

## GEARTOOTH SPEED SENSOR

# GS101205

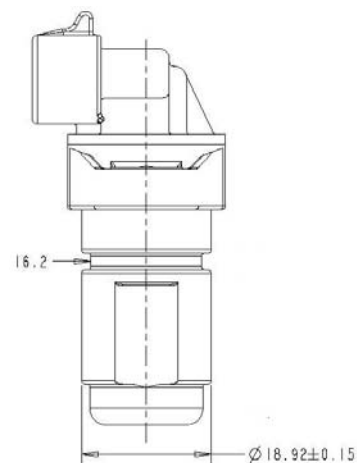
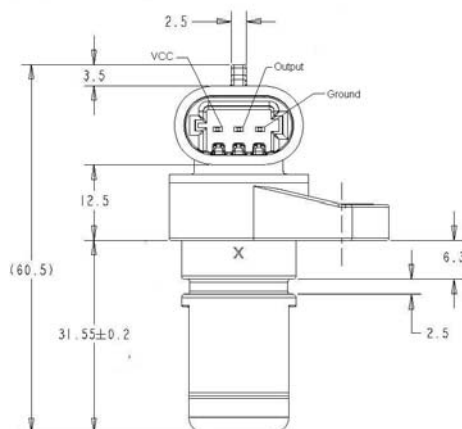
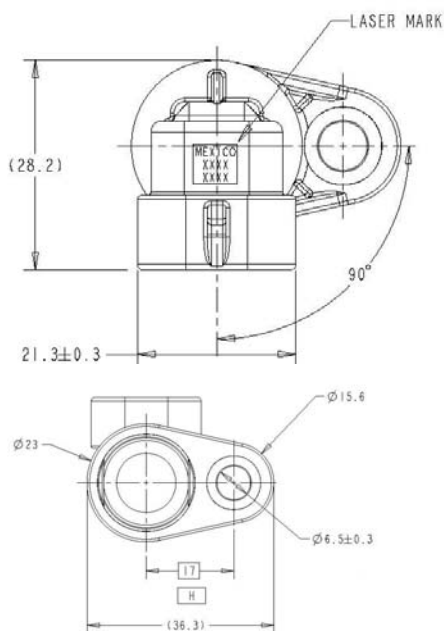
Flange mount gear sensor rated to 140°C



### Description

The GS101205 is a self-adjusting digital output Hall Effect device used in applications where near zero speed sensing (non power-up recognition) is required. This feature also compensates for target run out. The single hall design is immune to alignment issues allowing unlimited mounting positions.

### Dimensions mm



### Features and Benefits

- Capable of operating in high temp environments up to 150°C.(contact factory for details)
- Designed to meet IEC60529 IP67 standard for immersion.
- Resistant to fuels, solvents and lubricants associated with engines, transmissions, brakes and chassis systems.
- ESD resistance to 15kV (contact discharge)
- Mating connector: Delphi 12162280
- Accepts a standard SAE AS 568B-016 o-ring.

### Applications

- Transmission speed
- Wheel speed
- Engine speed
- Anti-lock braking systems

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## Mechanical Specifications

<b>Airgap</b>	1.5mm (with Cherry test gear)
<b>Maximum Installation Torque</b>	50 in-lbs (for a ¼ - 20 bold or M6 x 1)

## Electrical Specifications

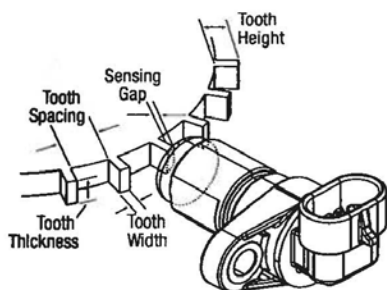
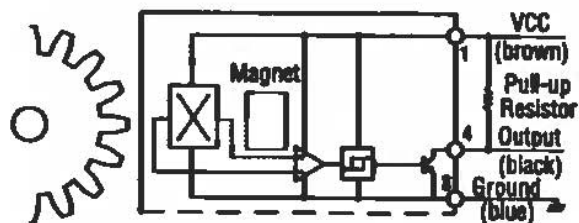
<b>Operating Voltage Range</b>	5-24 VDC
<b>Supply Voltage</b>	5-24 VDC
<b>Supply Current</b>	6 mA max
<b>Output Saturation Voltage</b>	600 mV max
<b>Output Current</b>	25 mA max
<b>Operating Temperature</b>	-40° to +140°C*
<b>Storage Temperature Range</b>	-40° to +150°C
<b>Output Rise time</b>	10µS
<b>Output Fall time</b>	10µS
<b>Bulk Current Injection</b>	SAE J1113-4 (250kHz to 500Mhz; 100mA/m)
<b>Conduction and Coupling</b>	SAE J1113-12 (± 200V)
<b>Electronic Discharge</b>	SAE J1113-13 (±14kV)
<b>Immunity to Magnetic Fields</b>	SAE J1113-22 (600 microT AC field; 5Hz to 2kHz; .2mT & 1mT DC field)
<b>Radiated Emissions</b>	SAE J1113-23
<b>Immunity to AC Fields</b>	SAE J1113-25 (15kV/m)
<b>Radiated Emissions</b>	SAE J1113-41 (Class 4)
<b>Maximum Speed</b>	10kHz (with Cherry target)

<b>Water Immersion</b>	IEC60529 IP67
<b>Dust, Sand and Gravel Bombardment</b>	SAE J1455 4.7.3
<b>Vibration</b>	Sinusoidal vibration max 15g's from 40 to 2000 Hz
<b>Mechanical Shock</b>	18 shocks at 50g's 11ms per Mil Std 202F

Recommended external pull-up resistor:

<b>Volts (DC)</b>	5	9	12	15
<b>Ohms</b>	1000	1800	2400	3000

Open Collector Sinking Block Diagram



For best results, we recommend targets made from low carbon cold rolled steel. Other factors that influence sensor performance include geartooth height and width, space between teeth, shape of the teeth and thickness of the target. As a general guideline, consider a target with the following minimum parameters:

Tooth Height	Tooth Width	Distance Between Teeth	Target Thickness
.200"	.100"	.400"	.250"

## Contact

Call, fax or visit our website  
For more information.

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Specifications subject to change without notice.

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