

# **Web Resources**



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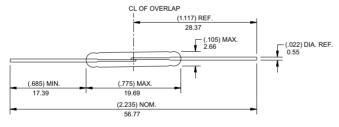
### **Agency Approvals**

Agency	Agency File Number	Ampere-Turns Range
c <b>AL</b> ° <sub>us</sub>	E67006	17-48 AT

Note: Contact Littelfuse for specific agency approval ratings.

### **Dimensions**

Dimensions in mm (inch)



# **Description**

The MVSR-20 series 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 1012 ohms minimum and contact resistance less than 100 milli-ohms.

## **Features and Benefits**

- Miniature normally open switch
- Capable of switching 1000 Vdc at 1 mA or 0.5 A up to
- Minimum voltage breakdown 2000 Vdc
- Available sensitivity range 17-48AT
- Hermetically sealed switch contacts are not affected by and have no effect on their external environment
- Zero operating power required for contact closure

# **Applications**

- Reed relays (particularly suitable for high voltage breakdown applications)
- Security
- Limit switching
- Telecoms line switching
- Industrial equipment
- Automatic test equipment

## **Switch Type**

Contact Form	A (SPST-NO)	
Materials	Body: Glass	
iviateriais	Leads: Tin-plated Ni-Fe wire	

Note: SPST-NO = Single-pole, single-throw, normally open

### **Flectrical Ratings**

Eloution Hatings				
Contact Rating <sup>1</sup>	-	W/VA - max.	10	
Voltage <sup>3</sup>	Switching <sup>2</sup> Breakdown <sup>4</sup>	Vdc - max.	1000	
		Vac - max.	265	
		Vdc - min.	< 32AT = 2000 min	
			32-38 AT = 3000 min	
			37-48 AT = 3600 min	
Current <sup>3</sup>	Switching <sup>2</sup> Carry	Adc - max.	0.50	
		Aac - max.	0.35	
		Adc - max.	1.30	
Capacitance	Contact	pF - typ.	0.43	
Resistance	Contact, Initial Insulation	Ω - max.	0.100	
		Ω - min.	1012	
Temperature	Operating	°C	-65 to +125	
	Storage <sup>5</sup>	C		

- 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. Referto 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-perMIL-STD-202, Method 301.
- 5. Storage Temperature Long time exposure at elevated temperature may degrade solderability of the leads.



### **Product Characteristics**

Operating Characteristics			
Operate Time <sup>1</sup>	-	0.75ms - max.	
Release Time <sup>1</sup>	-	0.30ms - max.	
Shock <sup>2</sup>	11ms 1/2 sine wave	20G - max.	
Vibration <sup>2</sup>	50-2000 Hertz	10G - max.	
Resonant Frequency	-	3.5kHz - typ.	

Magnetic Characteristics			
Pull-In Range <sup>3</sup>	Ampere Turns	17-48	
Rating Sensitivity <sup>4</sup>	Ampere Turns	35 and 45	
Test Coil	-	L4989	

### Notes:

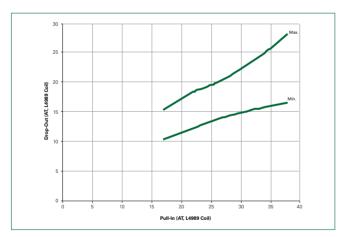
- 1. Operate (including bounce)/Release Time per EIA/NARM RS-421-A, diode suppressed coil (Coil II).

- 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.

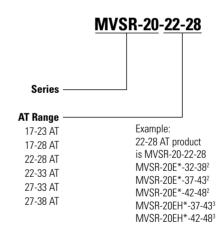
  4. Rating Sensitivity The value at which contact ratings and operating characteristics are determined. Derating may be required below this value.
- 5. Custom modifications of forming and/or cutting of reed switches are available. Please contact Littelfuse.

## **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:

- 1. These AT values are the before-modification values of the bare reed switch. 2. E = 3000V Voltage Breakdown
- 3. EH = 3600V Voltage Breakdown

## **Packaging**

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width
Bulk	Bulk	1000	-	-

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