

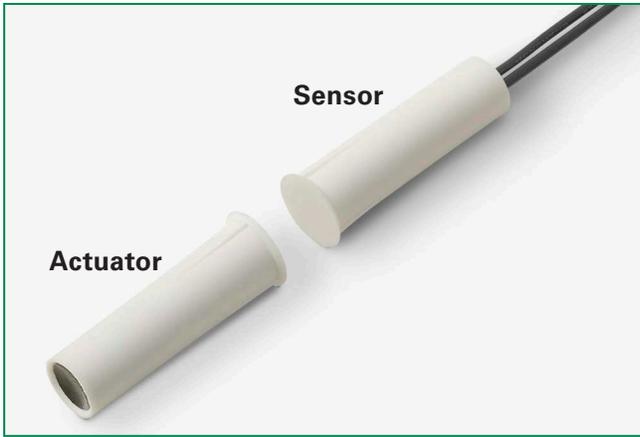
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EN: This Datasheet is presented by the manufacturer.

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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 presses 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

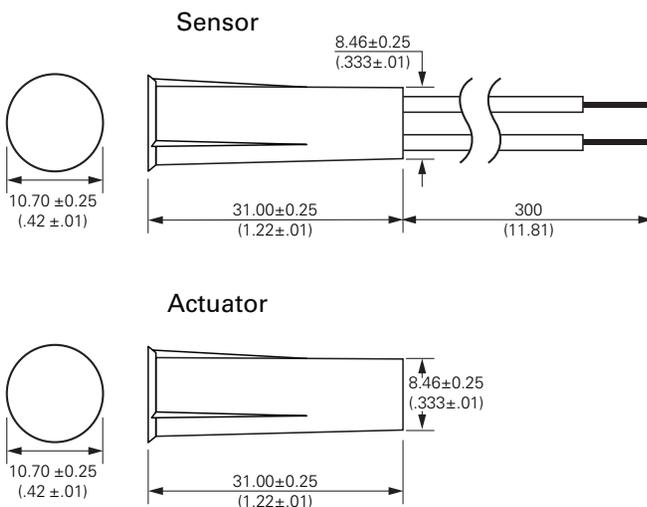
Agency Approvals

Agency	Agency File Number
	E61760

Note: Contact Littelfuse for specific agency approval ratings.

Dimensions

Dimensions in mm (inch)



Notes:

1. The 59040 Sensor and 57040 Actuator are designed to fit into a drill size hole of 9.5mm (0.375") diameter.
2. Not recommended to be mounted within ferrous metal materials. The activate distance will decrease significantly.

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 micro-controller voltage and current logic-level loads

Applications

- Position and limit sensing
- Security
- Appliances
- Industrial

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Electrical Ratings

Contact Type			Normally Open	Change Over	Normally Closed
Switch Type			1	3	4
Contact Rating ¹		VA/Watt - max.	10	5	5
Voltage ⁴	Switching ²	Vdc - max.	200	175	175
	Breakdown ³	Vac - max.	140	120	120
		Vdc - min.	250	200	200
Current ⁴	Switching ²	Adc - max.	0.5	0.25	0.25
	Carry	Aac - max.	0.35	0.18	0.18
		Adc - max.	1.2	1.5	1.5
Resistance ⁵	Contact, Initial Insulation	Ω - max.	0.2	0.2	0.2
		Ω - min.	10 ¹⁰	10 ⁹	10 ⁹
Capacitance	Contact	pF - typ.	0.3	1.0	1.0
Temperature	Operating	°C	-40 to +105	-40 to +105	-40 to +105

Product Characteristics

Operate Time ⁶		ms - max.	1.0	3.0	3.0
Release Time ⁶		ms - max.	1.0	3.0	3.0
Shock ⁷	11ms ½ sine	G - max.	100	50	50
Vibration ⁷	50-2000 Hz	G - max.	30	30	30

Notes:

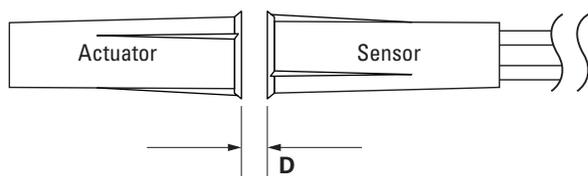
- Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
- When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application Notes AN108A and AN107 for details.
- Breakdown Voltage - per MIL-STD-202, Method 301. Leakage current is less than 0.1mA for 60 seconds.
- Electrical Load Life Expectancy - Contact Littelfuse with voltage, current values along with type of load.
- This resistance value is for 11.81in 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, adding a special connector, or plastic housing color options, please contact Littelfuse.
- Custom sensitivity options and a normally open high-voltage switch option are available.

