

59050

Miniature PCB Mountable Reed Switch



### Agency Approvals

Agency	Agency File/Certificate Number
	E61760 E471070*
	DEMKO 14 ATEX 1393U* II 3 G Ex nC IIC Gc

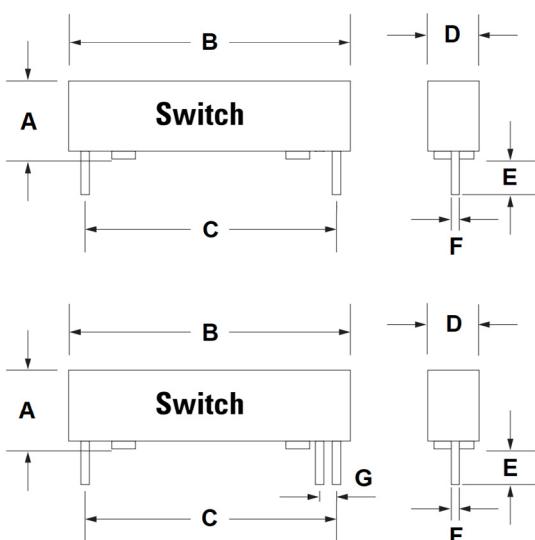
#### Note:

Contact Littelfuse for specific agency approval ratings.

\* Does not cover 59050-3

### Dimensions

Dimensions in mm (inch)



	A Max.	B Max.	C ±0.25 (.010)	D Max.	E ±0.38 (.015)	F Nom.	G
57050 Actuator	5.08 (.200)	22.86 (.900)	*	4.57 (.180)	—	—	—
59050 Switch	4.57 (.180)	22.86 (.900)	20.32 (.800)	4.32 (.170)	3.3 (.130)	0.508 (.020") Dia.	2.54 (0.10)

\* Mounting: 1.57 (.062) thick board, 3.17 (.125) holes on 18.28 (.720) nom. centres.

### Description

The 59050 is a miniature PCB-mountable reed switch, 22.86mm x 4.57mm x 4.32mm (0.900" x .180" x .170") with a choice of normally open, normally open high voltage and change over contacts. It has moulded stand-offs to allow board washing. It is capable of switching up to 265Vac/300Vdc at 10VA. It functions best with the matching actuator 57050-000.

**Note:** The 57050 Actuator is sold separately.

### Features & Benefits

- Two-part magnetically operated proximity switch
- Standard normally open, high voltage normally open and change over contact configuration
- Moulded stand-offs to allow board washing
- RoHS Compliant
- Wave solder capable
- Certified for use in North American Hazardous Locations: Class I, Division 2 and Zone 2
- ATEX certified for use in European explosive atmospheres: II 3 G Ex nC IIC Gc
- Hermetically sealed, magnetically operated contacts continue to operate long after optical and other technologies fail due to contamination

### Applications

- Position and Limit Sensing
- Security System Switch
- Door Switch

## 59050

## Miniature PCB Mountable Reed Switch

## Electrical Ratings

Contact Type			Normally Open	Normally Open High Voltage	Change Over
Switch Type			1	2	3
Contact Rating <sup>1</sup>		VA/Watt - max.	10	10	5
Voltage <sup>3</sup>	Switching <sup>2</sup>	Vdc - max.	200	300	175
		Vac - max.	140	265	120
Current <sup>3</sup>	Switching <sup>2</sup>	Vdc - min.	250	400	200
		Adc - max.	0.5	0.4	0.25
	Carry	Aac - max.	0.35	0.30	0.18
Resistance	Contact, Initial Insulation	Adc - max.	1.2	1.4	1.5
		$\Omega$ - max.	0.2	0.2	0.2
Capacitance	Contact	$\Omega$ - min.	$10^{10}$	$10^{10}$	$10^9$
		pF - typ.	0.3	0.2	1
Temperature	Operating	°C	-40 to +105	-20 to +105	-20 to +105

## Product Characteristics

Operate Time <sup>5</sup>		ms - max.	1.0	1.0	3
Release Time <sup>5</sup>		ms - max.	1.0	1.0	3
Shock <sup>6</sup>	11ms ½ sine	G - max.	100	100	50
Vibration <sup>6</sup>	50-2000 Hz	G - max.	30	30	30

## Notes:

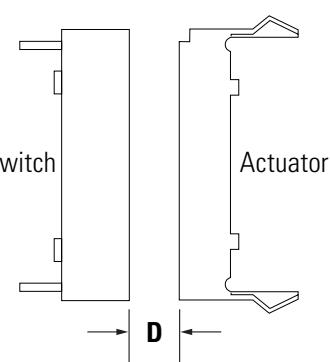
1. Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
2. When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application Notes AN108A and AN107 for details.
3. Electrical Load Life Expectancy - Contact Littelfuse with voltage, current values along with type of load.
4. Breakdown Voltage - per MIL-STD-202, Method 301.
5. Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
6. Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.

## Sensitivity Options (Using 57050 Actuator)

Select Option		S		T		U	
Switch Type		Pull-In AT Range	Activate Distance, D mm (inch) Average	Pull-In AT Range	Activate Distance, D mm (inch) Average	Pull-In AT Range	Activate Distance, D mm (inch) Average
1	Normally Open	12-18	7.2 (.283)	17-23	5.8 (.228)	22-28	4.8 (.189)
2	High Voltage	-	-	17-23	5.8 (.228)	22-28	4.8 (.189)
3	Change Over	10-15	3-13	5-14	15-20	2-10	4-12

## Note:

Pull-In Range - Contact Littelfuse for narrower AT ranges available.  
These AT values are the before molding and modification AT of the 59050.

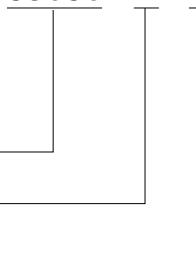


**59050**

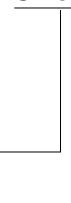
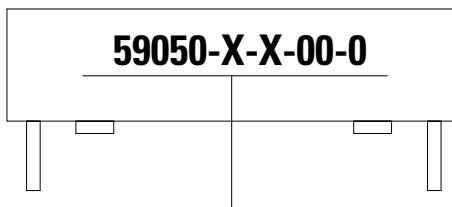
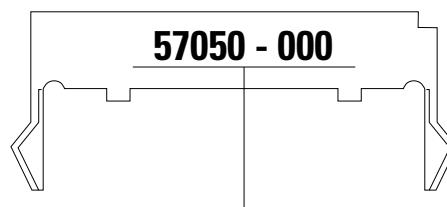
Miniature PCB Mountable Reed Switch

**Part Numbering System****Switch:****59050 - X - X - 00 - 0**

Series  
Switch Type  
1, 2 or 3  
Sensitivity  
S, T, or U


**Actuator:****57050 - 000**

Series  
Standard Actuator  
000


**Note:** The 57050 Actuator is sold separately.**Product Marking****Switch:****Part Number** \_\_\_\_\_**Actuator:****Part Number** \_\_\_\_\_**Packaging**

Packaging Option	Packaging Specification	Quantity	Quantity and Packaging Code	Taping Width
Bulk	Bulk	200 MOQ=1000	N/A	N/A

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