Honeywell

584XX Series

Digital Magnetic Speed Sensors



DESCRIPTION

Honeywell's 584XX Series Digital Magnetic Speed Sensors combine active electronics with features of Variable Reluctance Sensors in a single package. The 584XX Series produce constant amplitude output signals suitable for direct use in many digital and logic control applications.

Because the digital signal conditioning is done internally, interface circuitry is no longer required. This circuit changes the waveform generated by the sensor coil into a digital square-wave output.

FEATURES AND BENEFITS

- Senses moving ferrous metal
- Output signal of integrated circuit allows for direct use in digital equipment
- Minimizes the need for interface circuitry, reducing installation and maintenance costs
- Enhanced stability due to precisely-matched components
- Extremely precise relationship between the physical position of any sensed object and the electrical signal produced provides improved accuracy to timing and positioning applications
- Enhanced sensitivity with the capability to produce full output of +5 to 30 V at speeds as low as 3 in per second at gaps of .050 in, or 1 in per second at gaps of .005 in. Constant output amplitude independent of speed, and air gap (within sensing range), allows for full output at almost zero speeds.
- Excellent resistance to water, oil, shock and vibration damage extend product life and operating reliability
- Wide variety of supply voltages allow application flexibility
- Allows for the reduction in noise, often vital in potential positioning and synchronization applications
- Pre-leaded or connector versions allow application flexibility
- Standard thread sizes improve compatibility and interchangeability with other standard types of speed sensors

POTENTIAL APPLICATIONS

Industrial:

- Computing
- High-speed counting
- Positioning
- Tachometry
- Synchronization
- Routing
- Flow metering
- Machine control

Transportation:

- Engine, motor, or pump RPM sensing
- Over/under speed sensing
- Wheel speed detection

Digital Magnetic Speed Sensors

1/4, 3/8, 5/8 584XXLV LOW VOLTAGE OPERATING CHARACTERISTICS

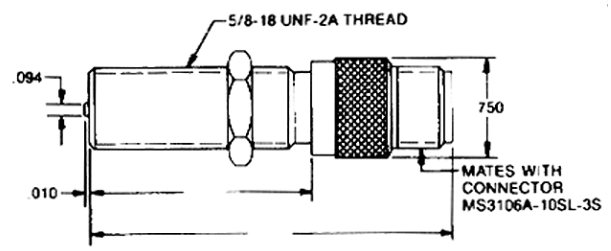
Characteristic	Measure
Supply voltage	5 Vdc to 15 Vdc @ 15 mA max. Low Voltage (LV)
Operating temperature range	-40 °C to 107 °C [-40 °F to 225 °F]
Output signal: square wave	Low: 350 mV max. @ 20 mA maximum current sink
	High: $\frac{RL \times Vs}{RL + 2.2K}$ RL = load resistance in K ohms; Vs = supply voltage in Vdc
Vibration	Meets MIL-STD 202F, method 204D
Housing material	400 Stainless Steel

584XXLV PHYSICAL CHARACTERISTICS

Sensors with 5/8-18 UNF-2A mounting thread, MS3106 connector, 10 kHz typical frequency response

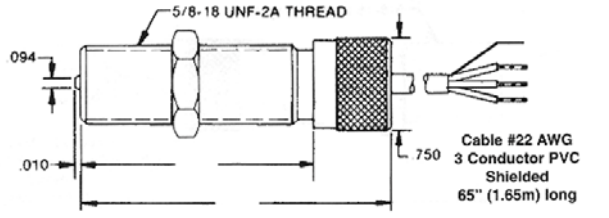
Model	Thread length	Overall length	Weight
58426LV	45 mm [1.8 in]	76 mm [3.0 in]	85 g [3.0 oz]
58426LVA30	76 mm [3.0 in]	104 mm [4.1 in]	142 g [5.0 oz]

Mates with 41009(VR) connector or CA310 cable assembly



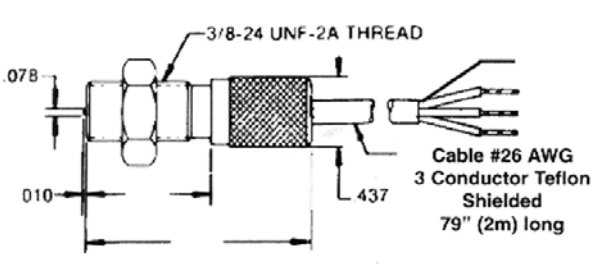
Sensors with 5/8-18 UNF-2A mounting thread, AWG 22 PVC shielded cable (1,65 m [65 in] long), 10 kHz typical frequency response

Model	Thread length	Overall length	Weight
58424LV	45 mm [1.8 in]	63 mm [2.5 in]	85 g [3.0 oz]



Sensors with 3/8-24 UNF-2A mounting thread, AWG 26 teflon leads (2 m [79 in] long), 50 kHz typical frequency response

Model	Thread length	Overall length	Weight
58423LV	25 mm [1.0 in]	38 mm [1.7 in]	85 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 product installation information.
- 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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