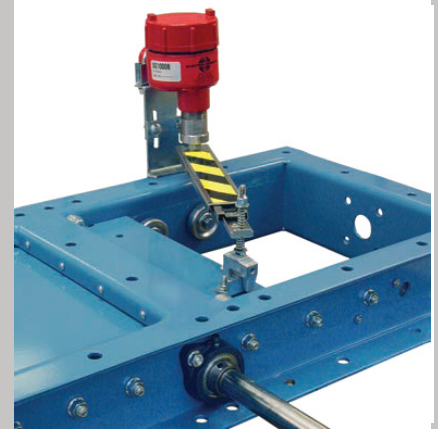


## Features

- Works on rack-and-pinion or linear driven gates
- Ideal for product proportioning
- Precisely measures repetitive linear movement
- Retains gate position in the event of a power loss
- Interfaces with a PLC or optional PM500

### Remote Display Unit

- Class I, Div I (C, D) Class II, Div I (E, F, G)

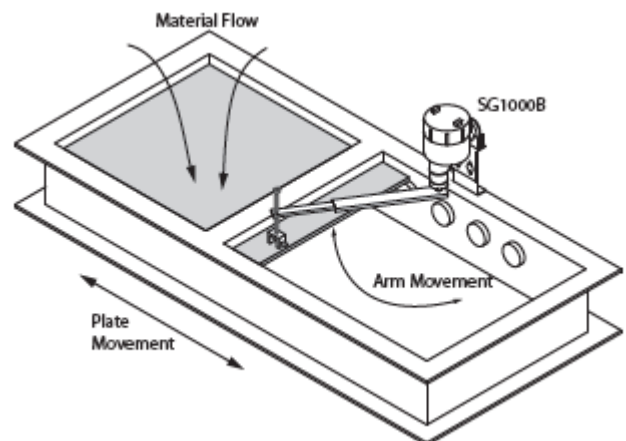
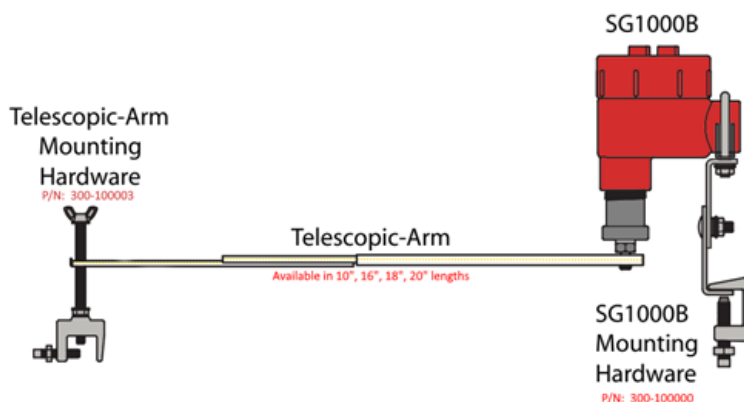


## Description

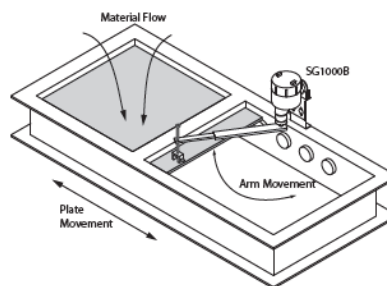
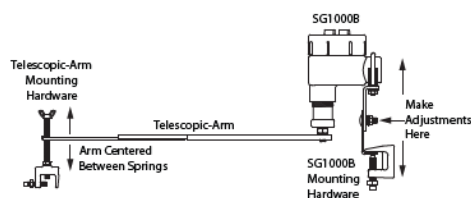
The SG1000B is designed to sense the position of both linear and rack-and-pinion driven slidegates. Housed in an explosion proof enclosure, the SG1000B is typically used to measure position of gates that have a repetitive linear movement, providing independent and accurate feedback via a 4-20 mA signal. To achieve this measurement, the SG1000B uses a telescopic arm to convert linear into angular movement and measures the arm's angle to determine the linear position. The optional PM500 Remote Display Unit can provide +24 VDC power to the SG1000B and can display the SG1000B's 4-20 mA signal as a percentage between fully-closed (0%) to fully open (100%) allowing the gate to be accurately monitored and positioned when regulating the flow of products. The PM500 also has two relays and a 4-20 mA proportional output.

## Application

The SG1000B has two modes: calibration and normal operating. A simple calibration procedure programs the SG1000B with encoder values corresponding to three unique telescopic-arm positions along the process's linear travel. Once programmed the SG1000B outputs a 4 mA DC signal when the encoder is at one end of the calibration span (gate fully-closed) and outputs a 20 mA DC signal when the encoder is at the other end of the calibration span (gate fully-open). When the encoder is at any mid-span position (gate between fully-closed and fully-open) the SG1000B outputs a signal that is proportionally between 4 and 20 mA. A typical application of the SG1000B sensing the position of a linear driven slide gate. Since the SG1000B is not dependent on how a slide gate is driven, it can also be used to measure the linear position of a rack-and-pinion driven slide gate. In either case, the SG1000B measures the telescopic arm's angle to determine the gate's linear position.



## SG1000B Dimensions



## Product Specifications

Input Power	
Voltage	+24 VDC $\pm 10\%$
Output	
Type	4-20 mA standard
General Specifications	
Calibration Span	Minimum: 5.6° swing of telescopic arm Maximum: 130° swing of telescopic arm
Resolution	0.2% to 5% dependent upon calibration span
Installation	The SG1000B mounts on a slide gate frame using two <u>optional</u> beam clamps, or via two user supplied 5/16" diameter bolts. The wide end of the telescopic arm attaches to the SG1000B using the supplied hardware. The narrow end of the telescopic arm attaches to the slide gate's plate using <u>optional</u> hardware and beam clamp.
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 mounting hardware for the SG1000B is sold separately.

Model Description	Part Number
SG1000B Position Sensor	800-010100
SG1000B Mounting Clamp	300-100000

Mounting Options	Part Number
SG1000B Mounting	300-100000
SG1000B Arm Mounting	300-100003

Telescopic Arm	Part Number
10 in. Telescopic Arm	800-010110
16 in. Telescopic Arm	800-010116
18 in. Telescopic Arm	800-010118
20 in. Telescopic Arm	900-010120
SGB Mounting	300-100000
SG Arm Mounting	300-100003

Options for Remote Display	Part Number
PM500, 155 VAC	800-004300
PM500, 230 VAC	991-000020
PM500, 2 Relay Outputs	991-000021
PM500, 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 Product X Installation and Operating Manual for complete details, specifications, and programming instructions.