

## Agency Approvals

| Agency | Agency File Number |
| :---: | :---: |
| c ${ }^{\circ}$ | E61760 |

Note: Contact Littelfuse for specific agency approval ratings.

## Dimensions

Dimensions in mm (inch)

## Actuator



## Description

The 59125 is a flange mounting reed sensor $28.57 \mathrm{~mm} \times 19.05 \mathrm{~mm} \times 6.35 \mathrm{~mm}$ $\left(1.125^{\prime \prime} \times 0.750^{\prime \prime} \times 0.259^{\prime \prime}\right)$ with integral terminal pins with a choice of normally open, normally open high voltage or normally closed contacts. It's case design enables screw or adhesive mounting. It is capable of switching up to $265 \mathrm{Vac} / 300 \mathrm{Vdc}$ at 10 VA . The 59125 functions best with the matching actuator 57125-000.

Note: The 57125 Actuator is sold separately.

## Features

- Two-part magnetically operated proximity sensor
- Moulded in terminal pins accept push on connector or wire wrap


## Benefits

- 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
- Case design allows screw down or adhesive mounting
- Customer defined sensitivity option
- No standby power requirement
- Operates through non-ferrous materials such as wood, plastic or aluminium
- Linear actuators
- Industrial process control

59125 Pinned Flange Sensor +57125 Actuator

Electrical Ratings

| Contact Type |  |  | Normally Open | Normally Open High Voltage | Normally Closed |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Type |  |  | 1 | 2 | 4 |
| Contact Rating ${ }^{1}$ |  | VA/Watt - max. | 10 | 10 | 5 |
| Voltage ${ }^{4}$ | Switching ${ }^{2}$ <br> Breakdown ${ }^{3}$ | Vdc - max. <br> Vac - max. <br> Vdc - min. | $\begin{aligned} & 200 \\ & 140 \\ & 250 \end{aligned}$ | $\begin{aligned} & 300 \\ & 265 \\ & 400 \end{aligned}$ | $\begin{aligned} & 175 \\ & 120 \\ & 200 \end{aligned}$ |
| Current ${ }^{4}$ | Switching ${ }^{2}$ <br> Carry | Adc - max. <br> Aac - max. <br> Adc - max. | $\begin{gathered} 0.5 \\ 0.35 \\ 1.2 \end{gathered}$ | $\begin{gathered} 0.4 \\ 0.30 \\ 1.4 \end{gathered}$ | $\begin{gathered} 0.25 \\ 0.18 \\ 1.5 \end{gathered}$ |
| Resistance ${ }^{5}$ | Contact, Initial Insulation | $\begin{aligned} & \Omega-\max . \\ & \Omega-\min . \end{aligned}$ | $\begin{gathered} 0.2 \\ 10^{10} \end{gathered}$ | $\begin{aligned} & 0.2 \\ & 10^{10} \end{aligned}$ | $\begin{aligned} & 0.2 \\ & 10^{9} \end{aligned}$ |
| Capacitance | Contact | pF - typ. | 0.3 | 0.2 | 0.3 |
| Temperature | Operating | ${ }^{\circ} \mathrm{C}$ | -40 to +105 | -20 to +105 | -40 to +105 |

## Product Characteristics

| Operate Time ${ }^{6}$ |  | ms - max. | 1.0 | 1.0 | 3.0 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Release Time $^{6}$ |  | ms - max. | 1.0 | 1.0 |  |
| Shock ${ }^{7}$ | $11 \mathrm{~ms}^{1 / 2}$ sine | G-max. | 100 | 100 | 50 |
| Vibration $^{7}$ | $50-2000 \mathrm{~Hz}$ | G-max. | 30 | 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. Breakdown Voltage - per MIL-STD-202, Method 301.
4. Electrical Load Life Expectancy - Contact Littelfuse with voltage, current values along with type of load.
5. This resistance value is for 11.81 mm wire length. Resistance changes when wire lengthens.
6. Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
7. Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.
8. For custom modifications to the wire length or size, or adding a special connector, please contact Littelfuse.

## Sensitivity Options (Using 57125 Actuator)

|  | Select Option | S |  | T |  | U |  | V |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Switch Type | Pull-In | $\begin{array}{\|c\|} \hline \text { Activate Distance-D } \\ \text { mm (inch) } \\ \text { Average } \end{array}$ | Pull-In AT Range | $\underset{\substack{\text { Activate Distance-D (inch) } \\ \text { Average }}}{\text { Act }}$ | Pull-In AT Range | $\begin{array}{\|c} \text { Activate Distance-D } \\ \text { mm (inch) } \\ \text { Average } \end{array}$ | Pull-In AT Range | $\begin{array}{\|c} \text { Activate Distance-D } \\ \text { mm (inch) } \\ \text { Average } \end{array}$ |
| 1 | Normally Open | 12-18 | 12.51 .492 | 17-23 | 11.3 (.445) | 22-28 | 9.8 (.385) | 27-33 | 8.9 (.350) |
| 2 | High Voltage | - | -- | 17-23 | 11.3 (.445) | 22-28 | 9.8 (.385) | 27-33 | 8.9 (.350) |
| 4 | Normally Closed | 15-20 | 8.0 (.315) | 20-25 | 7.2 (.283) | 25-30 | 5.9 (.233) | - | - |

Note:

1. Pull-In AT Range: These AT values are the bare reed switch AT before modification.
2. The activation distance is average value on the final sensor assembly


## 59125 Pinned Flange Sensor +57125 Actuator

## Part Numbering System



## Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity \& Packaging Code | Taping Width |
| :---: | :---: | :---: | :---: | :---: |
| Bulk | Bulk | 500 | N/A | N/A |

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