59050 Miniature PCB Mountable Reed Switch + 57050 Actuator



Agency Approvals

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

Note: Contact Littelfuse for specific agency approval ratings.

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 normally open high voltage 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

- Two-part magnetically operated proximity switch
- Standard normally open and high voltage normally open 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: Ex II 3 G Ex nC IIC Gc
- Certified for use in North American Hazardous Locations: Class I, Division 2 and Zone 2

Benefits

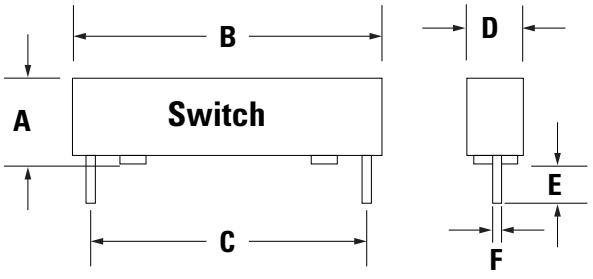
- Mounts directly into printed circuit board
- No standby power requirement
- Operates through non-ferrous materials such as wood, plastic or aluminium
- Hermetically sealed, magnetically operated contacts continue to operate long after optical and other technologies fail due to contamination

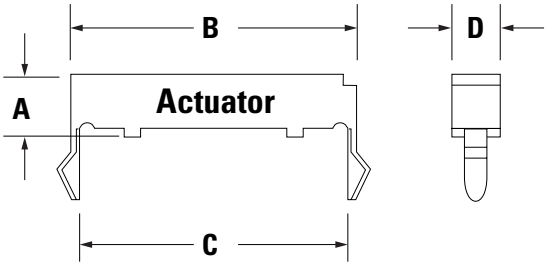
Applications

- 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.
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.

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

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Electrical Ratings

Contact Type			Normally Open	Normally Open High Voltage
Switch Type			1	2
Contact Rating [1]		VA/Watt - max.	10	10
Voltage [3]	Switching [2] Breakdown [4]	Vdc - max. Vac - max. Vdc - min.	200 140 250	300 265 400
Current [3]	Switching [2] Carry	Adc - max. Aac - max. Adc - max.	0.5 0.35 1.2	0.4 0.30 1.4
Resistance	Contact, Initial Insulation	Ω - max. Ω - min.	0.2 10^{10}	0.2 10^{10}
Capacitance	Contact	pF - typ.	0.3	0.2
Temperature	Operating	°C	-40 to +105	-20 to +105

Product Characteristics

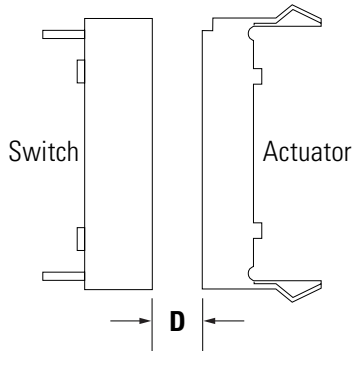
Operate Time [5]		ms - max.	1.0	1.0
Release Time [5]		ms - max.	1.0	1.0
Shock [6]	11ms ½ sine	G - max.	100	100
Vibration [6]	50-2000 Hz	G - max.	30	30

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)

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



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Part Numbering System

Switch: **59050 - X - X - 00 - 0**

- **Series**
- **Switch Type** 1 or 2
- **Sensitivity** S, T, or U

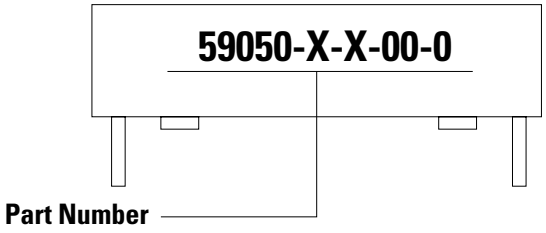
Actuator: **57050 - 000**

- **Series**
- **Standard Actuator** 000

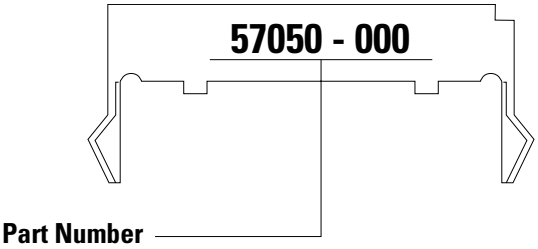
Note: The 57050 Actuator is sold separately.

Product Marking

Switch:



Actuator:



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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