

Automotive Sensor Products

Seat Belt Buckle Sensor – Reed



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 magnetic circuit will be complete, activating the Reed Switch to close its contacts sending a voltage output to the customer's electrical interface.

Packaging Options

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

Features

- ◆ Magnetically operated position sensor
- ◆ Integrated in seat belt buckle
- ◆ Normally open circuit
- ◆ 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
- ◆ Can be connected directly to sounder or LED indicator

Applications

- ◆ Vehicle Occupant Safety Systems

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Functional Characteristics

Parameter			
Type			
Reed Switch			
Sensor Logic		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

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