

# 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

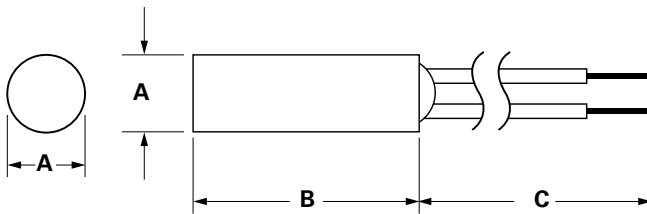
- Magnetically operated proximity sensor
- Compact size requires only 3mm diameter hole
- Hermetically sealed contacts
- Custom cable length and connector options available

## 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)



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

## Applications

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

# 59010 Sub-Miniature Firecracker Reed Sensor + 57020 Actuator

## Electrical Ratings

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

## Product Characteristics

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

### Notes:

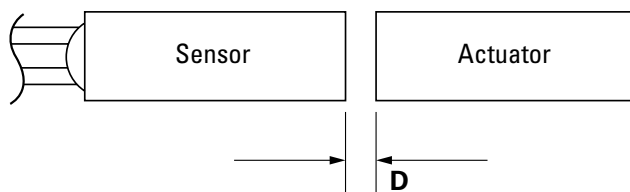
- Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
- When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application 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.




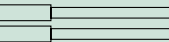
# 59010 Sub-Miniature Firecracker Reed Sensor + 57020 Actuator

## Cable Length Specification

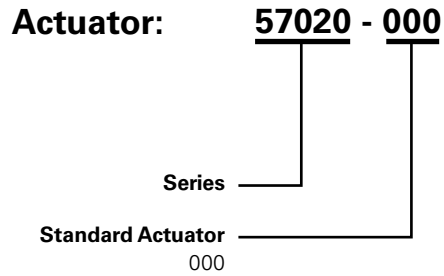
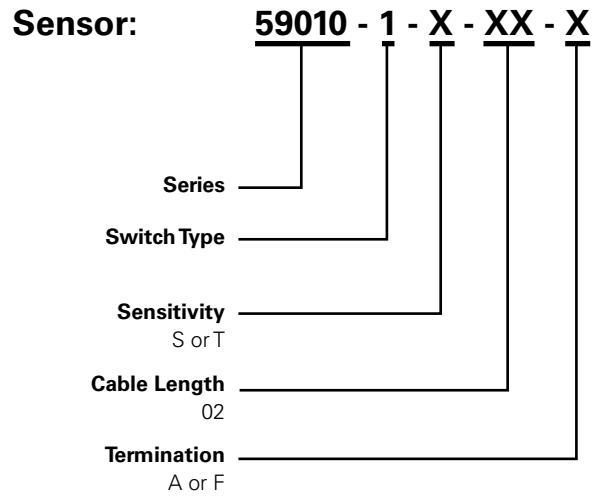
(Cable Type 30 AWG 7/38 PTFE 200°C MIL-W-16878/6)

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

**Disclaimer Notice** - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at [www.littelfuse.com/disclaimer-electronics](http://www.littelfuse.com/disclaimer-electronics).