

# PSCI

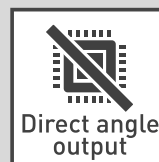
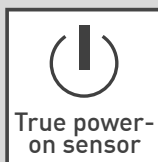
## Inductive eMotor Rotor Position Sensor

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 air 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)
- ▶ Cost-effective alternative to conventional resolvers



### ELECTRICAL SPECIFICATIONS

Supply voltage	5V ±10%
Supply current	Max 15mA
Voltage protection	±18 V
Accuracy	±1°el
Signal output	Single-ended demodulated sine/cosine (1.0V to 4.0V) Differential demodulated sine/cosine (-3V to +3V)
Resolution	Infinite
Propagation delay	<4.2 µsec
Maximum electrical speed	600.000 rpm

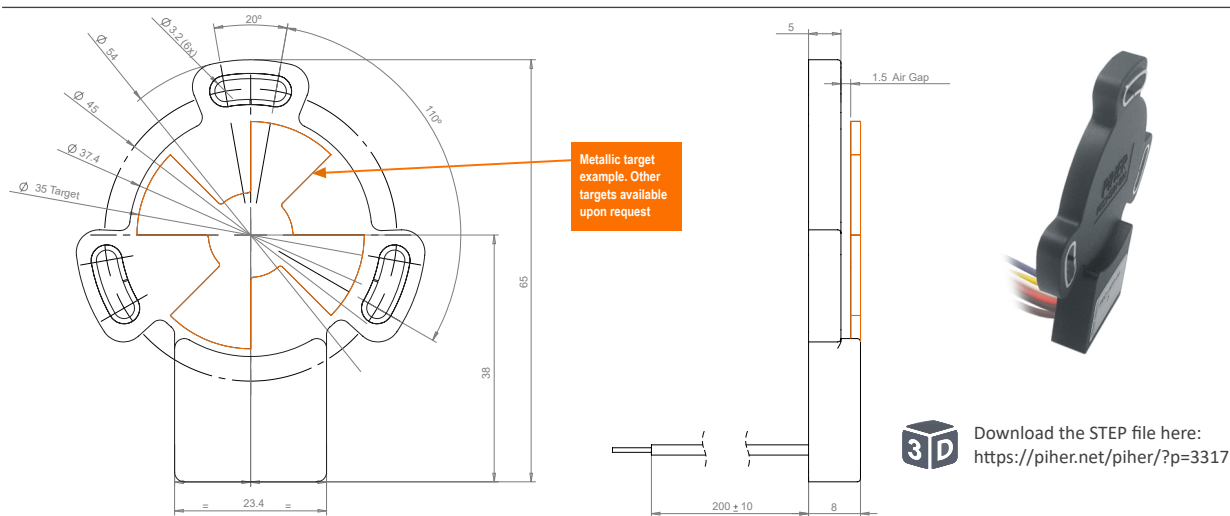
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### MECHANICAL SPECIFICATIONS

Rotational life	Unlimited
Max. mounting torque	2.2 Nm
Maximum mechanical speed	200.000 rpm (3-pole pair version) 150.000 rpm (4-pole pair version) 100.000 rpm (6-pole pair version)
Target material*	Conductive metal
Operating temperature	-40° to +150°C (coil temperature can be > 150°C)
Sealing	IP67, IP69K

\*Target not included, for support please contact Piher Sensing Systems

### DIMENSIONS (MM)



### CONNECTION SCHEME

Color	Single-Ended	Differential
Blue	Ground	Ground
Yellow	Sine (+)	Sine (+)
White	n/a	Sine (-)
Red	Cosine (+)	Cosine (+)
Black	n/a	Cosine (-)
Brown	Vcc	Vcc

More instructions of use on [www.piher.net](http://www.piher.net). Connector assembly available on request.

### HOW TO ORDER

Part number	
PSCI-3PP-05	3-pole pair (6 poles) differential output
PSCI-4PP-05	4-pole pair (8 poles) differential output
PSCI-6PP-05	6-pole pair (12 poles) differential output

Single-ended output sensors available on request.

### TARGET DESIGN

3 Pole Pairs	4 Pole Pairs	6 Pole Pairs

Target not included, for support please contact Piher Sensing Systems



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

#### Disclaimer:

The product information in this catalog is for reference purposes. Please consult for the most up to date and accurate design information.

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