

## Installation Instructions for the SS41 Series Low Gauss Bipolar Hall Effect Position Sensors

ISSUE 2  
PK 88781

### ELECTRICAL CHARACTERISTICS

| Catalog Listing SS41/SS41D        | Min. | Typ.             | Max.             | Remarks                          |
|-----------------------------------|------|------------------|------------------|----------------------------------|
| Supply Voltage                    | 4.5  |                  | 24               | VDC                              |
| Supply Current                    |      | 4 mA<br>6 mA     | 8.7 mA<br>15 mA  | Vs = 4.5 VDC<br>Vs = 6 to 24 VDC |
| Output Voltage (Operated)         |      | 0.15 V<br>0.15 V | 0.40 V<br>0.45 V | -40 to +125°C<br>+125 to +150°C  |
| Output Current (Operated)         |      |                  | 10 mA            |                                  |
| Output Leakage Current (Released) |      |                  | 10 µA            | Leakage into sensor output       |
| Output Switching Time             |      |                  |                  |                                  |
| Rise                              |      | 0.2 µs           | 1.5 µs           | 10 to 90%                        |
| Fall                              |      | 0.5 µs           | 1.0 µs           | 90 to 10%                        |

### MAGNETIC CHARACTERISTICS

| Temperature  | Gauss    |           |           |
|--------------|----------|-----------|-----------|
| Range        | Max. Op. | Min. Rel. | Min. Dif. |
| 0 to 85°C    | 150      | -150      | 50        |
| -40 to 125°C | 200      | -200      | 40        |
| -55 to 150°C | 250      | -250      | 30        |
| 25°C Typical | 40       | -40       | 80        |

### ABSOLUTE MAXIMUM RATINGS

|                                      |                                                                     |
|--------------------------------------|---------------------------------------------------------------------|
| Supply Voltage (Vs)                  | -24 to +28 VDC                                                      |
| Voltage externally applied to output | +28 VDC max, OFF condition only<br>-0.5 V min., OFF or ON condition |
| Output Current                       | 20 mA                                                               |
| Temperature Range                    | -55 to +170°C (-67 to +338°F)                                       |
| Magnetic Flux                        | No limit. Circuit cannot be damaged by magnetic overdrive           |

### SOLDERING/ASSEMBLY INSTRUCTIONS

Leads must be adequately supported during any forming or 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), with a duration of 3 seconds maximum.

### CATALOG LISTING

| Catalog Listing | Output                                                             | Magnetic Type |
|-----------------|--------------------------------------------------------------------|---------------|
| SS41            | Digital current sinking<br>Reverse polarity protection is standard | Bipolar       |

### WARNING

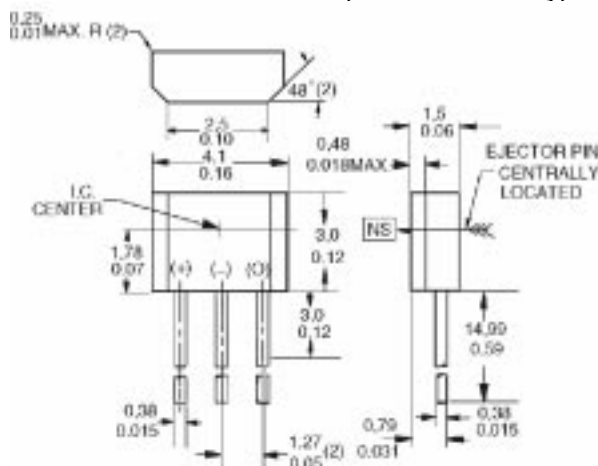
These products are **NOT** suitable for protection against personal injury.

To **AVOID** personal injury or death, **DO NOT USE** these products as emergency stop or safety devices, or in any other application where human safety is at risk.

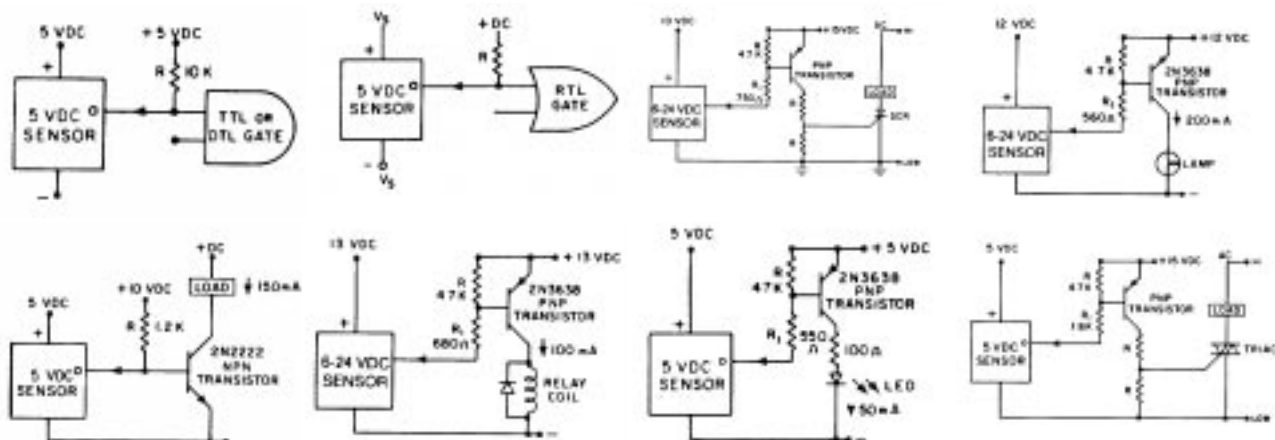
### NOTICE

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.

### MOUNTING DIMENSIONS (for reference only)



## INTERFACING DIAGRAMS



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## 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

## MICRO SWITCH

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