

# SS311PT/SS411P

**Table 1. SS311PT/SS411P Specifications (At 2.7 Vdc to 7 Vdc supply, 4 mA load, T<sub>A</sub> = -40 °C to 150 °C [-40 °F to 302 °F])**

Characteristic	Condition	Minimum	Typical	Maximum	Unit
Supply voltage	-40 °C to 150 °C [-40 °F to 302 °F]	2.7	5.0	7.0	Vdc
Supply current	gauss < -140, V <sub>s</sub> = 5 V, 25 °C [77 °F]	—	5.5	—	mA
	-40 °C to 150 °C [-40 °F to 302 °F]	—	—	14	
Output current	—	—	—	4.0	mA
V <sub>sat</sub>	gauss > 140	—	—	0.4	V
Output leakage current	gauss < -140	—	—	10	μA
Output rise time	25 °C [77 °F]	—	—	1.5	μs
Output fall time		—	—	1.5	
Thermal resistance:	—	—	303	—	°C/W
	SS311PT	—	233	—	
Operate	-40 °C to 150 °C [-40 °F to 302 °F]	-30	55	140	gauss
Release	-40 °C to 150 °C [-40 °F to 302 °F]	-140	-55	30	gauss
Differential	-40 °C to 150 °C [-40 °F to 302 °F]	40	—	—	gauss
Operating temperature	—	-40 [-40]	—	150 [302]	°C [°F]
Storage temperature	—	-40 [-40]	—	150 [302]	°C [°F]

## NOTICE

Bipolar Hall-effect sensors may have an initial output in either the ON or OFF state if powered up with an applied magnetic field in the differential zone (applied magnetic field >Brp and <Bop). Honeywell recommends allowing 10 μs for output voltage to stabilize after supply voltage has reached 5 Vdc.

**Table 2. SS311PT/SS411P Absolute Maximum Ratings<sup>1</sup>**

Characteristic	Minimum	Typical	Maximum	Unit
Supply voltage	-0.5	—	7.0	Vdc
Applied output voltage	-0.5	—	7.0	Vdc
Output current	—	—	8.0	mA
Magnetic flux	—	—	no limit	gauss

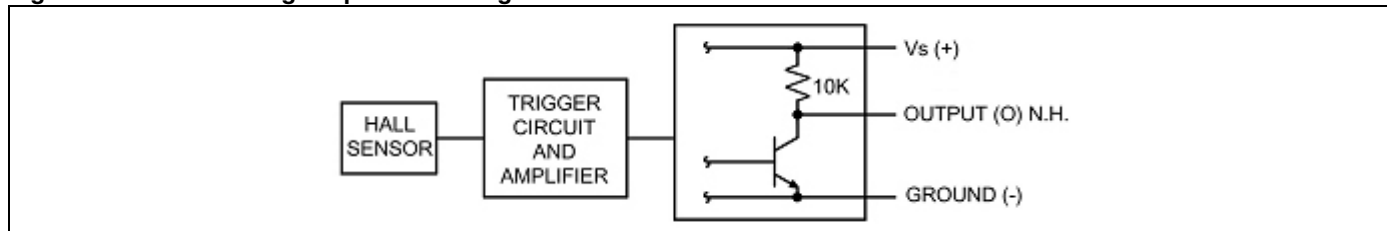
**Note 1:** The magnetic field strength (gauss) required to cause the switch to change state (operate and release) will be as specified in the magnetic characteristics. To test the switch against the specified magnetic characteristics, the switch must be placed in a uniform magnetic field.

## NOTICE

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



**Figure 1. Current Sinking Output Block Diagram**



# Bipolar Hall-Effect Digital Position Sensors

Figure 2. SS311PT Mounting/Tape and Reel Dimensions (For reference only. mm/[in])

