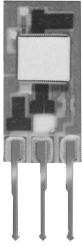


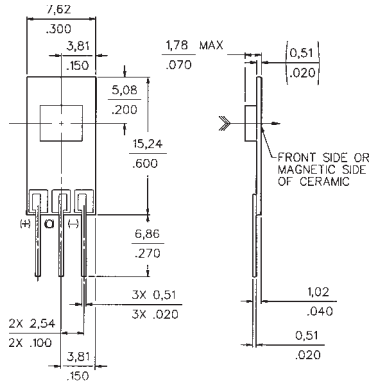
# Solid State Sensors

## Analog Position Sensors

SS94B1 Series

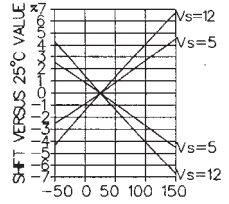


### MOUNTING DIMENSIONS (for reference only)

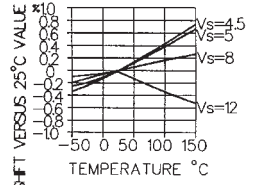


### OUTPUT CHARACTERISTICS (for reference only)

NULL SHIFT LIMITS VERSUS TEMP



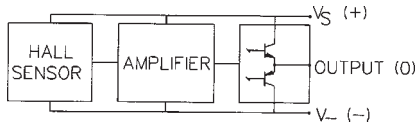
TYPICAL NULL SHIFT VERSUS TEMP



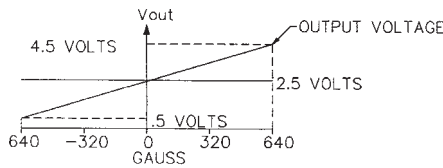
### FEATURES

- Single current sinking or current sourcing output
- 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

### BLOCK DIAGRAM



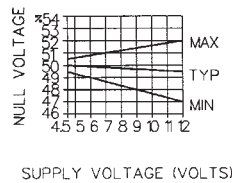
### TRANSFER CHARACTERISTICS



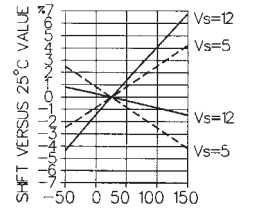
### SS94 ORDER GUIDE

Catalog Listing	SS94B1
Supply Voltage (VDC)	4.5 to 12 Performance @ 5 VDC
Supply Current (mA)	8 typ., 11 max.
Output Current/Type	Ratiometric/Sinking or Sourcing 1 mA typ., 2 mA max.
Output Voltage Swing Negative gauss Positive gauss	0.4 V typ. $V_s - 0.4$ V typ.
Magnetic Characteristics @ 25°C, 5 VDC (-67.0 to +67.0 mT, typ.) Span Null (Offset @ 0 gauss) Sensitivity (mV per gauss) Linearity (% span)	4.0 V (-670 to +670 gauss, typ.), 2.5 ± 0.03 V 3.125 ± 0.063 -0.5 ± 0.5
Temperature Error (@ 25°C) Null Shift (%/°C) Sensitivity (%/°C)	± 0.03 ± 0.03

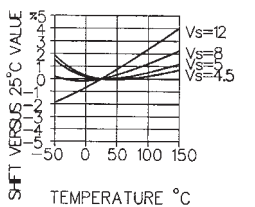
RATIO OF  $V_{null}$  TO  $V_{supply}$



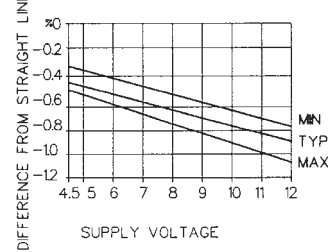
GAIN SHIFT LIMITS VERSUS TEMP



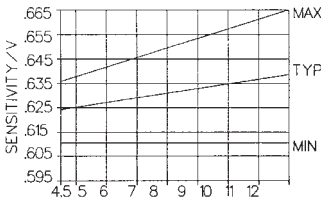
TYPICAL GAIN SHIFT VERSUS TEMP



LINEARITY VERSUS SUPPLY VOLTAGE  
END POINTS OF SPAN METHOD

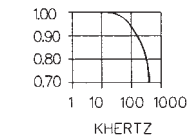


SENSITIVITY/V VERSUS SUPPLY VOLTAGE  
(mV/GAUSS/V)



TO CALCULATE SENSITIVITY, MULTIPLY  
Y-AXIS VALUE TIMES SUPPLY VOLTAGE

TYPICAL FREQUENCY RESPONSE  
 $V_s=8.0$   
 $R_L=33.3K$  PARALLEL WITH 100PF



$V_{out}$   
 $V_{out} @ 1KHZ$

SUPPLY CURRENT VERSUS TEMP

