MVSR-20

19.7mm Reed Switch

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 and Benefits

- Miniature normally open switch
- Capable of switching 1000Vdc at 1mA or 0.5A up to 10W
- Minimum voltage breakdown 2000 Vdc
- Available sensitivity range 17-38 AT
- 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

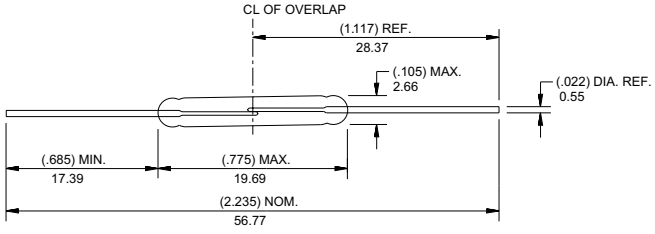
Agency Approvals

Agency	Agency File Number	Ampere-Turns Range
c UL us	E67006	17-38 AT

Note: Contact Littelfuse for specific agency approval ratings.

Dimensions

Dimensions in mm (inch)



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 [1]	-	W/VA - max.	10
Voltage [3]	Switching [2] Breakdown [4]	Vdc - max.	1000
		Vac - max.	265
		Vdc - min.	2000
Current [3]	Switching [2] Carry	Adc - max.	0.50
		Aac - max.	0.35
		Adc - max.	1.30
Capacitance	Contact	pF - typ.	0.2
Resistance	Contact, Initial Insulation	Ω - max.	0.100
		Ω - min.	10^{12}
Temperature	Operating	°C	-75 to +125
	Storage [5]		

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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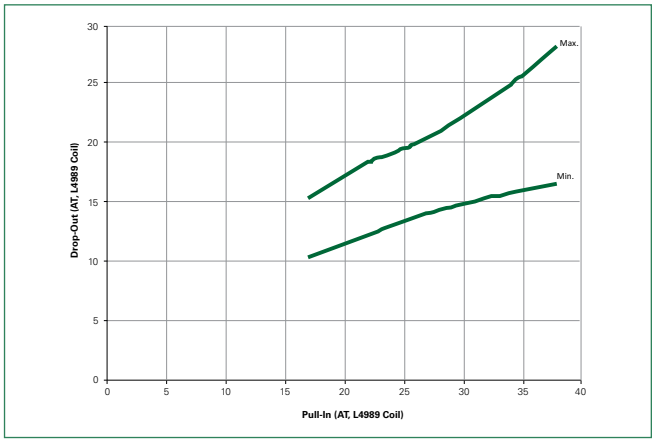
Product Characteristics

Operating Characteristics		
Operate Time [1]	-	0.75ms - max.
Release Time [1]	-	0.30ms - max.
Shock [2]	11ms 1/2 sine wave	100G - max.
Vibration [2]	50-2000 Hertz	30G - max.
Resonant Frequency	-	3.2kHz - typ.

Magnetic Characteristics		
Pull-In Range [3]	Ampere Turns	17-38
Rating Sensitivity [4]	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
17-28 AT
22-28 AT
22-33 AT
27-33 AT
27-38 AT
32-38 AT

Example:
22-28 AT product is
MVSR-20-22-28

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	-	-

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