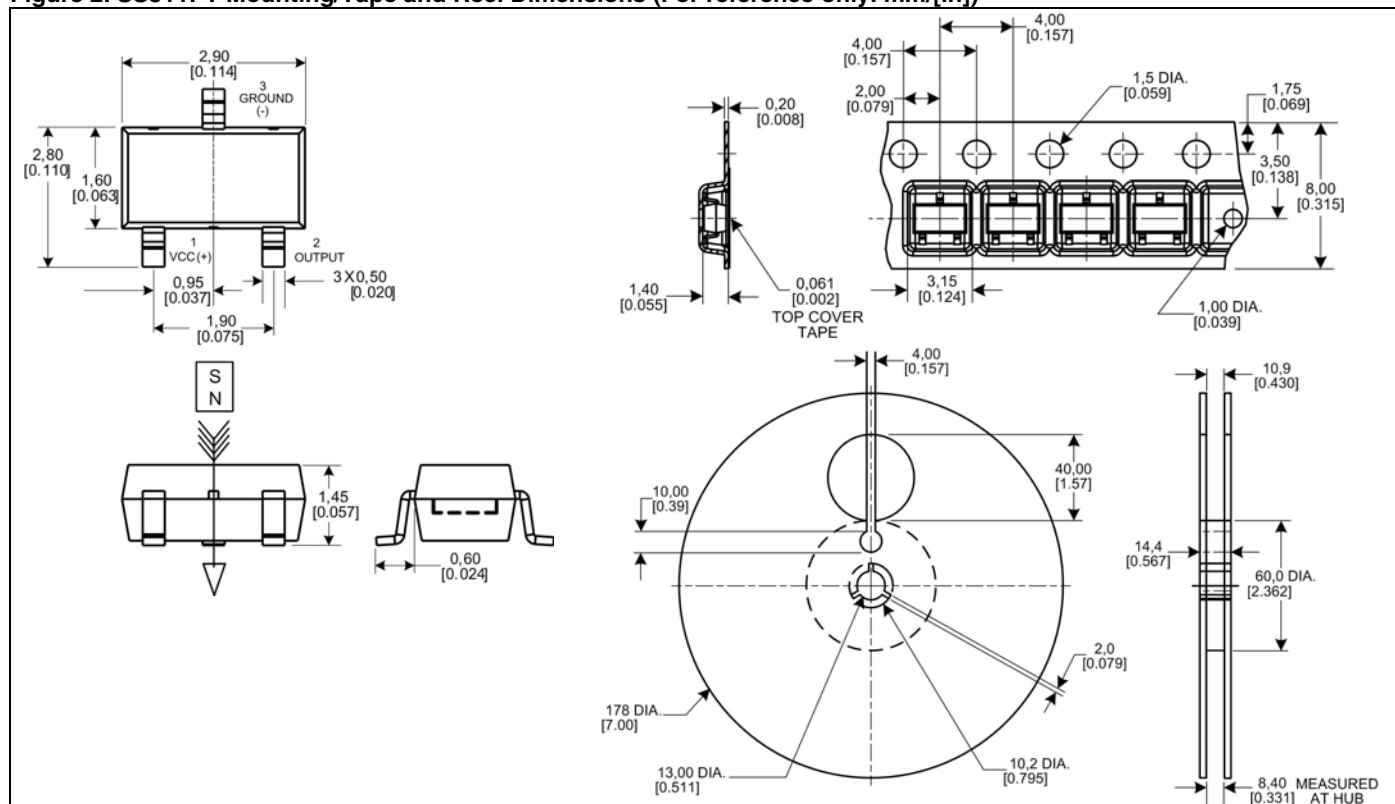
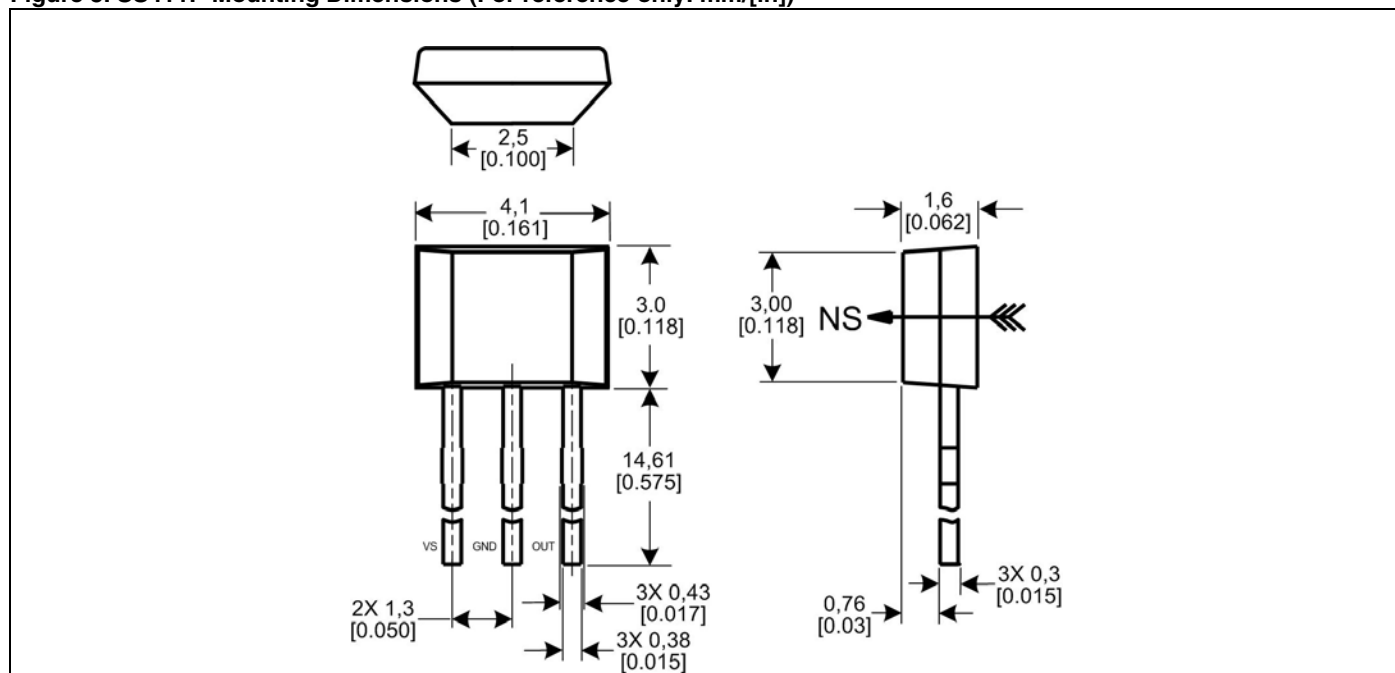


Figure 3. SS411P Mounting Dimensions (For reference only. mm/[in])



## Order Guide

Catalog Listing	Description
SS311PT	Bipolar Hall-effect digital position sensor with built-in pull-up resistor, SOT-23 package, tape and reel packaging (3000 units per reel)
SS411P	Bipolar Hall-effect digital position sensor with built-in pull-up resistor, flat TO-92 package, bulk packaging (1000 units per bag)

### 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.**

#### 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

#### 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.**

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