

59135 High Temperature Flange Mount Sensor + 57135 Actuator



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 0.259") with a choice of normally open, normally open high voltage, normally closed or changeover contacts. It's case design enables screw or adhesive mounting. It is rated for operation up to 150°C. It is capable of switching up to 265Vac/300Vdc at 10VA. The 59135 functions best with the matching actuator 57135-000.

Note: The 57135 Actuator is sold separately.

Features

- Two-part magnetically operated proximity sensor
- High temperature rated
- Cross-slotted mounting holes for optimum adjustability
- Customer defined sensitivity option
- Choice of cable length and connector
- Thermoset overmold material
- Teflon insulated wires

Benefits

- Hermetically sealed, magnetically operated contacts continue to operate long after optical and other technologies fail due to contamination
- No standby power requirement
- Operates through non-ferrous materials such as wood, plastic or aluminium

Agency Approvals

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

Note: Contact Littelfuse for specific agency approval ratings.

Dimensions

Dimensions in mm (inch)

Actuator



Sensor



| Schematics | Switch Type |
|------------|-------------|
| | 1 and 2 |
| | 3 |
| | 4 |

Applications

- Position and limit sensing
- Security system switch
- Linear actuators
- Door switch

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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 |
| | Breakdown ³ | Vac - max. | 140 | 265 | 120 | 120 |
| | | Vdc - min. | 250 | 400 | 200 | 200 |
| Current ⁴ | Switching ² | Adc - max. | 0.5 | 0.4 | 0.25 | 0.25 |
| | Carry | Aac - max. | 0.35 | 0.30 | 0.18 | 0.18 |
| | | 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 |

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 11.81mm 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 57135 Actuator)

| Select Option | Switch Type | S | | T | | U | | V | |
|---------------|-----------------|------------------|---------------------------------------|------------------|---------------------------------------|------------------|---------------------------------------|------------------|---------------------------------------|
| | | 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 | 12-18 | 18.5 (.729) | 17-23 | 17.1 (.673) | 22-28 | 15.8 (.622) | 27-33 | 15.1 (.595) |
| 2 | High Voltage | -- | -- | 17-23 | 17.1 (.673) | 22-28 | 15.8 (.622) | 27-33 | 15.1 (.595) |
| 3 | Change Over | 15-20 | 16.7 (.657) | 20-25 | 14.7 (.579) | 25-30 | 13.4 (.528) | -- | -- |
| 4 | Normally Closed | 15-20 | 16.7 (.657) | 20-25 | 14.7 (.579) | 25-30 | 13.4 (.528) | -- | -- |

Note:

- 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

