Reed Sensors
Firecracker > 59040

59040 Press-Fit Firecracker Reed Sensor + 57040 Actuator

Description
The 59040 Press-Fit Firecracker Reed Sensor is a small, cylindrical reed sensor 31.0mm (1.22") long that pressses into a 9.5mm (.375") diameter hole with a choice of normally open, normally closed or change-over contacts. It is capable of switching up to 200Vdc at 10W and is available with a range of sensitivity, cable length, plastic housing color (white, black, and wooden brown), and connector options. It has three crush ribs along the length of the capsule that allow a firm and fixed press-fit. It is well suited for position and limit sensing, security, level sensing applications. It functions best with the 57040 actuator.

Note: The 57040 Actuator is sold separately.

Features
- Magnetically-operated press-fit proximity sensor
- Cylindrical capsule with retaining ribs
- Operates and mounts through non-ferrous materials such as wood, plastic or aluminum
- Hermetically sealed contacts
- Customer-defined sensitivity options available
- Custom cable length and connector options available
- Press-fits into a standard drill size hole of 9.5mm (.375") diameter
- RoHS Compliant

Benefits
- Ribs on capsule compress when inserted into a mounting hole and provide retaining force, allowing simple and secure press-fit installation
- Quick and easy press-fit installation that requires no screws, brackets, nor glue.
- Well suited for usage in high-moisture and contaminated environments
- Non-contact solution, aesthetically more appealing than push-button or lever mechanical-type switches
- Ideal for battery-powered applications as the contacts do not draw power when in the non-activated state
- Reed contacts last for millions of operating cycles under microcontroller voltage and current logic-level loads

Applications
- Position and limit sensing
- Security
- Appliances
- Industrial

Agency Approvals

<table>
<thead>
<tr>
<th>Agency</th>
<th>Agency File Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>UL</td>
<td>E61760</td>
</tr>
</tbody>
</table>

Note: Contact Littelfuse for specific agency approval ratings.

Dimensions

Dimensions in mm (inch)

Sensor

- 9.46 ±0.25 (.333 ± 0.01)
- 31.00 ±0.25 (1.22 ±.01)
- 310.00 ±0.25 (12.22 ±.01)
- 300 (11.81)

Actuator

- 8.46 ±0.25 (.333 ±.01)
- 31.00 ±0.25 (1.22 ±.01)
- 310.00 ±0.25 (12.22 ±.01)

Notes:
1. The 59040 Sensor and 57040 Actuator are designed to fit into a drill size hole of 9.5mm (.375") diameter.
2. Not recommended to be mounted within ferrous metal materials. The activate distance will decrease significantly.
59040 Press-Fit Firecracker Reed Sensor + 57040 Actuator

**Electrical Ratings**

<table>
<thead>
<tr>
<th>Contact Type</th>
<th>Normally Open</th>
<th>Change Over</th>
<th>Normally Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch Type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact Rating 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breakdown 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resistance 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacitance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Product Characteristics**

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Operate Time 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Release Time 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shock 7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vibration 7</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

**Sensitivity Options (Using 57040 Actuator)**

<table>
<thead>
<tr>
<th>Select Option</th>
<th>S</th>
<th>T</th>
<th>U</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch Type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normally Open</td>
<td>12-18</td>
<td>25.0 (.984)</td>
<td>17-23</td>
</tr>
<tr>
<td>Change Over</td>
<td>15-20</td>
<td>21.0 (.836)</td>
<td>20-25</td>
</tr>
<tr>
<td>Normally Closed</td>
<td>15-20</td>
<td>21.0 (.836)</td>
<td>20-25</td>
</tr>
</tbody>
</table>

**Notes:**
1. Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
2. When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application Notes AN108A and AN107 for details.
3. Leakage current is less than 0.1mA for 60 seconds.
4. Electrical Load Life Expectancy - Contact Littelfuse with voltage, current values along with type of load.
5. This resistance value is for 11.81in wire length. Resistance changes when wire lengths.
6. Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
8. For custom modifications to the wire length or size, adding a special connector, or plastic housing color options, please contact Littelfuse.
9. Custom sensitivity options and a normally open high-voltage switch option are available.
## Part Numbering System

**Sensor:** 59040 - X - X - XX - X

- **Series**
- **Switch Type**
  - 1, 3, or 4
- **Sensitivity**
  - S, T, or U
- **Cable Length**
  - 02
- **Termination**
  - A, F, or E

**Actuator:** 57040 - 000

- **Series**
- **Standard Actuator**
  - 000

Note: The 57040 Actuator is sold separately.

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### Cable Length Specification

<table>
<thead>
<tr>
<th>Select Option</th>
<th>Cable Length mm (inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>300 (11.81)</td>
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</tbody>
</table>

### Termination Specification

**Termination Options**

<table>
<thead>
<tr>
<th>Select Option</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>Tinned leads (6.4±0.76)mm</td>
</tr>
<tr>
<td>F</td>
<td>Untinned leads (6.4±0.76)mm</td>
</tr>
<tr>
<td>E</td>
<td>JST type XHP 2.5mm pitch</td>
</tr>
</tbody>
</table>

### Product Marking

- **Part Number**
  - LITTELFUSE 59040 - X - X - XX - X
- **Date Code**
  - YYYY

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### Packaging

<table>
<thead>
<tr>
<th>Packaging Option</th>
<th>Packaging Specification</th>
<th>Quantity</th>
<th>Quantity and Packaging Code</th>
<th>Taping Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk</td>
<td>Bulk</td>
<td>500</td>
<td>N/A</td>
<td>N/A</td>
</tr>
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