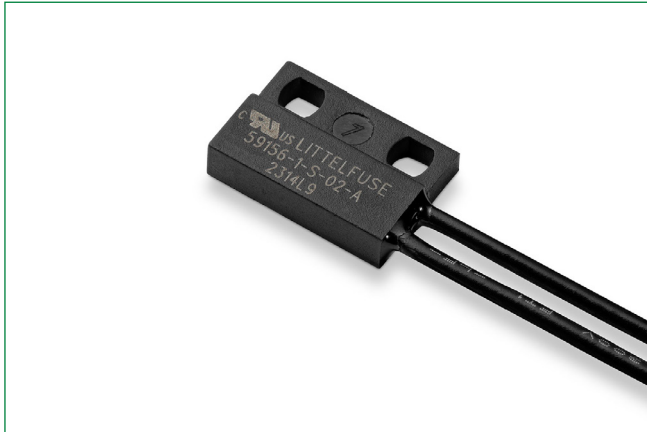


59156 Series

Subminiature Flange Mount Sensor

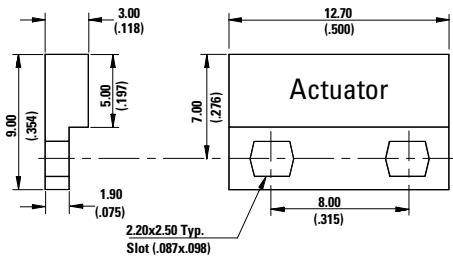


Dimensions

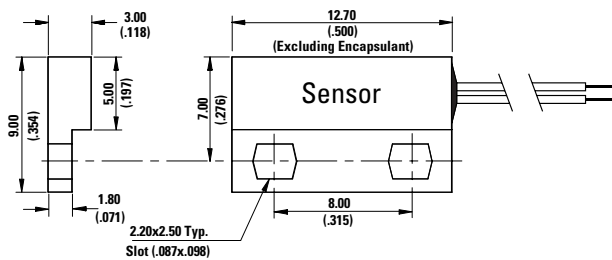
Dimensions in mm (inch)

Tolerances are +/- 0.25 (0.010) unless otherwise noted.

Actuator (sold separately)



Sensor (Two-wire version)



| Schematics | Switch Type |
|----------------|-------------|
| Black Black | 1 |

Description

The 59156 is a subminiature flange mounting reed sensor 12.70mm x 9.00mm x 3.00mm (0.500" x 0.354" x 0.118") with normally open contacts. The case design enables mounting with non-magnetic M2 screw at 0.1 Nm torque maximum or adhesive mounting. The wires exit from the left-hand side, see Drawing 2. It is also available with right-hand exit, see 59155 series. The 59156 is capable of switching up to 120Vac/170Vdc at 10VA. It is well suited for use in a wide range of industrial, appliances, or IoT proximity sensing applications.

The 59156 series functions best with the matching actuator 57155-000.

Features and Benefits

- Smallest flange mount type reed sensor in the market
- Non-contact switching solution for wet & harsh environments
- Housing design for optimum adjustability
- Available in select sensitivities (operating distances)
- Standard cable configurations; customization options available
- No leakage current in 'open' state—ideal for battery powered IoT applications
- Can operate through non-ferrous materials (for example, wood, plastic or aluminium)
- Helps implement efficient proximity/access and energy management systems
- Easy installation and effective concealment in many applications
- UL Recognized per UL 508 and CSA C22.2 No. 14
- Hermetically sealed, IP67 rated; REACH compliant

Applications

- Security and access control
- Factory automation
- Process equipment
- Major appliances
- Small appliances
- Proximity and limit sensing

Agency Approvals

| Agency | Agency File Number |
|--------|--------------------|
| | E61760 |

Note: Contact Littelfuse for specific agency approval ratings.

