

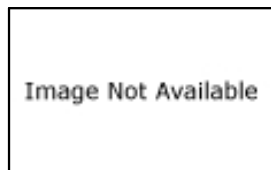


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### SS41-SP



**SS40 Series Bipolar Hall-Effect Digital Position Sensor; surface mount package, available in 1,000 per tape and reel**

#### Features

Small size  
Reverse power polarity protection  
Current sinking output  
Sensitive magnetic characteristics  
Operating speed from 0 kHz to over 100 kHz

#### Potential Applications

Speed and RPM sensor  
Brushless DC motor commutation  
Motor and fan control  
Magnetic encoding  
Tachometer, counter pickup  
Disc speed, tape rotation sensing  
Flow-rate sensing

#### Description

SS41-Series Bipolar Hall Effect sensors respond to alternating North and South poles.

A built-in regulator provides stable operation over 4.5 Vdc to 24 Vdc supply voltage range, and internal circuitry prevents sensor damage in case the supply voltage polarity is accidentally reversed. The SS41 Series Bipolar Hall-effect sensors are small, versatile digital Hall-effect devices that are operated by the magnetic field from a permanent magnet or an electromagnet. The open-collector sinking output voltage is easily interfaced with a wide variety of electronic circuits.

**NOTE:** These digital Hall sensors have an operating temperature range of -40 °C to 125 °C [-40 °F to 257 °F], appropriate for commercial, consumer, and industrial environments.

#### Supporting Documentation

- Required Accessories—Magnets**

Product Specifications	
Product Type	Hall-Effect Digital Position Sensor IC
Package Quantity/Type	Available in 1,000/Tape and Reel
Package Style	Surface Mount
Supply Voltage	4.5 Vdc to 24.0 Vdc
Output Type	Sink
Termination Type	Surface Mount
Magnetic Actuation Type	Bipolar
Operating Temperature Range	-40 °C to 150 °C [-40 °F to 302 °F]
Storage Temperature	-40 °C to 150 °C [-640 °F to 302 °F]
Output Voltage	0.4 Vdc max.
Switching Time Rise (10 % to 90 %)	1.5 µs max.
Switching Time Fall (90 % to 10 %)	1.0 µs max.
Availability	Global
Supply Current (max. @ 25 °C)	15 mA
Output Current (max.)	20 mA
Operate Point @ 25 °C	15.0 mT [150 G] max.
Release Point @ 25 °C	-14.0 mT [-140 G] min.
Leakage Current max.	10 µA
Differential	4.0 mT [40 G] min.
Series Name	SS40

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All Sensing and Control

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