

## Installation Instructions for the SR13/15 Series Position Sensors

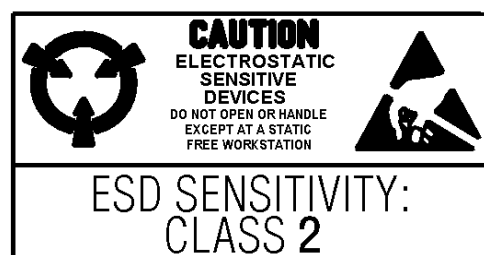
ISSUE 1  
PK 80136

### **⚠ 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.**



### **ABSOLUTE MAXIMUM RATINGS\***

Supply voltage	-1 to +25 VDC
Voltage externally applied to output	+25 VDC max. (OFF only) -0.5 VDC min. (OFF or ON)
Output ON current	50 mA, max.
Temperature Range	-40°C to +150°C (-40°F to +302°F)
Magnetic flux	No limit. Circuit cannot be damaged by magnetic overdrive.

\* 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.

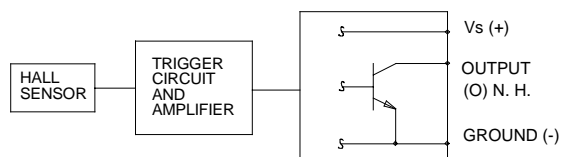
### **SOLDERING/ASSEMBLY**

Leads must be adequately supported during any forming/ shearing operation to ensure that the leads are not stressed inside the plastic case. Recommended PC board wave soldering temperature is 250°C to 260°C (482 °F to 500°F) for 3 seconds maximum.

### **OPERATING CHARACTERISTICS –40°C TO 125°C, 3.8 TO 30 VDC**

	Min.	Typ.	Max.	Remarks
Supply voltage	3.8	—	30	VDC
Current consumption	—	—	13	mA
Output voltage (operated)	—	—	0.40	Sinking 10 mA max.
Sink current (operated)	—	—	20	mA
Output leakage current (released)	—	—	5 $\mu$ A	$V_{OUT} = 30$ VDC, $V_{CC} = 30$ VDC
Output switching time				
Rise, 10 to 90%	—	1.5 $\mu$ s	1.5 $\mu$ s	$V_{CC} = 12$ V, $R_L = 1.6$ K $\Omega$ , $C_L = 20$ pF
Fall, 90 to 10%	—	1.5 $\mu$ s	1.5 $\mu$ s	
Operating Temperature	-40°C to +150°C (-40°F to +302°F)			

