



THE DATASHEET OF
59040-1-S-02-A



59040 Reed Sensor



Description

The 59040 Press-Fit Reed Sensor is a small, cylindrical reed sensor 31.0 mm (1.22") long that presses into a 9.5 mm (.375") diameter hole with a choice of normally open, normally closed or change-over contacts. It is capable of switching up to 200 Vdc at 10 W Contact rating. Extensive range of sensitivity with specified cable length is available. The housing color is white. It has three crush ribs along the length of the capsule that allow a firm and fixed press-fit.

59040 is well suited for use in a wide range of industrial, appliances, or IoT proximity sensing applications. It functions best with the 57040 or 57041 actuators.

Features & Benefits

- Easy press-fit installation
- 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

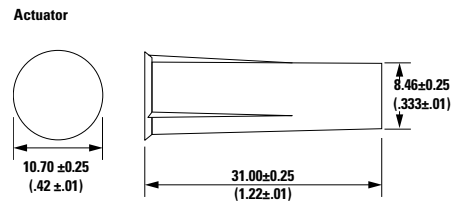
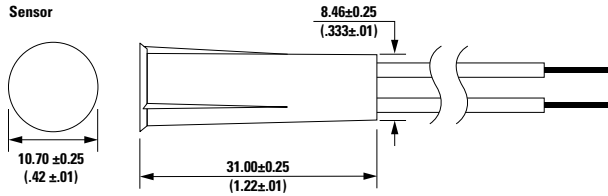
Note: Contact Littelfuse for specific agency approval ratings.

Applications

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

59040 Reed Sensor

Package 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.

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	Ω - max.	0.2	0.2	0.2
	Insulation	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 0.1 mA 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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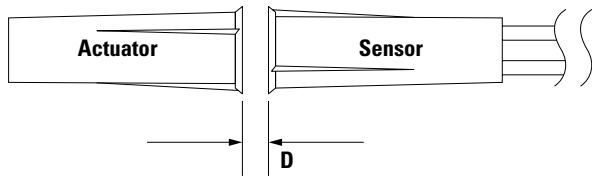
Sensitivity Options

Product	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)	
59040 Sensor with 57040 actuator	1	Normally Open	12-18	20.5	35	17-23	16.5	33.5	22-28	13.5	30
	3	Change Over	15-20	15.5	31	20-25	14	28	25-30	12.5	26.5
	4	Normally Closed	15-20	15.5	31	20-25	14	28	25-30	12.5	26.5
59040 Sensor with 57041 actuator	1	Normally Open	12-18	9	26	17-23	6	26	22-28	4	22
	3	Change Over	15-20	6	22	20-25	7	22	25-30	5	19
	4	Normally Closed	15-20	7	22	20-25	7	22	25-30	5	19

Note:

1. Measurements are from 57040 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 PVC 105°C UL1430/UL1569	
Select Option	Cable Length mm (inch)
02	300 +/- 10.00 [11.81 +/- 0.394]
05	1000 +/- 10.00 [39.37 +/- 0.394]

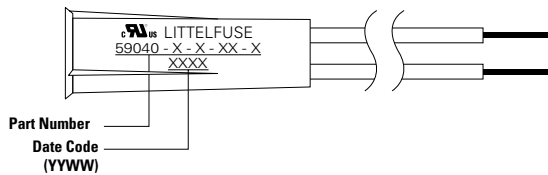
Termination Specification

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

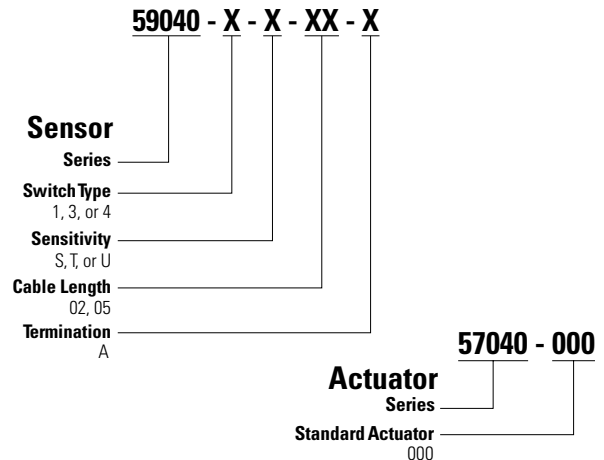
Packaging

Cable Length	Packaging Specification	Quantity
02	Bulk	2000
05	Bulk	1500

Product Marking



Part Numbering System



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