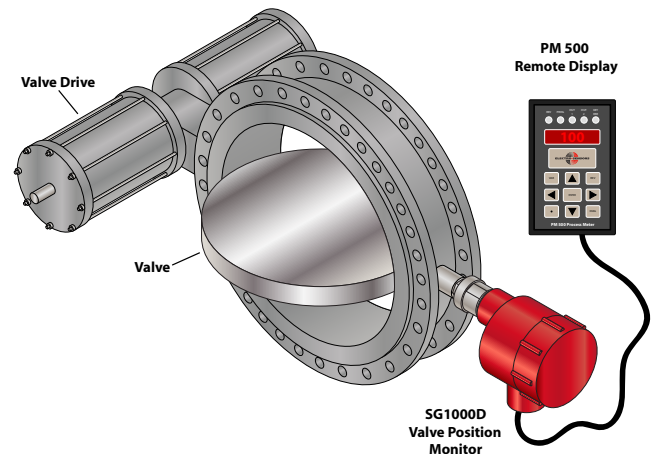
The SG1000D is a complete position monitoring system housed in a compact and explosion proof enclosure. It is an encoder-based position sensor providing a 4-20 mA output and is used to measure a rotary process such as a valve position having a clockwise or counter-clockwise rotary movement. The SG1000D works on rotary processes having a full-scale sweep as small as 15 degrees (fully-closed to fully-open), up through those having a full-scale sweep as large as 359 degrees.

The optional PM500 Remote Display can provide +24 VDC power to the SG1000D, it can display the SG1000D's valve position proportional 4-20 mA signal in desired units, typically 0% to 100%. The PM500 also has two relays and a 4-20 mA proportional output.

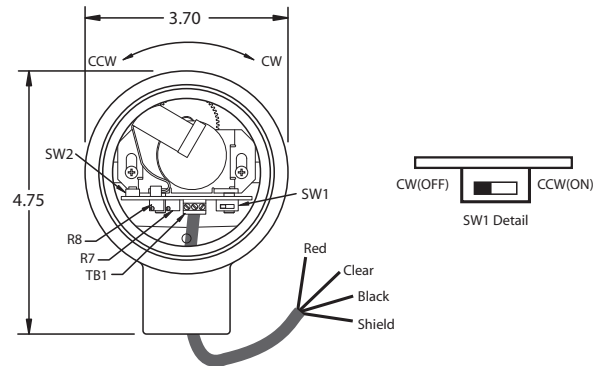
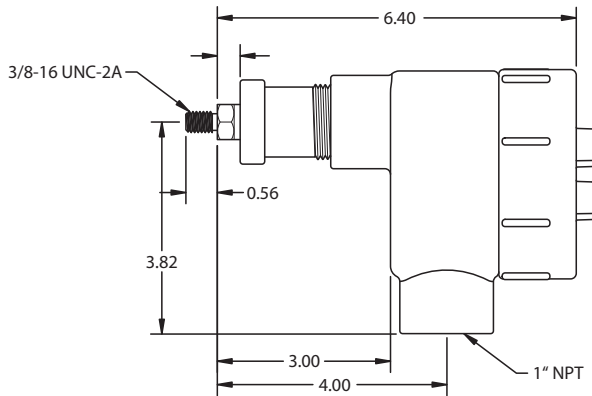


Principle of Operation

The SG1000D has two modes: calibration and normal operating. After installation, a simple calibration procedure is used to program the SG1000D with the encoder values corresponding to the valve's fully-closed and fully-open position limits. Once programmed, the SG1000D outputs a 4 mA DC signal when the valve is in the fully-closed position, and outputs a 20 mA DC signal when the valve is in the fully-open position. When the valve is at any mid-span position (between fully-closed and fully-open) the SG1000D outputs a signal that is proportionally between 4 and 20 mA.



SG1000D Dimensions



SG1000D Specifications

Input Power	
Voltage	24 VDC \pm 10%
Output	
Type	4-20 mA standard
General Specifications	
Calibration Span	Minimum: 15° or 1/24th turn Maximum: 359° or 1 turn
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 TB1-1 Red = Supply TB1-2 Clear = 4-20 mA TB1-3 Black = Ground Shield Wire
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
SG1000D Valve Position Sensor	800-010300

Options

Optional remote slide gate display.

Options	Part Number
PM 500, 115 VAC	800-004300
PM 500, 230 VAC	991-000020
PM 500, 2 Relays	991-000021
PM 500, Analog Output	991-000023

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 SG1000D Installation and Operating Manual for complete details, specifications, and programming instructions.