

59010 Sub-Miniature Firecracker Reed Sensor + 57020 Actuator

RoHS



Description

The 59010 Firecracker Reed Sensor is a sub-miniature cylindrical reed sensor 9.0mm L x 3.0mm Dia. (0.354" x 0.118") with a normally open contact. It is capable of switching up to 170Vdc at 10W and has cable length and connector options. It functions best with the 57020-000 actuator.

Note: The 57020 Actuator is sold separately.

Features

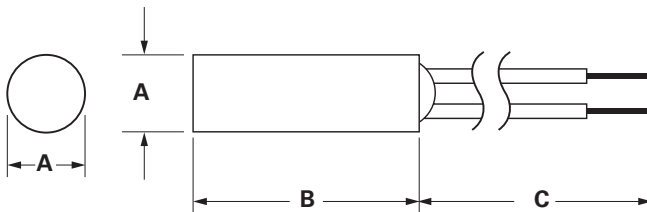
- Magnetically operated proximity sensor
- Compact size requires only 3mm diameter hole
- Hermetically sealed contacts
- Custom cable length and connector options available

Benefits

- Well suited for usage in high-moisture and contaminated environments
- Non-contact solution, aesthetically more appealing than push-button or lever mechanical-type switches
- Simple installation and adjustment
- No standby power requirement
- 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 micro-controller logic-level loads

Dimensions

Dimensions in mm (inch)



| | A Nom. mm(in) | B Nom. mm(in) | C Nom. mm(in) |
|-----------------------|----------------------------|----------------------------|-------------------------------|
| 57020 Actuator | 5.10 (.201) | 15.24 (.600) | – |
| 59010 Sensor | 3.00 (.118) | 9.00 (.354) | Cable Length ±10.00 (.393) |

Applications

- Position and Limit Sensing
- Security System Switch
- Level Sensing
- Linear Actuators

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Electrical Ratings

| Contact Type | | | Normally Open |
|-----------------------------|-----------------------------|-----------------|------------------|
| Switch Type | | | 1 |
| Contact Rating ¹ | | VA/Watt - max. | 5 |
| Voltage ⁴ | Switching ² | Vdc - max. | 175 |
| | | Vac - max. | 140 |
| | Breakdown ³ | Vdc - min. | 200 |
| | | | |
| Current ⁴ | Switching ² | Adc - max. | 0.35 |
| | | Aac - max | 0.25 |
| | Carry | Adc - max. | 0.50 |
| Resistance ⁵ | Contact, Initial Insulation | Ω - max. | 0.550 |
| | | Ω - min. | 10 ¹² |
| Capacitance | Contact | pF - typ. | 0.45 |
| Temperature | Operating | °C | -40 to +85 |

Product Characteristics

| | | | |
|---------------------------|-------------|-----------|------|
| Operate Time ⁶ | | ms - max. | 0.35 |
| Release Time ⁶ | | ms - max. | 0.03 |
| Shock ⁷ | 11ms ½ sine | G - max. | 50 |
| Vibration ⁷ | 10-2000 Hz | G - max. | 10 |

Notes:

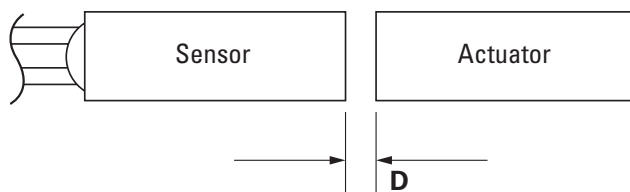
- Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
- When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application Notes AN108A and AN107 for details.
- Breakdown Voltage - per MIL-STD-202, Method 301.
- Electrical Load Life Expectancy - Contact Littelfuse with voltage, current values along with type of load.
- This resistance value is for 11.81mm wire length. Resistance changes when wire lengthens.
- Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
- Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.
- For custom modifications to the wire length or size, or adding a special connector, please contact Littelfuse.

Sensitivity Options (Using 57020 Actuator)

| Select Option | | S | | T | |
|---------------|---------------|------------------|---|------------------|---|
| Switch Type | | Pull-In AT Range | Activate Distance - D mm (inch) Average | Pull-In AT Range | Activate Distance - D mm (inch) Average |
| 1 | Normally Open | 6-10 | 6.3 (.248) | 10-15 | 4.9 (.193) |

Note:

- Pull-In AT Range: These AT values are the bare reed switch AT before modification.
- The activation distance is average value on the final sensor assembly.


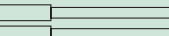


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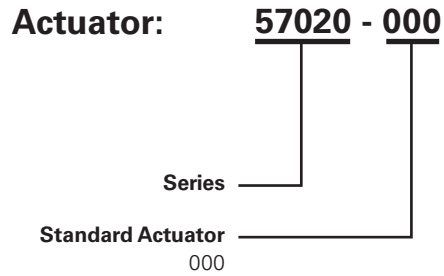
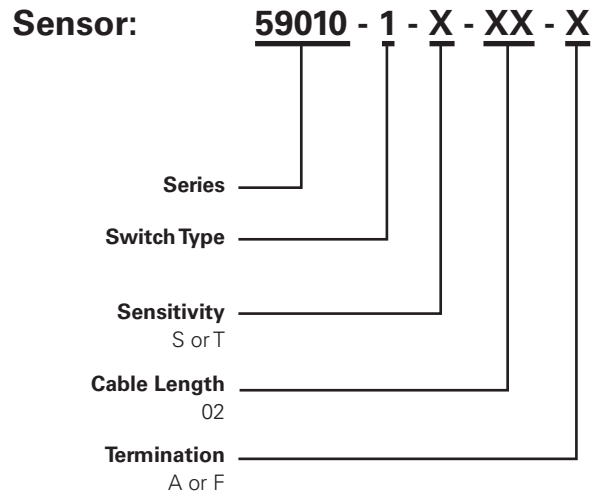
Cable Length Options

| (Cable Type 30 AWG 7/38 PTFE 200°C MIL-W-16878/6) | |
|---|---------------------------|
| Select Option | Cable Length mm (inch) |
| 02 | 300 (11.81) |

Termination Options

| Select Option | Description | |
|---------------|----------------|---|
| A | Tinned Leads |  |
| F | Untinned Leads |  |

Part Numbering System



Note: The 57020 Actuator is sold separately.

Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|------------------|-------------------------|----------|---------------------------|--------------|
| Bulk | Bulk | 500 | N/A | N/A |