

# 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

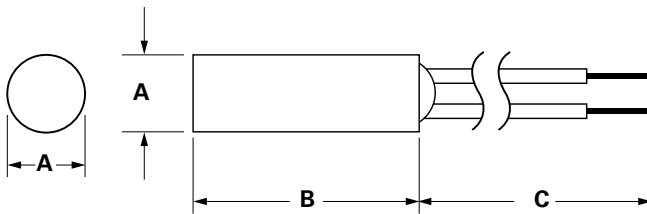
- Magnetically operated proximity sensor
- Compact size requires only 3mm diameter hole
- Hermetically sealed contacts
- Custom cable length and connector options available

## 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

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## 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:

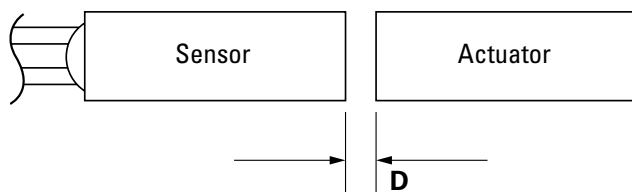
- Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
- When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application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




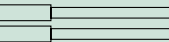
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## Cable Length Specification

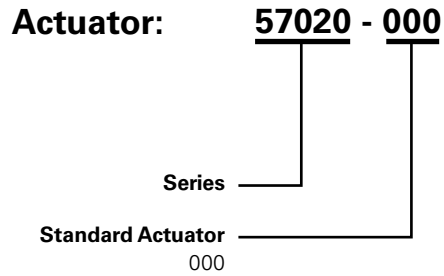
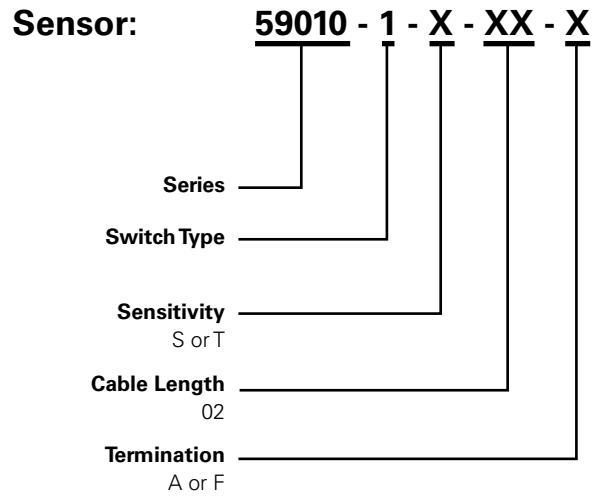
(Cable Type 30 AWG 7/38 PTFE 200°C MIL-W-16878/6)

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

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