

# RIPS 502 SMALL ANGLE ROTARY POSITION SENSOR

- HIGH RESOLUTION FOR SMALL ANGLES
- NON-CONTACTING INDUCTIVE TECHNOLOGY
- 5° TO 20° ROTATION
- DC ANALOGUE OUTPUT
- SUPERB DURABILITY
- WIDE RANGE OF INTERFACE OPTIONS
- HIGH FREQUENCY RESPONSE



## SPECIFICATION

### Travel

Electrical	5° to 20°
Mechanical	360°
Factory set range with adjustable zero and span	
<b>Independent Linearity</b>	< ±0.15% for 15° at 20°C
<b>Temperature Coefficient</b>	< ±0.01% /°C
<b>Overall Accuracy</b>	< ±0.5%
<b>Frequency Response</b>	> 800 Hz (-3dB)
<b>Resolution</b>	Infinite
<b>Noise</b>	< 0.1%
<b>Torque</b>	< 20mNm Static

## POWER SUPPLY AND OUTPUT OPTIONS

Input	Output
5V dc ±1V	0.5 to 4.5V dc Ratiometric
±15V dc	±5V dc or ±10V dc
16 to 28V dc	0.5 to 9.5V dc
18 to 28V dc	4 to 20mA (2 wire)
10 to 28V dc	4 to 20mA (3 wire sink)
16 to 28V dc	4 to 20mA (3 wire source)
<b>Supply Current</b>	10mA Typical, 20mA max.

## ENVIRONMENTAL

### Temperature Limits

Operating	-40° to +125°C (5V only)
	-20° to +85°C
Storage	-40° to +125°C

### Sealing

IP65/IP67 depending on connector / cable

### EMC Performance

IEC 801 EN50082-2  
IEC 801 EN50081-1

### Vibration

IEC 68-2-6: 10g

### Shock

IEC 68-2-29: 40g

### MTBF

450,000 hrs 40°C Ff

The **P502 RIPS** is an accurate non-contact Rotary Inductive Position Sensor which provides a high resolution analogue output over small angles. The sensor produces a DC voltage or current output from a DC supply. Angular ranges of between 5° and 20° rotation are available. Each sensor is calibrated to the exact angle to suit each application.

The P502 provides a linear output characteristic with rotation with a non-linearity of better than ±0.15% for 15° rotation. The analogue output signal represents absolute position and is available on power up.

The sensor incorporates a printed circuit inductive coil and a built-in custom ASIC electronic interface.

This combination provides outstanding durability, ruggedness and performance. A wide range of interface options are available including a loop powered 4-20mA version.

Performance and stability are excellent over the temperature range -40°C to 85°C. A higher temperature rating of +125°C is available on some versions.

The sensor also offers excellent frequency response up to 800Hz.

The sensor has a robust stainless steel and anodised aluminium housing sealed to IP65. The sensor can also be supplied with a variety of standard and custom housing and connector options.

