

59050

Miniature PCB Mountable Reed Switch



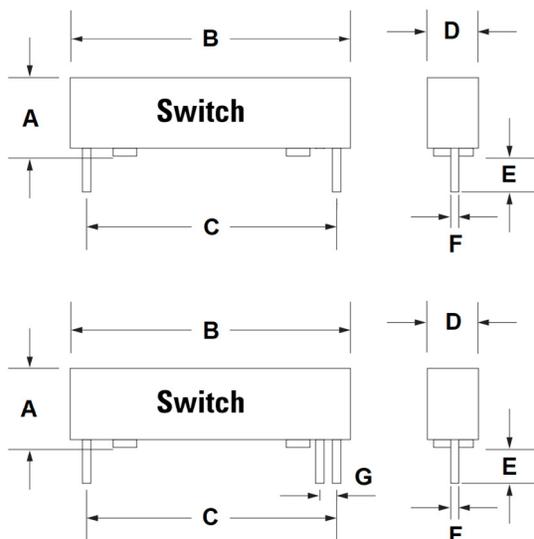
Agency Approvals

| 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 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: II 3 G Ex nC IIC Gc
- 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 ¹ | | VA/Watt - max. | 10 | 5 |
| Voltage ³ | Switching ² | Vdc - max. | 200 | 175 |
| | | Vac - max. | 140 | 120 |
| | Breakdown ⁴ | Vdc - min. | 250 | 200 |
| Current ³ | Switching ² | Adc - max. | 0.5 | 0.25 |
| | | Aac - max. | 0.35 | 0.18 |
| | Carry | Adc - max. | 1.2 | 1.5 |
| Resistance | Contact, Initial | Ω - max. | 0.2 | 0.2 |
| | Insulation | Ω - min. | 10 ¹⁰ | 10 ⁹ |
| Capacitance | Contact | pF - typ. | 0.3 | 1 |
| Temperature | Operating | °C | -40 to +105 | -20 to +105 |

Product Characteristics

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

Notes:

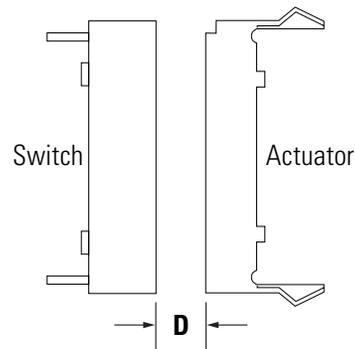
- Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
- When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application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

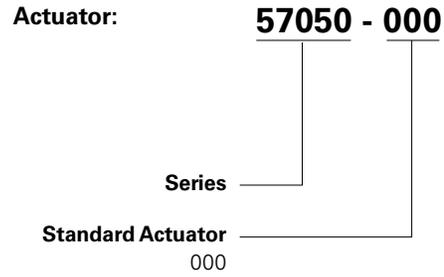
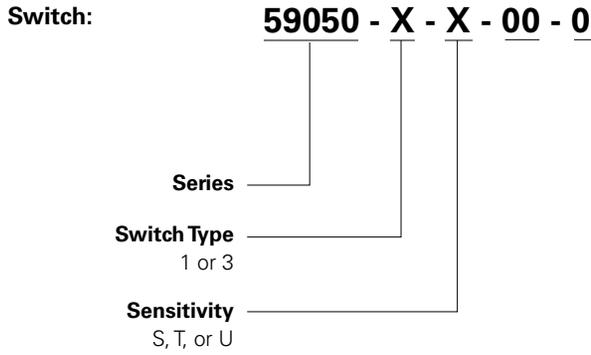
Pull-In Range - Contact Littelfuse for narrower AT ranges available.
These AT values are the before molding and modification AT of the 59050.



59050

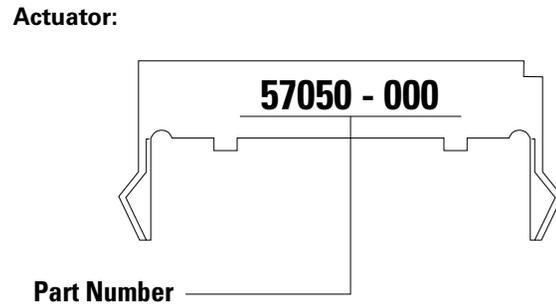
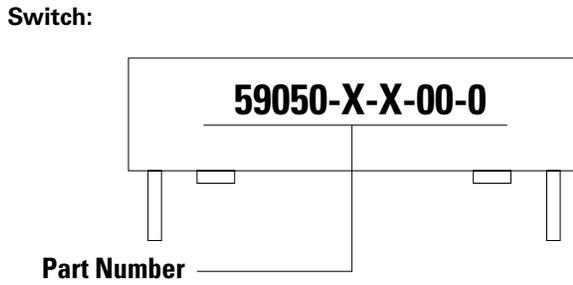
Miniature PCB Mountable Reed Switch

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 |

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