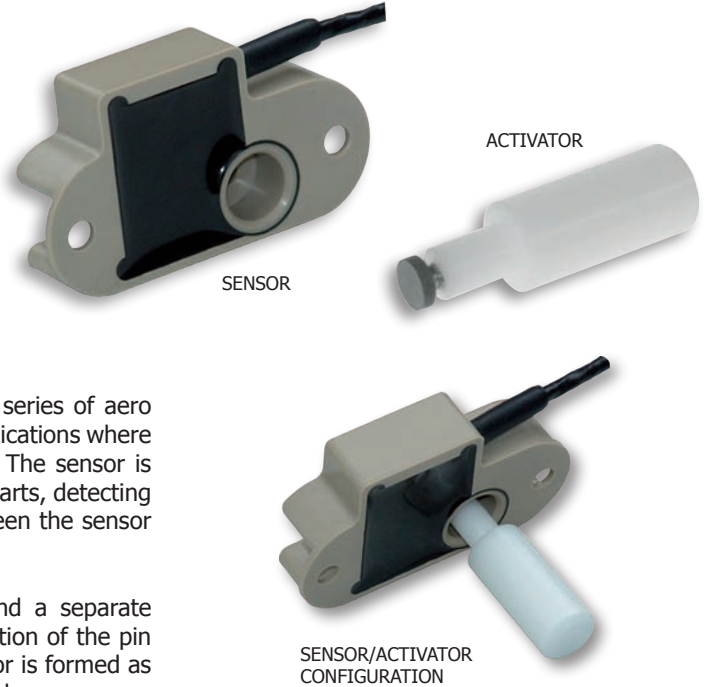


# Rod Position Sensor



## Key Features

- Non-Contact
- No Moving Sensor Parts
- 8mm Precision Linear Measurement
- Low Height Profile
- Analogue/Digital Output
- Unlimited Mechanical Life
- Submersible



Originally designed to monitor the height and movement of a series of aero struts on a Formula 1 car, the Rod Position Sensor is ideal for applications where a very small change in linear position needs to be monitored. The sensor is designed with a very low height profile and no internal moving parts, detecting up to 8mm of linear movement, with no physical contact between the sensor and the sensed part.

The Rod Position Sensor comprises two parts, the sensor and a separate metallic core pin activator. The sensor measures the linear position of the pin as it enters the bore of the sensor body. Commonly, the activator is formed as part of the existing mechanics for minimum installation overhead.

Small, light and robust, the sensor is fully electronic with on-board processing. The supplied software facilitates a fully configurable measurement range. Output signals are provided in three different formats and diagnostic information is given to assist in system fail-safe functionality.



### Electrical

Supply Voltage	+5VDC to +32VDC
Over Voltage Protection	>33VDC
Supply Current	<10mA
Reverse Polarity Protection	to -32VDC
Resolution	10 bit over configured range
Sample Rate	1KHz

### Analogue Output

Measuring Range	Linear: ±4mm (Configurable)
Voltage Output Range	0-4.2V
Range Accuracy	±0.1mm or equivalent

### PWM Output

Measuring Range	Linear: ±4mm (Configurable)
Frequency	250Hz or 1KHz

### Serial Output

Data Type	Asynchronous ASCII Data
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### Switch Output

Type	Switch to GND 32VDC Max, 8mA
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### Mechanical

Size	14 x 34.5 x 63mm (DxWxL)
Mounting	2 x ø5mm holes on a 50mm pitch
Weight	57.3g
Activator Materials	See notes overleaf
Materials Compatibility	Water, engine oil, engine coolant, diesel fuel, gasoline, salt spray, degreaser, degreaser tsp, ammonia and dust. All common automotive liquids and materials

### Environmental

Protection Class	IP67
Operational Temperature	-40°C to +85°C (standard) -40°C to +125°C (optional)
Storage Temperature	-40°C to +150°C
Dither Life	Non-Contact: No deterioration through use

