

MDSM-10

10.2mm Sub-miniature Surface Mount



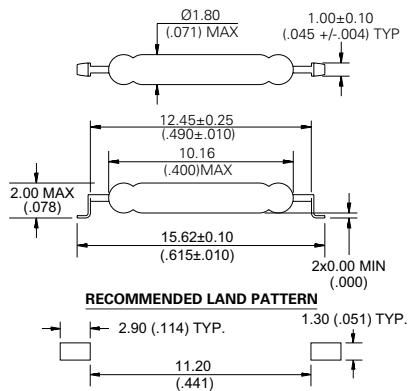
Agency Approvals

Agency	Agency File Number	Ampere-Turns Range
US	E47258 E471070	10-25 AT

Note: Contact Littelfuse for specific agency approval ratings.

Dimensions

Dimensions in mm (inch)



Note: Land pattern is Littelfuse recommendation only. User is responsible for proper PCB design.

Description

The MDSM-10 Reed Switch is a sub-miniature, surface mounting, normally open switch with a 10.16mm long x 1.80mm diameter (0.400" x 0.071") glass envelope, capable of switching 200Vdc at 10W.

This reed switch is a surface mount version of the MDSR-10. It has high insulation resistance of 10^{12} ohms minimum and low contact resistance of less than 120milli-ohms.

Features & Benefits

- Surface mounting normally open switch
- Capable of switching 200Vdc or 0.5A at up to 10W
- Low, stable contact resistance
- Available sensitivity 10-25 AT
- Hermetically sealed switch contacts are not affected by
- and have no effect on their external environment
- Low space requirement
- Zero operating power required for contact closure
- Excellent for switching microcontroller logic level loads

Applications

- Position Sensing
- Level Sensing
- Security
- Metering

Switch Type

Contact Form	A (SPST-NO)
Materials	Body: Glass Leads: Tin-plated Ni-Fe wire

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

Electrical Ratings

Contact Rating ¹		W/VA - max.	10
Voltage ³	Switching ²	Vdc - max.	200
	Breakdown ⁴	Vac - max.	140
		Vdc - min.	250
Current ³	Switching ²	Adc - max.	0.50
		Aac - max.	0.35
	Carry	Adc - max.	1.00
Resistance	Contact, Initial Insulation	Ω - max.	0.12
		Ω - min.	10^{12}
Capacitance	Contact	pF - typ.	0.2
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.

MDSM-10

10.2mm Sub-miniature Surface Mount

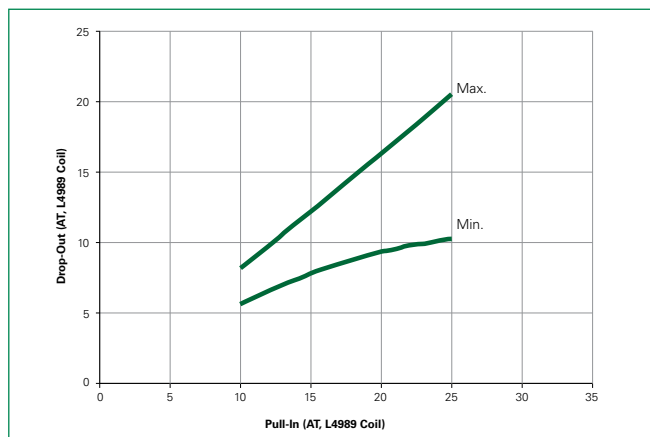
Product Characteristics

Operating Characteristics		
Operate Time ¹		0.5ms - max.
Release Time ¹		0.1ms - max.
Shock ²	11ms 1/2 sine wave	100G - max.
Vibration ²	50-2000 Hertz	30G - max.
Resonant Frequency		6.5kHz - typ.
Magnetic Characteristics		
Pull-In Range ³	Ampere Turns	10-25
Rating Sensitivity ⁴	Ampere Turns	15
Test Coil		L4989

Notes:

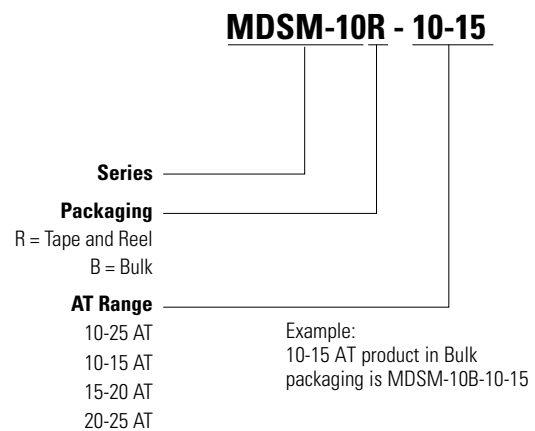
1. Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
2. Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.
3. Pull-In Range - Contact Littelfuse for narrower AT ranges available. These AT values are the before modification AT of the MDSR-10.
4. 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 of the MDSR-10 prior to modification into the MDSM-10.

