

# MISM-7

## 7mm Surface Mount Reed Switch



### Description

The MISM-7 surface mount reed switch is a sub-miniature, normally open switch with a 7mm long x 1.8mm diameter (0.276" x 0.071") glass envelope, capable of switching up to 0.25 Amps. This reed switch is a surface mount version of the MITI-7. It has a high insulation resistance of 1012 Ohms minimum and a contact resistance of less than 150 milliohms.

### Features & Benefits

- Ultra-miniature surface mount normally open switch
- Available sensitivity range 6-10 AT
- Capable of switching 170 Vdc or 0.25A up to 10W
- Hermetically sealed switch contacts are not effected by and have no effect on their external environment
- Zero operating power required for contact closure
- Excellent for switching microcontroller logic level loads
- Very low space requirement

### Additional Information



Resources



Accessories



Samples

### Agency Approvals

| Agency | Agency File Number | Ampere-Turns Range |
|--------|--------------------|--------------------|
|        | E47258<br>E471070  | 6 - 20AT           |

**Note:** Contact Littelfuse for specific agency approval ratings.

### Applications

- Position Sensing
- Level Sensing
- Meter Equipment
- Security
- Office Equipment

### Switch Type

|                     |                                             |
|---------------------|---------------------------------------------|
| <b>Contact Form</b> | A (SPST-NO)                                 |
| <b>Materials</b>    | Body: Glass<br>Leads: Tin-plated Ni-Fe wire |

**Note:** SPST-NO = Single-pole, single-throw, normally open

### Electrical Ratings

|                             |                                                  |                                        |                            |
|-----------------------------|--------------------------------------------------|----------------------------------------|----------------------------|
| Contact Rating <sup>1</sup> |                                                  | W/VA - max.                            | 10                         |
| Voltage <sup>3</sup>        | Switching <sup>2</sup><br>Breakdown <sup>4</sup> | Vdc - max.<br>Vac - max.<br>Vdc - min. | 170<br>120<br>175          |
| Current <sup>3</sup>        | Switching <sup>2</sup><br>Carry                  | Adc - max.<br>Aac - max.<br>Adc - max. | 0.25<br>0.18<br>0.50       |
| Resistance                  | Contact, Initial<br>Insulation                   | Ω - max.<br>Ω - min.                   | 0.150<br>10 <sup>12</sup>  |
| Capacitance                 | Contact                                          | pF - typ.                              | 0.3                        |
| Temperature                 | Operating<br>Storage <sup>5</sup>                | °C<br>°C                               | -40 to +125<br>-65 to +125 |

#### 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. Electrical Load Life Expectancy - Contact Littelfuse with voltage, current values along with type of load.
4. Breakdown Voltage - per MIL-STD-202, Method 301.
5. Storage Temperature - Long time exposure at elevated temperature may degrade solderability of the leads.

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### Product Characteristics

| Operating Characteristics |                    |               |
|---------------------------|--------------------|---------------|
| Operate Time <sup>1</sup> | -                  | 0.45ms - max. |
| Release Time <sup>1</sup> | -                  | 0.20ms - max. |
| Shock <sup>2</sup>        | 11ms 1/2 sine wave | 100G - max    |
| Vibration <sup>2</sup>    | 50-2000 Hertz      | 30G - max.    |
| Resonant Frequency        | -                  | 14kHz - typ.  |

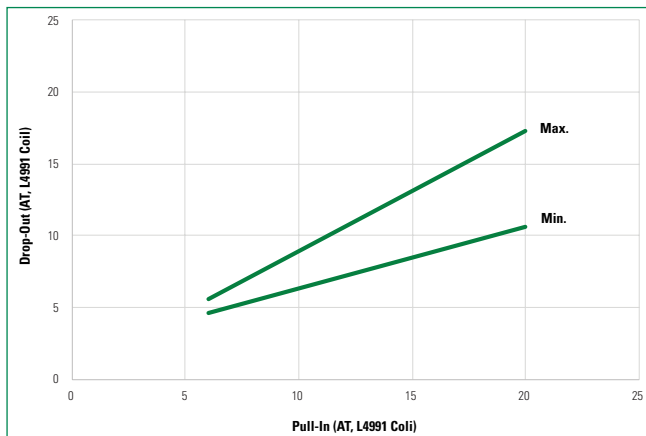
  

| Magnetic Characteristics        |              |                    |
|---------------------------------|--------------|--------------------|
| Pull-In Range <sup>3</sup>      | Ampere Turns | 6-10, 10-15, 15-20 |
| Rating Sensitivity <sup>4</sup> | Ampere Turns | 10                 |
| Test Coil                       | -            | L4991              |

#### Notes:

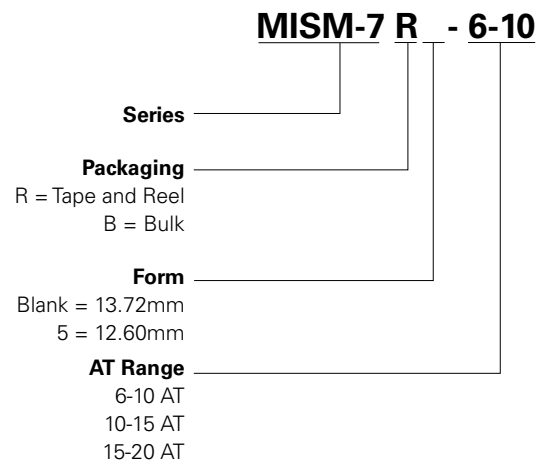
1. Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil I).
2. Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.
3. Pull-In Range - Contact Littelfuse for narrower AT ranges available. These AT values are the before modification AT of the MITI-3V1.
4. Rating Sensitivity - The value at which contact ratings and operating characteristics are determined. Derating may be required below this value.

### Drop-Out vs. Pull In Chart



**Note:** Chart represents the range of Drop-Out, min to max for a given Pull-In value.

### Part Numbering System



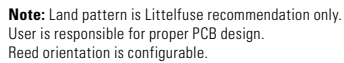
**Example:** 6-10 AT product is MISM-7R-6-10

**Note:** These AT values are the before-modification values of the bare reed switch.

### Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity and Packaging Code | Taping Width |
|------------------|-------------------------|----------|-----------------------------|--------------|
| Tape and Reel    | EIA-RS-481-1            | 3000     | R                           | 32mm         |

Dimensions in mm



### Reel Dimensions mm (inch)

