

59135 High Temperature Flange Mount Sensor

Flange Mounting Sensor



Description

The 59135 is a high temperature flange mounting reed sensor 28.57mm x 19.05mm x 6.35mm (1.125" x 0.750" x 0.250") with a choice of normally open, normally closed or change-over contacts. The case design enables mounting with M3 screw with washer at 1 Nm torque maximum or adhesive mounting. It is rated for operation up to 150°C and capable of switching up to 265Vac/300Vdc at 10VA.

The 59135 series is well suited for use in a wide range of industrial, appliances, or IoT proximity sensing applications.

Note: The 59135 series functions best with the matching actuator 57135-000.

Features and Benefits

- Non-contact switching solution for wet & harsh environments
- Rated up to 150C operating temperature
- Housing design for optimum adjustability
- Available in select sensitivities (operating distances)
- Standard Teflon insulated cable configurations; customization options available
- Thermoset overmold material
- Hermetically sealed, IP67 rated; UL and REACH compliant
- 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
- Compact size and easy installation and effective concealment in many applications
- UL Recognized per UL 508 and CSA C22.2 No. 14.

Additional Information



Resources



Accessories



Samples

Dimensions

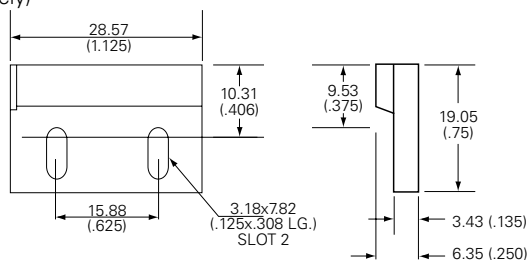
Dimensions in mm (inch)

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

Actuator

(sold separately)

Drawing 1



Sensor

Drawing 2

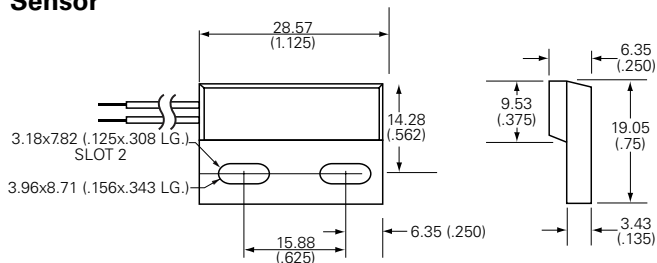


Table 1

| Schematics | Switch Type |
|----------------------|-------------|
| Red Red | 1 and 2 |
| Red Blue White | 3 |
| Red Red | 4 |

Applications

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

Table 2
Agency Approvals

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

Note: Contact Littelfuse for specific agency approval ratings.

59135 High Temperature Flange Mount Sensor

Flange Mounting Sensor

Table 3
Electrical Ratings

| Contact Type | | | Normally Open | Normally Open High Voltage | Change Over | Normally Closed |
|-----------------------------|-----------------------------|----------------|------------------|----------------------------|-----------------|-----------------|
| Switch Type | | | 1 | 2 | 3 | 4 |
| Contact Rating ¹ | | VA/Watt - max. | 10 | 10 | 5 | 5 |
| Voltage ⁴ | Switching ² | Vdc - max. | 200 | 300 | 175 | 175 |
| | | Vac - max. | 140 | 265 | 120 | 120 |
| | Breakdown ³ | Vdc - min. | 250 | 400 | 200 | 200 |
| Current ⁴ | Switching ² | Adc - max. | 0.5 | 0.4 | 0.25 | 0.25 |
| | | Aac - max. | 0.35 | 0.30 | 0.18 | 0.18 |
| | Carry | Adc - max. | 1.2 | 1.4 | 1.5 | 1.5 |
| Resistance ⁵ | Contact, Initial Insulation | Ω - max. | 0.2 | 0.2 | 0.2 | 0.2 |
| | | Ω - min. | 10 ¹⁰ | 10 ¹⁰ | 10 ⁹ | 10 ⁹ |
| Capacitance | Contact | pF - typ. | 0.3 | 0.2 | 0.3 | 0.3 |
| Temperature | Operating | °C | -40 to +150 | -20 to +150 | -40 to +150 | -40 to +150 |

Table 4

| Product Characteristics | | | | | | |
|---------------------------|-------------|-----------|-----|-----|-----|-----|
| Operate Time ⁶ | | ms - max. | 1.0 | 1.0 | 3.0 | 3.0 |
| Release Time ⁶ | | ms - max. | 1.0 | 1.0 | 3.0 | 3.0 |
| Shock ⁷ | 11ms ½ sine | G - max. | 100 | 100 | 50 | 50 |
| Vibration ⁷ | 50-2000 Hz | G - max. | 30 | 30 | 30 | 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 III).
- 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.

Table 5
Sensitivity Options (Using 57135 Actuator)

| Select Option | S | | | T | | | U | | | V | | |
|-------------------|------------------|--------------------------|----------------------------|------------------|--------------------------|----------------------------|------------------|--------------------------|----------------------------|------------------|--------------------------|----------------------------|
| | Pull-In AT Range | Activation Distance (mm) | Deactivation Distance (mm) | Pull-In AT Range | Activation Distance (mm) | Deactivation Distance (mm) | Pull-In AT Range | Activation Distance (mm) | Deactivation Distance (mm) | Pull-In AT Range | Activation Distance (mm) | Deactivation Distance (mm) |
| 1 Normally Open | 12-18 | 11-23 | 13-25 | 17-23 | 10-22 | 12-24 | 22-28 | 8-20 | 10-22 | 27-33 | 6-18 | 9-21 |
| 2 High Voltage | - | - | - | 17-23 | 8-20 | 11-23 | 22-28 | 7-19 | 11-23 | 27-33 | 6-18 | 10-22 |
| 3 Change Over | 15-20 | 9-21 | 11-23 | 20-25 | 6-18 | 9-21 | 25-30 | 5-17 | 8-20 | - | - | - |
| 4 Normally Closed | 15-20 | 9-21 | 11-23 | 20-25 | 6-18 | 9-21 | 25-30 | 5-17 | 8-20 | - | - | - |

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.