Part Numbering System


Note:

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

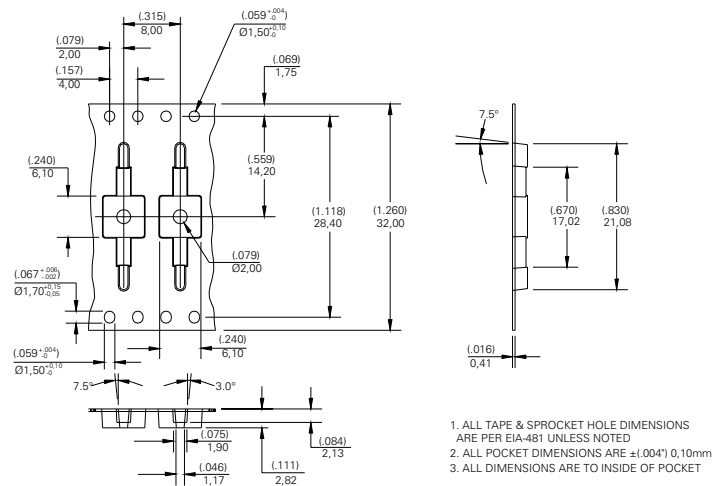
Packaging

Packaging Option	Packaging Specification	Quantity	Quantity and Packaging Code	Taping Width
Tape and Reel	EIA-RS-481-1	3000	R	32mm
Bulk	N/A	200	B	N/A

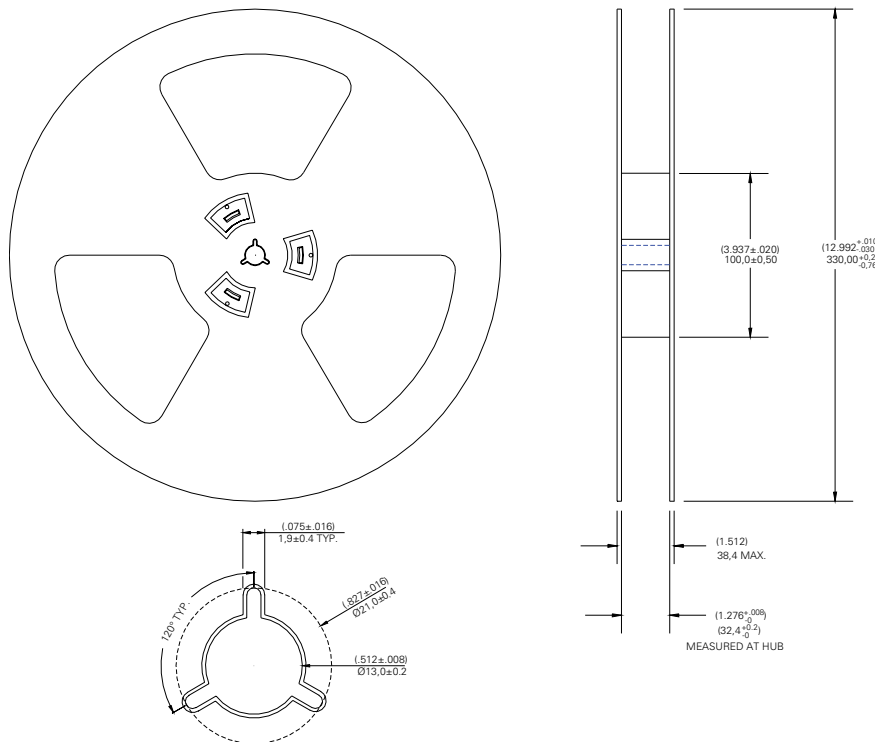
MDSM-10

10.2mm Sub-miniature Surface Mount

TAPE DIMENSIONS mm (inch)



REEL DIMENSIONS mm (inch)



Disclaimer Notice - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at: www.littelfuse.com/disclaimer-electronics.