

# SSH-G01

## Hall-Effect Gear Tooth Speed and Direction Sensor

The flange mount gear tooth speed and direction sensors of Piher Sensing Systems are designed to precisely calculate speed and direction of ferrous gears in demanding environments such as vehicle transmissions. The hall-effect sensor measures the variation in flux found in the airgap between the magnet and the passing teeth. Based on its touchless technology and rugged design the SSH-G01 sensor provides true long-term reliability.



### KEY FEATURES

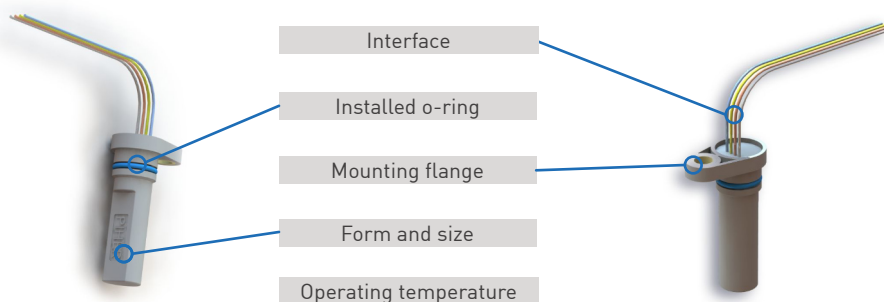
- ▶ Speed and direction feedback
- ▶ Operating temperature of 125°C (higher on demand)
- ▶ Fast and near zero speed sensing capable
- ▶ Compact and rugged for automotive & industrial areas
- ▶ Sealed for harsh environments: IP67
- ▶ Resistant to moist and high vibration environments such as engines, transmissions, brakes and chassis systems
- ▶ ESD protection
- ▶ Easily customizable cable or connector interface

### APPLICATIONS

- ▶ Vehicle transmission
- ▶ Wheel speed and direction
- ▶ Engine speed
- ▶ Anti-lock braking system
- ▶ Pump speed feedback

### CUSTOMIZATION POSSIBILITIES

Custom product design can easily be provided to meet any form, fit and function including the choice of wire harness and interface connector.



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## Gear Tooth Speed and Direction Sensor

### ENVIRONMENTAL SPECIFICATIONS

	Two Wire Current Source	A/B Signal
Operating temperature	-40° to +125°C*	
Storage temperature	-40° to +125°C*	
Shock	50g	
Vibration	5-2000 Hz; 20g; A <sub>max</sub> 0,75 mm	
Sealing	IP67	
Bulk current injection	Tested to ISO 11452-4 (2011) 1MHz to 400MHz; 100mA	Tested to GMW3097 level 2
Conducted immunity	Tested to ISO 7637-2 (2011)	Tested to ISO 7637-2: level IV
ESD	Tested to ISO 10605 (2008) ±8kV	12kV
Conducted emissions	CISPR 25 (2008)	-
Capacitive coupling clamp	-	Tested to ISO 7637-3:2008

\*Others available on request

### MECHANICAL SPECIFICATIONS

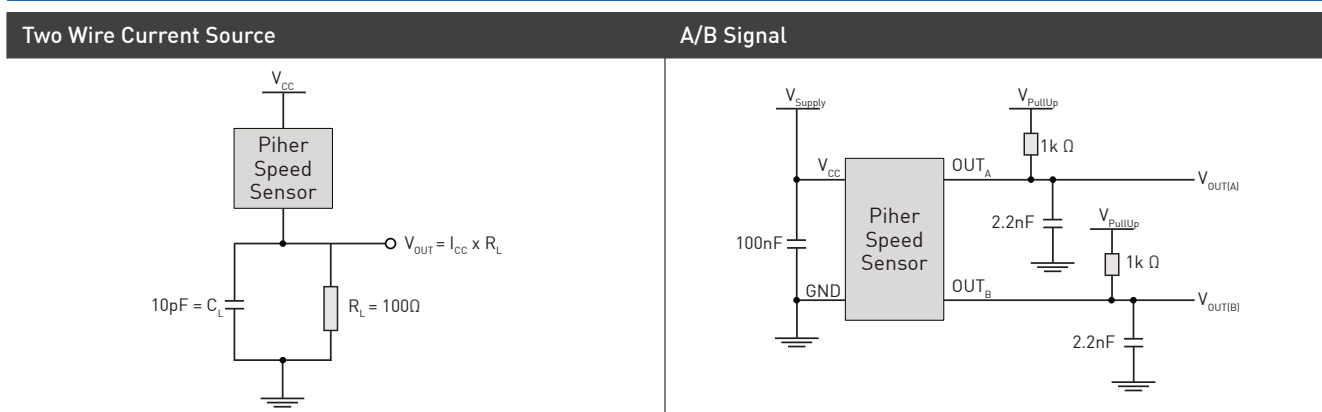
	Two Wire Current Source	A/B Signal
Air gap	1.5mm	
Max. installation torque	5.6 Nm (for 1/4-20 bolt or M6 x 1)	
Maximum speed	12 kHz (forward) / 7 kHz (reverse)	9 kHz (forward) / 6 kHz (reverse)

### ELECTRICAL SPECIFICATIONS

	Two Wire Current Source	A/B Signal
Operating voltage range	4-24 VDC	
Reverse supply voltage	-18 VDC	
Supply current	Low state: 5.9-8 mA High state: 12-16 mA	Typ. 10 mA
Power-on time	1 ms	
Output risetime	10 μs	5 μs
Output falltime	10 μs	3.5 μs

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

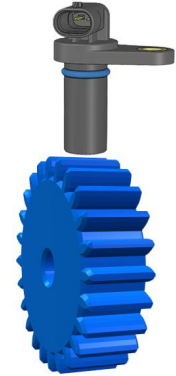
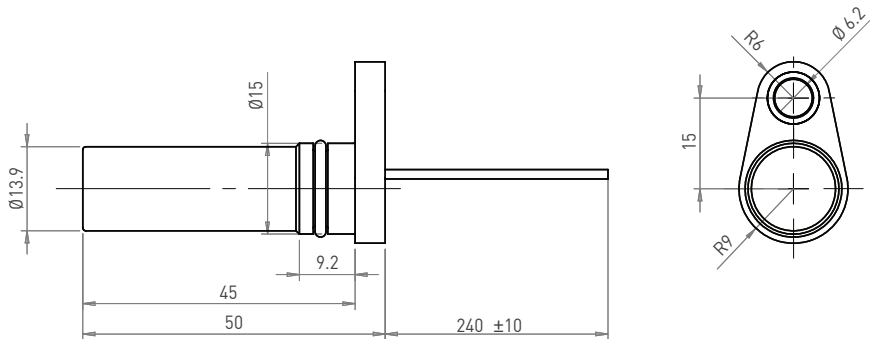
### RECOMMENDED CONNECTIONS



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## Gear Tooth Speed and Direction Sensor

### DIMENSIONS (MM)



### HOW TO ORDER

Series	Output
SSH-G01-002-AB	A/B signal
SSH-G01-002-CP	two wire current source

### OUR ADVANTAGE

- ▶ Leading-edge innovative position sensing solutions
  - ▷ Contactless (Hall-effect and Inductive Technology)
  - ▷ Contacting (Potentiometers, Printed Electronics)
- ▶ Engineering design-in support
- ▶ 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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