

311-1519

**Honeywell**

Installation Instructions for the  
2SS52M Series Magnetoresistive Position  
Sensors

ISSUE 1  
PK 80077


**⚠ 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.

**OPERATING MODE**  
2SS52M Series are operated by magnetic fields (North or South) parallel to the sensor package.

**NOTICE**  
Due to the inherently high sensitivity of the 2SS52M, stray magnetic fields parallel to the IC may affect operation.



**CAUTION**  
ELECTROSTATIC SENSITIVE DEVICES  
DO NOT OPEN OR HANDLE EXCEPT AT A STATIC FREE WORKSTATION



**ESD SENSITIVITY:  
CLASS 2**

**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 to 260°C (482 to 500°F) for 3 seconds maximum.

**ABSOLUTE MAXIMUM RATINGS\***

|                                      |  |
|--------------------------------------|--|
| Supply voltage                       | 3.8 to +30 VDC   |
| Voltage externally applied to output | +24 VDC max. (OFF cond. only)<br>-0.5 VDC min. (OFF or ON cond.) |
| Output ON current                    | 20 mA max.   |
| Temperature                          | -40 to +150°C (-40 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.

**ELECTRICAL SPECIFICATIONS** over 3.8 to 30 VDC and -40 to +150°C unless otherwise noted

|  | Typ.                       | Max.             | Remarks  |
|--|----------------------------|------------------|--|
| Supply Current (without load) at 25°C, with 16V supply | 6 mA                       | 11 mA<br>10 mA   | Max. operated<br>Max. released                                 |
| Output Voltage (operated)                              | 0.25 V                     | 0.40 V           | Sinking 20 mA max.   |
| Output Leakage Current (released)                      |                            | 10 µA            | Leakage into sensor output                                     |
| Output Switching Time                                  | Rise 0.2 µs<br>Fall 0.1 µs | 1.5 µs<br>1.5 µs | 10 to 90%, 1600 Ω, 20 pF load<br>90 to 10%, 1600 Ω, 20 pF load |

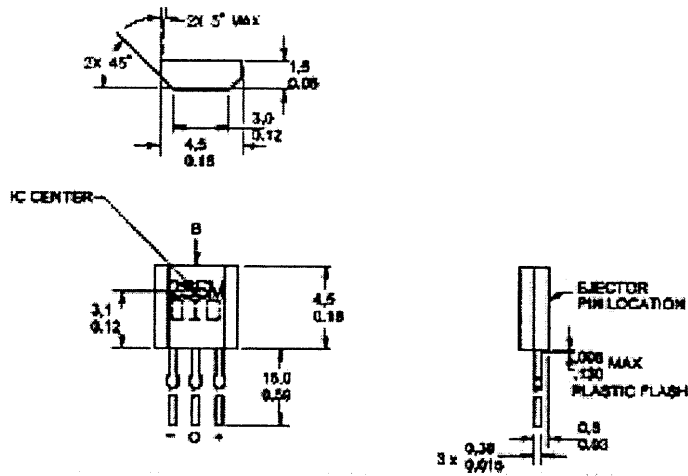
**MAGNETIC CHARACTERISTICS** over 3.8 to 30 VDC Supply Voltage

| Temperature Range             | Max. Operate | Min. Release | Max. Differential |
|-------------------------------|--------------|--------------|-------------------|
| -25 to +85°C (-13 to +185°F)  | 25 gauss     | 5 gauss      | 7 gauss           |
| -40 to +150°C (-40 to +302°F) | 25 gauss     | 4 gauss      | 8 gauss           |

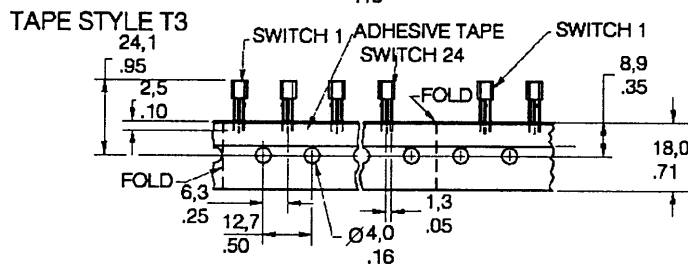
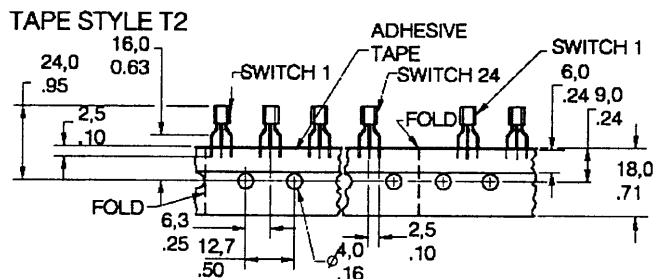
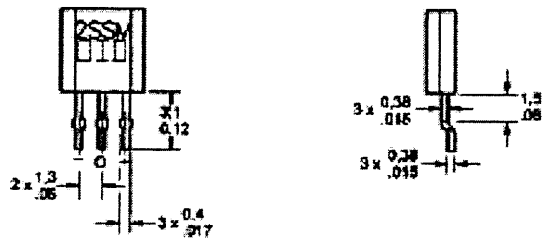
# 2SS52M Series

