

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

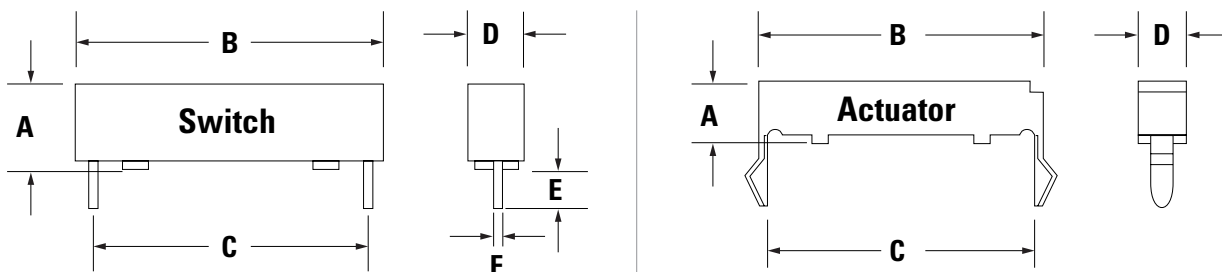
- Mounts directly into printed circuit board
- No standby power requirement
- Operates through non-ferrous materials such as wood, plastic or aluminium
- Hermetically sealed, magnetically operated contacts continue to operate long after optical and other technologies fail due to contamination

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. |
|-----------------------|----------------|-----------------|-------------------|---------------|-------------------|-------------------------|
| 57045 Actuator | 4.32 (.170) | 17.78 (.700) | * | 3.3 (.130) | — | — |
| 59045 Switch | 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 ¹ | | VA/Watt - max. | 10 |
| Voltage ³ | Switching ² | Vdc - max. | 200 |
| | Breakdown ⁴ | Vac - max. | 140 |
| | | Vdc - min. | 250 |
| Current ³ | Switching ² | Adc - max. | 0.5 |
| | Carry | Aac - max. | 0.35 |
| | | | Adc - max. |
| Resistance | Contact, Initial Insulation | Ω - max. | 0.2 |
| | | Ω - min. | 10 ¹⁰ |
| Capacitance | Contact | pF - typ. | 0.3 |
| Temperature | Operating | °C | -40 to +105 |

Product Characteristics

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

Notes:

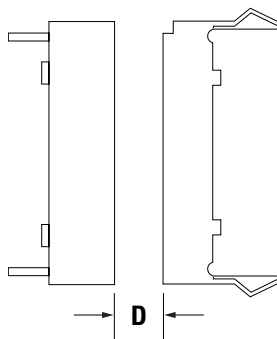
- Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
- When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application 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:

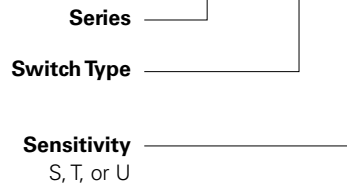
Pull-In Range - Contact Littelfuse for narrower AT ranges available. These AT values are the before molding and modification AT of the 59045.



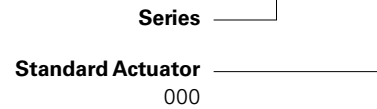
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Part Numbering System

Switch: 59045 - 1 - X - 00 - 0



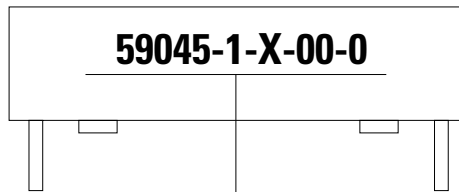
Actuator: 57045 - 000



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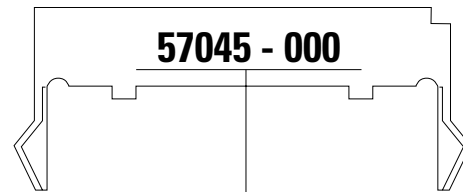
Product Marking

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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