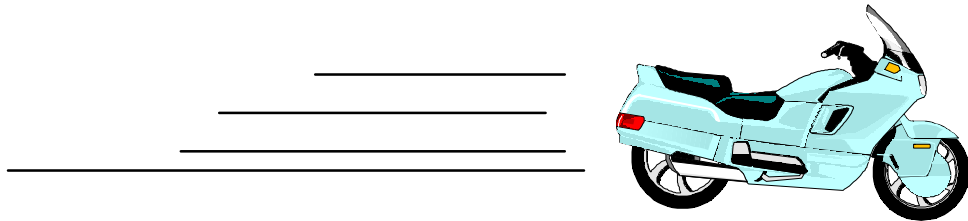


## Speed Sensing

SOLID STATE

AP 00286



### PRODUCT

Solid state sensors  
1GT101DC,  
SS400 Series

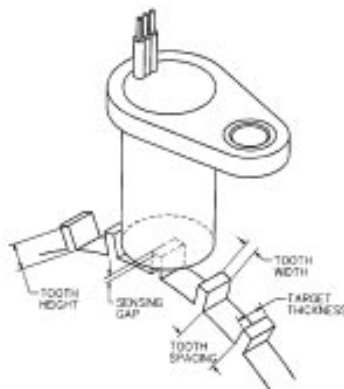
### APPLICATION DESCRIPTION

Speed sensing can be achieved with a variety of approaches. One solution is to use a ferrous metal gear target with a gear tooth sensor. The gear tooth passes by the sensor face which concentrates the magnetic flux from the bias magnet in the sensor. The sensor detects the change in the flux level, and translates it into a change in the sensor output.

Another approach for speed or RPM sensing is to use a digital Hall-effect sensor with a ring magnet. As the poles of the magnet pass by the sensor, the output is changed.

Speed or RPM sensing can be used for a variety of applications including: camshaft and crankshaft, transmission, tachometers, anti-skid/traction control, sprocket speed, conveyor speed, stop motion detection, counters. Speed sensing is done in applications in: automotive, agricultural and construction equipment, buses, trucks, lawn and garden equipment, golf carts, ski mobiles, escalators, and automation equipment to name a few.

### Gear tooth Sensor and Target



### Ring Magnet and Hall sensor

