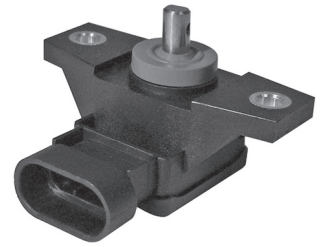


# Hall-Effect Rotary Position Sensors Line Guide



**Round and round the globe, it's Honeywell.** So trust Honeywell Sensing and Control (S&C) for your Hall-effect rotary position sensor needs. These transducers vary output voltage or current in response to changes in a magnetic field — using a magnetically biased Hall-effect integrated circuit (IC) to sense rotary movement of the actuator shaft. The rotation of the shaft changes the IC's position to the magnets, and then detects the

change in flux density. The output of the IC is converted to a linear output up to 360 degrees of travel. Honeywell S&C seals the IC together with conditioning and protection circuitry and two permanent magnets in a rugged package featuring enhanced reliability. What's more, our non-contacting approach to Hall-effect rotary position applications provides longer-life solutions that excel in most harsh environments.

## FEATURES

### HALL-EFFECT ROTARY POSITION SENSORS

#### RPN Series.

**Features:** Solid-state, Hall-effect technology • Reverse polarity, short circuit and EMC protection • Sealed package with integral connector • Choice of operating ranges, outputs, and levers • Easy installation • IP67 or IP69K • Compact design • Rugged construction • Suitable for most harsh environments • Flange mounting with two accessible round or elongated mounting holes

**Benefits:** Long service life, low torque actuation, and greatly reduced wear-out of mechanisms. Enhanced resistance to damage from incorrect wiring and electrical noise. Wide selection of operating ranges up to 360° allowable rotation provide wide operating angle tolerant to overtravel. Choice of output signal types and ranges

for application flexibility. Sealed package with integral connector for durability. Often ideal for detecting position and movement of potential applications such as pedals, throttles, gear shift levers, linkages, suspension and hitches in trucks, off-road vehicles, cranes and construction/ agricultural/industrial equipment.

## Hall-Effect Rotary Position Sensors Line Guide

### More are turning to Honeywell, for more value.

Honeywell S&C Hall-effect rotary position sensors respond to the presence or to the interruption of a magnetic field, using a solid-state Hall-effect IC to sense rotary movement of the actuator shaft and then producing a proportional output. The IC, circuitry and magnets are galvanized with an integral connector — more than a match for the most unforgiving conditions. This makes them often ideal for potential transportation applications, such as throttle and speed position and control, inboard lever control, foot pedal, gearshift, steering, lever, linkage, seat, mirror, tilt and manipulator arm position.

Other benefits include: 360-degree operating range with multi-turn allowable rotation, low torque actuation and greatly reduced wear-out mechanisms, enhanced resistance to damage from incorrect wiring and electrical noise, wide operating angle tolerant to overtravel, integrated reverse polarity, short circuit and EMC protection.



### Hall-Effect Rotary Position Sensors

#### RPN Series

<b>Supply voltage range</b>	5 Vdc to 30 Vdc (inclusive)
<b>Current consumption</b>	20 mA max.
<b>Output signal range</b>	0.25 V to 4.75 V, 0.5 V to 4.5 V, 3 V to 5 V, 4.5 V to 0.5 V, 4.75 V to 0.25 V, 1 V to 9 V, 4 mA to 20 mA, 20 mA to 4 mA
<b>Operating range</b>	50°, 60°, 70°, 90°, 120°, 180°, 270°, 360°
<b>Accuracy</b>	±1.6%
<b>Linearity</b>	±0.35° to ±5° (inclusive)
<b>Operating temperature range</b>	-40 to 125 °C [-40 °F to 257 °F]
<b>Sealing</b>	IP67, IP69K
<b>Connector</b>	AMP, Deutsch

**Warranty.** 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 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.

For more information about Sensing and Control products, visit [www.honeywell.com/sensing](http://www.honeywell.com/sensing) or call +1-815-235-6847. Email inquiries to [info.sc@honeywell.com](mailto:info.sc@honeywell.com)

 **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.**

 **WARNING**  
**MISUSE OF DOCUMENTATION**

- The information presented in this catalogue 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.**

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