

59105 Terminal Flange Sensor + 57105 Actuator



Description

The 59105 is a flange mounting reed sensor 28.57mm x 19.05mm x 6.35mm (1.125" x 0.750" x 0.250") with an integral two-pin connector. It has choices of normally open, normally open high voltage or normally closed contacts and its case design enables screw or adhesive mounting. It is capable of switching up to 265Vac/300Vdc at 10VA. The 59105 functions best with the matching actuator 57105-000.

Note: The 57105 Actuator is sold separately.

Features

- Two-part magnetically operated proximity sensor
- Shrouded terminals accept Molex SL series connector
- Case design allows screw down or adhesive mounting
- Customer-defined sensitivity option

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

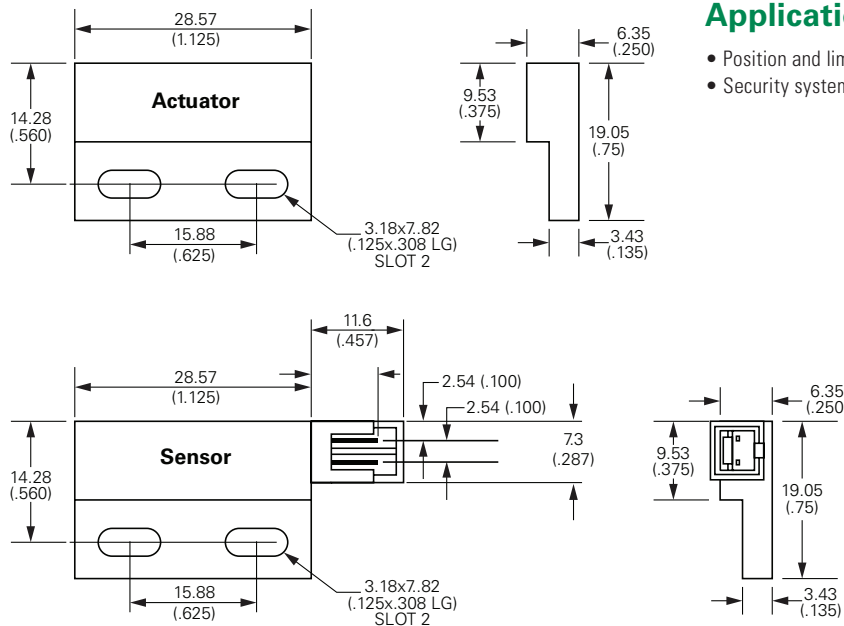
Agency Approvals

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

Note: Contact Littelfuse for specific agency approval ratings.

Dimensions

Dimensions in mm (inch)



Applications

- Position and limit sensing
- Security system switch
- Linear actuators
- Industrial process control

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

59105 Terminal Flange Sensor + 57105 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 | Vdc - max. | 200 | 300 | 175 |
| | Breakdown ³ | Vac - max. | 140 | 265 | 120 |
| | | Vdc - min. | 250 | 400 | 200 |
| Current ⁴ | Switching ² | Adc - max. | 0.5 | 0.4 | 0.25 |
| | Carry | Aac - max. | 0.35 | 0.30 | 0.18 |
| | | Adc - max. | 1.2 | 1.4 | 1.5 |
| Resistance ⁵ | Contact, Initial Insulation | Ω - max. | 0.2 | 0.2 | 0.2 |
| | | Ω - min. | 10 ¹⁰ | 10 ¹⁰ | 10 ⁹ |
| Capacitance | Contact | pF - typ. | 0.3 | 0.2 | 0.3 |
| Temperature | Operating | °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 | 3.0 |
| Shock ⁷ | 11ms ½ sine | G - max. | 100 | 100 | 50 |
| Vibration ⁷ | 50-2000 Hz | G - max. | 30 | 30 | 30 |

Notes:

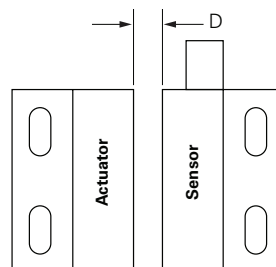
- Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
- When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application 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 57105 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 | 12-18 | 12.5 (.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:

- 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



59105 Terminal Flange Sensor + 57105 Actuator

Part Numbering System

Sensor: 59105 - X - X - 00 - 0

Series
Switch Type
1, 2, or 4
Sensitivity
S, T, U, or V

Actuator: 57105 - 000

Series
Standard Actuator
000

Note: The 57105 Actuator is sold separately.

Packaging

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

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Littelfuse:

[59105-010](#) [59105-1-V-00-0](#) [59105-2-V-00-0](#) [59105-2-U-00-0](#) [59105-4-U-00-0](#) [59105-4-S-00-0](#) [59105-2-T-00-0](#)
[59105-1-S-00-0](#) [59105-1-U-00-0](#) [59105-020](#) [59105-030](#) [59105-1-T-00-0](#) [59105-4-T-00-0](#)