



SENSORONIX

ADVANCED MAGNETIC SENSOR TECHNOLOGY

The Official Newsletter of Sensoronix Inc.

TYPES OF MAGNETIC SENSORS



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HALL-EFFECT ZERO SPEED SENSOR

Non contact Magnetic sensors that measure distortion of magnetic field by using ferrous material gear tooth or other magnetic target for precise measurement of rotating shaft's speed even down to stop.



2

HALL-EFFECT PROXIMITY SWITCH SENSOR

Non contact Magnetic proximity switch sensor that produces a digital output due to presence and absence of a magnet as a sensing target.



3

HALL-EFFECT SPEED & DIRECTION SENSOR

Non-contact magnetic sensors that provide precise measurement of speed and direction of a rotating shaft by using a ferrous material gear tooth as a sensing target which produces two digital signals.



4

HALL- EFFECT QUADRATURE SENSOR

Non contact Magnetic Quadrature sensors that measure the speed and direction of a rotating shaft by using ferrous material gear tooth as a sensing target which produce two digital square wave outputs with 90° out of phase. Signal one leading signal two at forward direction and signal two leading signal one at reverse direction for detecting the direction of rotation.

EXPLORE WHAT'S INSIDE THIS ISSUE:

Different Types of Sensors

Common Sensor Applications

Industries Served



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HALL-EFFECT DISPLACEMENT SENSOR W/ LINEAR OUTPUT

Non contact Magnetic position sensor designed for precise measurement of wide range of magnetic field and can detect relatively small changes in magnetic field and provide a linear output voltage by using a magnet as a sensing target.



6

HALL-EFFECT SPEED SENSOR LINEAR OUTPUT

Non contact magnetic linear speed sensors that produce industry standard linear 4-20mA or 0-10 VDC output by using ferrous material gear tooth or other magnetic target for precise measurement of speed (RPM) down to zero speed.



7

VARIABLE RELUCTANCE SPEED SENSOR

The collapse of magnetic field due to an interruption by a ferrous gear tooth provides an analog signal output (sine wave) that does not require an outside power source. Generates sine wave signal for the speed (RPM) by using ferrous as a target.



8

VR SPEED SENSOR W/ COMPLEMENTARY OUTPUTS

Non-contact magnetic sensors that measure the collapse of magnetic field due to the interruption by a ferrous gear tooth. The sensors provide two analog signal outputs (sine wave) that does not require an outside power source.



9

VR SPEED SENSOR W/ DIGITAL OUTPUT

Non contact magnetic speed sensor that due to the active solid state analog to digital converter integrated with variable reluctance (VR) sensor to produce a digital square wave signal output with constant amplitude regardless of variations to the speed and air gap.



COMMON SENSOR APPLICATIONS

Sensoronix Inc. sensors are used in many Industry Applications such as **Automotive:** Crankshaft, Transmission Speed, Engine Speed, Dynamometers and Performance vehicles (and many more). **Aviation/Aerospace:** Fan control, Solenoid, Test Equipment, Antenna, Engine control and Switches. **Off Highway, Agriculture & Construction:** Dynamometers, Crankshaft, Transmission Control, Engine Speed Control, Cement Mixers, Lifters, Tractors, Harvesting Machines and Trucks. **Railroad:** Locomotive Speed Control, Diesel Engines, Transmission and Switches. **Power Generation:** Gen-sets, Panels, Diesel Engines, Power Turbines. **Military:** Engine Control, Bradley Transmission, Armored Vehicles, GPS Systems, Missiles and Mining Equipment. **Biotech:** Centrifuge Speed Measurement and Proximity Switches. **Exercise Equipment:** Speed Control, Distance Measurement and switches.

INDUSTRIES SERVED

There are various types of sensors in use today, which have different properties, and capabilities as you learned above. Most of these sensors are small in size, but they are of great help. Here are some most common industries:

- Automotive
- Aviation
- Aerospace
- Agriculture
- Biotechnology
- Construction
- Power Generation
- Exercise Equipment
- Locomotive
- Military
- Off Highway

