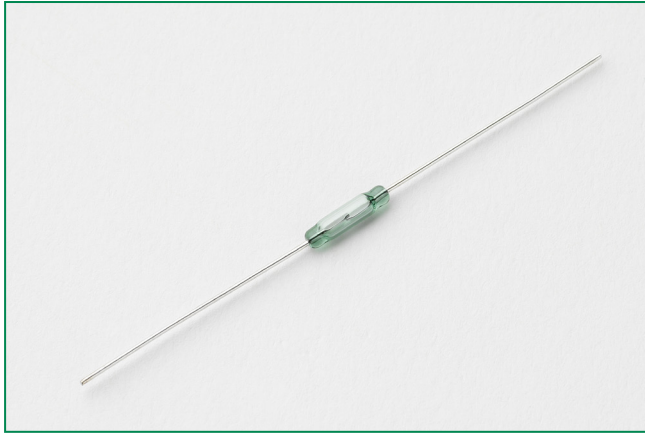


# MITI-3V1 7mm Ultra-Miniature Reed Switch



## Description

The MITI-3V1 ultra-miniature reed switch is a normally open switch with a 7.00mm long x 1.80mm diameter (0.276" x 0.071") glass envelope, which is capable of switching 170Vdc at 10W. It has a high insulation resistance of  $10^{12}$  ohms minimum and low contact resistance of less than 150 milliohms.

The MITI-3V1 is also available in a surface mount version, that is, MISM-3V1.

## Features

- Ultra-miniature, normally open switch
- Capable of switching 170Vdc or 0.25A at up to 10W
- Available sensitivity range 6-10 AT

## Benefits

- Hermetically sealed switch contacts are not affected by and have no effect on their external environment
- Very low space requirement
- Zero operating power required for contact closure
- Excellent for switching micro-controller logic level loads

## Applications

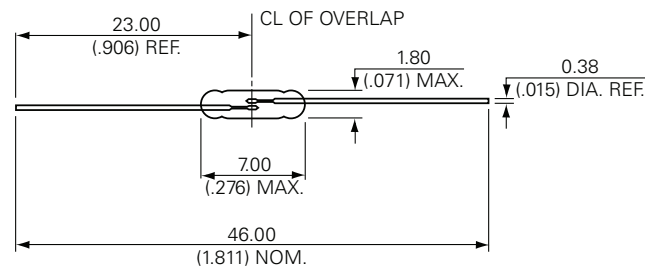
- Reed relays
- Security
- Metering
- Mobile phones

## Agency Approvals

| Agency | Agency File Number  | Ampere-Turns Range |
|--------|---------------------|--------------------|
|        | E47258<br>E471070   | 6-10 AT            |
|        | DEMKO 14 ATEX 1393U | 6-10 AT            |

## Dimensions

Dimensions in mm



## Switch Type

|              |                                              |
|--------------|----------------------------------------------|
| Contact Form | A (SPST-NO)                                  |
| Materials    | Body: Glass<br>Leads: Tin Plated Nickel Iron |

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

## Electrical Ratings

|                             |                                                  |                                          |                            |
|-----------------------------|--------------------------------------------------|------------------------------------------|----------------------------|
| Contact Rating <sup>1</sup> |                                                  | Watt - max.                              | 10                         |
| Voltage <sup>3</sup>        | Switching <sup>2</sup><br>Breakdown <sup>4</sup> | Vdc - max.<br>Vdc - min.                 | 170<br>175                 |
| Current <sup>3</sup>        | Switching <sup>2</sup><br>Carry                  | A - max.<br>A - max.                     | 0.25<br>0.5                |
| Resistance                  | Contact, Initial<br>Insulation                   | $\Omega$ - max.<br>$\Omega$ - min.       | 0.15<br>$10^{12}$          |
| Capacitance                 | Contact                                          | pF - typ.                                | 0.3                        |
| Temperature                 | Operating<br>Storage <sup>5</sup>                | $^{\circ}\text{C}$<br>$^{\circ}\text{C}$ | -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.

## Product Characteristics

|                           |                    |                |
|---------------------------|--------------------|----------------|
| Operate Time <sup>1</sup> |                    | 0.45ms - max.  |
| Release Time <sup>1</sup> |                    | 0.2ms - max.   |
| Shock <sup>2</sup>        | 11ms 1/2 sine wave | 150G - max.    |
| Vibration <sup>2</sup>    | 50-2000 Hertz      | 30G - max.     |
| Resonant Frequency        |                    | 18.0kHz - typ. |

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

1. Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
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.
4. Rating Sensitivity - The value at which contact ratings and operating characteristics are determined. Derating may be required below this value.
5. Custom modifications of forming and/or cutting of reed switches are available. Please contact Littelfuse.

Note: The chart represents the range of Drop-Out, minimum to maximum for a given Pull-In value.

**MITI-3V1-6-10**

**Series** ————— 6-10 AT

**AT Range** ————— Example: 6-10 AT product is MITI-3V1-6-10



**Datasheet**



| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|------------------|-------------------------|----------|---------------------------|--------------|
| Bulk             | Bulk                    | 2000     | N/A                       | N/A          |