Honeywell

Power Output

Industrial VRS Magnetic Speed Sensors

DESCRIPTION

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.

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

5/8 INCH (M16*) SENSORS (All dimensions for reference only. mm/[in])
*Contact Honeywell for availability of metric mounting thread versions.

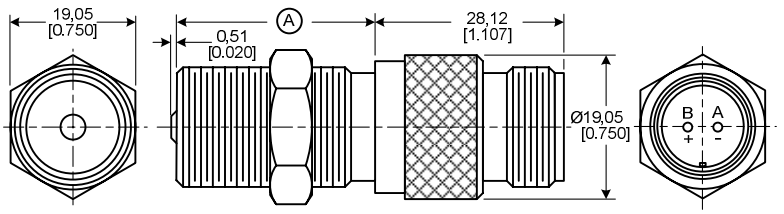
General Specifications

Parameter	Characteristic	Parameter	Characteristic
Min. output voltage	70 Vp-p	Inductance	85 mH max.
Coil resistance	120 Ohm to 162 Ohm	Gear pitch range	12 DP (module 2.11) or coarser
Pole piece diameter	4,75 mm [0.187 in]	Optimum actuator	8 DP (module 3.17) ferrous metal gear
Min. surface speed	0,38 m/s [15 in/s] typ.	Max. operating frequency	40 kHz typ.
Operating temp. range	-55 ºC to 120 ºC [-67 ºF to 250 ºF]	Vibration	Mil-Std 202F Method 204D
Mounting thread	5/8-18 UNF-2A	Termination	MS3106 connector

Test Condition Specifications

Parameter	Characteristic
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

Catalog Listing	Thread Length (A)	Weight
3040AN	28 mm [1.1 in]	70 g [2.5 oz]
3040AN25	63 mm [2.5 in]	84 g [3.0 oz]
3040AN30	76 mm [3.0 in]	84 g [3.0 oz]
3040AN40	101 mm [4.0 in]	98 g [3.5 oz]
3040AN50	127 mm [5.0 in]	128 g [4.5 oz]



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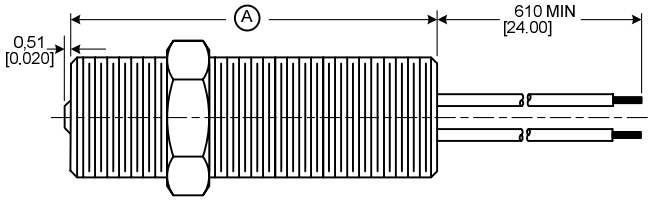
Mounting Thread	5/8-18 UNF-2A	Termination	20 AWG Teflon-insulated leads

Test Condition Specifications

Parameter	Characteristic
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

Catalog Listing	Thread Length (A)	Weight
3040S20	50 mm [2.0 in]	70 g [2.5 oz]
3040S30	76 mm [3.0 in]	84 g [3.0 oz]



5/8 INCH (M16*) SENSORS CONTINUED (All dimensions for reference only. mm/[in])

*Contact Honeywell for availability of metric mounting thread versions.

General Specifications

Parameter	Characteristic	Parameter	Characteristic
Min. output voltage	70 Vp-p	Inductance	85 mH max.
Coil resistance	120 Ohm to 162 Ohm	Gear pitch range	12 DP (module 2.11) or coarser
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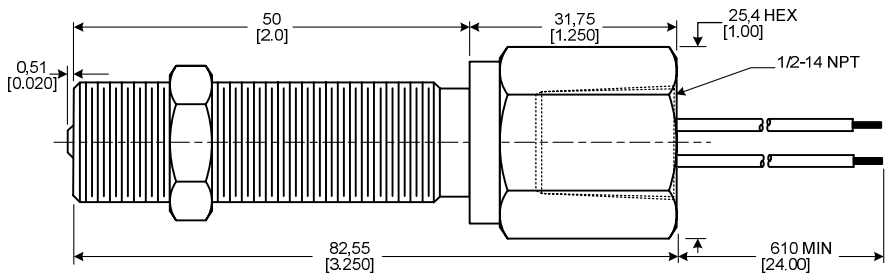
Min. surface speed	0,38 m/s [15 in/s] typ.	Max. operating frequency	40 kHz typ.
Operating temp. range	-55 ºC to 120 ºC [-67 ºF to 250 ºF]	Vibration	Mil-Std 202F Method 204D
Mounting thread	5/8-18UNF-2A	Termination	20 AWG Teflon-insulated leads, conduit mount

Test Condition Specifications

Parameter	Characteristic
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

Catalog Listing	Weight
3040H20	140 g [5.0 oz]



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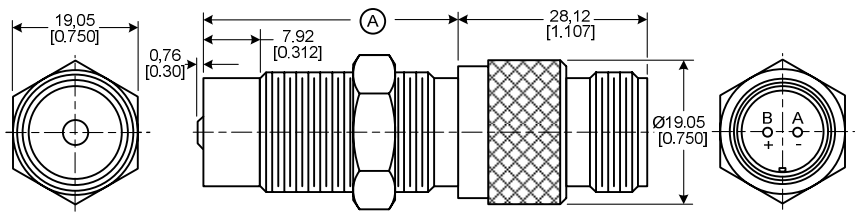
Mounting thread	5/8-18 UNF-2A	Termination	MS3106 connector

Test Condition Specifications

Parameter	Characteristic
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

Catalog Listing	Thread Length (A)	Weight
3040A	35 mm [1.4 in]	70 g [2.5 oz]
3040A25	63 mm [2.5 in]	84 g [3.0 oz]



⚠ WARNING

PERSONAL INJURY

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

⚠ WARNING

MISUSE OF DOCUMENTATION

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

SALES AND SERVICE

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office or:

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Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

http://moschip.ru/get-element

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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