

# MITI-7 7mm Ultra-Miniature Reed Switch



## Description

The MITI-7 ultra-miniature reed switch is a normally open switch with a 7mm x 1.8mm (0.276" x 0.071") glass envelope, which is capable of switching 170Vdc at 10W. It has a sensitivity range of 6-20 AT. It has a high insulation resistance of  $10^{12}$  ohms minimum and low contact resistance of less than 150 milliohms. The MITI-7 is also available in a surface mount version, that is, MISM-7.

## Features

- Ultra-miniature, normally open switch
- Capable of switching 170Vdc or 0.25A at up to 10W
- Available sensitivity range 6-20 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

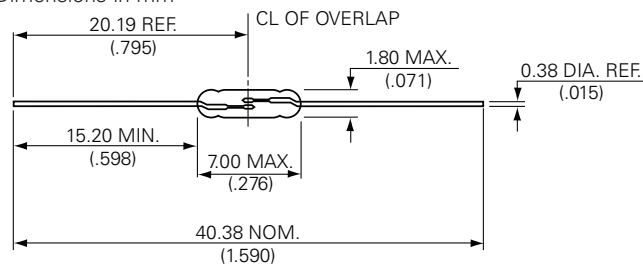
## Agency Approvals

Agency	Agency File Number	Ampere-Turns Range
	E47258 E471070	6-20 AT
	DEMKO 14 ATEX 1393U	6-20 AT

Note: Contact Littelfuse for specific agency approval ratings.

## Dimensions

Dimensions in mm



## Applications

- Position Sensing
- Security
- Meter Equipment
- Industrial Controls
- Office Equipment
- Telecoms

## 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 <sup>1</sup>		Watt - max.	10
Voltage <sup>3</sup>	Switching <sup>2</sup>	Vdc - max.	170
	Breakdown <sup>4</sup>	Vac - max.	120
		Vdc - min.	175
Current <sup>3</sup>	Switching <sup>2</sup>	Adc - max.	0.25
	Carry	Aac - max.	0.18
		Adc - max.	0.50
Resistance	Contact, Initial	$\Omega$ - max.	0.15
		$\Omega$ - min.	$10^{12}$
Capacitance	Contact	pF - typ.	0.3
Temperature	Operating	$^{\circ}\text{C}$	-40 to +125
		Storage <sup>5</sup>	$^{\circ}\text{C}$

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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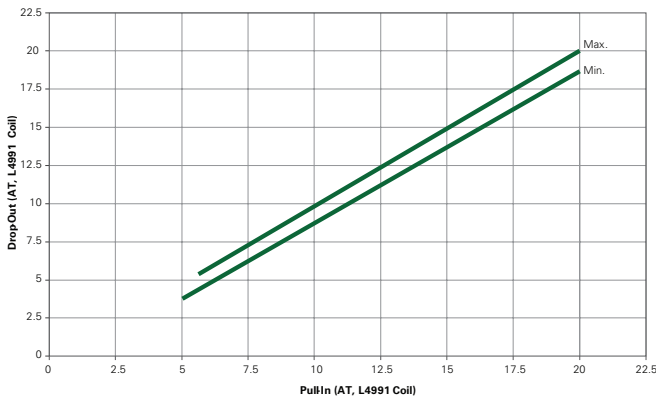
## Product Characteristics

Operating Characteristics		
Operate Time <sup>1</sup>		0.45ms - max.
Release Time <sup>1</sup>		0.2ms - max.
Shock <sup>2</sup>	11ms 1/2 sine wave	150G - max.
Vibration <sup>2</sup>	50-2000 Hertz	30G - max.
Resonant Frequency		14kHz - typ.
Magnetic Characteristics		
Pull-In Range <sup>3</sup>	Ampere Turns	6-20
Rating Sensitivity <sup>4</sup>	Ampere Turns	12
Test Coil		L4991

Notes:

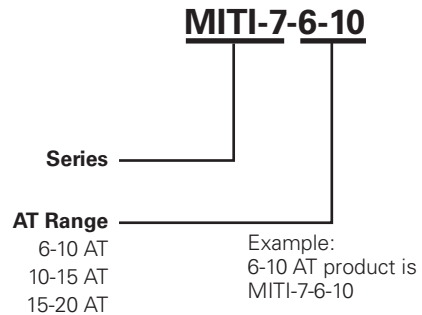
- Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
- Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.
- Pull-In Range - Contact Littelfuse for narrower AT ranges available.
- Rating Sensitivity - The value at which contact ratings and operating 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



## Packaging

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

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