RIPS® P501 MINIATURE ROTARY SENSOR

High-resolution angle feedback for industrial and scientific applications

- **Non-contacting inductive technology to eliminate wear**
- **Angle set to customer's requirement**
- **Compact, durable and reliable**
- **Specifically designed for automotive applications**
- **High accuracy and stability**
- **Sealing to IP67**

As a leading designer and manufacturer of linear, rotary, tilt and intrinsically safe position sensors, Positek® has the expertise to supply a sensor to suit a wide variety of applications.

Our P501 RIPS® (Rotary Inductive Position Sensor) is an affordable, durable, high-accuracy rotary sensor designed for industrial and scientific feedback applications, but requires a smaller footprint than the P500.

Like all Positek sensors, the P501 provides a linear output proportional with angle of deflection. Each unit is supplied with the output calibrated to the angle required by the customer, between 30 and 140 degrees and with full EMC protection built in.

It is particularly suitable for OEMs seeking good sensor performance for applications where space is important.

Overall performance, repeatability and stability are outstanding over a wide temperature range. The sensor has a rugged anodised aluminium body and integrated mounting flange. The flange has two 4.3mm by 20 degree wide slots on a 48mm pitch to simplify mounting and position adjustment. Environmental sealing is to IP67.

SPECIFICATION

DIMENSIONS	
Body diameter	28.3 mm (solder pins) 30.8 mm (with cable boot)
Body Length (to seal face)	23.2 mm
Shaft	8.5 mm Ø 4mm
For full mechanical details see drawing P501-11	
Power Supply	+5V dc nom. ± 0.5%, 10mA typ 20mA max
Output Signal	0.5-4.5V dc ratiometric, Load: 2kΩ min.
Independent linearity	< ± 0.5% for 80 degrees @ 20°C
Temperature coefficients	< ± 0.01%/°C Gain & < ± 0.01%FS/°C Offset
Typical overall accuracy	< ± 0.75%/ FSO
Frequency response	> 10 KHz (-3dB)
Resolution	Infinite
Noise	< 0.02% FSO
Environmental Temperature Limits	
Operating	-40 to +125°C
Storage	-40 to +125°C
Sealing	IP67
EMC Performance	EN 61000-6-2, EN 61000-6-3
Vibration	IEC 68-2-6: 10g
Shock	IEC 68-2-29: 40 g
MTBF	350,000 hrs 40°C Gf
Drawing List	
P501-11	Sensor Outline

Drawings, in AutoCAD® dwg or dxf format, available on request.

Do you need a position sensor made to order to suit a particular installation requirement or specification? We'll be happy to modify any of our designs to suit your needs - please contact us with your requirements.

For further information please contact:
Everight Precision Technologies Corporation
50 Fairview Rd., Penn Valley, PA 19072 USA
Phone: 610.453.3075 Fax: 610.672.9663 email: info@everightsensors.com

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How Positek's PIPS® technology eliminates wear for longer life

Positek's **PIPS®** technology (Positek Inductive Position Sensor) is a major advance in displacement sensor design. PIPS®-based displacement transducers have the simplicity of a potentiometer with the life of an LVDT/RVDT.

PIPS® technology combines the best in fundamental inductive principles with advanced micro-electronic integrated circuit technology. A PIPS® sensor, based on simple inductive coils using Positek's ASIC control technology, directly measures absolute position giving a DC analogue output signal. Because there is no contact between moving electrical components, reliability is high and wear is eliminated for an exceptionally long life.

PIPS® overcomes the drawbacks of LVDT technology – bulky coils, poor length-to-stroke ratio and the need for special magnetic materials. It requires no separate signal conditioning.

Our LIPS® range are linear sensors, while RIPS® are rotary units and TIPS® are for detecting tilt position. Ask us for a full technical explanation of PIPS® technology.

We also offer a range of ATEX-qualified intrinsically-safe sensors.

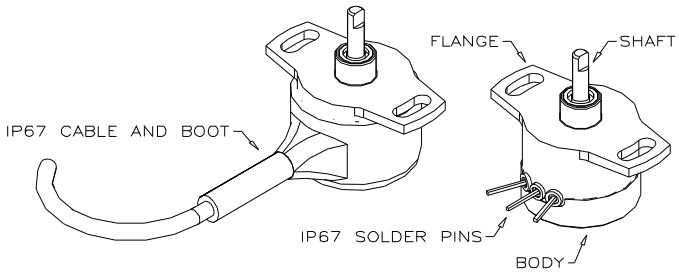


TABLE OF OPTIONS

MEASUREMENT RANGE: Factory-set to any angle from ±15° to ±70°* in increments of 1mm.

CONNECTION/CABLE OPTIONS

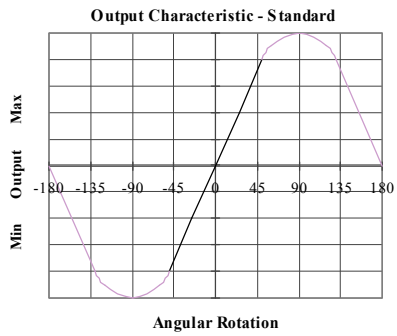
Solder pins	IP67
Cable with boot	IP67

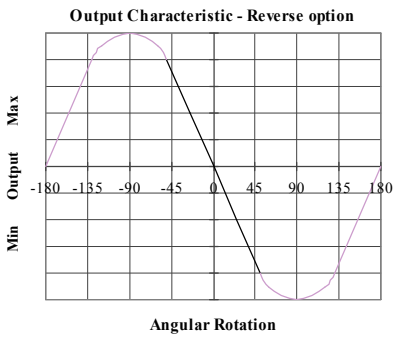
Cable length >50cm – please specify length in cm

MOUNTING OPTIONS

Plain 4 mm diameter shaft with flat, Sprung blade.

*NB At 0° rotation the output signal will be at mid full scale output.





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