

TIPS SERIES P601 LARGE ANGLE TILT SENSOR

- **Non-Contacting Inductive Technology**
- **Up to +/- 80° Tilt**
- **Integrated Signal Conditioning**
- **Absolute Analogue Output**
- **1° Hysteresis**
- **Superb Durability and Robustness**

SPECIFICATION

Tilt Angle

Electrical +/- 3° to +/-80°
Factory set range with adjustable zero and span

Mechanical unlimited

Independent Linearity < +/- 0.5%
for +/- 50° at 20°C

Temperature Coefficient < +/-0.01%/°C

Hysteresis < 1° with vibration

Resolution Infinite

Noise < 0.1% FSO

Damping 0.6 critical typical

Power Supply and Output Options

| Input | Output |
|-----------------------|---------------------------------|
| + 5 V dc +/- 1 V | 0.5 to 4.5 V dc ratiometric +/- |
| 15 V dc | +/- 5 V dc or +/- 10V dc |
| +16 to 28 V dc | 0.5 to 9.5 V dc |
| 18 to 28 V dc | 4 to 20mA (2 wire) |
| 10 to 28 V dc | 4 to 20mA (3 wire sink) |
| 16 to 28 V dc | 4 to 20mA (3 wire source) |
| Supply Current | 10 mA Typical 20 mA max. |

Environmental

Temperature Limits

Operating -40 to +125°C (5V only)

-40 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

IEC 68-2-6:1982 10g

IEC 68-2-29:1968 40 g

Refer to Drawing

450,000 hrs 40°C Gf

Vibration

Shock

Fittings

MTBF



The Inductive Tilt Sensor **TIPS P601** is a high accuracy analogue tilt sensor which offers outstanding performance and durability at low cost. The sensor uses inductive coils created using printed circuit board layout techniques and the electronic interface producing the output signal is combined into a single custom ASIC. The interface is built into the sensor and this gives a very compact and durable sensor.

TIPS P601 provides a linear output characteristic with the angle of tilt. Tilt angles from +/- 3° up to +/- 80° can be accommodated by factory calibration.

Each sensor is calibrated to the exact angle required so that it is optimised for the application.

Hysteresis and repeatability of 1% of range is achieved with good linearity of 0.5% over +/-50°. Performance and stability are excellent over a wide temperature range up to 125°C

The sensor has a robust housing sealed to IP65/IP67 and is suitable for a wide range of applications. The sensor is available with a range of mounting and cable/connector options including a servo mounting and a flange mounting.

