

# 59050

## Miniature PCB Mountable Reed Switch



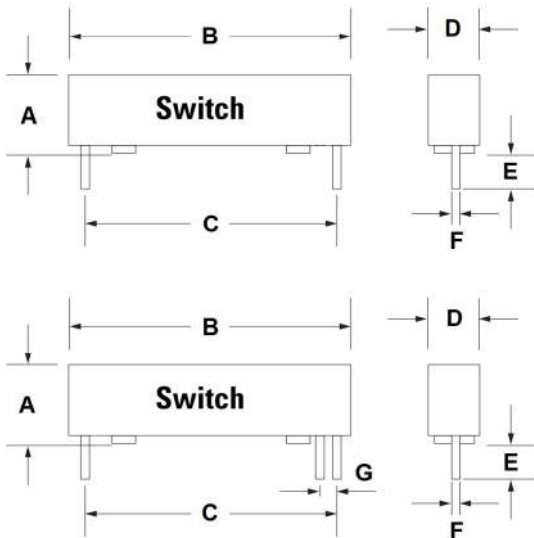
### Agency Approvals

Agency	Agency File/Certificate Number
	E61760 E471070*
	DEMKO 14 ATEX 1393U* 

**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 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 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:
- Certified for use in North American Hazardous Locations: Class I, Division 2 and Zone 2
- Mounts directly into printed circuit board
- No standby power requirement
- Operates through non-ferrous materials such as wood, plastic or aluminium
- 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	Change Over
Switch Type			1	3
Contact Rating <sup>1</sup>		VA/Watt - max.	10	5
Voltage <sup>3</sup>	Switching <sup>2</sup>	Vdc - max.	200	175
		Vac - max.	140	120
	Breakdown <sup>4</sup>	Vdc - min.	250	200
Current <sup>3</sup>	Switching <sup>2</sup>	Adc - max.	0.5	0.25
		Aac - max.	0.35	0.18
	Carry	Adc - max.	1.2	1.5
Resistance	Contact, Initial	$\Omega$ - max.	0.2	0.2
	Insulation	$\Omega$ - min.	10 <sup>10</sup>	10 <sup>9</sup>
Capacitance	Contact	pF - typ.	0.3	1
Temperature	Operating	°C	-40 to +105	-20 to +105

**Product Characteristics**

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

**Notes:**

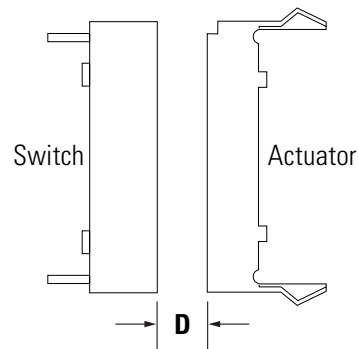
- Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
- When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application Notes AN108A and AN107 for details.
- Electrical Load Life Expectancy - Contact Littelfuse with voltage, current values along with type of load.
- Breakdown Voltage - per MIL-STD-202, Method 301.
- 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 (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)
3	Change Over	10-15	7.4 (.290)	15-20	6.1 (.240)	20-25	5.0 (.197)

**Note:**

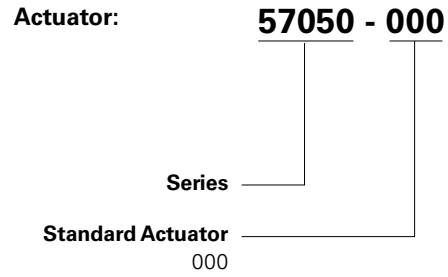
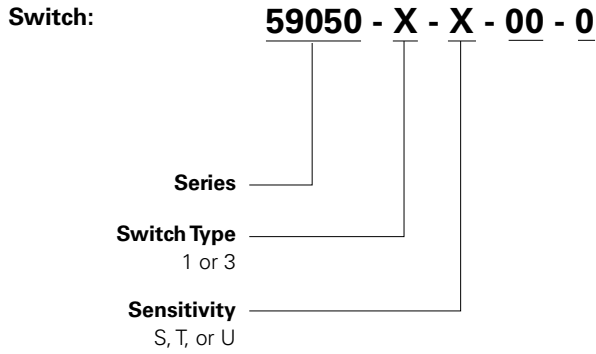
Pull-In Range - Contact Littelfuse for narrower AT ranges available.  
These AT values are the before molding and modification AT of the 59050.



# 59050

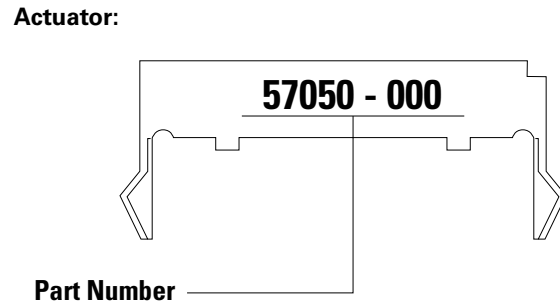
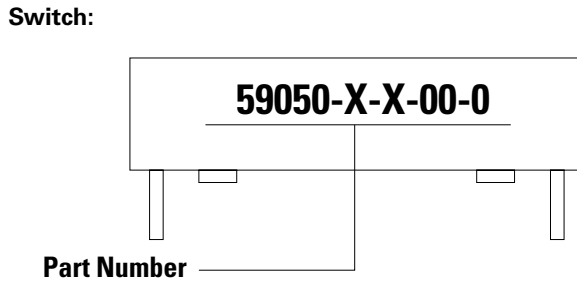
## Miniature PCB Mountable Reed Switch

### Part Numbering System



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

### Product Marking



### Packaging

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

**Disclaimer Notice** - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at [www.littelfuse.com/disclaimer-electronics](http://www.littelfuse.com/disclaimer-electronics).