

MDSM-DT 14.7mm Surface Mount Changeover Reed Switch



Description

The MDSM-DT Reed Switch is a miniature, surface mounting, changeover switch with a 14.73mm long x 2.54mm diameter (0.580" x 0.100") glass envelope. It is capable of switching 175Vdc at 5W. The MDSM-DT has an insulation resistance of 10^9 ohms minimum and contact resistance less than 100 milli-ohms. This reed switch is a surface mount version of the MDRR-DT.

Features

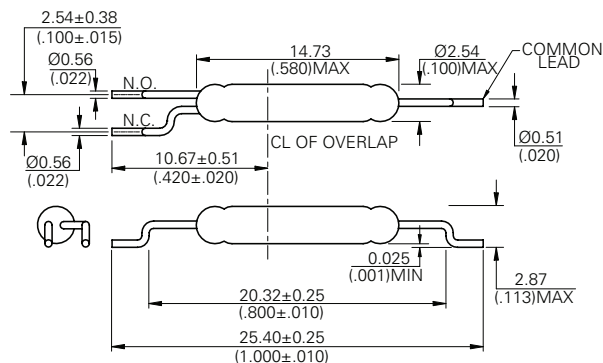
- Surface mount SPDT changeover switch
- Capable of switching 175Vdc or 0.25A at up to 5W
- Available sensitivity 15-30 AT

Agency Approvals

Agency	Agency File Number	Ampere-Turns Range
	E47258 E471070	15-30 AT
	DEMKO 14 ATEX 1393U	15-30 AT

Dimensions

Dimensions in mm (inch)



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

Electrical Ratings

Contact Rating ¹		W/VA - max.	5
Voltage ³	Switching ²	Vdc - max.	175
	Breakdown ⁴	Vac - max.	120
	Switching ²	Vdc - min.	200
Current ³	Carry	Adc - max.	0.25
		Aac - max.	0.18
		Adc - max.	1.50
Resistance	Contact, Initial Insulation	Ω - max.	0.100
		Ω - min.	10^9
Capacitance	Contact	pF - typ.	1.0
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.

Benefits

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

Applications

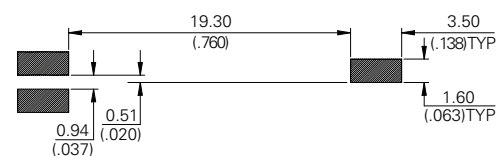
- Position Sensing
- Level Sensing
- Industrial Controls
- Office Equipments
- Mobile Phones

Switch Type

Contact Form	C (SPDT-CO)
Materials	Body: Glass Leads: Tin-plated Ni-Fe wire

Note: SPDT-CO = Single-Pole, Double-Throw, Change-Over

RECOMMENDED LAND PATTERN



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Product Characteristics

Operating Characteristics		
Operate Time ¹		0.7ms - max.
Release Time ¹		1.0ms - max.
Shock ²	11ms 1/2 sine wave	50G - max.
Vibration ²	50-2000 Hertz	30G - max.
Resonant Frequency		11.0kHz - typ.
Magnetic Characteristics		
Pull-In Range ³	Ampere Turns	15-30
Rating Sensitivity ⁴	Ampere Turns	20
Test Coil		L4989

Notes:

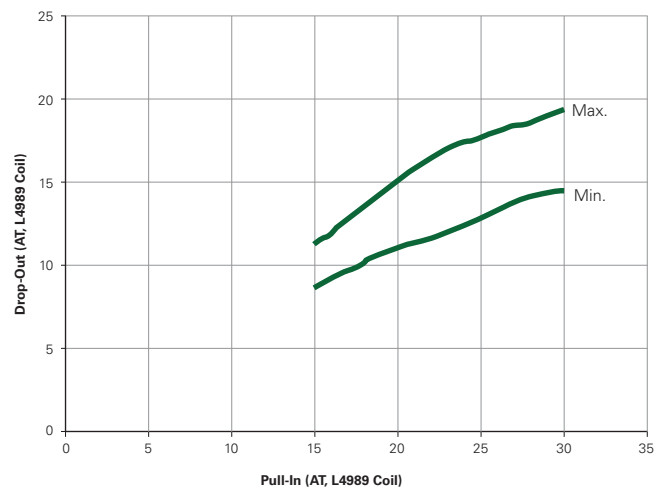
1. Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).

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 MDRR-DT.

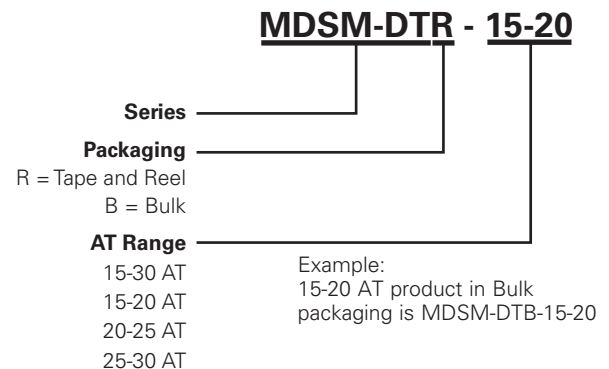
4. Rating Sensitivity - The value at which contact ratings and operating characteristics are determined. Derating may be required below this value.

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 MDRR-DT prior to modification into the MDSM-DT.

Part Numbering System



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

Additional Information



Datasheet



Resources



Samples

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

TAPE DIMENSIONS mm (inch)



Mouser Electronics

Authorized Distributor

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Littelfuse:

<u>MDSM-DTB 20-25</u>	<u>MDSM-DTB 20-30</u>	<u>MDSM-DTR 15-25</u>	<u>MDSM-DTB 15-20</u>	<u>MDSM-DTR 15-30</u>	<u>MDSM-DTR 20-25</u>
<u>MDSM-DTB 25-30</u>	<u>MDSM-DTR 15-20</u>	<u>MDSM-DTB 15-30</u>	<u>MDSM-DTR 20-30</u>	<u>MDSM-DTR 25-30</u>	<u>MDSM-DTB 15-25</u>
<u>MDSM-DTR-20-25</u>	<u>MDSM-DTB-15-20</u>	<u>MDSM-DTR-15-20</u>	<u>MDSM-DTB-25-30</u>	<u>MDSM-DTR-15-25</u>	<u>MDSM-DTR-20-30</u>
<u>MDSM-DTB-15-30</u>	<u>MDSM-DTB-15-25</u>	<u>MDSM-DTB-20-30</u>	<u>MDSM-DTR-15-30</u>	<u>MDSM-DTB-20-25</u>	<u>MDSM-DTR-25-30</u>
<u>MDSM-DTB-10-15</u>					