

# PSCI

## High Speed Inductive Rotor Position Sensor

Accurate feedback on the angular position, direction, and speed of the rotor shaft is essential to optimize control of the motor inverter and drive the electric engine with the best possible efficiency. The PSCI high speed inductive rotor position sensor can be mounted on the same shaft as the electric machine rotor, is immune to electromagnetic stray fields and provides accurate measurement of rotor position in a compact, light weight and fully sealed package.



### KEY FEATURES

- ▶ Up to 600.000 (el) rpm speed
- ▶ Low weight and compact dimensions
- ▶ Robust to tilt, misalignment and gap variations
- ▶ True power-on sensor: excellent accuracy and precision
- ▶ Immune to stray fields, no shielding required
- ▶ End-of-shaft sensor for metallic target
- ▶ Standard version available for 6, 8, and 12 poles
- ▶ Suitable for harsh environments (fully sealed, shock, vibration)
- ▶ ASIL-C ready (redundant output available on request)
- ▶ Cost-effective alternative to traditional resolvers

### APPLICATIONS

- ▶ Motor position sensing and control in electric and hybrid powertrains

### TECHNICAL SPECIFICATIONS

Signal output	Analog: differential sine/cosine (1.0V to 4.0V)
Max. speed (mec)	200.000 rpm (6-pole version) 150.000 rpm (8-pole version) 100.000 rpm (12-pole version)
Accuracy	±1°el
Resolution	infinite
Propagation delay	< 4.2 μsec
Operating temperature	-40°C to +150°C (coil temperature can be > 150°C)
Rotational life	unlimited
Sealing	IP69K
Supply voltage	5V ±10%
Current	Max 15 mA; ±18V over/reverse voltage protection
Mounting torque	Max 2.2 N m
Target material	Metal

Other technical specifications available. Contact [info@piher.net](mailto:info@piher.net)

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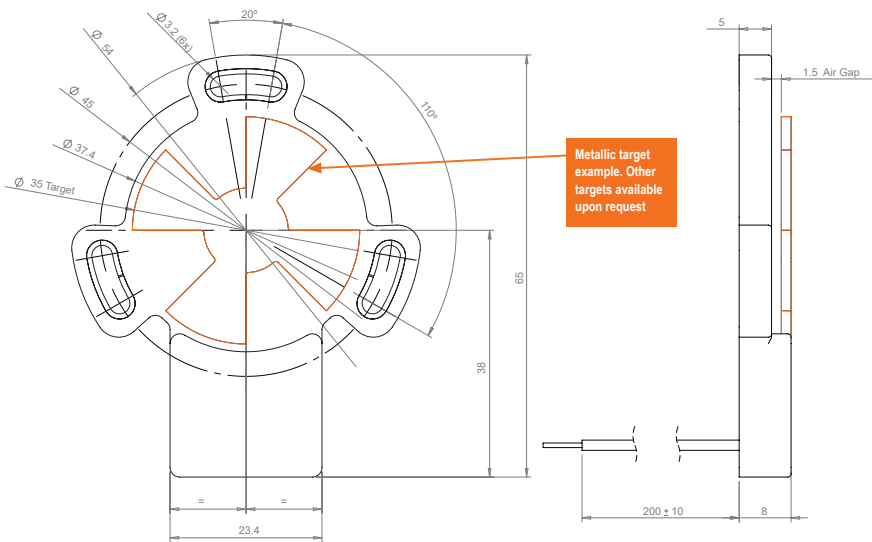
# PIHER *sensing* systems

Potentiometers | Hall-Effect Sensors | Inductive Sensors  
Speed Sensors | Printed Electronics | Value Added Assemblies

### HOW TO ORDER (Example: PSCI - 4PP - 05)

Series	Number of pole pairs	Supply Voltage
PSCI	3PP = Three 4PP = Four 6PP = Six	05 = 5V

### DIMENSIONS (MM) - 8-POLE VERSION



Metallic target  
example. Other  
targets available  
upon request

### CONNECTION SCHEME

- Blue = Ground
- Yellow = Sine (+)
- White = Sine (-)
- Red = Cosine (+)
- Black = Cosine (-)
- Brown = Vcc

Wires: 0.35mm<sup>2</sup>  
TXL SAE J1128



Download the STEP file here:  
<https://piher.net/piher/?p=3317>

### OUR ADVANTAGE

- ▶ Leading-edge innovative position sensing solutions
  - ▷ Contactless (Hall-effect and Inductive Technology)
  - ▷ Contacting (Potentiometers, Printed Electronics)
- ▶ Value added proposition
  - ▷ Engineering design-in support
  - ▷ Cable harness and connector assembly
- ▶ All our products can be customized to fit target application and customer requirement
- ▶ Capability to move seamlessly from development to true high-volume production
- ▶ A global footprint with global engineering and commercial support
- ▶ One-stop shop not limited to position sensors (temperature, pressure, gas,...) through group collaboration
- ▶ Flexibility and entrepreneurship of a medium-sized company with the backing of Amphenol Corporation



Please always use the latest updated datasheets and 3D models published on our website.

#### Disclaimer:

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