

MICRO SWITCH Hall Effect Sensors

Rotary Position Sensor

RP Series

FEATURES

- Tested to over 15 million operations
- $\pm 7\%$ accuracy over temperature
- -40 to $+135^{\circ}\text{C}$ operating temperature
- 90° maximum angular rotation
- Solid state, magnetically operated
- Reliability and precision provide improved engine management
- Proven Hall effect technology
- Compatible with system diagnostics

TYPICAL APPLICATIONS

- Throttle position
- Traction assist
- Transmission
- Accelerator pedal (drive-by-wire)
- Suspension
- Clutch position
- Gear shift position
- Electronic governor



RP Series rotary position sensor is intended for angular position sensing applications where freedom from wear-out failure mechanisms is important. A patented, symmetrical magnetic circuit is used to generate a linear magnetic field as a function of rotor angle. This linear magnetic field is converted to a linear DC voltage by a highly precise Hall effect integrated circuit. The symmetrical magnetic circuit minimizes errors due to rotor runout and assembly tolerances.

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ABSOLUTE MAXIMUM RATINGS

	Min.	Max.	Units
Supply voltage	—	+ 10	Volts
Output voltage (off)	- 0.5	+ 10	Volts
Output ON current	—	1.0	mA
Operating temperature	-20	+135	°C
Storage temperature	-40	+150	°C
Magnetic flux	No limit. Circuit cannot be damaged by magnetic overdrive.		

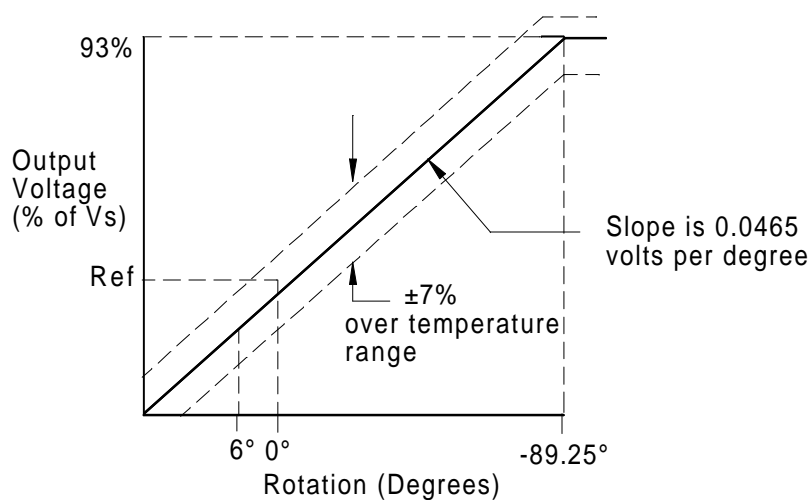
Absolute maximum ratings are the extreme limits the device will withstand without damage to the device. However, the electrical and magnetic characteristics are not guaranteed as the maximum limits (above recommended) are approached, nor will the device necessarily operate at maximum ratings.

OPERATING CHARACTERISTICS

	Min.	Max.	Units	Conditions
Supply voltage, V_s	4.75	5.25	VDC	-20 to +135°C
Output ratio @ idle (0°)	0.09	0.11	V_o/V_s	25°C, 5V
Sensitivity (slope) 0 to -84.25°	.0091	.0095	V_o/V_s	25°C, 5V
Linearity, 0 to -84.25°	-7.0%	+7.0%	%	-20 to +135°C, 5 ± 0.5 V
Output clamp	0.90	0.96	V_o/V_s	-20 to +135°C, 5 ± 0.5 V
Return torque (up/down)	0.021	0.113	N m	0 to 84.25° rotation
Rotor rest angle	5.0	7.0	Deg.	25°C

Characteristics are obtained when using a specified actuator that is $1,55 \pm 0,05$ mm thick by $9,965 \pm 0,05$ mm wide, centered to within 0,02 mm.

