



**THE DATASHEET OF
SS491B**





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SS491B



Actual product appearance may vary.

SS491 Series Miniature Ratiometric Linear Hall-Effect Sensor; radial lead IC package

Features

- Small size
- Low power consumption
- Single current sinking or current sourcing linear output
- Built-in thin-film resistors - laser trimmed for precise sensitivity and temperature compensation
- Rail-to-rail operation provides more useable signal for higher accuracy
- Responds to either positive or negative gauss
- Quad Hall sensing element for stable output)

Potential Applications

- Current sensing
- Motor control
- Position sensing
- Magnetic code reading
- Rotary encoder
- Ferrous metal detector
- Vibration sensing
- Liquid level sensing
- Weight sensing

Description

SS491 Series MRL (Miniature Ratiometric Linear) sensors have a ratiometric output voltage, set by the supply voltage. It varies in proportion to the strength of the magnetic field.

A new Hall effect integrated circuit chip provides increased sensitivity. The quad Hall sensing element minimizes the effects of mechanical or thermal stress on the output. The positive temperature coefficient of the sensitivity helps compensate for the negative temperature coefficients of low cost magnets, providing a robust design over a wide temperature range.

NOTE: Products ordered in bulk packaging (plastic bags) may not have perfectly straight leads as a result of normal handling and shipping operations. Please order tape packaging option for applications with critical lead straightness requirements.

Supporting Documentation

[Required Accessories—Magnets](#)

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Keyword Search

Search for product and support information.

All Sensing and Control

Product Search

Part number search:

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Specification Search

Product Specifications	
Product Type	Hall-Effect Digital Position Sensor IC
Package Quantity/Type	Available in 1,000/Bag
Package Style	Radial Lead IC
Supply Voltage	4.5 Vdc to 10.5 Vdc
Output Type	Sink/Source
Termination Type	PC Board
Magnetic Actuation Type	Ratiometric
Operating Temperature Range	-40 °C to 150 °C [-40 °F to 302 °F]
Storage Temperature	-55 °C to 165 °C [-67 °F to 329 °F]
Output Voltage	0.2 Vdc to (V _s - 0.2 Vdc) typ., 0.4 Vdc to (V _s - 0.4 Vdc) min.
Linearity (% of Span)	-1.0 % typ.
Output Voltage Span (min.)	0.4 Vdc to (V _s - 0.4 Vdc)
Availability	Global
Supply Current (max. @ 25 °C)	8.7 mA @ 5 Vdc
Sensitivity @ 25 °C	0.60 mV to 1.25 mV/G
Temperature_Error_25_Null_Shift_2	-0.06 min., 0.08 max.
Temperature_Error_25_Sensitivity_1	-0.02 min., 0.08 max.
Magnetic Range (typ.)	-6 mT to 6 mT [-60G to 60 G]
Magnetic Range (min.)	-5 mT to 5 mT [-50G to 50 G]
Output Voltage Span (typ.)	0.2 Vdc to (V _s - 0.2 Vdc)
Null (Output @ 0 G)	5.0 Vdc ± 1.0 Vdc
Response Time (µs)	3 µs
Series Name	SS491

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