### **BLOCK CIRCUIT WIRING DIAGRAM**



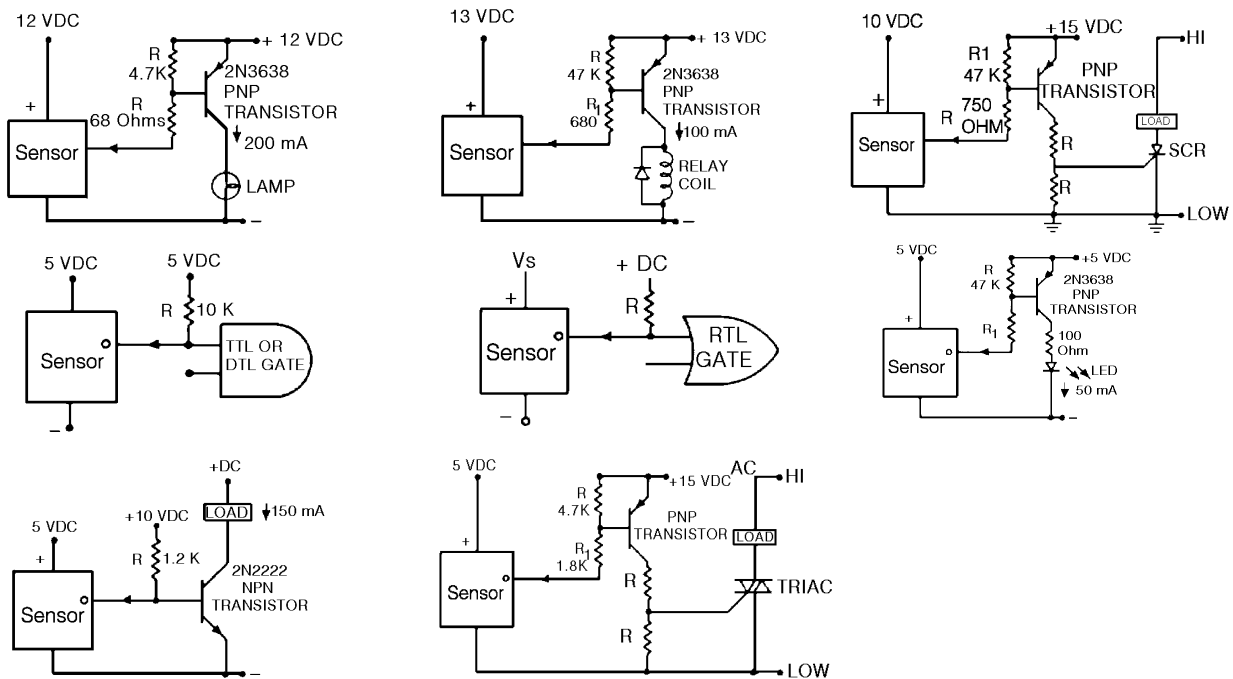
## MAGNETIC CHARACTERISTICS

	SR13C-A1	SR13D-A1	SR13F-A1	SR13R-A1	SR15C-A3
Magnetic Type	Unipolar	Unipolar	Unipolar	Latching	Unipolar
25°C					
Max. Op.	180	115	390	85	180
Min. Rel.	75	20	235	-85	75
Min. Dif.	25	20	30	50	25
-20°C to 85°C					
Max. Op.	215	135	435	110	215
Min. Rel.	60	15	200	-110	60
Min. Dif.	10	8	30	50	10

## NOTICE

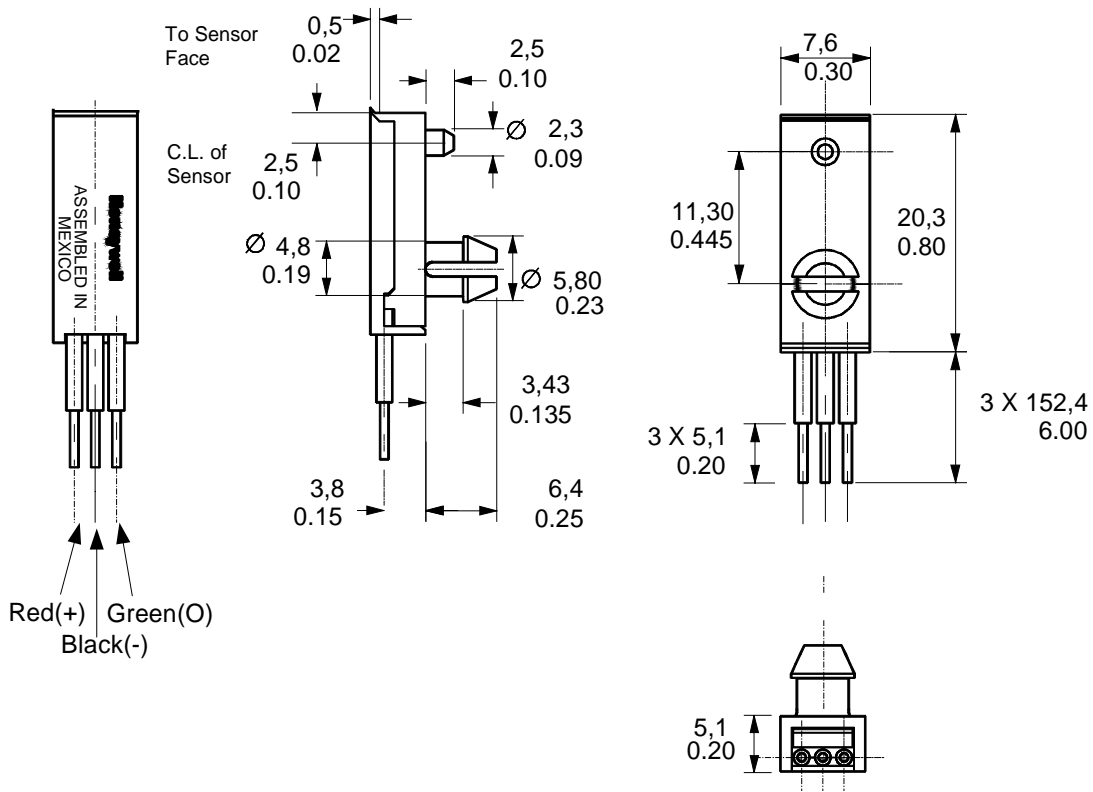
Bipolar Hall effect sensors may have an initial output in either the On or Off state if powered up with an applied magnetic field in the differential zone (applied magnetic field > Brp and < Bop). Honeywell recommends allowing 10 μs for output voltage to stabilize after supply voltage has reached 5 volts.