### Options

Wiring	- Standard (28AWG) - Customer Specified
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# Rod Position Sensor

## Activator Materials

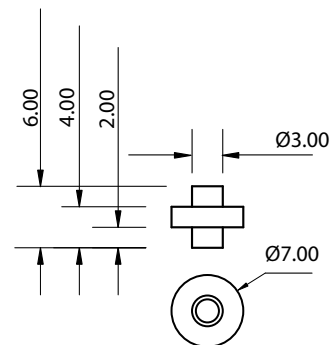
- EN3B Mild Steel or similar
- Copper
- Tinned Steel
- Others compatible, contact Gill with your requirement.

## Wiring

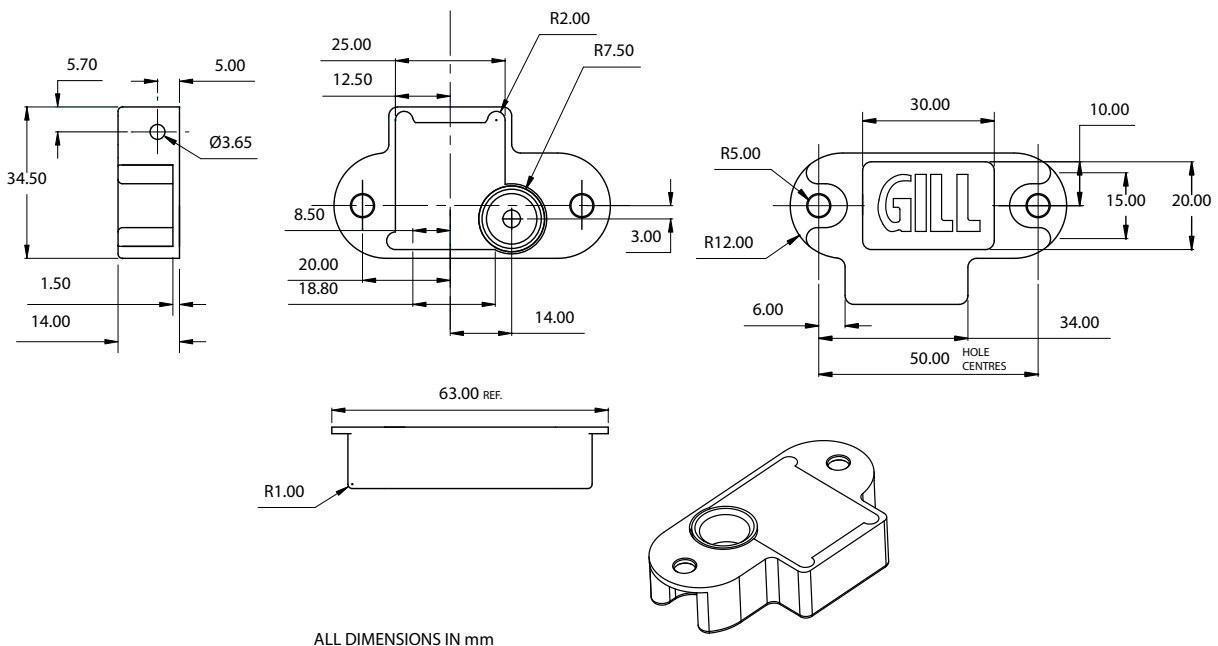
	Red	+4.8VDC to +30VDC Supply
	Black	System & Power Ground (GND)
	Blue	Switch Output
	Green	Serial Comms Input (Rx), RS232 Compatible
	White	Serial Comms Output (Tx), RS232 Compatible
	Yellow	Analogue Output: Voltage or PWM

## Activator

The sensor requires a metallic activator to be mounted 0.5-2mm away from the sensing face. This can either be mechanically mounted to the moving object or machined into the application for minimal installation overhead. On the right is a drawing showing the dimensions of our recommended standard activator. Please consult Gill for more information on activator design.



\*All undefined dimensions are non-critical



ALL DIMENSIONS IN mm



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