



# GEARTOOTH SPEED SENSOR

# GS101205

## 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>	9-16 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 +150°C*
<b>Storage Temperature Range</b>	-40° to +125°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)

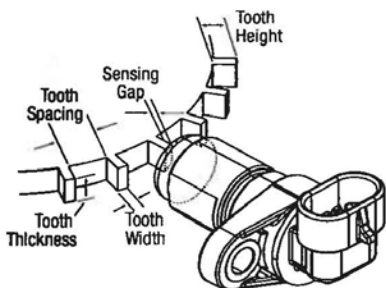
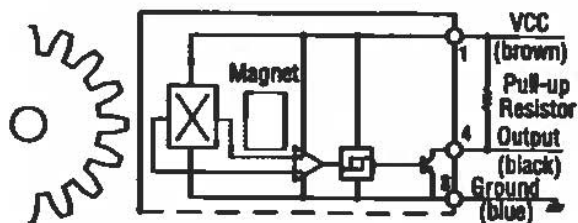
\*For continuous operation at 150° supply voltage should be limited to 5.5V max.

<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

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Specifications subject to change without notice.

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