MDRR-DT 14.7mm Miniature Changeover Reed Switch



Description

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

Features

- Miniature SPDT changeover switch
- Capable of switching 175Vdc or 0.25A at up to 5W
- Available sensitivity range 10-30 AT

Benefits

- Hermetically sealed switch contacts are not affected by and have no effect on their external environment
- Can be used as changeover or normally closed contact
- Zero operating power required for contact closure
- Excellent for switching microcontroller logic level loads

Applications

- Position Sensing
- Reed Relays
- Industrial Controls
- Office Equipments
- Home Appliances
- Security

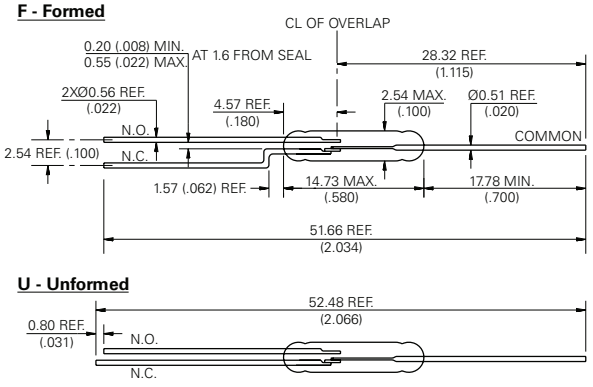
Agency Approvals

Agency	Agency File Number	Ampere-Turns Range
c UL us	E47258 E471070	10-30 AT

Note: Contact Littelfuse for specific agency approval ratings.

Dimensions

Dimensions in mm (inch)



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

Electrical Ratings

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

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Specifications are subject to change without notice.

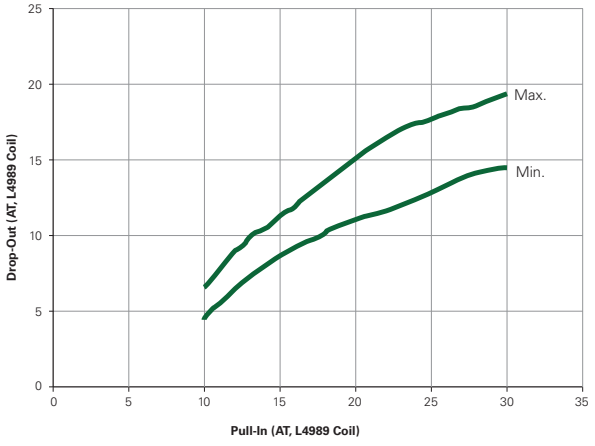
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Product Characteristics

Operating Characteristics		
Operate Time [1]		0.7ms - max.
Release Time [1]		1ms - 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	10-30
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.
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: Chart represents the range of Drop-Out, min to max for a given Pull-In value.

Part Numbering System

MDRR-DT -15-20 F

Series

AT Range
10-15 AT
10-20 AT
15-20 AT
15-25 AT
15-30 AT
20-25 AT
20-30 AT
20-35 AT
25-30 AT

Version
F = FORMED
U = UNFORMED

Example:
15-20 AT product is
MDRR-DT-15-20-F or
MDRR-DT-15-20-U

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
Bulk	Bulk	1000	N/A	N/A

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