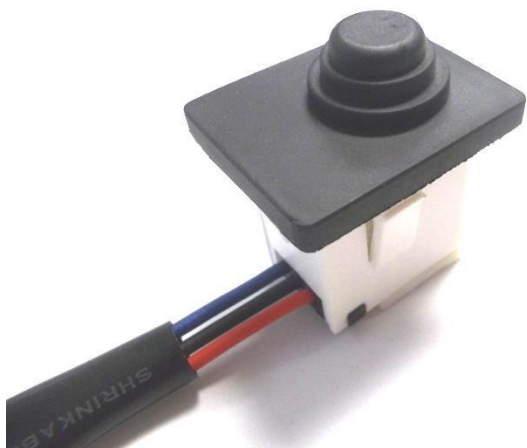


Automotive Sensor Products

Seat Occupancy Sensor – Hall



General Description

The Seat Occupancy sensor is a magnetically operated push button sensor with a simple push-fit clip mounting configuration, allowing the passenger safety system to determine the presence of an object or person in a seat.

Operation

Basic Principle

The sensor is in a pre-defined single logic output state. When the plunger is depressed, the magnetic circuit will be complete, activating the Hall Effect sensor, which would switch logic (voltage) output levels to the customer electrical interface.

Packaging Options

Custom packaging can be provided to meet any need, please contact Littelfuse Engineering for details.

Features

- ♦ Magnetically operated position sensor
- ♦ Two logic output states (low and high)
- ♦ Simple flush and recessed mounting options available
- ♦ Non-contact sensor
- ♦ Operates when plunger is depressed
- ♦ Choice of cable length and clips
- ♦ Choice of circuitry for output voltages
- ♦ Choice of connectors and terminals

Benefits

- ♦ Robust construction makes this sensor well suited to harsh environments
- ♦ Integral neoprene boot provides protection from severe environments
- ♦ Hermetically sealed, magnetically operated contacts give excellent life and reliability

Applications

- ♦ Seat occupancy
- ♦ Position and limit sensing

Automotive Sensor Products

Functional Characteristics

| Parameter | | | |
|--|------------------------|------------|----------------------------------|
| Type | | | |
| Hall Sensor | | | |
| Electrical | | | |
| Supply Voltage (Note 1) | Absolute rating | Max. | 8.5V _{dc} |
| | Operation | Min. - Max | 4.5 – 5.5 V _{dc} |
| | Overvoltage protection | Max. | 19.5 V _{dc} |
| Output Voltage | High | Max. | 4.5 + 0.0 / -0.1 V _{dc} |
| | Low | Max. | 0.5 + 0.1 / -0.0 V _{dc} |
| Output Current (continuously on) | | Max. | -1.0 to 1.0 |
| Current Consumption over Temperature Range | Low | mA | 2 – 10 |
| | High | mA. | 2 – 10 |
| Switching Speed | | Khz - Max. | 2 |
| Environmental/Mechanical | | | |
| Temperature | Operating | Celsius | -40° to +85° |
| | Storage | Celsius | -40° to 105° |
| Shock | 11ms Sine | Max. | 50g |
| Vibration | 10 – 1000Hz | Max. | 3.3g |

Note 1 - As long as Tj (Junction Temperature) max. is not exceeded

Littelfuse

Website: www.littelfuse.com
 Sales Support: ALL_Autosensors_Sales@littelfuse.com
 Technical Support: ALL_Autosensors_Tech@littelfuse.com

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