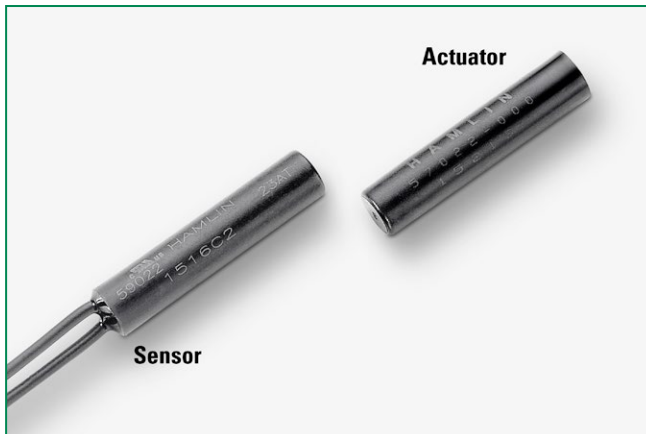


59022 Firecracker Reed Sensor + 57022 Actuator



Description

The 59022 Firecracker Reed Sensor is a small cylindrical reed sensor, 25.4mm (L) x 5.80mm (Dia.) (1.00" x 0.228"), with a choice of normally open, normally closed or change-over contacts. It is capable of switching up to 200Vdc at 10W.

The 59022 Firecracker Reed Sensor is available with a range of sensitivity and cable length options. It functions best with the 57022 actuator.

Note: The 57022 Actuator is sold separately.

Features

- Magnetically-operated proximity sensor
- Hermetically sealed contacts
- Operates through non-ferrous materials such as wood, plastic or aluminum
- Options of normally open, normally closed or single-pole-double-throw
- Customer-defined sensitivity option
- Custom cable length and connector options available

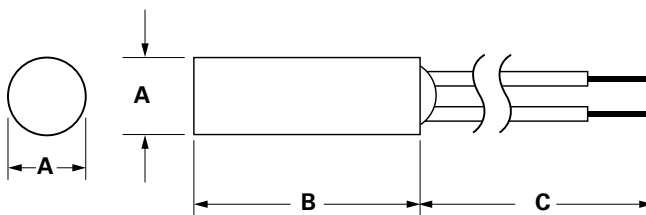
Agency Approvals

Agency	Agency File Number
	E61760

Note: Contact Littelfuse for specific agency approval ratings.

Dimensions

Dimensions in mm (inch)



	A Nom.	B Nom.	C Nom.
57022 Actuator	5.80 (.228)	25.40 (1.000)	—
59022 Sensor	5.80 (.228)	25.40 (1.000)	300 (11.81)

Benefits

- Fits nicely into small confined spaces
- Quick and easy to install
- 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 logic level loads

Applications

- Position and limit sensing
- Security
- Level sensing
- Linear actuators

59022 Firecracker Reed Sensor + 57022 Actuator

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. Ω - min.	0.2 10 ¹⁰	0.2 10 ⁹	0.2 10 ⁹
Capacitance	Contact	pF - typ.	0.3	0.3	0.3
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:

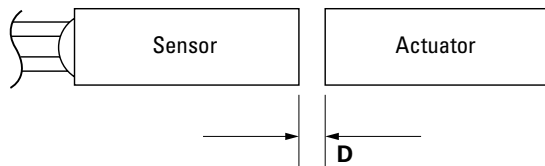
- Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
- When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application 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 11.81mm 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.
- Custom sensitivities and a high voltage switch are options

Sensitivity Options (Using 57022 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	9.6 (.377)	17-23	7.0 (.275)	22-28	5.0 (.197)
3	Change Over	15-20	9.3 (.367)	20-25	7.5 (.295)	25-30	6.5 (.256)
4	Normally Closed	15-20	9.3 (.367)	20-25	7.5 (.295)	25-30	6.5 (.256)

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



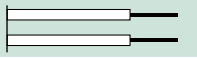


Schematics	Switch Type
	1
	3
	4

59022 Firecracker Reed Sensor + 57022 Actuator

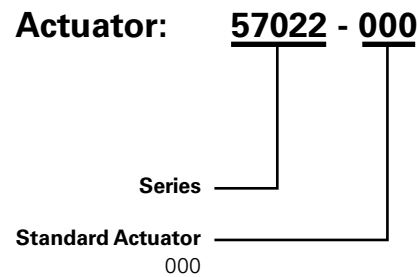
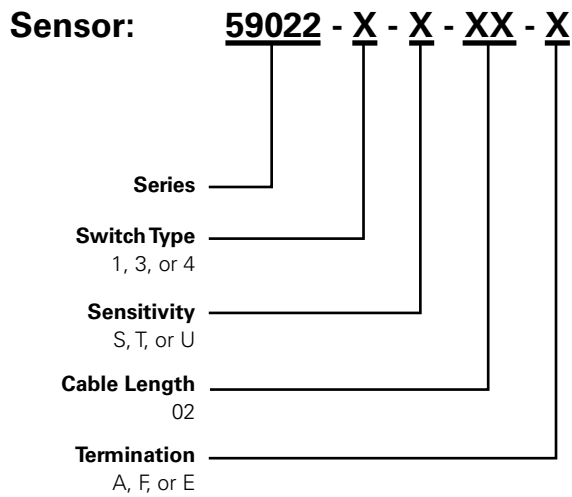
Cable Length Specification

Cable Type: 24 AWG 7/32 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 57022 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.