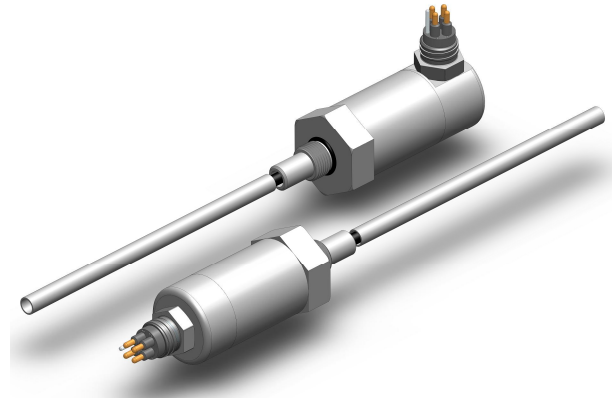


LIPS[®] S120 350 BAR SUBMERSIBLE CYLINDER – LINEAR POSITION SENSOR

High-resolution position feedback for hydraulic and pneumatic cylinders

- 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 350 Bar



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 S120 LIPS[®] (Linear Inductive Position Sensor) is an affordable, durable, high-accuracy position sensor designed for arduous underwater hydraulic or pneumatic cylinder position feedback applications where service life, environmental resistance and cost are important. It is particularly suitable for OEMs seeking good sensor performance for arduous applications such as industrial machinery.

Overall performance, repeatability and stability are outstanding over a wide temperature range. The unit is highly compact and space-efficient, being responsive along almost its entire length. Like all Positek[®] sensors it provides a linear output proportional to travel. Each unit is supplied with the output calibrated to the travel required by the customer, any stroke from 0-5mm to 0-800mm and with full EMC protection built in.

The sensor is very rugged, being made of stainless steel with an inert fluoropolymer-sheathed probe with a stainless steel target tube. The sensor is easy to install in cylinders and has a wide range of mechanical and electrical options.

Environmental sealing is to IP68 350 Bar. The maximum system pressure is limited to 350 Bar (Water pressure plus hydraulic pressure).

SPECIFICATION

Dimensions	
Body diameter	40 mm
Body Length (to seal face)	80.3 mm (axial), 88.8 mm (radial)
Probe Length (from seal face)	calibrated travel + 58 mm
Target Tube Length	calibrated travel + 30 mm
	<i>For full mechanical details see drawing S120-11</i>
Independent Linearity	≤ ± 0.25% FSO @ 20°C - up to 450 mm ≤ ± 0.5% FSO @ 20°C - over 450 mm ≤ ± 0.1% FSO @ 20°C* available upon request.
	*Sensors with calibrated travel from 10 mm up to 400 mm.
Temperature Coefficients	< ± 0.01%/°C Gain & < ± 0.01%FS/°C Offset
Frequency Response	> 10 kHz (-3dB) > 300 Hz (-3dB) 2 wire 4 to 20 mA
Resolution	Infinite
Noise	< 0.02% FSO
Environmental Temperature Limits	
Operating	-4°C to +50°C
Storage	-4°C to +50°C
Sealing	IP68 350 Bar Limit of 350 Bar for water pressure + hydraulic pressure
Hydraulic Pressure	350Bar Absolute
EMC Performance	EN 61000-6-2,
	EN 61000-6-3
Vibration	IEC 68-2-6: 10 g
Shock	IEC 68-2-29: 40 g
MTBF	350,000 hrs 40°C Gf
Drawing List	
S120-11	Sensor Outline
P100-12	Typical Target Installation details
P100-15	Mounting Thread details
TG24-11	Optional Target Tube Flange details
	<i>Drawings, in AutoCAD[®] dwg or dxf format, available on request.</i>

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:

www.positek.com sales@positek.com

Tel: +44(0)1242 820027 fax: +44(0)1242 820615

Positek Ltd, Andoversford Industrial Estate, Cheltenham GL54 4LB U.K.

LIPS[®] S120 350 BAR SUBMERSIBLE CYLINDER – LINEAR POSITION SENSOR

High-resolution position feedback for hydraulic and pneumatic cylinders

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

CALIBRATED TRAVEL: Factory set to any length from 0-5mm to 0-800mm (e.g. 254mm)

ELECTRICAL INTERFACE OPTIONS

OUTPUT SIGNAL	SUPPLY INPUT	OUTPUT LOAD
Standard:		
0.5-4.5V dc ratiometric	+5V dc nom. ± 0.5V.	5kΩ min.
Buffered:		
0.5-4.5V dc	+24V dc nom. + 9-28V.	5kΩ min.
±5V dc	±15V dc nom. ± 9-28V.	5kΩ 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.

CONNECTOR

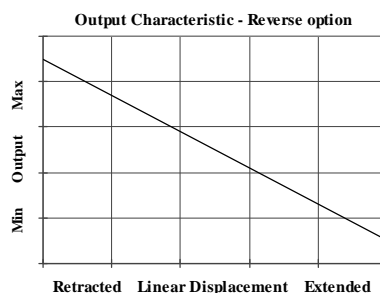
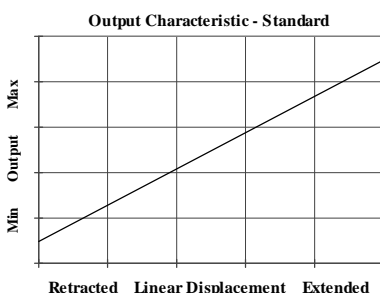
Wet mate 4 pin MC BH-4-M (axial or radial)
 Supplied with a connector and 0.5 m, 4x0.5mm² cable assembly as standard.
 Mating connector with longer lengths available.

MOUNTING THREAD OPTIONS

M18 or ¾ UNF 40 mm hex A/F, Ø 40 mm seal face.
 Supplied with O-ring seal.

FLANGE OPTIONS

Penny & Giles HLS120, Temposonics (M4 fixing) and Parker Hannifin cylinders versions available.



For further information please contact:

www.positek.com sales@positek.com

Tel: +44(0)1242 820027 fax: +44(0)1242 820615

Positek Ltd, Andoversford Industrial Estate, Cheltenham GL54 4LB U.K.