## INTERFACE DIAGRAMS

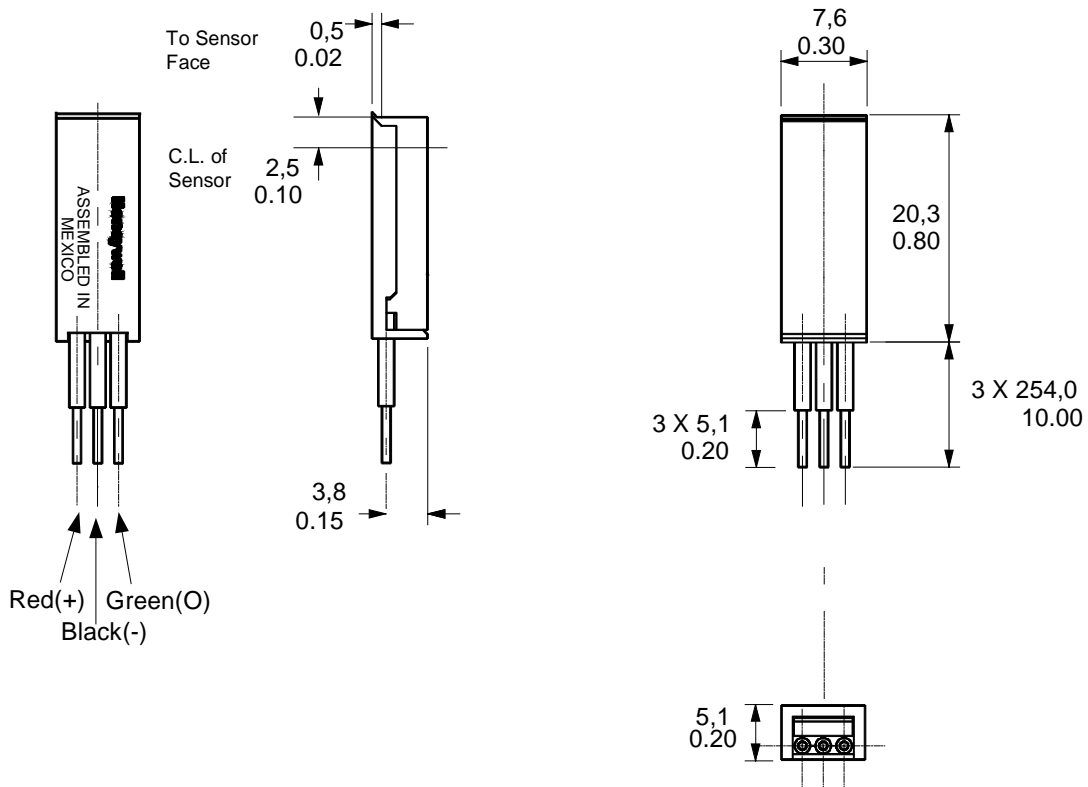


**MOUNTING DIMENSIONS** (for reference only) mm/in

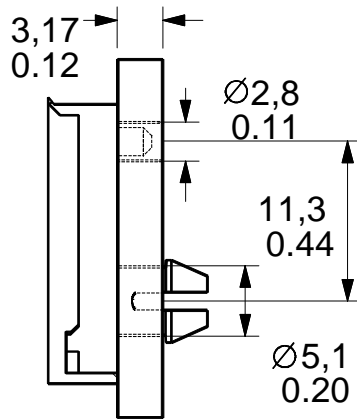
**SNAP-IN DIGITAL POSITION SENSOR (SR13C-A1, SR13D-A21, SR13F-A1, and SR13R-A1)**



**FLAT MOUNT DIGITAL POSITION SENSOR (SR15C-A3)**



## SUGGESTED MOUNTING DETAIL



## WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Contact your local sales office for warranty information. If warranted goods are returned to Honeywell during the 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.**

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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.

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

### FAX

1-815-235-6545 USA

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[www.honeywell.com/sensing](http://www.honeywell.com/sensing)

[info@micro.honeywell.com](mailto:info@micro.honeywell.com)

# Honeywell

Sensing and Control  
Honeywell Inc.  
11 West Spring Street  
Freeport, Illinois 61032



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