

# 59143 Series

## Miniature Flange Mount Sensor

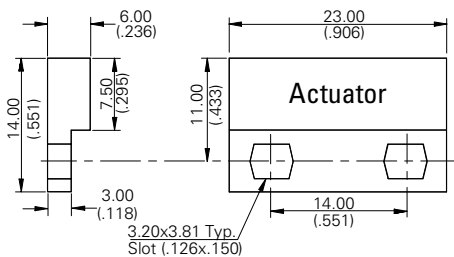


### Dimensions

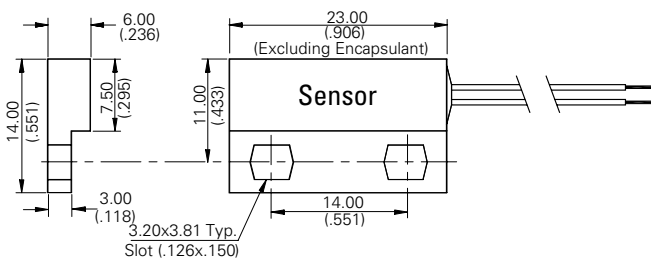
Dimensions in mm (inch)

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.

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## 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:**

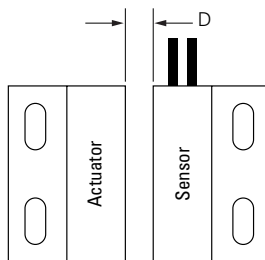
- Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
- When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application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




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## 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	

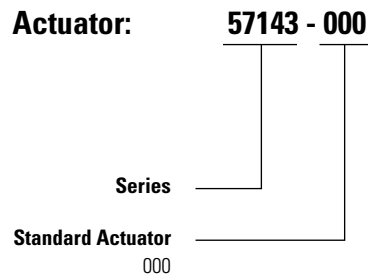
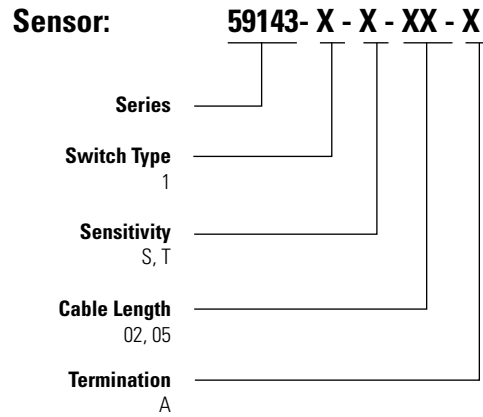
### Material Specification

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

### Packaging

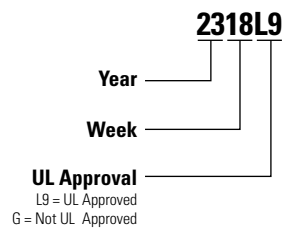
Cable Length	Packaging Option	Quantity
02	Bulk	500
05	Bulk	500

### Part Numbering System



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

### Data Code System



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