MRPR-8 20.3mm Miniature High Voltage Reed Switch

Description
The MRPR-8 Reed Switch is a miniature, normally open switch with a 20.32mm long x 2.84mm diameter (0.800" x 0.112") glass envelope, capable of high voltage and power switching of 265Vac at 50VA. The MRPR-8 has high insulation resistance of 10¹⁰ ohms minimum and contact resistance less than 100 milli-ohms.

Features
- Miniature normally open switch
- Capable of switching 265Vac or 1.0A at up to 50W/VA
- Minimum voltage breakdown 750Vdc
- Available sensitivity range 22-43 AT

Benefits
- Hermetically sealed switch contacts are not affected by and have no effect on their external environment
- Zero operating power required for contact

Applications
- Reed relays (suitable for switching European mains voltage)
- Limit switching
- Telecoms line switching
- White goods applications
- European mains voltage switching

Electrical Ratings

<table>
<thead>
<tr>
<th>Contact Rating</th>
<th>V/Wa</th>
<th>Voltage</th>
<th>Current</th>
<th>Resistance</th>
<th>Capacitance</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>max</td>
<td>265</td>
<td>1.0</td>
<td>0.100</td>
<td>0.2</td>
<td>-20 to +125</td>
</tr>
<tr>
<td></td>
<td>min</td>
<td>750</td>
<td>0.7</td>
<td>10¹⁰</td>
<td></td>
<td>-65 to +125</td>
</tr>
</tbody>
</table>

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. 
5. Storage Temperature - Long time exposure at elevated temperature may degrade solderability of the leads.
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Product Characteristics

### Operating Characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operate Time</td>
<td>0.75 ms - max.</td>
</tr>
<tr>
<td>Release Time</td>
<td>0.3 ms - max.</td>
</tr>
<tr>
<td>Shock</td>
<td>11 ms 1/2 sine wave</td>
</tr>
<tr>
<td>Vibration</td>
<td>50-2000 Hertz</td>
</tr>
<tr>
<td>Resonant Frequency</td>
<td></td>
</tr>
</tbody>
</table>

### Magnetic Characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pull-In Range</td>
<td>22-43</td>
</tr>
<tr>
<td>Rating Sensitivity</td>
<td>22</td>
</tr>
<tr>
<td>Test Coil</td>
<td>L4989</td>
</tr>
</tbody>
</table>

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

- **Series**: MRPR-8
- **AT Range**
  - 22-43 AT
  - 22-28 AT
  - 22-33 AT
  - 27-33 AT
  - 27-38 AT
  - 32-38 AT
  - 32-43 AT
  - 37-43 AT
- **Example**: 22-28 AT product is MRPR-8-22-28

Note: These AT values are the before-modification values of the bare reed switch.

### Additional Information

- [Datasheet](#)
- [Resources](#)
- [Samples](#)

### Packaging

<table>
<thead>
<tr>
<th>Packaging Option</th>
<th>Packaging Specification</th>
<th>Quantity</th>
<th>Quantity &amp; Packaging Code</th>
<th>Taping Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk</td>
<td>Bulk</td>
<td>1000</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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