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Honeywell

S351AT and SS451A Hall-effect Digital Position Sensor

General Description:

The SS351AT and SS451A sensors are small, versatile digital Hall-effect devices that are operated by the magnetic field from a permanent magnet or an electromagnet. They are designed to respond to a either a North pole or a South pole.

These omnipolar sensors are sensitive and flexible devices designed to meet a wide range of potential applications. The SS351AT and SS451A have a typical operating point of 85 G at 25 °C [77 °F]. Because they can be operated by a North pole or a South pole, they



do not require the magnet polarity to be identified, thus making the installation easier and potentially reducing the system cost.

These sensors are available in two package styles. The SS351AT is available in the subminiature SOT-23 surface mount package; the SS451A is available in the leaded, flat TO-92-style package. The SS351AT's small size requires less PC board space, allowing it to be used in smaller assemblies. Its 3 Vdc capability allows for use in low voltage applications, promoting energy efficiency.

The SS351AT is available on tape and reel (3000 units per reel); the SS451A is available in a bulk package (1000 units per bag).

Key Features:

 Subminiature package size (SS351AT) supplied on tape and reel allows for a compact design with automated component placement, helping to reduce manufacturing costs



 Simple activation from a North pole or a South pole and sensitive magnetics make this omnipolar product suitable in a variety of potential motion control, lid closure detection, and displacement sensing applications

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- Low voltage 3 Vdc capability helps reduce power consumption
- Built-in reverse polarity protection protects the device from potential damage during installation
- Thermally balanced integrated circuit provides for stable operation over a wide temperature range of -40° to 150 °C [-40 °F to 302 °F]
- RoHS-compliant materials meet Directive 2002/95/EC

Applications:

- Speed and RPM (revolutions per minute) sensing in fitness equipment
- Magnetic encoder for building access
- Damper or valve position control in HVAC (heating, ventilation and air conditioning) equipment
- Flow rate sensing in appliances and water softeners
- Printer head position sensing
- Flow rate sensing in industrial processes
- Robotic control (cylinder position monitoring)
- Float-based fluid level sensing
- Displacement sensor in hospital beds and medical equipment
- Medication bin monitor on portable drug carts

Related Products Information:

Mfr Part #	Farnell #	Newark #	Description
SS351AT	1780459	51R0329	Hall-effect digital position sensor
SS451A	1780460	51R0330	Hall-effect digital position sensor



