

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

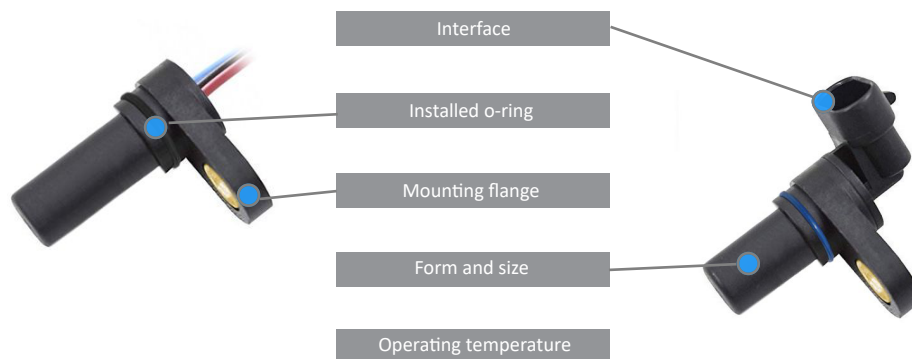
- ▶ Speed and direction feedback
- ▶ Operating temperature of 125°C (higher on demand)
- ▶ Fast and near zero speed sensing capable
- ▶ Compact and rugged for automotive & industrial areas
- ▶ Sealed for harsh environments: IP67
- ▶ Resistant to moist and high vibration environments such as engines,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

APPLICATIONS

- ▶ Vehicle transmission speed and direction
- ▶ Wheel speed and direction
- ▶ Hoist and engine speed and direction
- ▶ Anti-lock braking system
- ▶ Pump speed feedback
- ▶ Industrial control

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.



SSH-G01

Gear Tooth Speed and Direction Sensor

ENVIRONMENTAL SPECIFICATIONS

	Two Wire Current Source	A/B Signal
Operating temperature	-40°C to +125°C*	
Storage temperature	-40°C to +105°C*	
Shock	IEC 60068-2-27 50g; 3 axis	
Thermal Shock	100 cycles; Tmax: +125°C	
Chemical Resistance	Windshield washer, Diesel, Gasoline, Battery liquid, Coolant liquid, Potash, Brake liquid, Detergent, Engine oil	
Salt Spray	UNE-EN ISO 9227	
Sealing	IP67, IP69K ISO 20653	
Humidity	168 h 40°C 95%RH	
High Temperature Exposure	ISO 16720-4 100h, 125°C	
Vibration	IEC 60068-2-6 5-2000Hz;20g; Amax 0,75 mm	
Bulk current injection	ISO 11452-4 /GMW3097 Level 2	-
Radiated Immunity	ISO 11452-2 150V/m; 200MHz-2000MHz	
Transients Immunity	ISO 7637-3	
Radiated Emissions	CISPR25:2008	-
ESD	ISO 10605:2008 ±8kV; Air Gap ±16kV	

*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)	40 kHz

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	5 µs

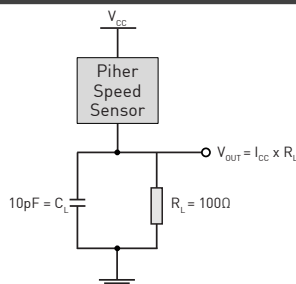
Other specifications available. Contact info@piher.net

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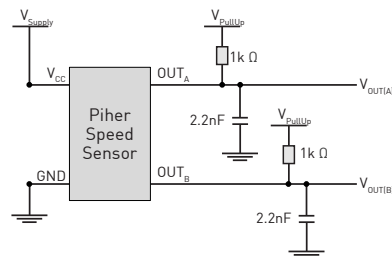
Gear Tooth Speed and Direction Sensor

RECOMMENDED CONNECTIONS

Two Wire Current Source

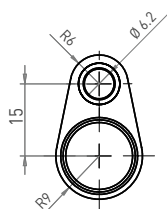
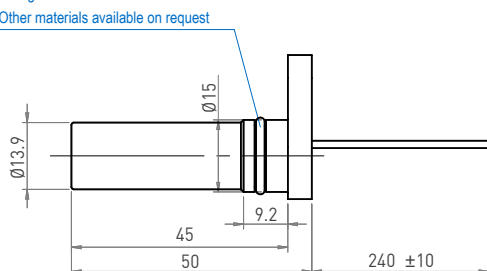


A/B Signal



DIMENSIONS (MM)

O-ring Material EPDM 70
Other materials available on request



Download the STEP file at: www.piher.net

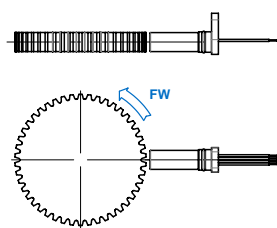
CONNECTION SCHEME

Color	A/B Signal	Current Source
Brown	Vcc	Vcc
Blue	Ground	n/a
Black	Signal output A	n/a
White	Signal output B	n/a
Yellow	n/a	Signal output

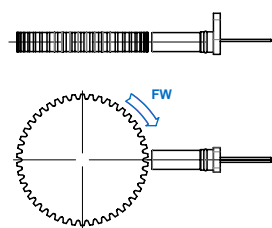
Connector assembly available on request.

TYPICAL MOUNTING

SSH-G01-002-AB and SSH-G01-002-CP



SSH-G01-002-CP-R



HOW TO ORDER

Series	Output
SSH-G01-002-AB	A/B signal
SSH-G01-002-CP	two wire current source - CCW
SSH-G01-002-CP-R	two wire current source - CW (reverse)



Please always use the latest updated datasheets published on our website.

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