



- Industrial MagnetoResistive Linear Sensor
- Non-Contact technology
- 0-1.5” Absolute Travel
- -20-85°C Operating Temperature
- +/-0.5% Repeatability FS
- Analog Output (.5-4.5V)
- IP67
- Customizable Stroke
- +/-3% accuracy

DESCRIPTION

The PSIL25 is a non-contact linear sensor manufactured for industrial applications requiring long term stability in a harsh environment. This magneto-resistive technology allows customization for specific applications that may require small objects to measure. The potted plastic design is made for higher temperature applications where dust, humidity, and/or grease might be an issue.

The PSIL25 sensor is easy to use, install, and flexible in the use of various sensing cores to meet customers requirements.

The design is simple, cost effective, and proves reliable for OEM customers. Please contact us for Custom design availability.

APPLICATIONS

- Industrial Automation
- Money Dispensing Equipment
- Automotive
- Medical Device
- Aerospace

Maximum Environmental Ratings

Operating Temperature -20°C to 85°C
Storage Temperature Range -25°C to 85°C

Supply Voltage.....11-30VDC
Dimensions 27 X 28 X 21mm

PSIL25 Operational Characteristics

V ₊ = 5V, V ₋ = 0V, Temperature = 25°C					
PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS
Supply Voltage	V _{DD}	3.6	5	5.5	V
Supply Current	I _{DD}	12	15	25	mA
Upper Output Voltage (Note 1)	V _{OUT}	4.2	4.5	4.8	V
Lower Output Voltage	V _{OUT}	.47	.5	.55	V
Linearity (Note 2)		-0.25		0.25	%FS
Temperature Error (Null and Span) (Note 3)		-2		+2	%FS
Response Time	t _R		1	100	ms
Total Error Band (Note 4)		-1.5		1.5	%FS
Compensated Temperature Range	C	10		50	C
Operating Temperature Range	C	-20		85	C

Notes:

1) Measured with Supply Voltage at 5V. 2) Defined as best straight line 3) Measured from 0°C to 70°C 4) Measured over compensated temperature range 10-50C

Application Information

Package

The one piece sensor body design is made of a high temperature plastic, which allows for easy manufacturability and long term stability. Automotive grade vibration proof design was made for 5 year+ life.

Stability

The inductive sensing element is mounted to a ceramic base and sealed into the high temperature plastic housing. The selection of thermally capability materials reduce the mechanical stress on the sensor resulting in greater stability over time and temperature.

Electrical Connections

Wire Color	Connection
Brown	V+
White	GND
Black	Output
Blue	Out GND

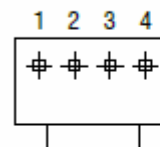
Media

The plastic material is tolerant to the following media but not limited to oil, air, gas, some corrosive media, and salt water. The sensor can be affected by large ferrous objects within 6" of the sensor.

Linear ranges

Standard stroke 10, 15, 25, and 30mm. Custom linear displacement ranges are available for OEM customers.

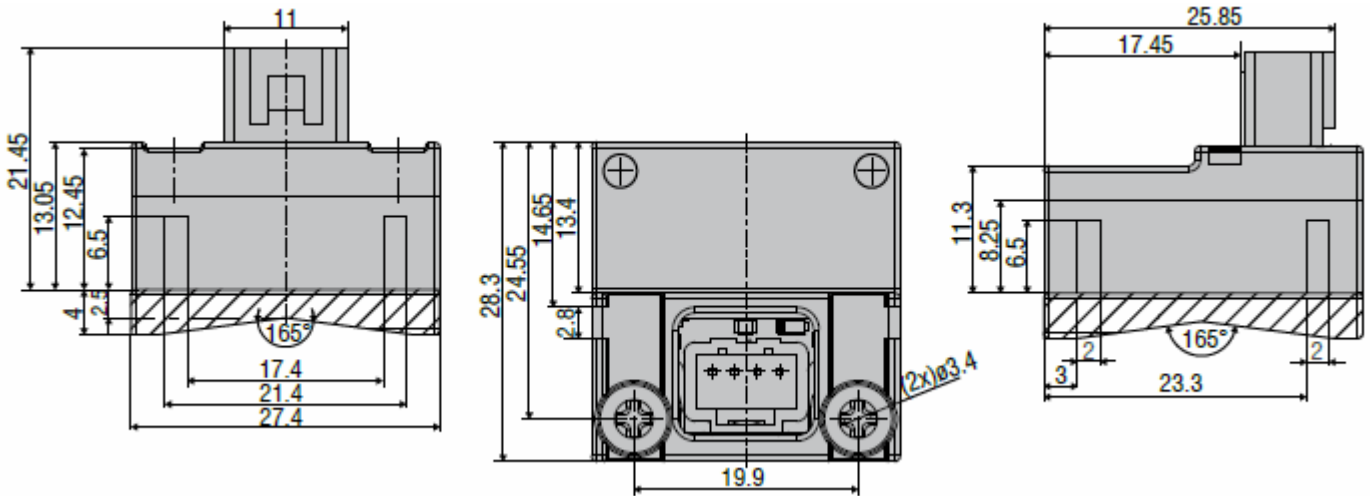
Pin assignment View connector side



1: + supply 3: GND
2: GND Out 4: + Out

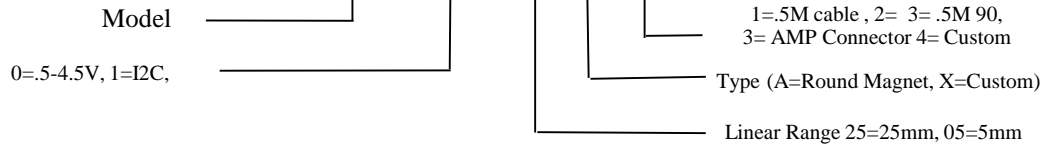
GND pins internally connected

Mechanical Dimensions (inches)



Part Number Configuration

PSIL25-1 - 25A 1



Standard Part Numbers

Model	Linear Range (mm)	Type
PSIL25-0-50A1	50	.5M Cable
PSIL25-0-75A1	75	.5M Cable
PSIL25-0-25A1	25	.5M 90

Notice:

Phoenix Sensors LLC reserves the right to make changes to the product contained in this publication. Phoenix Sensors LLC assumes no responsibility for the use of any circuits described herein, conveys no license under any patent or other right, and makes no representation that the circuits are free of patent infringement. While the information in this publication has been checked, no responsibility, however, is assumed for inaccuracies.

Phoenix Sensors LLC does not recommend the use of any of its products in life support applications where the failure or malfunction of the product can reasonably be expected to cause failure of a life-support system or to significantly affect its safety or effectiveness. Products are not authorized for use in such applications.