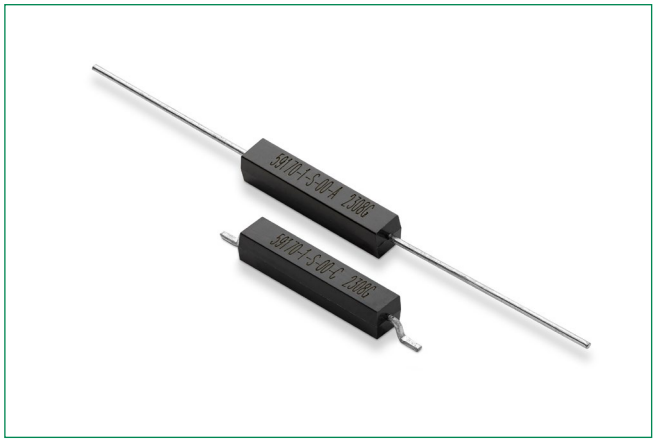
59170 Series
Sub-miniature Overmolded Reed Switch



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 59170 is a sub-miniature overmolded reed switch 11.43mm x 2.29mm x 2.29mm (0.450" x 0.090" x 0.090") with either straight or Gull Wing leads. It has normally open contact and capable of switching up to 200Vdc at 10W.

Note: The 57045 Actuator is sold separately.

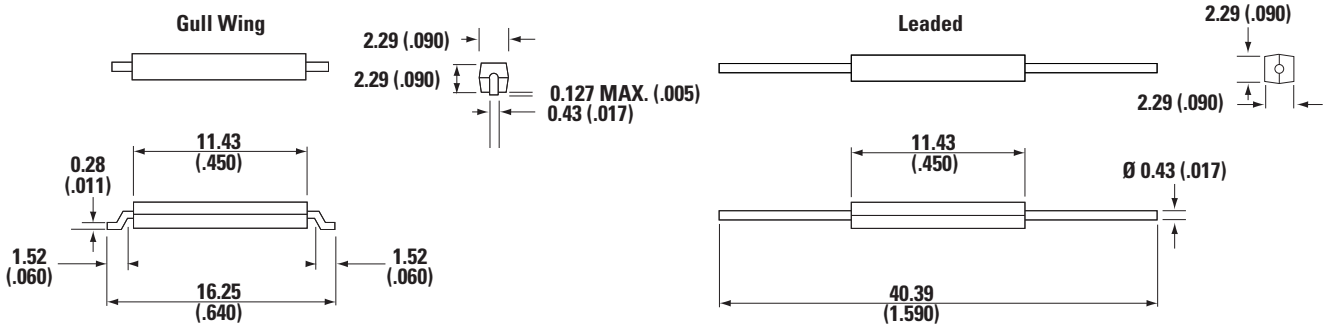
Features & Benefits

- Two-part magnetically operated proximity switch
- Gull Wing, leaded
- Tape and reel option
- Solder reflow capable
- Thermoset overmolded material
- RoHS compliant
- 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
- 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

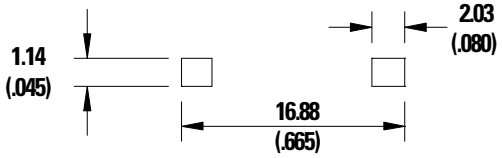
Applications

- 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)



Revised: GD. 01/26/24

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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 1A
Resistance	Contact, Initial Insulation	Ω - max. Ω - min.	0.120 Ohm 10^{12}
Capacitance	Contact	pF - typ.	0.2
Temperature	Operating	°C	-40 to +125

Product Characteristics			
Operate Time [5]		ms - max.	0.5
Release Time [5]		ms - max.	0.1
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.

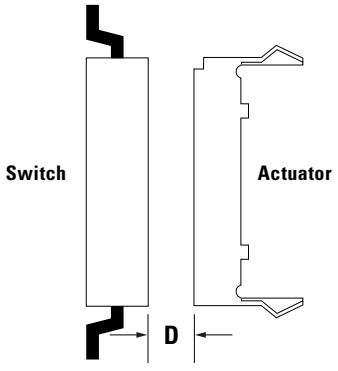
Sensitivity Options (Using 57045 Actuator)

Select Option		S		T		U		V	
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	Pull-In AT Range	Activate Distance, D mm (inch) Average
1	Normally Open	10-15	6.5 (.255)	15-20	5.0 (.197)	20-25	4.6 (.181)	25-30	4.5 (.177)

Note:
1. Pull-In AT Range: These AT values are the before molding and modification AT of the 59170.
2. The activation distance is average value post modification for the Gull wing option C or D.

Termination Specification

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



59170 Series
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Part Numbering System

Switch: 59170 - 1 - X - 00 - X

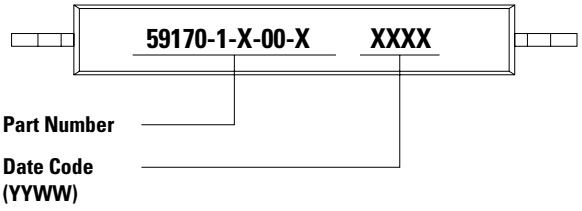
- **Series**
- **Switch Type**
- **Sensitivity** S, T, U or V
- **Termination & Packaging** A, C, or D

Actuator: 57045 - 000

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

Note: The 57045 Actuator is sold separately.

Product Marking



Packaging

Packaging Option	Packaging Specification	Quantity	Termination and Packaging Code	Taping Width
Bulk	Bulk	59170-1-X-00-A 800/box	A	N/A
Bulk	Bulk	59170-1-X-00-C 1500/box	C	N/A
Tape and Reel	EIA-RS-481-1	1500	D	32.00mm (1.260")