

Enabling the
Electronics
Revolution

PIHER *sensing*
systems
an Amphenol® company

Product Guide

Hall-Effect Rotary and Linear Position Sensors



Hall-Effect Position Sensors

Contactless magnetic linear and rotary sensors

We are experts in **advanced position sensing technologies** and enable our clients to accurately measure and control rotational and linear motion. As Amphenol company, we benefit from the growth and development opportunities of a global corporation, while maintaining the agility, creativity and entrepreneurial spirit of a medium-sized company that can **quickly adapt to customer needs**.

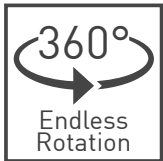
MAIN FEATURES OF OUR HALL EFFECT SENSORS



True, contactless operation
Without any gears or mechanical interfaces the sensor is easily assembled and calibrated and subject to limited wear and tear over lifetime.



Made for harsh environments
The rugged package protects the sensor from dust, moisture, vibration and extreme temperatures for usage in the most demanding environments.



360 degree absolute position feedback
Endless mechanical rotational angle without dead band, keeps the position on power loss with programmable electrical angles up to 360 degrees.



Adaptable to your requirements
Connector assembly, programmable transfer function and switch outputs as well as different output protocols and redundancy levels available.

OUR CUSTOMERS OPERATE IN THE FOLLOWING SECTORS



Automotive



Agriculture



Construction



Material Handling



Industrial



Marine








Medical

End-of-shaft sensors

- Reliable **non-contacting** position feedback in **compact packaging**
- Up to **50 million life cycles**
- High performance in **harsh environmental conditions**
- **Customizable** shafts, output protocols and connector assemblies




Hall-Effect End-of-Shaft Rotary Position Sensors

Model	Type	Dimensions (mm) L x W x H	Resolution	Absolute Linearity	Supply Voltage	Rotational Life	Electrical Angular Range	
							min	max
 MSC-360	Miniature flange mount	17 x 28 x 12.8	Analog, PWM: 12 bit	±1.5%	5 V ±10%	Up to 7 million	90	360
 PSC-360	Flange mount	37 x 40 x 32	Analog, PWM: 12 bit SPI: 14 bit	±1% (0.5%)	5 V ±10% 7 V to 15 V (25 V)	Up to 50 million	15	360
 PSC-360U	Panel mount incl. switch	34.5 x 27 x 36	Analog, PWM: 12 bit SPI: 14 bit	±1% (0.5%)	5V 12V 15V	Up to 50 million	15	360
 PSE-360	Panel mount	25.6 x 21.3 x 38.4	Analog: 12 bit	±1% (0.5%)	5 V ±10%	Up to 50 million	15	360
 PSE-290	Panel mount with mechanical end-stop	25.6 x 21.3 x 38.4	Analog: 12 bit	±1% (0.5%)	5 V ±10%	Up to 50 million	15	270

Through shaft sensors

- Unique, **patented design** allows shaft insertion from top or bottom
- **Low-profile** enables reduced packaging space
- Adapts to shaft's eccentricity and mounting tolerances
- **Customizable** rotor diameter, output protocols and connector assemblies
- Also available as **multi-turn** solutions


Hall-Effect Through-Shaft Rotary Position Sensors

Model	Type	Dimensions (mm) L x W x H	Resolution	Absolute Linearity	Supply Voltage	Rotational Life	Electrical Angular Range	
							min	max
 MTS-360	Miniature SMD mount	18 x 18 x 5.9	Analog, PWM: 12 bit	±1% (0.5%)	5 V ±10%	Up to 50 million	15	360
 MTS-360PCB	Miniature flange mount including Molex connector	35 x 36 x 7.5	Analog, PWM: 12 bit	±1% (0.5%)	5 V ±10%	Up to 50 million	15	360
 PST-360	Flange mount	62 x 53.3 x 12	Analog, PWM: 12 bit SPI: 14 bit	±1% (0.5%)	5 V ±10% 7 V to 15 V (25 V)	Up to 50 million	15	360


Touchless sensors

- Separate sensing element and magnet
- Virtually **unlimited mechanical life**
- **Truly touchless**, no need for gears or bearings
- Easy to assemble with low sensitivity to radial and axial play
- Compact, **fully sealed** modules

Hall-Effect Touchless Rotary Position Sensors

Model	Type	Dimensions (mm) L x W x H	Resolution	Absolute Linearity	Supply Voltage	Rotational Life	Electrical Angular Range	
							min	max
 PS2P-C0N	2-piece rotary sensor 3-mm nominal air gap	26 x 41.5 x 9.5	Analog, PWM: 12 bit SPI: 14 bit	±1% (0.5%)	5 V ±10% 7 V to 15 V (25 V)	Virtually unlimited	15	360


Hall-Effect Touchless Linear Position Sensor

Model	Type	Dimensions (mm) L x W x H	Resolution	Absolute Linearity	Supply Voltage	Life	Measurement Range (mm)	
							min	max
 PS2P-LIN	2-piece linear sensor 3-mm nominal air gap	26 x 41.5 x 9.5	Analog, PWM: 12 bit SPI: 14 bit	±1% (0.5%)	5 V ±10% 7 V to 15 V (25 V)	Virtually unlimited	1	15

Play resistant

- Immune to **radial and axial play**
- Virtually **unlimited mechanical life**
- **Air gap distance** between sensor and target can be customized
- Improved calibration, operation and **minimal maintenance and service downtime**
- Any shaft/arc diameter

Variable Air Gap Arc Position Sensors

Model	Type	Allowed play	Resolution	Absolute Linearity	Supply Voltage	Rotational Life	Electrical Angular Range	
							min	max
 PS2P-ARC	Play resistant 2-piece rotary sensor Immune to radial and axial play, available as custom solution	Radial ±1.5mm Axial ±7mm	Analog, PWM: 12 bit SPI: 14 bit	±1% (0.5%)	5 V ±10% 7 V to 15 V (25 V)	Virtually unlimited	15	180

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