MITI-7 7mm Ultra-Miniature Reed Switch

RoHS c $\boxed{\text{UL}}$ us ⟨Ex⟩
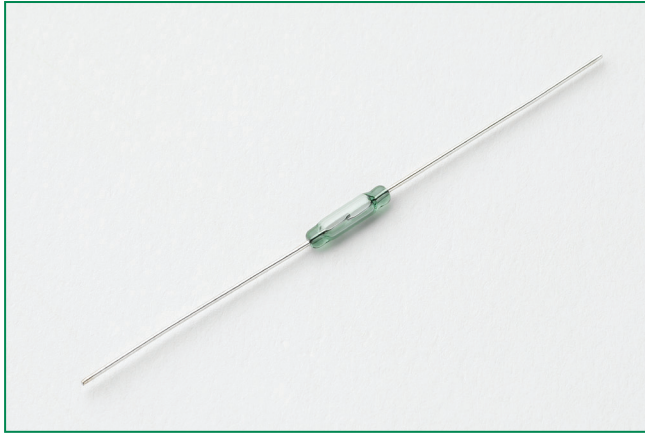
Description

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
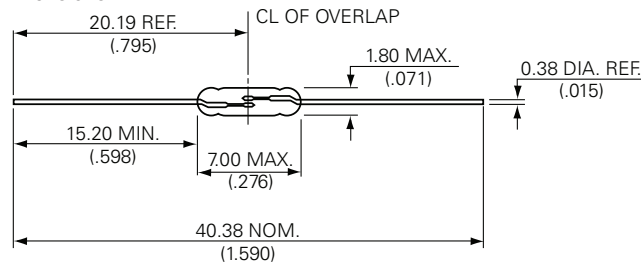- Excellent for switching micro-controller logic level loads

Applications

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

Agency Approvals

Agency	Agency File Number	Ampere-Turns Range
c $\boxed{\text{UL}}$ us	E47258 E471070	6-20 AT
⟨Ex⟩	DEMKO 14 ATEX 1393U	6-20 AT

Note: Contact Littelfuse for specific agency approval ratings.

Switch Type

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

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

Dimensions

Dimensions in mm

CL OF OVERLAP

20.19 REF. (.795)
1.80 MAX. (.071)
0.38 DIA. REF. (.015)
15.20 MIN. (.598)
7.00 MAX. (.276)
40.38 NOM. (1.590)

Electrical Ratings

Contact Rating [1]		Watt - max.	10
Voltage [3]	Switching [2]	Vdc - max.	170
		Vac - max.	120
	Breakdown [4]	Vdc - min.	175
Current [3]	Switching [2]	Adc - max.	0.25
		Aac - max.	0.18
	Carry	Adc - max.	0.50
Resistance	Contact, Initial	Ω - max.	0.15
	Insulation	Ω - min.	10^{12}
Capacitance	Contact	pF - typ.	0.3
Temperature	Operating	°C	-40 to +125
	Storage [5]	°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-7 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		14kHz - typ.
Magnetic Characteristics		
Pull-In Range [3]	Ampere Turns	6-20
Rating Sensitivity [4]	Ampere Turns	12
Test Coil		L4991

Notes:
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.

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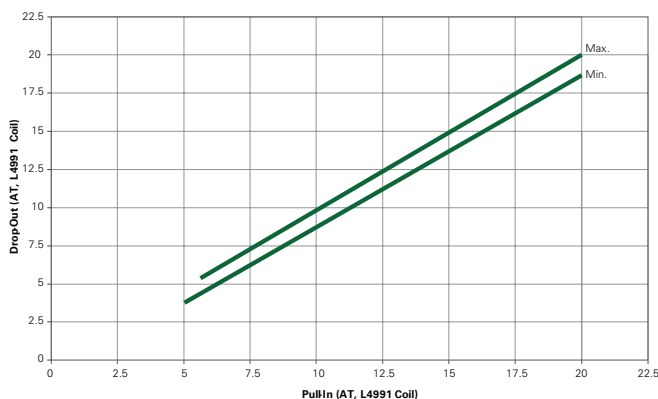
Note: The chart represents the range of Drop-Out, minimum to maximum for a given Pull-In value.

Part Numbering System

MITI-7-6-10

Series

AT Range
6-10 AT
10-15 AT
15-20 AT

Example:
6-10 AT product is
MITI-7-6-10
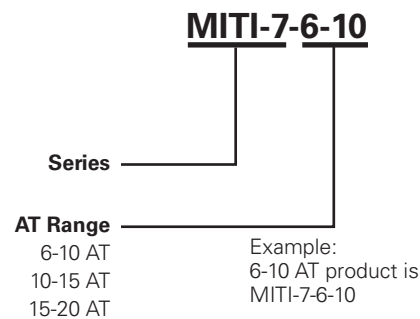
Packaging

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

Mouser Electronics

Authorized Distributor

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

[Littelfuse](#):
  [MITI-7-10-15](#) [MITI-7-15-20](#) [MITI-7-6-10](#)