TRANSFER FUNCTION

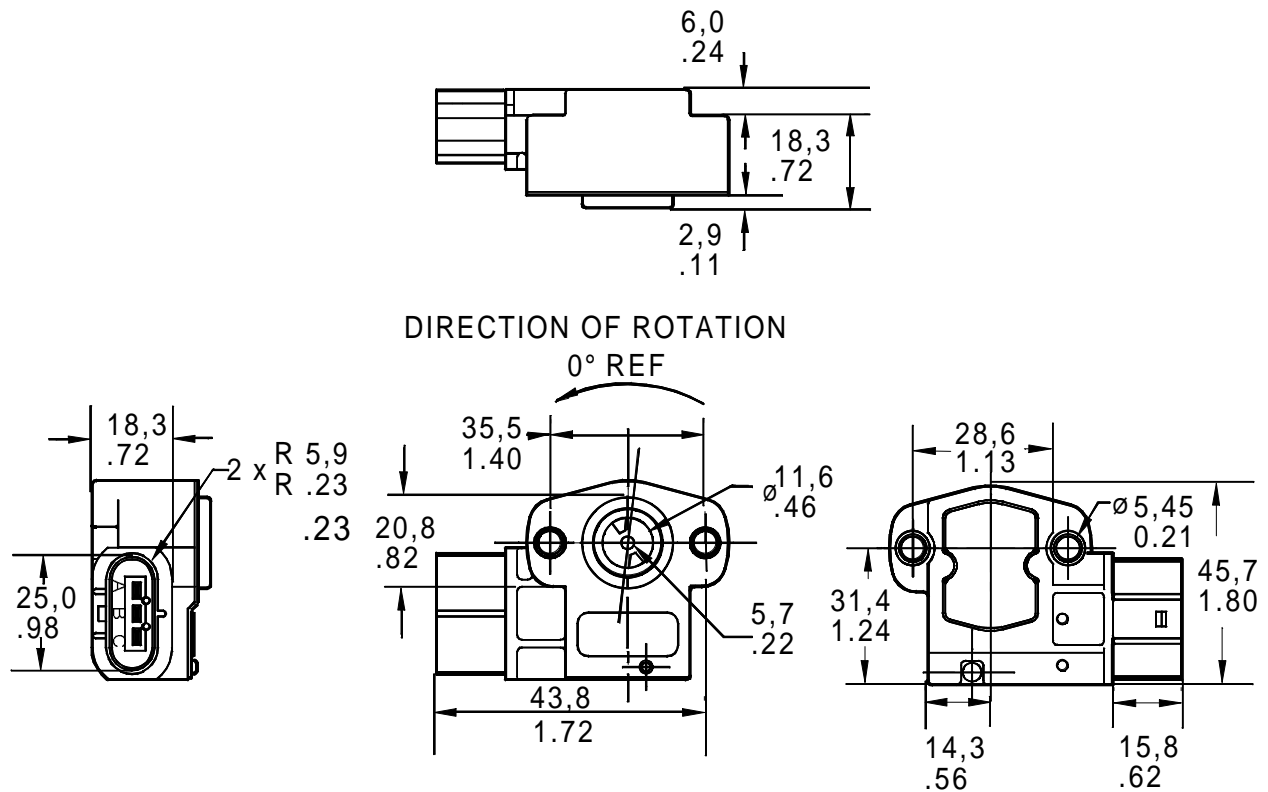


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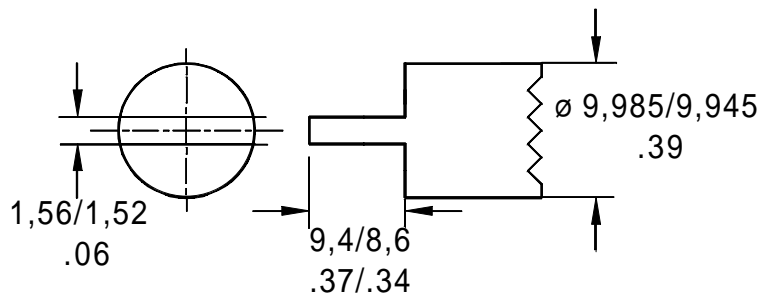
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MOUNTING DIMENSIONS (for reference only)



APPLICATION DRIVE BLADE



MATING CONNECTORS*

Catalog Listing	Description
7116-1520-08	Terminal (3 required)
7157-7933	Terminal seal (3 required)
7157-6827-10	Rear holder
7283-1335-40	Connector housing

* Available from American Yazaki only

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ORDER GUIDE

Catalog Listing	Description
RP-200	Hall effect rotary position sensor

WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Commencing with date of shipment, Honeywell's warranty runs for 18 months. If warranted goods are returned to Honeywell during that period of coverage, Honeywell will repair or replace 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.**

For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact a nearby sales office. Or call:

1-800-537-6945 USA

1-800-737-3360 Canada

1-815-235-6847 International

1-815-235-6545 USA FAX

INTERNET

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

Honeywell

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