S623

Description

High-resolution tilt feedback for industrial and scientific applications

- Non-contacting inductive technology to eliminate wear
- Angle 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, has the expertise to supply a sensor to suit a wide variety of applications. Our S623 TIPS® (Tilt Inductive Position Sensor) is an affordable, durable, high-accuracy tilt sensor designed for underwater and scientific feedback applications. The S623, like all sensors, is supplied with the output calibrated to the angle required by the customer, between 15 and 160 degrees and with full EMC protection built in. The sensor provides a linear output characteristic with angle of deflection.

There is a machined registration mark to identify the calibrated mid point. It is particularly suitable for OEMs seeking good sensor performance for arduous applications such as industrial machinery where cost is important. Overall performance, repeatability and stability are outstanding over a wide temperature range. Electrical connections to the sensor are made via a Micro mini wetmate connector. The sensor has a rugged 316 stainless steel body and mounting flange. The flange has two 5.5mm holes on a 54mm pitch to simplify mounting. The S623 offers a range of electrical options. Environmental sealing is to IP68 350 BAR.

Specifications

DIMENSIONS	
Body diameter	40 mm
Body Length (to seal face)	81 mm
For full mechanical details see drawing S623-11	
Independent linearity/Hysteresis	
(combined error)	< ± 0.25 degrees
Temperature coefficients	< ± 0.01%/°C Gain &
	< ± 0.01%FS/°C Offset
Response time	250 mS @ 20°C typ.
Resolution	Infinite
Damping ratio	0.2 : 1 (0.6 nom. @ 25°C)
Noise	< 0.02% FSO
Environmental Temperature Limits	
Operating	-20 to +85°C all output options
Storage	-40 to +125°C
Sealing	IP68 350 BAR
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	
S623-11	Sensor Outline
Drawings, in AutoCAD® dwg or dxf format, available on request.	

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How PIPS® technology eliminates wear for longer life

PIPS® technology (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.

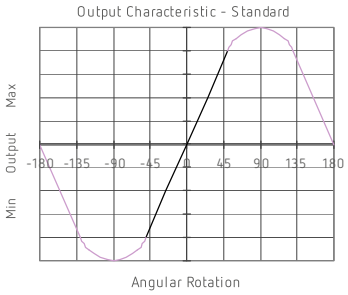
PIPS® technology combines the best in fundamental inductive principles with advanced micro-electronic integrated circuit technology.A PIPS® sensor, based on simple inductive coils using ASIC control technology, directly measures absolute position giving a DC analogue output signal. Because there is no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

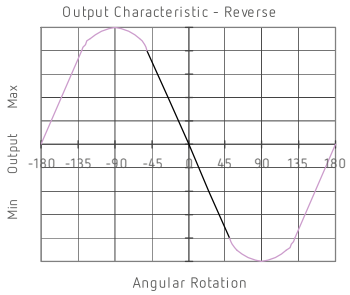
PIPS® overcomes the drawbacks of LVDT technology – bulky coils, poor length-to-stroke ratio and the need for special magnetic materials. It requires no separate signal conditioning.

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 ±7.5° to ±80° in increments of 1 degree.	
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		
Connector - Micro mini wetmate MCBH-4-MP SS		IP68 350 BAR





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