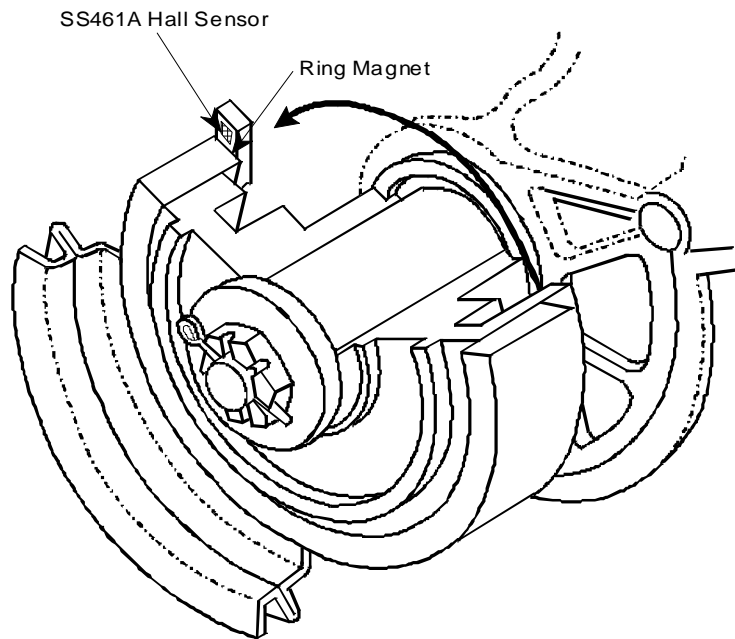


## Speed Transducer

SOLID STATE

AP 00232



### PRODUCT:

SS461A Hall Effect Sensor

### APPLICATION DESCRIPTION:

A Midwest manufacturer of automotive sensors uses Hall effect devices in their Speed Transducer to detect crankshaft rotation in automobiles and trucks.

The customer required a very high sensitivity latching sensor to guarantee a duty cycle close to 50 percent, one of the advertised features. The SS461A was selected. The Hall sensor is potted in a zinc die-cast housing. The sensor counts pulses in a ring magnet that is mechanically coupled to the vehicle's crankshaft. The output of the sensor is used in speedometers, tachometers, on-board computers and tachographs. The Hall device is superior to electromagnetic pick-ups (variable reluctance) because of the Hall effect sensor's sharp square wave output.

Electromagnetic sensors give a sine wave output that can cause spurious pulses or false readings.

The customer also liked the excellent symmetry of the SS461A, which gives a duty cycle close to 50 percent when matched with the customer's magnet.