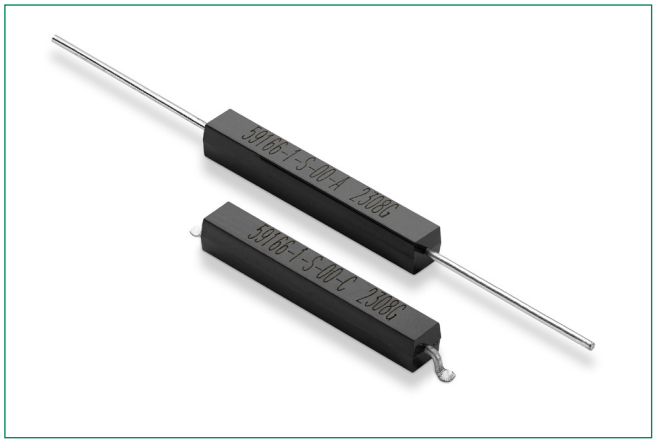
59166 Series
Miniature Overmolded Reed Switch



Additional Information

Resources | Accessories | Samples

Agency Approvals

Agency	Agency File Number
c UL us	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 59166 is a miniature overmolded reed switch 16.00mm x 2.40mm x 2.40mm (0.630" x 0.094" x 0.094") with Gull Wing leads. It has normally open contact, capable of switching up to 200Vdc at 10W.

Note: The 57045 Actuator is sold separately.

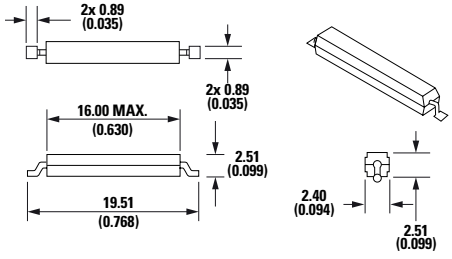
Features & Benefits

- Two-part magnetically operated proximity switch
- Gull Wing Leads
- Tape and reel option
- Solder reflow capable
- Thermoset overmolded material
- RoHS Compliant
- 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
- Suitable for pick and place
- 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

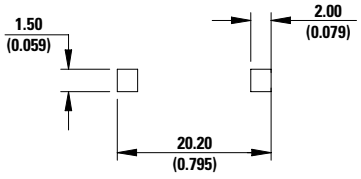
Applications

- Position and Limit Sensing
- Security System Switch
- Door and Window Proximity Sensing
- Metering
- Automotive Electronics
- Anti-Tamper Detection
- Small Appliances

Dimensions
Dimensions in mm (inch)



Soldering Footprint
Dimensions in mm (inch)



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Electrical Ratings

Contact Type			Normally Open
Switch Type			1
Contact Rating [1]		VA/Watt - max.	10
Voltage [3]	Switching [2] Breakdown [4]	Vdc - max. Vac - max. Vdc - min.	200 140 250
Current [3]	Switching [2] Carry	Adc - max. Aac - max. Adc - max.	0.5 0.35 0.8
Resistance	Contact, Initial Insulation	Ω - max. Ω - min.	0.2 10^{10}
Capacitance	Contact	pF - typ.	0.3
Temperature	Operating	°C	-40 to +125
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:
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.

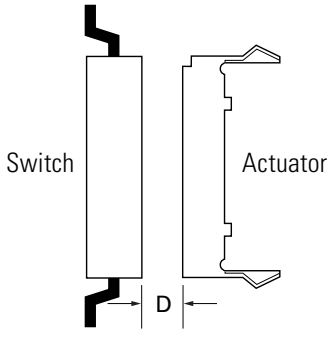
Sensitivity Options (Using 57045 Actuator)

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	10-15	7.4 (.292)	15-20	6.1 (.240)	20-25	5.1 (.201)

Note:
1. Pull-In AT Range: These AT values are the before molding and modification AT of the 59166.
2. The activation distance is average value post modification for the Gull wing option C or D.

Termination Specification

Termination Options	
Select Option	**Description**
C	Gull Wing bulk packed
D	Gull Wing tape and reel



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Part Numbering System

Switch: 59166 - 1 - X - 00 - X

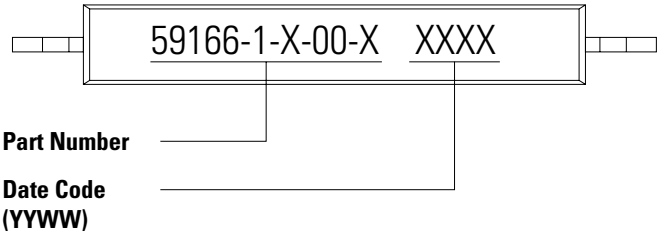
- **Series**
- **Switch Type**
- **Sensitivity** S, T, or U
- **Termination and Packaging** C, or D

Actuator: 57045 - 000

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

Note: The 57045 Actuator is sold separately.

Product Marking



Packaging

Packaging Option	Packaging Specification	Quantity	Quantity and Packaging Code	Taping Width
Bulk	Bulk	1500	B	N/A
Tape and Reel	EIA-RS-481-1	1500	R	32.00/(1.260)

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