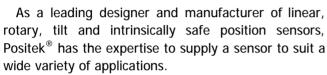


LIPS® P115 RUGGED SUBMERSIBLE STAND-ALONE LINEAR POSITION SENSOR

Position feedback for industrial and scientific applications

- Non-contacting inductive technology to eliminate wear
- Travel set to customer's requirement
- Compact and self-contained
- High durability and reliability
- High accuracy and stability
- Sealing to IP68 10Bar



Our P115 LIPS® (Linear Inductive Position Sensor) is a heavy-duty version of the P114 sensor with a stronger 12.7mm push rod, recommended for applications where vibration is an issue or there is a need for longer travel sensors which are to be mounted horizontally between rod eyes. It remains an affordable, durable, high-accuracy position sensor designed for applications where the sensor would be completely submerged during normal operation, up to a pressure of 10Bar. The unit is highly compact and space-efficient, being responsive along almost its entire length. Like all Positek sensors, the P115 provides a linear output proportional to displacement. Each sensor is supplied with the output calibrated to the travel required by the customer, from 50 to 600mm and with full EMC protection built in.

The sensor is very robust, the body and push rod being made of stainless steel for long service life and environmental resistance.

Overall performance, repeatability and stability are outstanding over a wide temperature range. The sensor is easy to install with mounting options including stainless steel M8 rod eye bearings and body clamps. The push rod can be supplied free or captive, with female M8 thread, or an M8 stainless steel rod eye. The P115 also offers a wide range of mechanical and electrical options, environmental sealing is to IP68 10Bar.



SPECIFICATION

DIMENSIONS

Body diameter 35 mm

Body length (Axial version) measurement length + 166 mm Body length (Radial version) measurement length + 189 mm

Push rod extension measurement length + 7mm, OD 12.65mm

For full mechanical details see drawing P115-11

Independent linearity $< \pm 0.25\%$ up to 450mm @ 20°C

< \pm 0.5% over 450mm @ 20°C

Temperature coefficients $< \pm 0.01\%$ °C Gain & $< \pm 0.01\%$ FS/°C Offset

Typical overall accuracy $< \pm 0.75\% / FSO$ Frequency response > 10 KHz (-3dB)

> 300 Hz (-3dB) 2 wire 4 to 20 mA

Resolution Infinite
Noise < 0.02% FSO
Environmental Temperature Limits

Operating -40 to +125°C standard -20 to +85°C buffered

Storage -40 to +125°C Sealing IP68 10Bar

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

P115-11 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.





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Position feedback for industrial and scientific applications

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 intrinsicallysafe sensors.

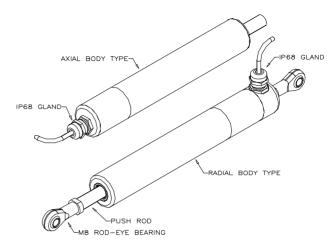


TABLE OF OPTIONS

MEASUREMENT RANGE: Factory-set to any length from 50 to

600 mm in increments of 1mm.

ELECTRICAL INTERFACE OPTIONS

(OUTPUT SIGNAL	SUPPLY INPUT	OUTPUT LOAD
	Standard:		
	0.5-4.5V dc ratiometric	$+5V$ dc nom. \pm 0.5V.	2kΩ min.
	Buffered:		
	0.5-4.5V dc	+24V dc nom. + 9-28V.	2kΩ min.
	±5V dc	±15V dc nom. ± 9-28V.	2kΩ min.
	0.5-9.5V dc	+24V dc nom. + 13-28V.	5kΩ min.
	±10V dc	±15 V dc nom. ± 13.5-28V.	5kΩ min.
	Supply Current	10mA typical, 20mA maximum.	
	4-20mA (2 wire)	+24 V dc nom. + 18-28V.	300Ω @ 24V.
	(3 wire sink)	+24 V dc nom. + 13-28V.	950Ω @ 24V.
	(3 wire source)	+24 V dc nom. + 13-28V.	300Ω max.

CABLE OPTIONS

Cable with PG7 gland Axial, IP68 10Bar Cable with PG7 gland Radial, IP68 10Bar

Cable length >50cm - please specify length in cm

MOUNTING OPTIONS

M8 rod eye bearing (radial versions), Body Tube Clamp/s (axial or radial versions).

PUSH ROD OPTIONS – standard retained with M8x1.25 female thread M8 rod eye bearing or Free.

