

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



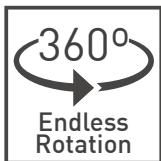
True, contactless operation

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



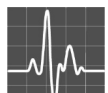
Material Handling



Industrial



Marine



Medical



- 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%	5V ±10%	Up to 7 million	90	360
 PSC-360	Flange mount	37 x 40 x 32	Analog, CAN, PWM: 12 bit SPI: 14 bit	±1% (0.5%)	5V ±10% 7V to 15V (25V)	Up to 50 million	15	360
 HRPS	With integrated connector	55 x 42.3 x 40.6	Analog: 12 bit	±1%	5V ±10% 7V to 32V	Up to 50 million	50	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
 PSCM	Multi-Turn (up to 32x)	37 x 40 x 32	Analog: 12 bit	±1% (0.1%)	5V ±10% 10V to 30V	Up to 50 million	720	11.520
 PSE-360	Panel mount	25.6 x 21.3 x 38.4	Analog: 12 bit	±1% (0.5%)	5V ±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%)	5V ±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%)	5V ±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%)	5V ±10%	Up to 50 million	15	360
 PST-360	Flange mount	62 x 53.3 x 12	Analog, CAN, PWM: 12 bit SPI: 14 bit	±1% (0.5%)	5V ±10% 7V to 15V (25V)	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-CON	2-piece rotary sensor	26 x 41.5 x 9.5	Analog, CAN, PWM: 12 bit SPI: 14 bit	±1% (0.5%)	5V ±10% 7V to 15V (25V)	Virtually unlimited	15	360
3mm nominal air gap. Maximum air gap: 5mm (higher on request)								
 HRPM	2-piece rotary sensor with integrated connector	56.9 x 32 x 17	Analog: 12 bit	±1%	5V ±10% 7V to 32V	Virtually unlimited	50	360
3mm nominal air gap								

Hall-Effect Touchless Linear Position Sensor

Model	Type	Dimensions (mm) L x W x H	Resolution	Absolute Linearity	Supply Voltage	Life	Measurement Range (mm)
 PS2P-LIN	2-piece linear sensor	26 x 41.5 x 9.5	Analog, CAN, PWM: 12 bit SPI: 14 bit	±1% (0.5%)	5V ±10% 7V to 15V (25V)	Virtually unlimited	0 to 12 mm 0 to 25 mm
3mm nominal air gap. Maximum air gap: 5mm (higher on request)							

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 customizable

Arc Position Sensors

Model	Type	Magnet radius	Resolution	Absolute Linearity	Supply Voltage	Rotational Life	Electrical Angular Range	
							min	max
 PS2P-ARC	Play resistant 2-piece rotary sensor	23mm 31mm	Analog, CAN, PWM: 12 bit	±1% (0.5%)	5V ±10% 7V to 15V (25V)	Virtually unlimited	45	110
Immune to radial and axial play. Other electrical rotational angles on request.								

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