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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# MDSR-7 12.7mm Sub-miniature Reed Switch





#### **Description**

The MDSR-7 Reed Switch is a sub-miniature, normally open switch with a 12.70mm long x 1.80mm diameter (0.500" x 0.071") glass envelope, capable of switching 200Vdc at 10W. It has high insulation resistance of  $10^{12}$  ohms minimum and low contact resistance of less than 100 milli-ohms.

#### **Features**

- Sub-miniature normally open switch
- Capable of switching 200V or 0.5A at up to 10W
- Available sensitivity range 10-25 AT

### **Agency Approvals**

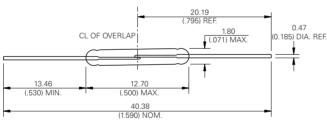
Agency	Agency File Number	Ampere-Turns Range
c <b>FN</b> °us	E47258 E471070	10-25 AT
Œx <b>〉</b>	DEMKO 14 ATEX 1393U	10-25 AT

#### **Benefits**

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

#### **Dimensions**

Dimensions in mm (inch)



## **Applications**

- Reed Relays (particularly suited to ATE type applications)
- Security Systems
- Limit Switching
- · Office Equipment

## **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 <sup>1</sup>		W/VA - max.	10
Voltage <sup>3</sup>	Switching <sup>2</sup> Breakdown <sup>4</sup>	Vdc - max. Vac - max. Vdc - min.	200 140 250
Current <sup>3</sup>	Switching <sup>2</sup> Carry	Adc - max. Aac - max. Adc - max.	0.5 0.35 0.80
Resistance	Contact, Initial Insulation	$\Omega$ - max. $\Omega$ - min.	0.100 10 <sup>12</sup>
Capacitance	Contact	pF - typ.	0.3
Temperature	Operating Storage <sup>5</sup>	°C °C	-40 to +125 -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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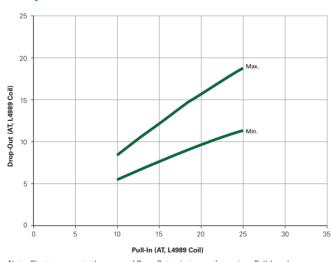
#### **Product Characteristics**

Operating Characteristics					
Operate Time <sup>1</sup>		0.6ms - max.			
Release Time <sup>1</sup>		0.2ms - max.			
Shock <sup>2</sup>	11ms 1/2 sine wave	100G - max.			
Vibration <sup>2</sup>	50-2000 Hertz	30G - max.			
Resonant Frequency		5.5kHz - typ.			
Magnetic Characteristics					
Pull-In Range <sup>3</sup>	Ampere Turns	10-25			
Rating Sensitivity <sup>4</sup>	Ampere Turns	20			
Test Coil		L4989			

#### Notes:

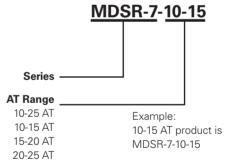
- 1. Operate (including bounce)/Release Time per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
- 2. Shock and Vibration per EIA/NARM RS-421-A and MIL-STD-202.
- 3. Pull-In Range Contact Littelfuse for narrower AT ranges available.
- 4. Rating Sensitivity The value at which contact ratings and operating 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 & Packaging Code	Taping Width
Bulk	Bulk	1000	N/A	N/A