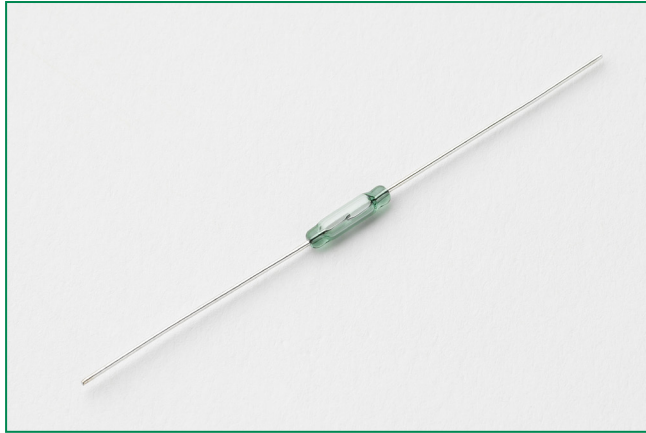


MITI-3V1 7mm Ultra-Miniature Reed Switch



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

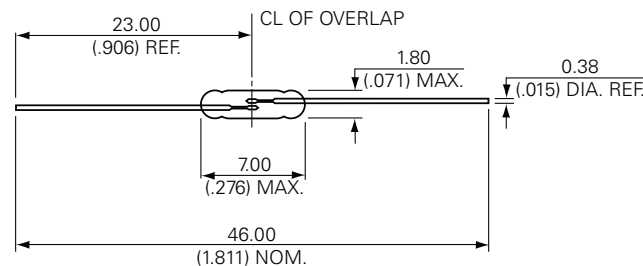
- Reed relays
- Security
- Metering
- Mobile phones

Agency Approvals

| Agency | Agency File Number | Ampere-Turns Range |
|--------|---------------------|--------------------|
| | E47258 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 Leads: Tin Plated Nickel Iron |

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

Electrical Ratings

| | | | |
|-----------------------------|--|--------------------|-------------|
| Contact Rating ¹ | | Watt - max. | 10 |
| Voltage ³ | Switching ² Breakdown ⁴ | Vdc - max. | 170 |
| | | Vdc - min. | 175 |
| Current ³ | Switching ² Carry | A - max. | 0.25 |
| | | A - max. | 0.5 |
| Resistance | Contact, Initial Insulation | Ω - max. | 0.15 |
| | | Ω - min. | 10^{12} |
| Capacitance | Contact | pF - typ. | 0.3 |
| Temperature | Operating Storage ⁵ | $^{\circ}\text{C}$ | -40 to +125 |
| | | $^{\circ}\text{C}$ | -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.

MITI-3V1 7mm Ultra-Miniature Reed Switch

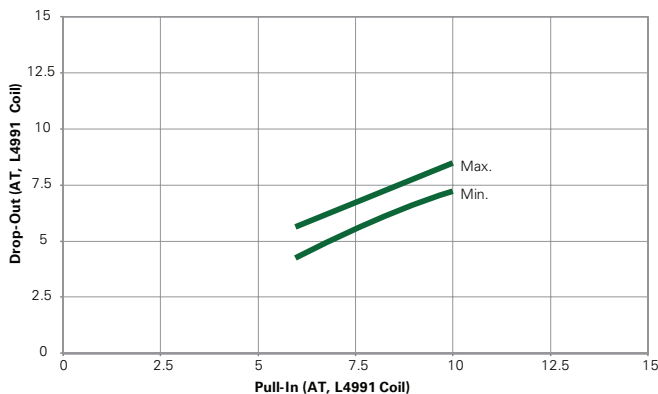
Product Characteristics

| Operating Characteristics | | |
|---------------------------------|--------------------|----------------|
| Operate Time ¹ | | 0.45ms - max. |
| Release Time ¹ | | 0.2ms - max. |
| Shock ² | 11ms 1/2 sine wave | 150G - max. |
| Vibration ² | 50-2000 Hertz | 30G - max. |
| Resonant Frequency | | 18.0kHz - typ. |
| Magnetic Characteristics | | |
| Pull-In Range ³ | Ampere Turns | 6-10 |
| Rating Sensitivity ⁴ | Ampere Turns | 10 |
| Test Coil | | L4991 |

Notes:

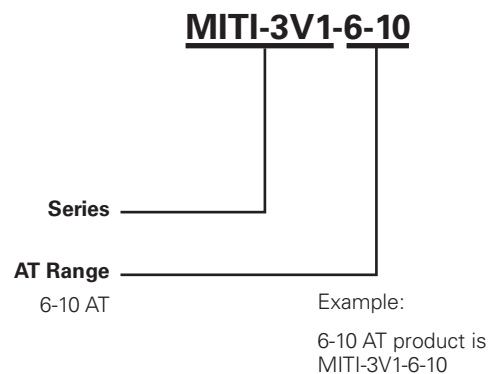
- Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
- Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.
- Pull-In Range - Contact Littelfuse for narrower AT ranges available.
- Rating Sensitivity - The value at which contact ratings and operating characteristics are determined. Derating may be required below this value.
- Custom modifications of forming and/or cutting of reed switches are available. Please contact Littelfuse.

Drop Out vs. Pull-In Chart



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

Part Numbering System



Additional Information



Datasheet



Resources



Samples

Packaging

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