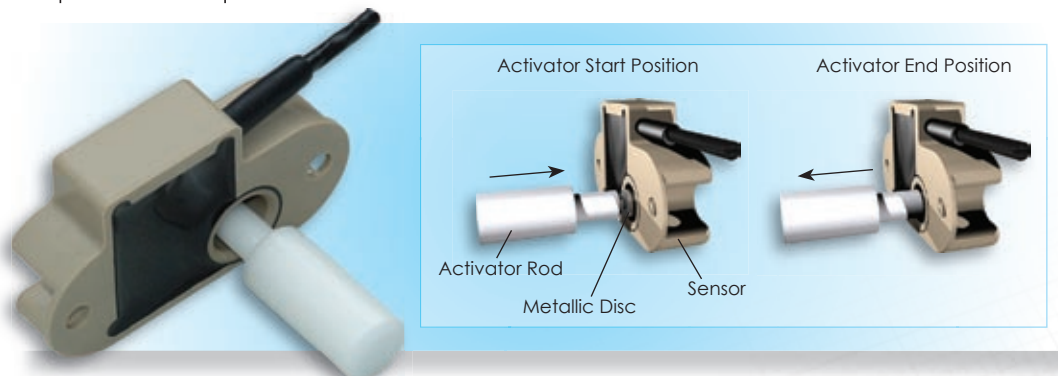


Blade Non-Contact Position Sensor

Originally designed for an F1 application but adaptable for many others, the Blade Rod Position sensor employs Gill's innovative induction technology. Able to sense linear motion, the device is the perfect solution for tough applications where the use of traditional sensors has proved too expensive or unreliable.



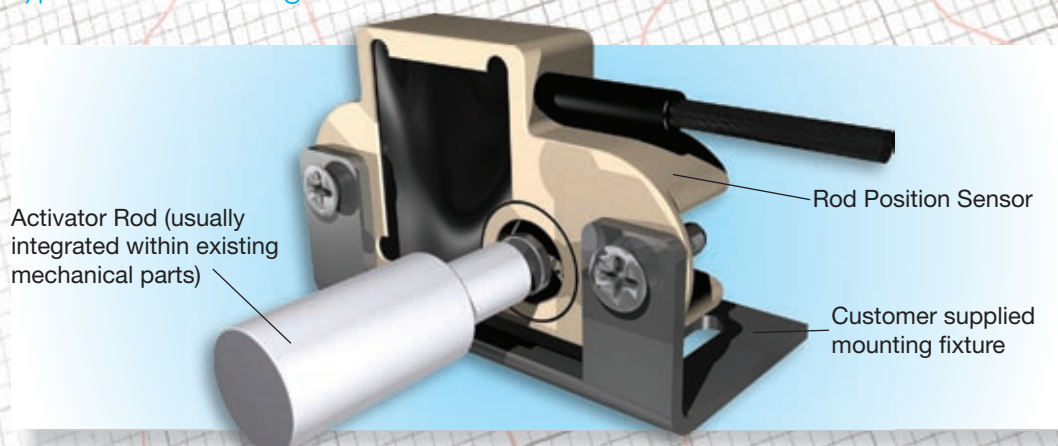
The customised Rod Position Sensor is comprised of two parts, the sensor and a separate metallic core pin activator. The sensor measures the linear position of the pin as it enters the cavity in the sensor body. The sensor was originally developed to measure the position of a strut on an aerofoil in a Formula One racing car. In this application, the activator was formed as part of the strut for minimum installation overhead.

Small, light and robust, the sensor is fully electronic with on-board processing, providing considerable configuration via BladeCom software, diagnostic information and assisting in providing system failsafe functionality.

Favourably priced against industrially sealed potentiometers and hall effect sensors, this sensor is ideal for a variety of automotive, industrial vehicle, marine and control applications. With a durable design and absence of mechanical linkages, this customised Blade is perfect for use in harsh environments - grime, moisture, temperature and vibration.

Flexible, robust, maintenance-free and easy to fit, the Rod Position Sensor represents the best solution for your application's demanding position sensing needs.

