

# 59045 Miniature PCB Mountable Reed Switch + 57045 Actuator



## Description

The 59045 is a miniature PCB-mountable reed switch, 17.78mm x 4.32mm x 3.3mm (0.700" x 0.170" x 0.130") with a normally open contact. It has moulded stand-offs to allow board washing. It is capable of switching up to 200Vdc at 10W. It functions best with the matching actuator 57045-000.

**Note: The 57045 Actuator is sold separately.**

## Features

- Two-part magnetically operated proximity switch
- Normally open contact configuration
- Moulded stand-offs to allow board washing
- 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: Ex II 3 G Ex nC IIC Gc
- RoHS compliant

## Agency Approvals

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

Note: Contact Littelfuse for specific agency approval ratings.

## Benefits

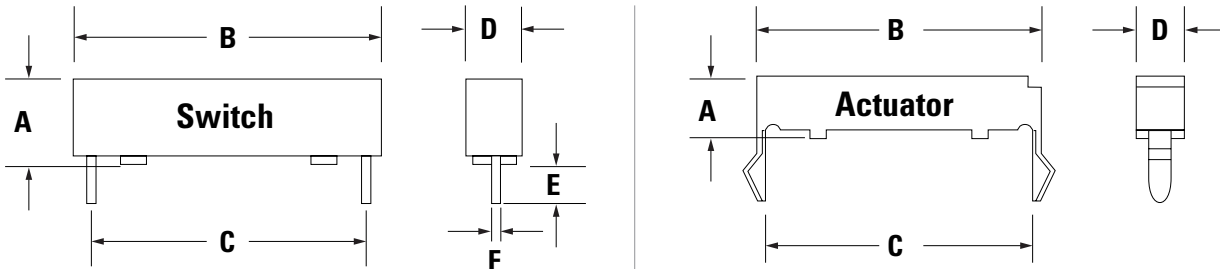
- Mounts directly into printed circuit board
- No standby power requirement
- Operates through non-ferrous materials such as wood, plastic or aluminium
- Hermetically sealed, magnetically operated contacts continue to operate long after optical and other technologies fail due to contamination

## Applications

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

## Dimensions

Dimensions in mm (inch)



	A Max.	B Max.	C ±0.25 (.010)	D Max.	E ±0.38 (.015)	F Nom.
<b>57045 Actuator</b>	4.32 (.170)	17.78 (.700)	*	3.3 (.130)	—	—
<b>59045 Switch</b>	4.32 (.170)	17.78 (.700)	15.24 (.600)	3.3 (.130)	3.3 (.130)	0.4699 (.0185") Dia.

\* Mounting: 1.57 (.062) thick board, 3.17 (.125) holes on 13.72mm (.540) centerline.

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## Electrical Ratings

Contact Type			Normally Open
Switch Type			1
Contact Rating <sup>1</sup>		VA/Watt - max.	10
Voltage <sup>3</sup>	Switching <sup>2</sup>	Vdc - max.	200
	Breakdown <sup>4</sup>	Vac - max.	140
		Vdc - min.	250
Current <sup>3</sup>	Switching <sup>2</sup>	Adc - max.	0.5
	Carry	Aac - max.	0.35
			Adc - max.
Resistance	Contact, Initial Insulation	Ω - max.	0.2
		Ω - min.	10 <sup>10</sup>
Capacitance	Contact	pF - typ.	0.3
Temperature	Operating	°C	-40 to +105

## Product Characteristics

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

### Notes:

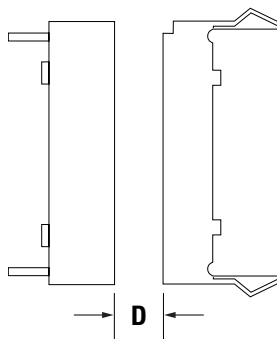
- Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
- When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application 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 57045 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	15-20	5.0 (.196)	20-25	4.3 (.170)	25-30	3.8 (.150)

### Note:

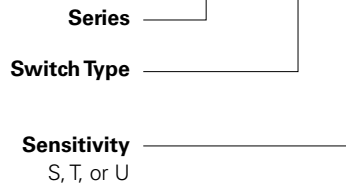
Pull-In Range - Contact Littelfuse for narrower AT ranges available. These AT values are the before molding and modification AT of the 59045.



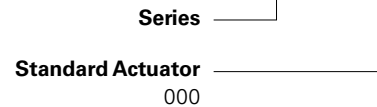
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## Part Numbering System

**Switch:**      59045 - 1 - X - 00 - 0



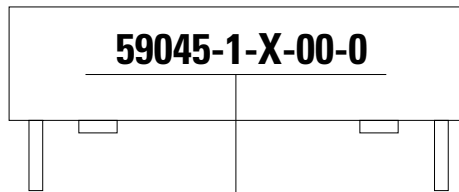
**Actuator:**      57045 - 000



**Note:** The 57045 Actuator is sold separately.

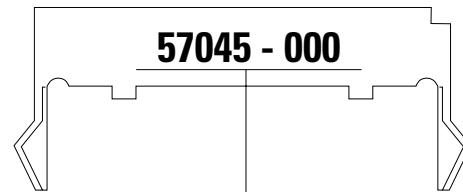
## Product Marking

**Switch:**



**Part Number** \_\_\_\_\_

**Actuator:**



**Part Number** \_\_\_\_\_

## Packaging

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

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