59156 Series

Subminiature Flange Mount Sensor

Electrical Ratings

| Contact Type | | | Normally Open |
|-----------------------------|------------------------|----------------|------------------|
| Switch Type | | | 1 |
| Contact Rating ¹ | | VA/Watt - max. | 10 |
| Voltage ⁴ | Switching ² | Vdc - max. | 170 |
| | Breakdown ³ | Vac - max. | 120 |
| | | Vdc - min. | 175 |
| Current ⁴ | Switching ² | Adc - max. | 0.25 |
| | Carry | Aac - max. | 0.18 |
| | | Adc - max. | 0.5 |
| Resistance ⁵ | Contact, Initial | Ω - max. | 0.15 |
| | Insulation | Ω - min. | 10 ¹² |
| Capacitance | Contact | pF - typ. | 0.3 |
| Temperature | Operating | °C | -40 to +105 |

Product Characteristics

| | | | |
|---------------------------|-------------|-----------|-----|
| Operate Time ⁶ | | ms - max. | 0.5 |
| Release Time ⁶ | | ms - max. | 0.2 |
| Shock ⁷ | 11ms ½ sine | G - max. | 100 |
| Vibration ⁷ | 50-2000 Hz | G - max. | 30 |

Notes:

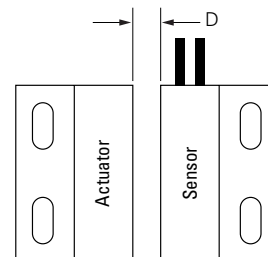
- Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
- When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application Notes AN108A and AN107 for details.
- Breakdown Voltage - per MIL-STD-202, Method 301.
- Electrical Load Life Expectancy - Contact Littelfuse with voltage, current values along with type of load.
- This resistance value is for 300 mm wire length. Resistance changes when wire lengthens.
- 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.
- For custom modifications to the wire length or size, or adding a special connector, please contact Littelfuse.

Sensitivity Options (Using 57155 Actuator)

| Select Option | | S | | | T | | |
|---------------|---------------|------------------|--------------------------|----------------------------|------------------|--------------------------|----------------------------|
| Switch Type | | Pull-In AT Range | Activation Distance (mm) | Deactivation Distance (mm) | Pull-In AT Range | Activation Distance (mm) | Deactivation Distance (mm) |
| 1 | Normally Open | 6-10 | 2.0-4.2 | 2.2-4.7 | 10-15 | 1.5-4.0 | 1.8-4.4 |

Notes:

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



59156 Series

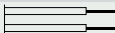
Subminiature Flange Mount Sensor

Cable Length Specification

| Cable Type: 26 AWG PVC 105°C UL1569 | |
|-------------------------------------|--------------------------------|
| Select Option | Cable Length mm (inch) |
| 02 | 300 +/-10.00 (11.81 +/- 0.394) |
| 05 | 1000+/-10.00 (39.37+/- 0.394) |

Note: Please contact Littelfuse for cable length customizations.

Termination Specification

| Termination Options | | |
|---------------------|--|---|
| Select Option | Description (Two-wire versions illustrated) | |
| A | Tinned leads (6.4±0.76)mm |  |

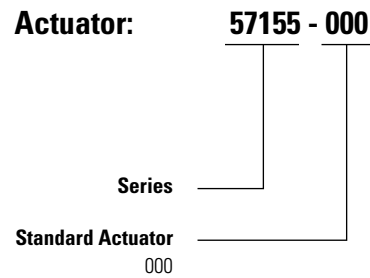
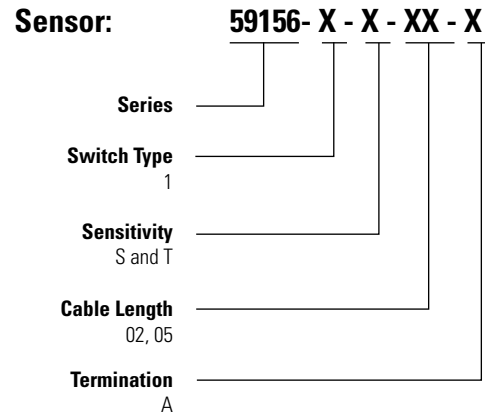
Material Specification

| | Housing Material | Color | Sealing Component |
|----------------|------------------|-------|-------------------|
| 57155 Actuator | 20% GF P.B.T | Black | Epoxy |
| 59156 Sensor | 20% GF P.B.T | Black | Epoxy |

Packaging

| Cable Length | Packaging Option | Quantity |
|--------------|------------------|----------|
| 02 | Bulk | 500 |
| 05 | Bulk | 500 |

Part Numbering System



Note: The 57140 Actuator is sold separately.

Disclaimer Notice - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at <http://www.littelfuse.com/disclaimer-electronics>.