

# 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

## 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

## Agency Approvals

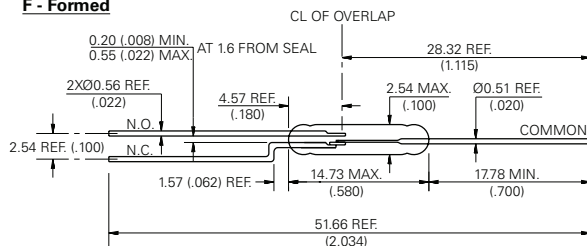
Agency	Agency File Number	Ampere-Turns Range
cULus	E47258 E471070	10-30 AT
Ex	DEMKO 14 ATEX 1393U	10-30 AT

Note: Contact Littelfuse for specific agency approval ratings.

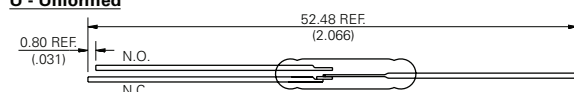
## Dimensions

Dimensions in mm (inch)

### F - Formed



### U - Unformed



## Electrical Ratings

Contact Rating <sup>1</sup>		W/VA - max.	5
Voltage <sup>3</sup>	Switching <sup>2</sup>	Vdc - max.	175
	Breakdown <sup>4</sup>	Vac - max.	120
		Vdc - min.	200
Current <sup>3</sup>	Switching <sup>2</sup>	Adc - max.	0.25
	Carry	Aac - max.	0.18
		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 <sup>5</sup>	°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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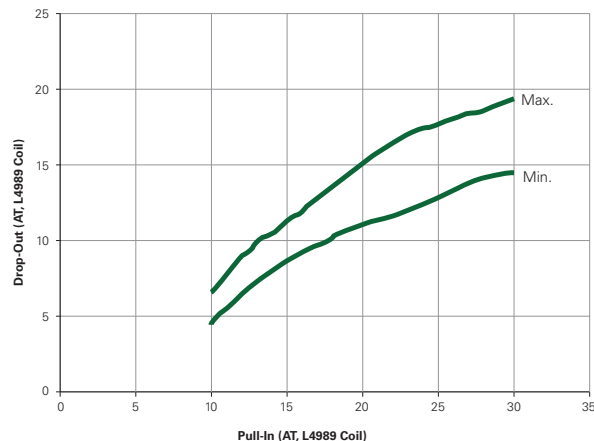
### Product Characteristics

Operating Characteristics		
Operate Time <sup>1</sup>		0.7ms - max.
Release Time <sup>1</sup>		1ms - max.
Shock <sup>2</sup>	11ms 1/2 sine wave	50G - max.
Vibration <sup>2</sup>	50-2000 Hertz	30G - max.
Resonant Frequency		11.0kHz - typ.
Magnetic Characteristics		
Pull-In Range <sup>3</sup>	Ampere Turns	10-30
Rating Sensitivity <sup>4</sup>	Ampere Turns	20
Test Coil		L4989

Notes:

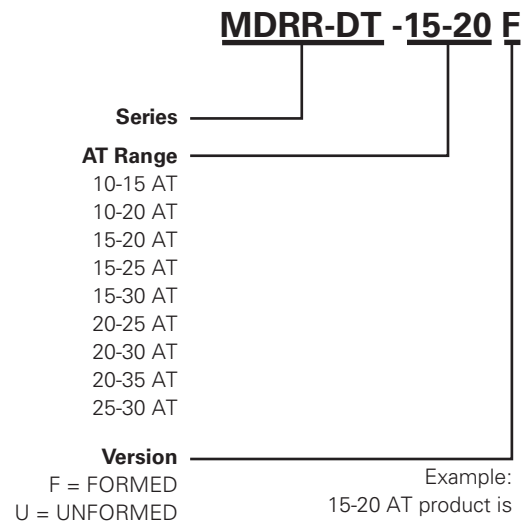
1. Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
2. Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.
3. Pull-In Range - Contact Littelfuse for narrower AT ranges available.
4. Rating Sensitivity - The value at which contact ratings and operating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



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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