



# RIPS<sup>®</sup> 501 MINIATURE ROTARY SENSOR



- Rotational Feedback for Industrial and Scientific Applications
- Non-Contacting Inductive Technology
- Very Robust, Durable and Reliable
- Compact Overall Length
- Up to 125°C Operating Temperature
- Up to 140° Rotation
- DC Supply – DC Analogue Output
- Excellent Accuracy and Stability
- IP67 Sealing

## SPECIFICATION

|  |   |
|--|---|
| Travel   |   |
| Electrical                                       | ±15° to ±70°                                    |
| Mechanical                                       | 360°  |
| Factory set range with adjustable zero and span. |   |
| Independent Linearity                            | < ± 0.5% for 80° @ 20°C                         |
| Temperature Coefficients                         | < ± 0.01%/°C Gain &<br>< ± 0.01%FS/°C Offset    |
| Typical Overall Accuracy                         | < ± 0.75% FSO                                   |
| Frequency Response                               | > 800 Hz (-3dB)<br>> 300 Hz (2 wire 4 to 20 mA) |
| Resolution                                       | Infinite  |
| Noise  | < 0.02% FSO                                     |
| Power Supply and Output Options                  |   |
| Input  | Output  |
| + 5 V dc ± 0.5 V                                 | 0.5 – 4.5 V dc ratiometric                      |
| Supply Current                                   | 10 mA Typical, 20 mA max.                       |
| Torque   | < 20mNm Static                                  |
| Environmental                                    |   |
| Temperature Limits                               |   |
| Operating  | -40 to +125°C                                   |
| Storage  | -40 to +125°C                                   |
| Sealing  | IP67  |
| EMC Performance                                  | EN 61000-6-2<br>EN 61000-6-3                    |
| Vibration  | IEC 68-2-6: 10g                                 |
| Shock  | IEC 68-2-29: 40 g                               |
| MTBF   | 450,000 hrs 40°C Gf                             |



The P501 RIPS<sup>®</sup> is an affordable, durable, accurate Rotary Inductive Position Sensor suitable for arduous industrial and scientific feedback, and specifically automotive testing and motor racing, applications.

P501 sensors are; available with calibrated travel from 30° up to 140°, easy to install and set up and provide a linear output characteristic with rotation. Using Positek's PIPS<sup>®</sup> technology, inductive printed circuit board coil with advanced ASIC electronic technology, the sensors DC analogue output signal represents absolute position and is available immediately on power up.

Overall performance, repeatability and stability are outstanding over a wide temperature range; excellent frequency response and no wearing contacts they have major advantages over RVDT or potentiometer based devices.

This very robust aluminium sensor is flange mounted, sealed to IP67, with plain shaft or sprung blade options and full EMC protection built in.

Enquires regarding modifications for custom applications are welcome, please contact us with your requirements.

