# MVSR-20 19.7mm Reed Switch





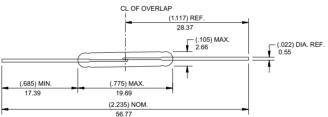
## **Agency Approvals**

Agency	Agency File Number	Ampere-Turns Range
c 🔊 us	E47258 E471070	17-38 AT
Æx>	DEMKO 14 ATEX 1393U	17-38 AT

Note: Contact Littelfuse for specific agency approval ratings

### **Dimensions**

Dimensions in mm (inch)



# Description

The MVSR-20 reed switch is a miniature, normally open switch with a 19.69mm long x 2.66mm diameter (0.775" x 0.105") glass envelope, capable of high voltage switching of up to 1kVdc at 1mA. It has high insulation resistance of  $10^{12}$  ohms minimum and contact resistance less than 100 milli-ohms.

### **Features**

- Miniature normally open switch
- Capable of switching 1000Vdc at 1mA or 0.5A up to 10W

### **Benefits**

 Hermetically sealed switch contacts are not affected by and have no effect on their external environment

### **Applications**

- Reed relays (particularly suitable for high voltage breakdown applications)
- Security

### **Switch Type**

- Minimum voltage breakdown
  2000 Vdc
- Available sensitivity range 17-38 AT
- Zero operating power required for contact closure
- Limit switching
- Telecoms line switching
- Industrial equipment

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
	Switching <sup>2</sup>	Vdc - max.	1000
Voltage <sup>3</sup>		Vac - max.	265
	Breakdown <sup>4</sup>	Vdc - min.	2000
	Switching <sup>2</sup>	Adc - max.	0.50
Current <sup>3</sup>		Aac - max.	0.35
	Carry	Adc - max.	1.30
	Contact, Initial	Ω - max.	0.100
Resistance	Insulation	Ω - min.	10 <sup>12</sup>
Capacitance	Contact	pF - typ.	0.2
Temperature	Operating Storage ⁵	⊃° ⊃°	-75 to +125 -75 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 1		0.75ms - max.	
Release Time <sup>1</sup>		0.30ms - max.	
Shock <sup>2</sup>	11ms 1/2 sine wave	100G - max.	
Vibration <sup>2</sup>	50-2000 Hertz	30G - max.	
Resonant Frequency		3.2kHz - typ.	
Magnetic Characteristics			
Pull-In Range <sup>3</sup>	Ampere Turns	17-38	
Rating Sensitivity <sup>4</sup>	Ampere Turns	35	
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

	MVSR-20-22-28		
Series ·			
AT Range			
17-23 AT	Example:		
17-28 AT	22-28 AT produ	uct is	
22-28 AT	MVSR-20-22-2	28	
22-33 AT			
27-33 AT			
27-38 AT			
32-38 AT			

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

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