



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Gear Tooth Speed Sensors



GS102301 Sensors

Threaded, straight connector gear tooth speed sensor rated to 140 °C

Description

The GS1023 series gear tooth speed sensors are Hall Effect devices designed for use in applications where ferrous edge detection/near zero speed sensing is needed. The single Hall design is immune to alignment issues allowing unlimited mounting positions. They provide a sinking current output.

Features

- From near zero speed up to 15 kHz sensing capability
- Resistant to fuels, solvents, and lubricants associated with engines, transmissions, brakes and chassis systems
- Supplied with installed Viton O-ring
- Installs into a standard M20 x 1.5 O-ring port
- RoHS compliant
- IP67
- Typical air gap of 1.5 mm*

Typical Applications

- Speedometers
- Anti-lock braking systems
- Exercise equipment
- CNC machine tools

Environmental Specifications

Vibration	Sinusoidal, 15 g max from 40 Hz to 2 kHz
Mechanical Shock Resistance	50 g
Maximum Speed Detection	15 kHz
Operating Temperature	-40 °C to 140 °C (-40 °F to 284 °F)
Storage Temperature	-40 °C to 150 °C (-40 °F to 302 °F)
Ingress Protection	IP67

Electrical Specifications

Operating Supply Voltage	5 to 24 VDC
Maximum Input Voltage	30 VDC
Maximum Reverse Voltage	26.5 VDC
Supply Current	3 mA typ., 6 mA max
Output Sink Current	25 mA max
Recommended Pull-Up Resistor	See chart

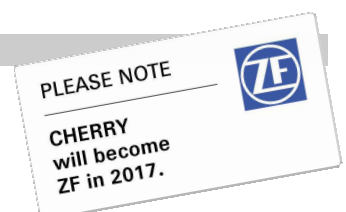
Mechanical Specifications

Housing Material	Glass Reinforced Thermoplastic
Maximum Installation Torque Limit	68.0 Nm (50 ft lb) on threads
Operating Air Gap / Sensing Distance*	1.5 mm (0.06")
* With recommended target type; see drawing	
Sensor Orientation	Not sensitive

Products

Part Number	Connector**
GS102301	Delphi Metri-Pack 150

**Mates to Delphi connector 12162280

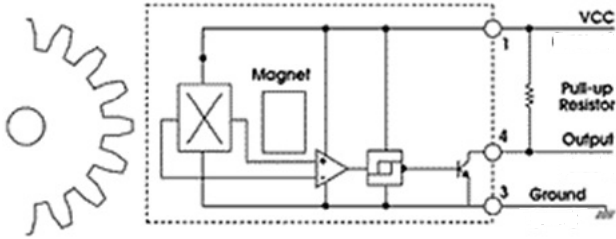


Note: An external pull-up resistor is required, the value of which is dependent on the supply voltage. The resistor should be connected between the output and Vcc. Refer to the wiring diagram for lead colors or pin numbering as applicable.

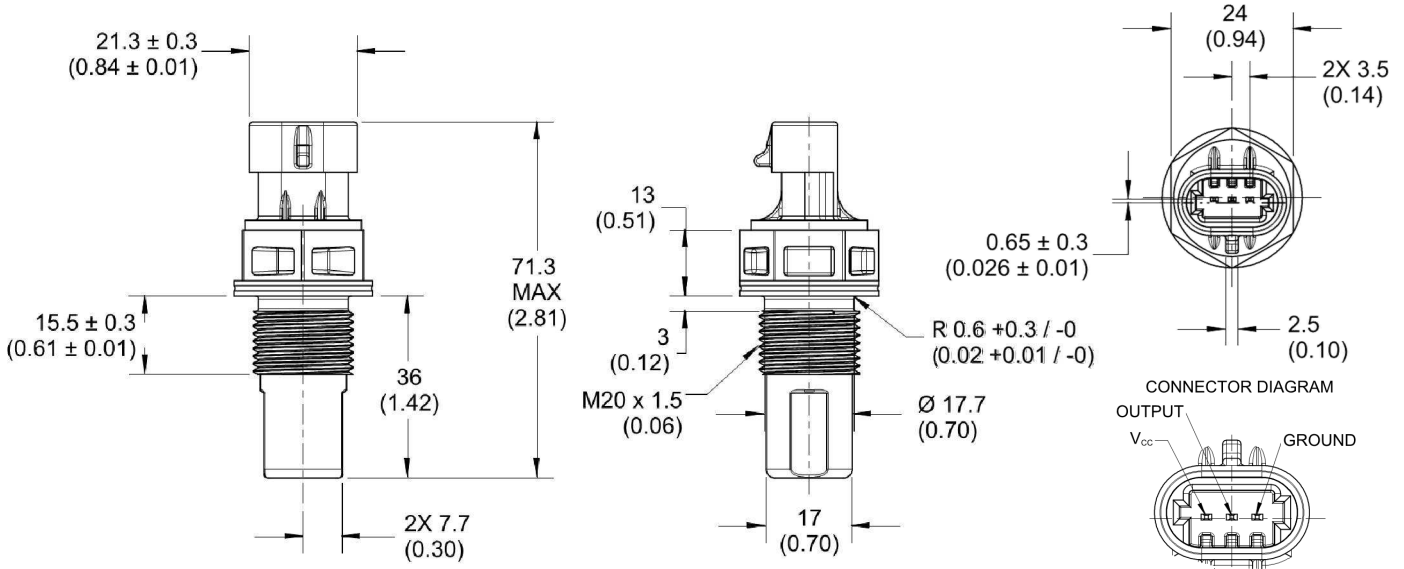
Recommended External Pull-Up Resistor

Volts DC	5	9	12	15	24
Ohms	1k	1.8k	2.4k	3k	3k

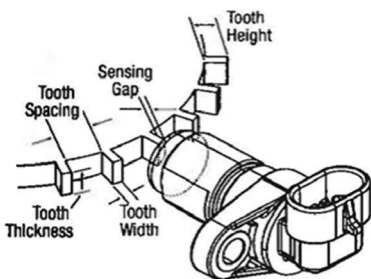
Open Collector Sinking Block Diagram



Dimensions mm (inches)



Installation



For best results, we recommend targets made from low carbon cold rolled steel. Other factors that influence sensor performance include gear tooth height and width, space between the teeth, shape of the teeth and thickness of the target. As a general guideline, consider a target with minimum parameters as shown below. Note that smaller dimensions may work, but testing for the application is required.

Tooth Height	Tooth Width	Distance between Teeth	Target Thickness
5.0 mm (.200")	2.5 mm (.100")	10 mm (.400")	6.35 mm (.250")