

GEARTOOTH SPEED SENSOR

GS101205 Series

Flange mount gear sensor rated to 150°C



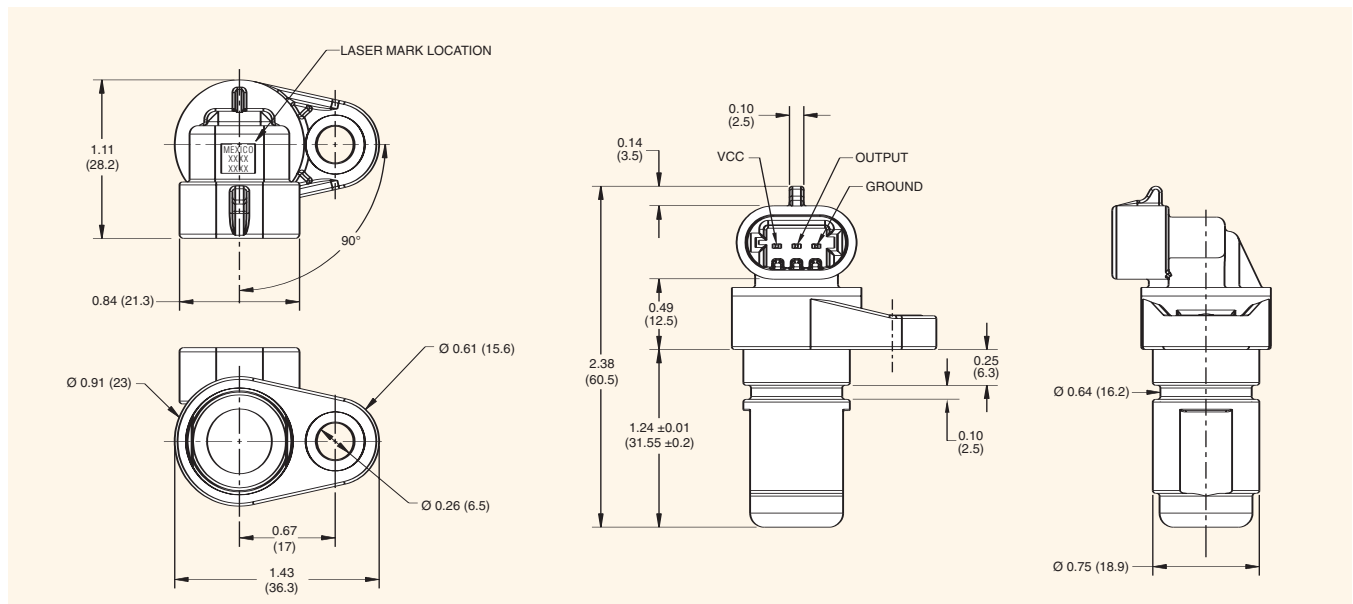
Features and Benefits

- Capable of operating up to 150°C
- Sealed design exceeds IEC60529 IP67 standard for immersion
- Resistant to fuels, solvents, and lubricants associated with engines, transmissions, brakes and chassis systems
- Easily customizable connector orientation
- ESD resistant to 15kV (contact discharge)
- Operates at arbitrarily low speeds
- Mating connector Delphi 12162280

Applications

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

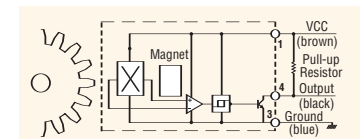
Dimensions inches (mm)



Recommended external pull-up resistor:

Volts (DC)	5	9	12	15
Ohms	1000	1800	2400	3000

Open Collector Sinking Block Diagram



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Mechanical Specifications

Airgap	1.5 mm (with Cherry test gear)
Max Installation Torque	50 in-lbs (for a 1/4 - 20 bolt or M6 X 1)

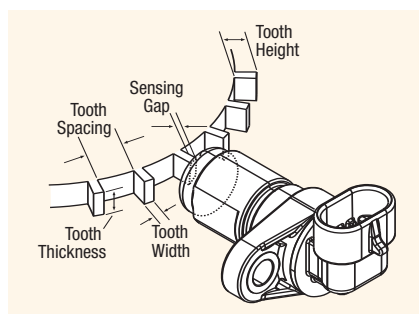
Electrical Specifications

Operating Voltage Range	5–30 VDC
Supply Current	6 mA max
Output Saturation Voltage	600 mV max
Output Current	25 mA max
Operating Temperature	-40° to 150°C*
Storage Temperature Range	-55° to 150°C
Output Risetime	10µS
Output Falltime	10µS
Bulk Current Injection	SAE J1113-4 (250kHz to 500MHz; 100mA/m)
Conduction and Coupling	SAE J1113-12 (±200V)
Electronic Discharge	SAE J1113-13 (±15kV)
Radiated Immunity	SAE J1113-21 (10kHz to 18GHz; 200 V/m)
Immunity to Magnetic Fields	SAE J1113-22 (600microT AC Field; 5Hz to 2kHz; .2mT & 1mT DC Field)
Radiated Emissions	SAE J1113-23
Immunity to AC Fields	SAE J1113-25 (15kV/m)
Radiated Emissions	SAE J1113-41 (Class 4)
Maximum Speed	10kHz (with Cherry target)

*For continuous operation at 150°C supply voltage should be limited to 5.5V max.

Environmental Specifications

Water Immersion	IEC60529 IP67
Dust, Sand and Gravel Bombardment	SAE J400 JUN80
Vibration	Sinusoidal vibration max 15g's from 40 to 2000 Hz
Mechanical Shock	18 shocks at 50g's 11ms per Mil Std 202F



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

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