

Automotive Sensor Products

Seat Belt Buckle Sensor – Mechanical



General Description

The sensor detects whether the seat belt buckle is latched or unlatched, allowing the passenger safety system to determine the optimum airbag deployment. It is also used as an input to the electronic park brake and the unbuckled warning system.

Operation

Basic Principle

The sensor is in a normally open position. When the seat belt buckle thorn moves from an unlatched to a latched position the mechanism will close completing the electrical circuit and sending a voltage output to the customer electrical interface.

Packaging Options

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

Features

- ◆ Mechanically operated position sensor
- ◆ Simple, cost effective mechanism
- ◆ Integrated in seat belt buckle
- ◆ Normally open contact
- ◆ Operates when the thorn in the seat belt buckle moves from an unlatched to a latched position
- ◆ Choice of cable length and clips
- ◆ Choice of connector and terminals
- ◆ Choice of circuitry for output voltages

Benefits

- ◆ Robust construction makes this sensor well suited to harsh environments
- ◆ No standby power required
- ◆ No magnet on thorn required
- ◆ Gold plated contacts give excellent life and reliability

Applications

- ◆ Vehicle Occupant Safety Systems

Automotive Sensor Products

Functional Characteristics

| Parameter | | | |
|------------------------------|------------|---------------|----------------|
| Type | | | |
| Mechanical Switch Sensor | | | |
| Contact | | Normally Open | |
| Electrical | | | |
| Voltage | Switching | Max. | 12Vdc |
| Closed State Current Sensing | | Min. | 5mA |
| | | Max. | 30mA |
| Environmental/Mechanical | | | |
| Temperature | Operating | Celsius | -40°C to +85°C |
| Mechanical Shock | 6ms ½ Sine | Max. | 50g |

Littelfuse

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

Information provided by Littelfuse is believed to be accurate and reliable.
 All rights reserved. Trademarks and registered trademarks are the property of their respective owners.
 Littelfuse products are designed for specific applications and should not be used for any purpose (including, without limitation, automotive applications) not expressly set forth in applicable Littelfuse product documentation. Warranties granted by Littelfuse shall be deemed void for products used for any purpose not expressly set forth in applicable Littelfuse product documentation. Littelfuse shall not be liable for any claims or damages arising out of products used in applications not expressly intended by Littelfuse as set forth in applicable Littelfuse product documentation.