Typical sensor configuration



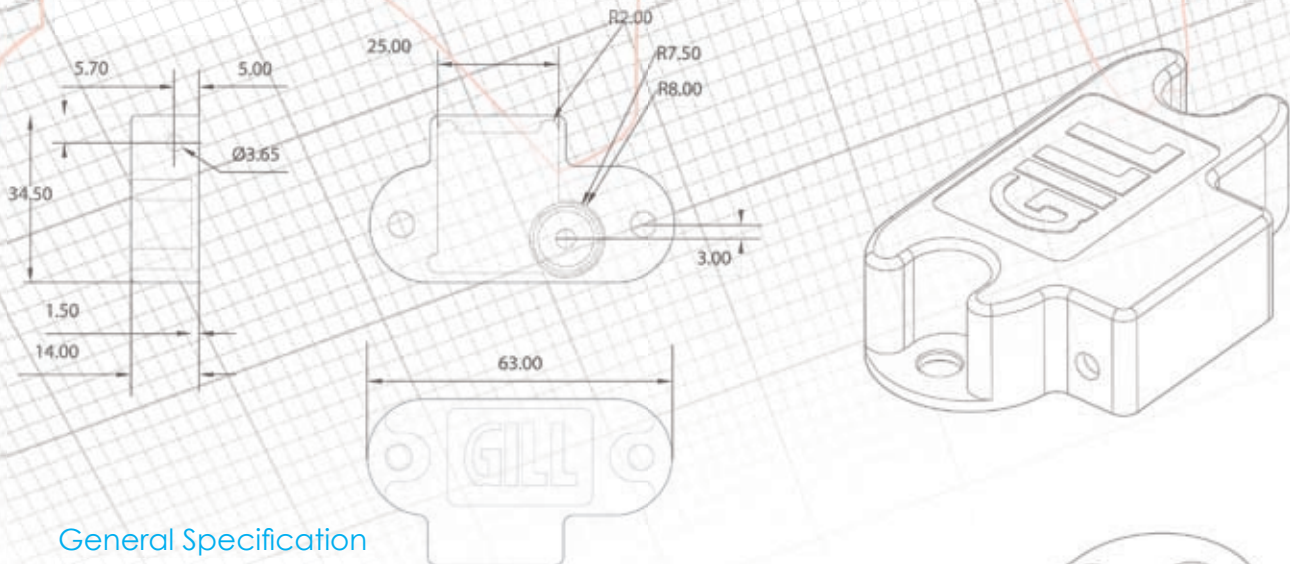
Rod Position Sensor

Applications

This customised sensor was developed for the Formula One industry where accurate position detection of an adjustable strut was required. A feature was added to the end of the strut rod, which extended into the blind circular cavity shown in the images. A range of movement up to 5mm with excellent resolution could then be utilised providing test data for race engineers to optimise car setup.

Another use of this sensor has been for brake pad wear detection in specialist applications such as the military vehicle market. Using the device to detect the end position of a shaft attached to the moving brake caliper provides the user with instant feedback of brake pad condition.

The total non-contact nature of this device, without the need for linkages, makes this product ideal for fast serviceability of the driveline - essential for rapid military repair and deployment.



General Specification

Size	14 x 35 x 63mm (DxWxL)
Sensor-Activator clearance	2mm typically
Detector Range	Configurable 5mm linear
Accuracy	±0.1mm
Resolution	0.03mm
Sample Rate	1KHz
Electrical Supply Voltage	+5VDC to +32VDC
Electrical Supply Current	<10mA
Serial Output	Asynchronous ASCII data
PWM Output	250Hz / 1KHz
Analogue Output	0-4.2V Max range
Operating Temperature	-40°C to +85°C (standard) -40°C to +125°C (optional)
Sealing	IP67
Activator Materials	Steel - EN3B mild steel or similar. Others optional depending on application. Please contact Gill for further details

Website Link

www.gillsensors.co.uk/content/Rod_Sensor.htm



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