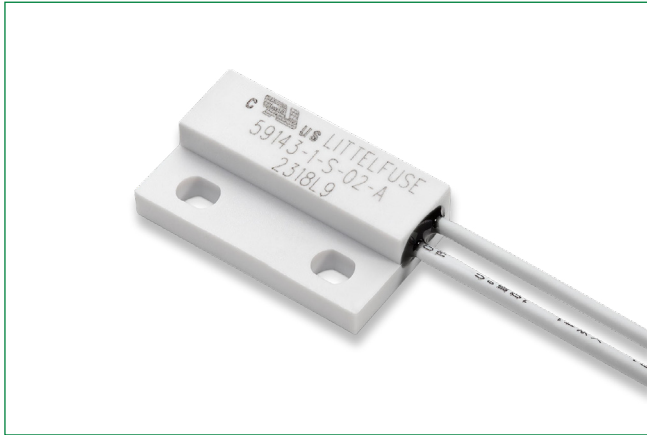


# 59143 Series

## Miniature Flange Mount Sensor

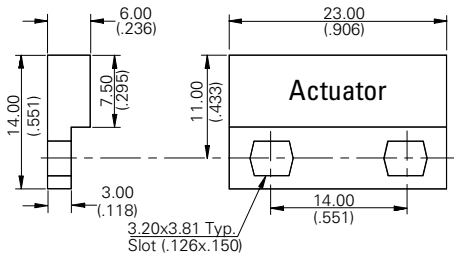


### Dimensions

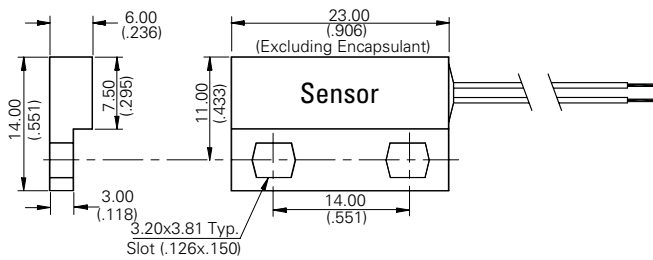
Dimensions in mm (inch)

Tolerances are +/- 0.25 (0.010) unless otherwise noted.

**Actuator** (sold separately)



**Sensor** (Two-wire version)



Schematics	Switch Type
White White	1

### Description

The 59143 is a miniature flange mounting reed sensor 23.00 mm x 14.00 mm x 6.00 mm (0.906" x 0.551" x 0.236") with normally open contacts. The case design enables mounting with M3 screw with washer at 1 Nm torque maximum or adhesive mounting. The wires exit from the right-hand side, see Drawing 2. The 59143 is capable of switching up to 265Vac/300Vdc at 10VA.

It is well suited for use in a wide range of industrial, appliances, or IoT proximity sensing applications.

The 59143 series functions best with the matching actuator 57143-000, which is sold separately.

### Features and Benefits

- Non-contact switching solution for wet & harsh environments
- Housing design for optimum adjustability
- Available in select sensitivities (operating distances)
- Standard cable configurations; customization options available
- Hermetically sealed, IP67 rated; UL and REACH compliant
- No leakage current in 'open' state—ideal for battery-powered IoT applications
- Can operate through non-ferrous materials (for example, wood, plastic or aluminium)
- Helps implement efficient proximity/access and energy management systems
- Compact size and easy installation and effective concealment in many applications
- UL Recognized per UL 508 and CSA C22.2 No. 14.

### Applications

- Security and access control
- Factory automation
- Process equipment
- Major appliances
- Small appliances
- Proximity and limit sensing

### Agency Approvals

Agency	Agency File Number
	E61760

**Note:** Contact Littelfuse for specific agency approval ratings.

# 59143 Series

## Miniature Flange Mount Sensor

### Electrical Ratings

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

### Product Characteristics

Operate Time <sup>6</sup>		ms - max.	1.0
Release Time <sup>6</sup>		ms - max.	1.0
Shock <sup>7</sup>	11ms ½ sine	G - max.	100
Vibration <sup>7</sup>	50–2000 Hz	G - max.	30

**Notes:**

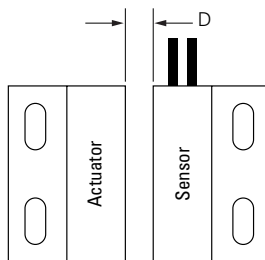
- Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
- When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application Notes AN108A and AN107 for details.
- Breakdown Voltage - per MIL-STD-202, Method 301.
- Electrical Load Life Expectancy - Contact Littelfuse with voltage, current values along with type of load.
- This resistance value is for 300 mm 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 57140 Actuator)

Select Option		S			T		
Switch Type	Pull-In AT Range	Activation Distance (mm)	Deactivation Distance (mm)	Pull-In AT Range	Activation Distance (mm)	Deactivation Distance (mm)	
1 Normally Open	12–18	9–16	10–17	17–23	7–15	9–17	

**Notes:**

- 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.




# 59143 Series

## Miniature Flange Mount Sensor

### Cable Length Specification

Cable Type: 24 AWG 7/32 PVC 105°C UL1430/UL1569		
Select Option	Cable Length mm (inch)	Cable Color
02	300 +/-10.00 (11.81 +/- 0.394)	White
05	1000 +/-10.00 (39.37 +/- 0.394)	White

### Termination Specification

Termination Options		
Select Option	Description (Two-wire versions illustrated)	
A	Tinned leads (6.4±0.76)mm	

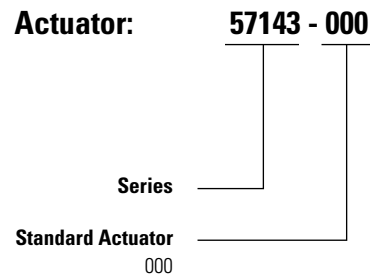
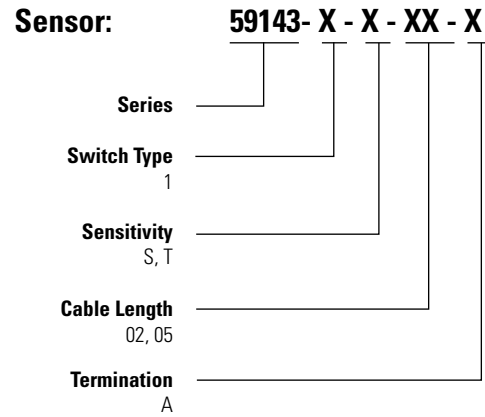
### Material Specification

	Housing Material	Color	Sealing Component
57143 Actuator	20% GF P.B.T	White	Epoxy
59143 Sensor	20% GF P.B.T	White	Epoxy

### Packaging

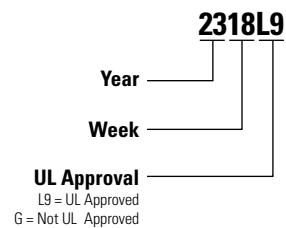
Cable Length	Packaging Option	Quantity
02	Bulk	500
05	Bulk	500

### Part Numbering System



**Note:** The 57140 Actuator is sold separately.

### Data Code System



**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 <http://www.littelfuse.com/disclaimer-electronics>.