

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

- 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

Benefits

- 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

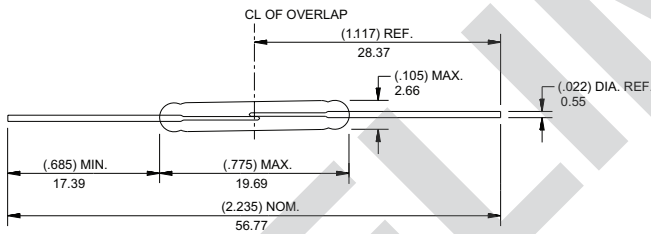
Agency Approvals

| Agency | Agency File Number | Ampere-Turns Range |
|--------|--------------------|--------------------|
| | Pending | 17-38 AT |
| | Pending | 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 | Vdc - max. | 1000 |
| | Breakdown ⁴ | Vdc - min. | 2000 |
| Current ³ | Switching ² | Adc - max. | 0.50 |
| | Carry | Adc - max. | 1.30 |
| Resistance | Contact, Initial Insulation | Ω - max. | 0.100 |
| | | Ω - min. | 10^{12} |
| Capacitance | Contact | pF - typ. | 0.2 |
| Temperature | Operating Storage ⁵ | $^{\circ}$ C | -75 to +125 |
| | | $^{\circ}$ C | -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.

MVSR-20 19.7mm Reed Switch

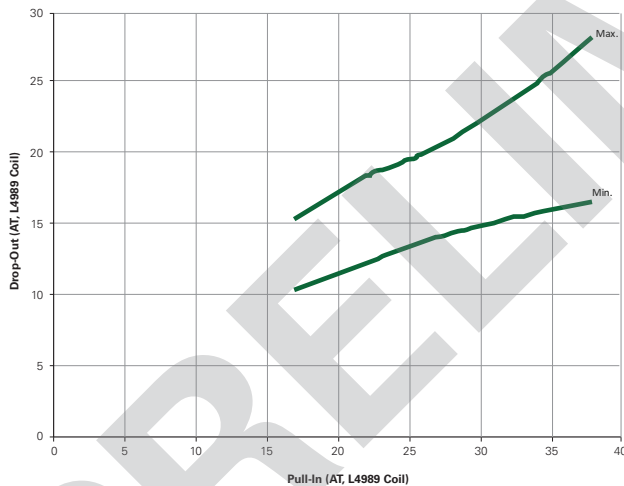
Product Characteristics

| 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:

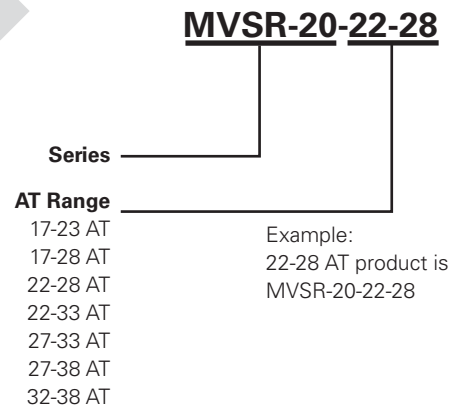
- Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
- Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.
- Pull-In Range - Contact Littelfuse for narrower AT ranges available.
- Rating Sensitivity - The value at which contact ratings and operating characteristics are determined. Derating may be required below this value.
- 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 |

