Reed Sensor Datasheet

59025 Reed Sensor





Additional Information







Resources

Agency Approvals

Agency	Agency File Number
c FN [°] us	E61760

Note: Contact Littelfuse for specific agency approval ratings.

Description

The 59025 Reed Sensor is a small cylindrical reed sensor, 25.4 mm (L) x 6.22 mm (Dia.) (1.00" x 0.245"), with a choice of normally open, normally closed or change-over contacts. It is capable of switching up to 265 Vac/300 Vdc at 10 VA. The 59025 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 57025 actuator.

Features & Benefits

- Non-contact switching solution for wet & harsh environments
- No leakage current in 'open' state-ideal for batterypowered 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

Applications

- Security and access control
- Factory automation
- Process equipment

- 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.

- Major appliances
- Small appliances
- Proximity and limit sensing

Package Dimensions Dimensions in mm (inch)

Material Specifications

Product	A Nom. mm[in]	B Nom. mm[in]	Product	Housing Material	Color	Sealing Component
57025 Actuator	57025 Actuator 6.22 +/- 0.25 [0.245 +/- 0.010] 25.4 +/- 0.25 [1.00 +/- 0.010]	57025 Actuator	30% GF P.B.T	Black	Epoxy	
0,020,000000		[1.00 +/- 0.010]	59025 Sensor	30% GF P.B.T	Black	Epoxy
59025 Sensor	6.22 +/- 0.25 [0.245 +/- 0.010]	25.4 +/- 0.25 [1.00 +/- 0.010]			2.000	Lpony



Electrical Ratings

	Contact Type		Normally Open	Normally Open HighVoltage	Change Over	Normally Closed
Switch Type	-	-	1	2	3	4
Contact Rating ¹	-	VA/Watt - max.	10	10	5	5
Voltage ⁴	Switching ² Breakdown ³	Vdc - max. Vac - max. Vdc - min.	200 140 250	300 265 400	175 120 200	175 120 200
Current ⁴	Switching ² Carry	Adc - max. Aac - max. Adc - max.	0.5 0.35 1.2	0.4 0.30 1.4	0.25 0.18 1.5	0.25 0.18 1.5
Resistance⁵	Contact, Initial Insulation	Ω - max. Ω - min.	0.2 10 ¹⁰	0.2 10 ¹⁰	0.2 10 ⁹	0.2 10 ⁹
Capacitance	Contact	pF - typ.	0.3	0.2	0.3	0.3
Temperature	Operating	°C	-40 to +105	-20 to +105	-40 to +105	-40 to +105

Product Characteristics

Operate Time ⁶	-	ms - max.	1.0	1.0	3.0	3.0
Release Time ⁶	-	ms - max.	1.0	1.0	3.0	3.0
Shock ⁷	11ms ½ sine	G - max.	100	100	50	50
Vibration ⁷	50-2000 Hz	G - max.	30	30	30	30

Notes:

1. Contact rating - Product of the switching voltage and current should never exceed the wattage rating Contact Littelfuse for additional load/life information.

2. 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.

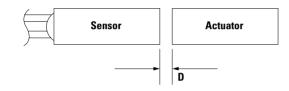
This resistance value is for 300 mm wire length. Resistance changes when wire lengthens.
Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.

Sensitivity Options

S	elect Option		S		т		U			v			
8	Switch Type	Pull-In AT Range	Activation Distance (mm)	Deactivation Distance (mm)									
1 N	ormally Open	12-18	5-14	6-16	17-23	4-11	6-15	22-28	1-8	4-13	27-33	0.5-7	3-13
2 ł	High Voltage			-	17-23	3-9	5-12	22-28	2-9	4-13	27-33	0.5-7	3-13
3 (Change Over	15-20	3-11	5-16	20-25	3-10	4-13	25-30	2-9	4-13	27-33		-
4 No	ormally Closed	15-20	4-11	5-16	20-25	3-9	4-11	25-30	2-8	4-10	27-33		-

Note:

Measurments are from 57025 Nominal Actuator
Pull-In AT Range: These AT values are the bare reed switch AT before modification.



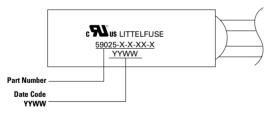
Cable Length Specification

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]			

Packaging

Cable Length	Packaging Specification	Quantity
02	Bulk	2000
05	Bulk	1500



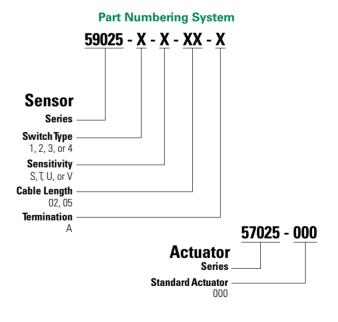


3. Not recommended to be mounted within/near ferrous materials; if doing so these activate & deactivate distances will decrease significantly

Schematics	Switch Type
Black Black	1, 2
T Black Blue White	3
Black Black	4

Termination Specification

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



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