



THE DATASHEET OF
59010-1-S-02-F



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

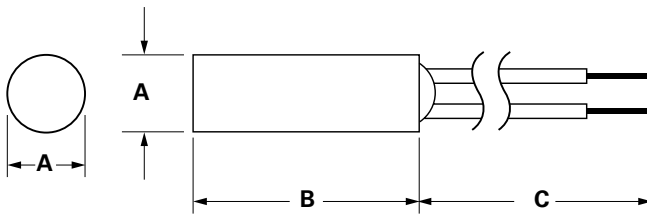
- Magnetically operated proximity sensor
- Compact size requires only 3mm diameter hole
- Hermetically sealed contacts
- Custom cable length and connector options available

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:

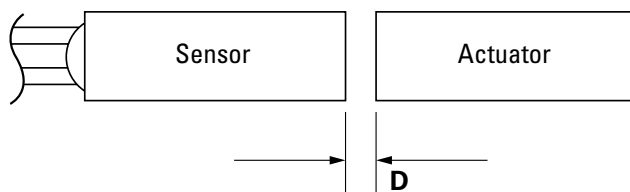
- Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
- When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application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




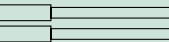
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Cable Length Specification

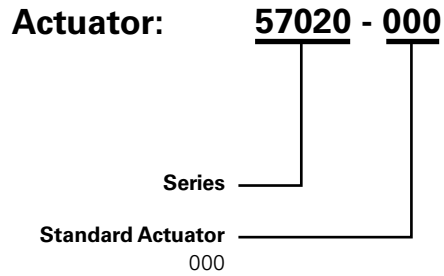
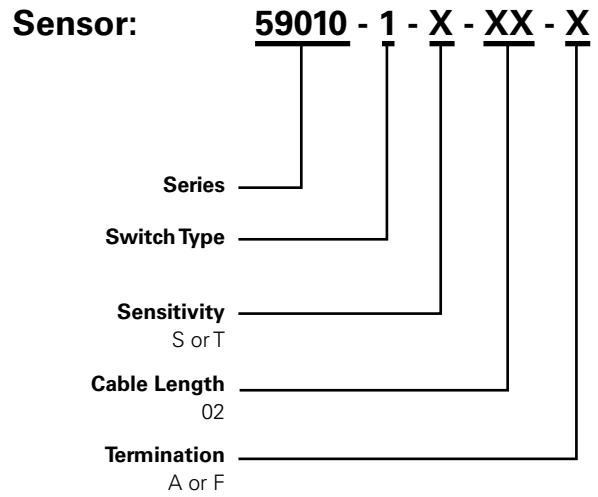
(Cable Type 30 AWG 7/38 PTFE 200°C MIL-W-16878/6)

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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