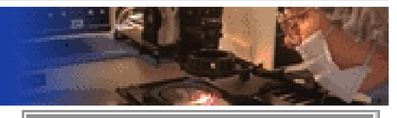
Honeywell

Honeywell Sensing and Control



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3040A

Actual product appearance may vary.

Power Output VRS Sensor, 15,9 mm [0.625 in] M16 diameter, 70 Vp -p, -55 ºC to 120 ºC [-67 ºF to 250 ºF], 12 DP (module 2.11) or coarser, 40 kHz, 64 mm [2.50 in] approx. length

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Features

Self-powered operation
Direct conversion of actuator speed to output frequency
Simple installation
No moving parts
Designed for use over a wide range of speeds
Adaptable to a wide variety of configurations
Customized VRS products for unique speed sensing applications
Housing diameter: 5/8 in (M16)
Housing material/style: stainless steel threaded
Terminations: MS3106 connector, preleaded
Output voltage: 70 Vp-p

Potential Applications

Engine RPM (revolutions per minute) measurement on aircraft, automobiles, boats, buses, trucks and rail vehicles
Motor RPM measurement on drills, grinders, lathes and automatic screw machines
Motor RPM measurement on precision camera, tape recording and motion picture equipment
Process speed measurement on food, textile, paper, woodworking, printing, tobacco and pharmaceutical industry machinery
Motor speed measurement of electrical generating equipment
Speed measurement of pumps, blowers, mixers, exhaust and ventilating fans
Flow measurement on turbine meters
Wheel-slip measurement on autos and locomotives
Gear speed measurement

Power Output VRS sensors are designed for driving low resistance loads at large air gaps in applications where larger actuators may be used. Passive VRS (Variable Reluctance Speed) Magnetic Speed sensors are simple, rugged devices that do not require an external voltage source for operation. A permanent magnet in the sensor establishes a fixed magnetic field. The approach and passing of a ferrous metal target near the sensor's pole piece (sensing area) changes the flux lines of the magnetic field, dynamically changing its strength. This change in magnetic field strength induces a current into a coil winding which is attached to the output terminals. The output signal of a VRS sensor is an ac voltage that varies in amplitude and wave frequency as the speed of the monitored device changes, and is usually expressed in peak to peak voltage (Vp-p). One complete waveform (cycle) occurs as each target passes the sensor's pole piece. If a standard gear were used as a target, this output signal would resemble a sine wave if viewed on an oscilloscope. Honeywell also offers VRS sensors for general purpose, high output, high resolution, high temperature and hazardous location applications, as well as low-cost molded versions.

Supporting Documentation
None Available

Product Specifications	
Diameter	15,9 mm [0.625 in]
Available Metric Thread	M16
Test Condition Specifications	Surface Speed = 25 m/s [1000 in/s], Gear = 8 DP [module 3.17), Air Gap = 0.127 mm [0.005 in], Load Resistance = 1.25 kOhm
Min. Output Voltage (Peak to Peak)	70 Vp -p
Pole Piece Shape and Size	Round; 4,75 mm [0.187 in] diameter
Typ. Operating Temperature Range	-55 ºC to 120 ºC [-67 ºF to 250 ºF]
Gear Pitch Range	12 DP (module 2.11) or coarser
Typ. Operating Frequency	40 kHz
Max. Inductance	85 mH
Coil Resistance	120 Ohm to 162 Ohm
Min. Surface Speed	0,38 m/s [15 in/s]
Optimum Actuator	8 DP (module 3.17) ferrous metal gear
Mounting Thread	5/8 -18 UNF -2A
Vibration	Mil-Std 202F, Method 204D
Material	Stainless steel threaded
Approximate Housing Length	64 mm [2.50 in]
Termination	MS3106 Connector
Weight	70 g [2.5 oz]
Series Name	Power Output