

## Interactive Catalog Replaces Catalog Pages

Honeywell Sensing and Control has replaced the PDF product catalog with the new **Interactive Catalog**. The **Interactive Catalog** is a power search tool that makes it easier to find product information. It includes more installation, application, and technical information than ever before.



**Click this icon to try the new  
Interactive Catalog.**

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### **Sensing and Control**

Honeywell Inc.

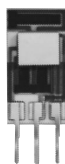
11 West Spring Street

Freeport, Illinois 61032

# Solid State Sensors

## Analog Position Sensors

SS94A Series



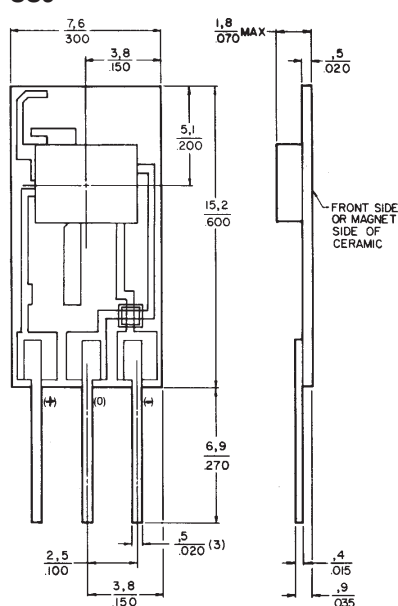
### FEATURES

- Single current sinking or current sourcing linear output
- Improved temperature stability
- Three pin in-line printed circuit board terminals
- Standard .100" mounting centers
- Laser trimmed thin film and thick film resistors minimize sensitivity variations and compensate for temperature variations
- Flux range of  $\pm 100$  to  $\pm 2500$  gauss

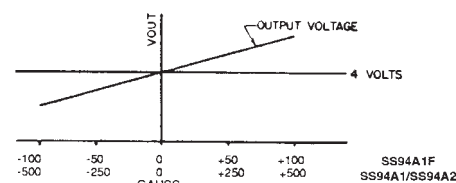
### OPERATION

The SS9 utilizes a Hall effect integrated circuit chip which provides increased temperature stability and performance. Laser trimmed thick film resistors on the ceramic substrate and thin film resistors on the integrated circuit reduce null and gain shifts over temperature which results in consistent sensitivity from one device to the next.

### MOUNTING DIMENSIONS (For reference only)



### TYPICAL TRANSFER CHARACTERISTICS



### SS9 ORDER GUIDE

| Catalog Listing                                     | SS94A1                 | SS94A1B                | SS94A1E                | SS94A1F                | SS94A2                 | SS94A2C                | SS94A2D                |
|-----------------------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Main Feature                                        | Gen. purpose           | 5 VDC operation        | Low drift              | High sensitivity       | Noise shielded††       | Noise shielded††       | Noise shielded††       |
| Supply Voltage (VDC)*                               | 6.6 to 12.6            | 4.5 to 8.0             | 6.6 to 12.6            | 6.6 to 12.6            | 6.6 to 12.6            | 6.6 to 12.6            | 6.6 to 12.6            |
| Supply Current (mA)**                               | 13 typ.<br>30 max.     | 8 typ.<br>17.5 max.    | 13 typ.<br>30 max.     | 13 typ.<br>30 max.     | 13 typ.<br>30 max.     | 13 typ.<br>30 max.     | 13 typ.<br>30 max.     |
| Output Current (mA)<br>Sinking or Sourcing          | 1 max.                 | 1 max.                 | 1 max.                 | 1 max.                 | 1 max.                 | 1 max.                 | 1 max.                 |
| Response Time (μ sec.)                              | 3 typ.                 | 3 typ.                 | 3 typ.                 | 3 typ.                 | 3 typ.                 | 3 typ.                 | 3 typ.                 |
| Magnetic Characteristics***<br>Span*                | .625 V <sub>s</sub>    | .375 V <sub>s</sub>    | .625 V <sub>s</sub>    | .625 V <sub>s</sub>    | .625 V <sub>s</sub>    | .625 V <sub>s</sub>    | .625 V <sub>s</sub>    |
| Range (gauss)*                                      | -500 to +500           | -500 to +500           | -500 to +500           | -100 to +100           | -500 to +500           | -1000 to +1000         | -2500 to +2500         |
| Sensitivity (mV/gauss @ 25°C)                       | 5.0±.1                 | 1.875±.100             | 5.0±.1                 | 25.0±.5                | 5.0±.1                 | 2.50±.05               | 1.00±.02               |
| Linearity† (% span)                                 | -0.8 typ.<br>-1.5 max. | -0.8 typ.<br>-1.5 max. | -0.8 typ.<br>-1.5 max. | -0.8 typ.<br>-1.5 max. | -0.8 typ.<br>-1.5 max. | -0.8 typ.<br>-1.5 max. | -0.8 typ.<br>-1.5 max. |
| Vout (0 gauss @ 25°C)***                            | 4.00±.04V              | 2.50±.05V              | 4.00±.04V              | 4.00±.08V              | 4.00±.04V              | 4.00±.04V              | 4.00±.04V              |
| Temperature Error (all %s<br>reference 25°C value)* |                        |                        |                        |                        |                        |                        |                        |
| Null (%/°C)                                         | ±.02                   | ±.025                  | ±.01                   | ±.10                   | ±.02                   | ±.0125                 | ±.007                  |
| Gain (%/°C)                                         | ±.02                   | ±.025                  | ±.02                   | + .02<br>- .055        | ±.02                   | ±.02                   | ±.02                   |

\* -40° to 125°C.

MilliTesla = Gauss 10<sup>-1</sup>

\*\* Excludes load. Typical at 25°C/Maximum at -40°C.

\*\*\* @ V<sub>s</sub> = 5 VDC for SS94A1B only/@ V<sub>s</sub> = 8 VDC for all others.

† Derived from straight line between end points.

†† Silver coating on back of ceramic is electrically connected to - terminal.  
Specified using a 2.2KΩ resistor unless otherwise noted.

Null voltage (Vout at 0 gauss) and sensitivity are ratiometric to supply voltage.

Magnets page 25.

Application consideration: The output is clamped at the high end. Clamping voltage may be as low as 9VDC. The output will not exceed the clamping voltage regardless of field strength or supply voltage.