Sensitivity Options (Using 57040 Actuator)

Select Option		S		T		U	
Switch Type		Pull-In AT Range	Activate Distance, D mm (inch) Average	Pull-In AT Range	Activate Distance, D mm (inch) Average	Pull-In AT Range	Activate Distance, D mm (inch) Average
1	Normally Open	12-18	25.0 (.984)	17-23	21.2 (.834)	22-28	17.9 (.705)
3	Change Over	15-20	21.0 (.836)	20-25	18.4 (.725)	25-30	17.0 (.670)
4	Normally Closed	15-20	21.0 (.836)	20-25	18.4 (.725)	25-30	17.0 (.670)

Note:

- Pull-In AT Range: These AT values are the bare reed switch AT before modification.
- The activate distance is an average value for the final sensor assembly.
- Not recommended to be mounted within/near ferrous metal materials; if doing so, these activate distances will decrease significantly.



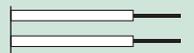
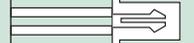
Schematics	Switch Type
	1
	3
	4

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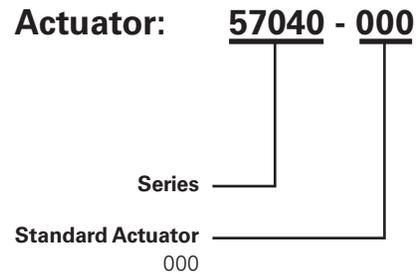
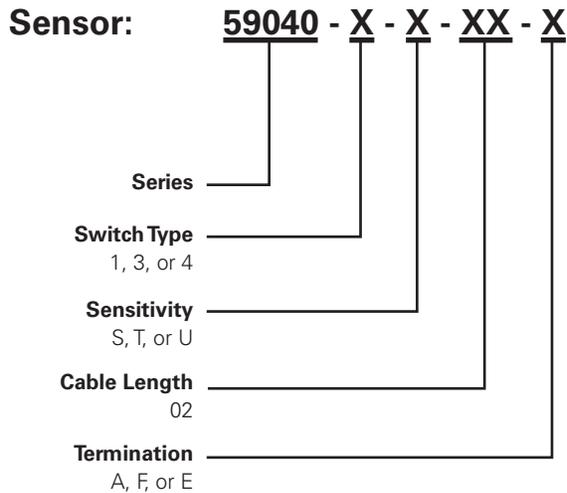
Cable Length Specification

Cable Type: 24 AWG PVC 105°C UL1430/UL1569	
Select Option	Cable Length mm (inch)
02	300 (11.81)

Termination Specification

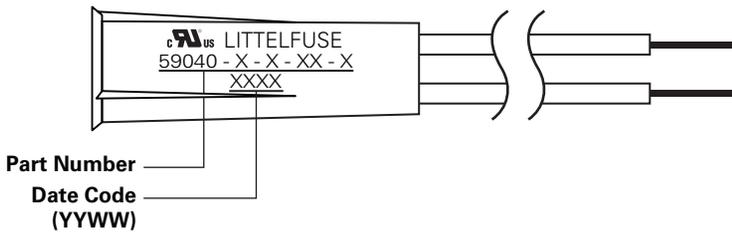
Termination Options		
Select Option	Description (Two-wire versions illustrated)	
A	Tinned leads (6.4±0.76)mm	
F	Untinned leads (6.4±0.76)mm	
E	JST type XHP 2.5mm pitch	

Part Numbering System



Note: The 57040 Actuator is sold separately.

Product Marking



Packaging

Packaging Option	Packaging Specification	Quantity	Quantity and Packaging Code	Taping Width
Bulk	Bulk	500	N/A	N/A