

# 59022 Reed Sensor



## Description

The 59022 Reed Sensor is a small cylindrical reed sensor, 25.4 mm (L) x 5.80 mm (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 200 Vdc at 10 W.

The 59022 Reed Sensor is available with a range of sensitivity and cable length options. It is well suited for use in a wide range of industrial, appliances, or IoT proximity sensing applications. It functions best with the 57022 actuator.

## Features & Benefits

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

## Additional Information



Resources



Accessories



Samples

## Agency Approvals

Agency	Agency File Number
	E61760

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

## Applications

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

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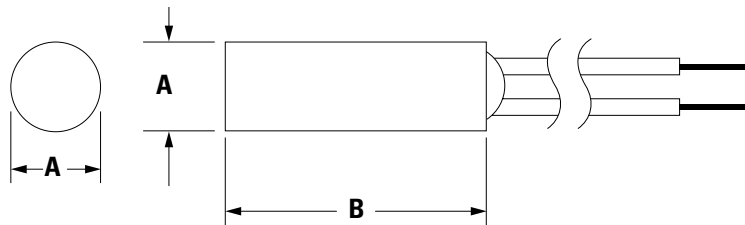
## Package Dimensions

Dimensions in mm (inch)

Product	A Nom. mm[in]	B Nom. mm[in]
57022 Actuator	5.8 +/- 0.25 [0.228 +/- 0.010]	25.4 +/- 0.25 [1.00 +/- 0.010]
59022 Sensor	5.8 +/- 0.25 [0.228 +/- 0.010]	25.4 +/- 0.25 [1.00 +/- 0.010]

## Material Specifications

Product	Housing Material	Color	Sealing Component
57022 Actuator	20% GF P.B.T	Black	Epoxy
59022 Sensor	20% GF P.B.T	Black	Epoxy



## Electrical Ratings

	Contact Type		Normally Open	Change Over	Normally Closed
Switch Type	-	-	1	3	4
Contact Rating <sup>1</sup>	-	VA/Watt - max.	10	5	5
Voltage <sup>4</sup>	Switching <sup>2</sup>	Vdc - max.	200	175	175
		Vac - max.	140	120	120
	Breakdown <sup>3</sup>	Vdc - min.	250	200	200
Current <sup>4</sup>	Switching <sup>2</sup>	Adc - max.	0.5	0.25	0.25
		Aac - max.	0.35	0.18	0.18
	Carry	Adc - max.	1.2	1.5	1.5
Resistance <sup>5</sup>	Contact, Initial Insulation	Ω - max.	0.2	0.2	0.2
		Ω - min.	10 <sup>10</sup>	10 <sup>9</sup>	10 <sup>9</sup>
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 <sup>6</sup>	-	ms - max.	1.0	3.0	3.0
Release Time <sup>6</sup>	-	ms - max.	1.0	3.0	3.0
Shock <sup>7</sup>	11ms ½ sine	G - max.	100	50	50
Vibration <sup>7</sup>	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 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.

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## Sensitivity Options

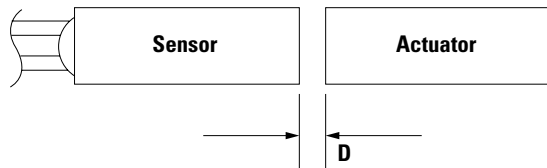
Select Option		S			T			U		
Switch Type		Pull-In AT Range	Activation Distance (mm)	Deactivation Distance (mm)	Pull-In AT Range	Activation Distance (mm)	Deactivation Distance (mm)	Pull-In AT Range	Activation Distance (mm)	Deactivation Distance (mm)
1	Normally Open	12-18	5.1	17	17-23	3.8	15.5	22-28	2.5	14
3	Change Over	15-20	5	15.5	20-25	4	14	25-30	3	12
4	Normally Closed	15-20	5	15.5	20-25	4	14	25-30	3	12

**Note:**

1. Measurements are from 57022 Nominal Actuator

2. Pull-In AT Range: These AT values are the bare reed switch AT before modification.

3. Not recommended to be mounted within/near ferrous materials; if doing so these activate & deactivate distances will decrease significantly



Schematics	Switch Type
	1
	3
	4

## Cable Length Specification

Cable Type: 24 AWG 7/32 PVC 105°C UL1430/UL1569	
Options	Cable Length mm [inch]
02	300 +/- 10.00 [11.81 +/- 0.394]
05	1000 +/- 10.00 [39.37 +/- 0.394]

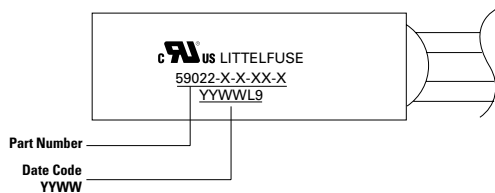
## Termination Specification

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

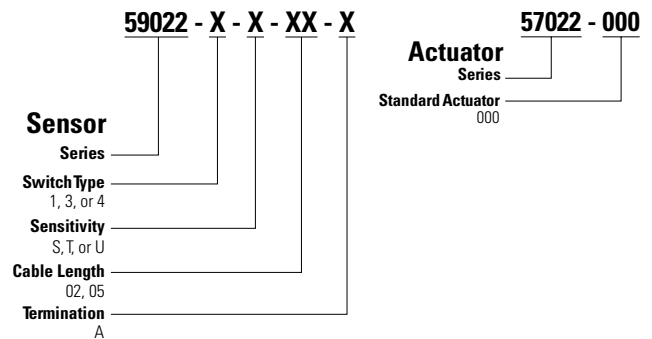
## Packaging

Cable Length	Packaging Specification	Quantity
02	Bulk	2000
05	Bulk	1500

## Package Markings



## Part Numbering System



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