ISSUE 1 PK 80077

## MOUNTING DIMENSIONS (for reference only)

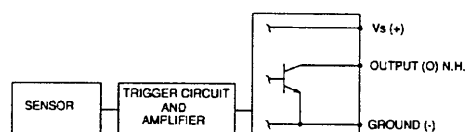


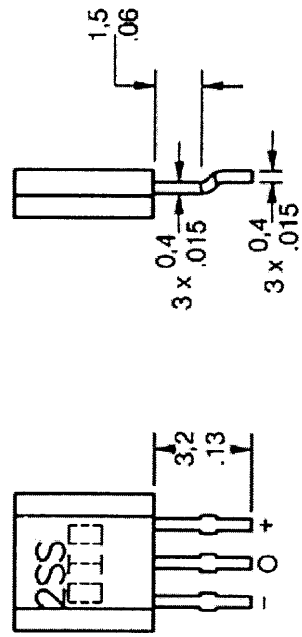
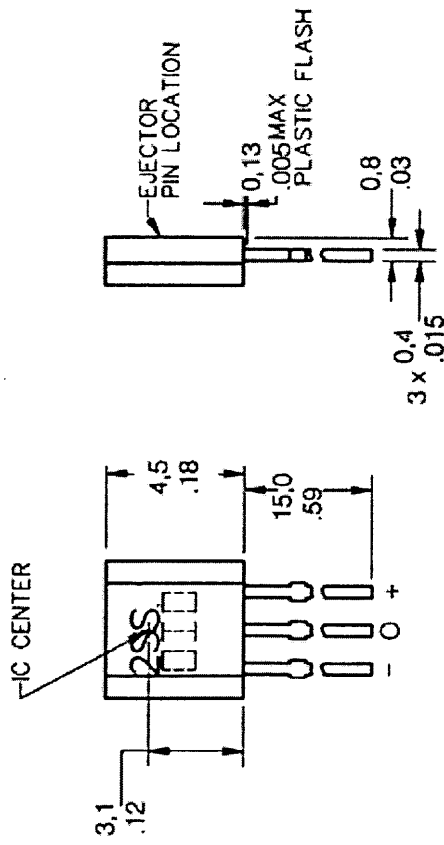
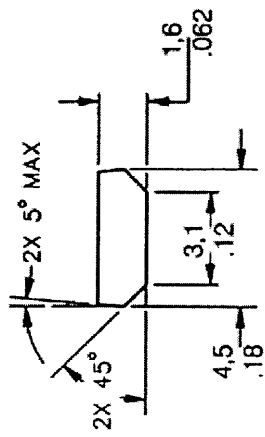
## 2SS52M-S Dimensions (Surface Mount)



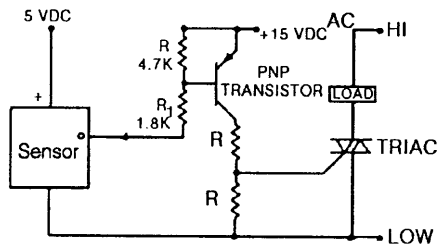
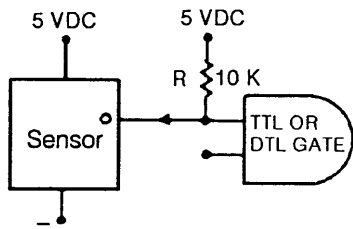
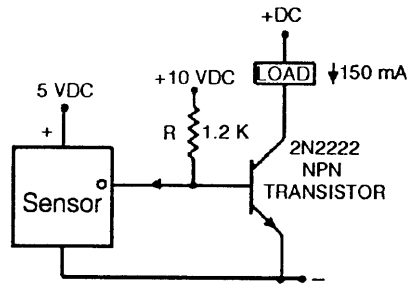
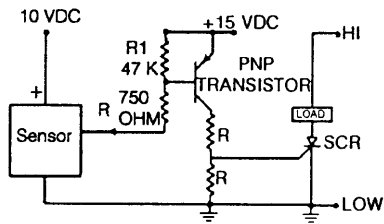
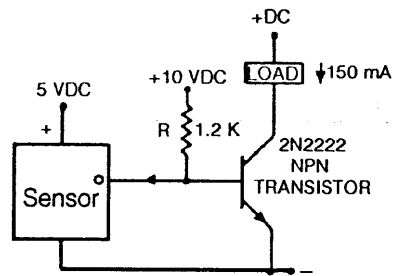
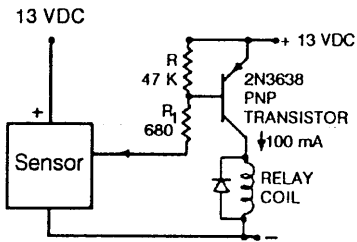
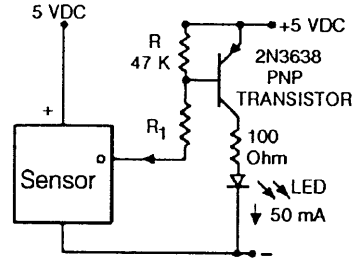
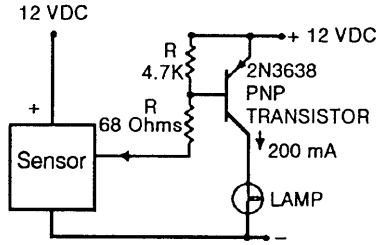
Tape styles T2 and T3 are available in ammo style package.

## BLOCK DIAGRAM CURRENT SINKING OUTPUT (NPN)





**INTERFACE DIAGRAMS**  
**NPN (CURRENT SINKING) OUTPUT**



# 2SS52M Series

ISSUE 1 PK 80077

## 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.**

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

### INTERNET

<http://www.honeywell.com/sensing/>

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

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.

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

## MICRO SWITCH

Honeywell Inc.

11 West Spring Street

Freeport, Illinois 61032



Printed with Soy Ink  
on 50% Recycled Paper



PK 80077-1-EN IL50 GLO 698 Printed in USA