**Description**

The MDRR-DT Reed Switch is a miniature changeover switch with a 14.73mm long x 2.54mm diameter (0.580” x 0.100”) glass envelope, capable of switching 175Vdc at 5W. It has insulation resistance of $10^9$ ohms minimum, and contact resistance less than 100 milli-ohms. The MDRR-DT is available in surface mount version, that is, MDSM-DT.

**Features**

- Miniature SPDT changeover switch
- Capable of switching 175Vdc or 0.25A at up to 5W
- Available sensitivity range 10-30 AT

**Benefits**

- Hermetically sealed switch contacts are not affected by and have no effect on their external environment
- Can be used as changeover or normally closed contact
- Zero operating power required for contact closure
- Excellent for switching microcontroller logic level loads

**Applications**

- Position Sensing
- Reed Relays
- Industrial Controls
- Office Equipments
- Home Appliances
- Security

**Agency Approvals**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Agency File Number</th>
<th>Ampere-Turns Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-ULUS</td>
<td>E47268 E471070</td>
<td>10-30 AT</td>
</tr>
<tr>
<td>DEMKO 14 ATEX 1393U</td>
<td>10-30 AT</td>
<td></td>
</tr>
</tbody>
</table>

Note: Contact Littelfuse for specific agency approval ratings.

**Dimensions**

Dimensions in mm (inch)

- **F - Formed**
  - CL of Overlap
  - 0.20 (0.008) MIN. AT 1.6 FROM SEAL
  - 2XØ0.56 REF. (0.022) MAX.
  - 4.57 REF. (0.180)
  - 2.64 MAX. 1.50 (0.100) COMMON
  - 14.73 MAX. (0.580)
  - 51.66 REF. (2.034)
  - Ø0.51 REF. (0.020)

- **U - Unformed**
  - 0.80 REF. (0.031)
  - 52.48 REF. (2.066)
  - 17.78 MIN. (0.700)
  - 51.66 REF. (2.034)

**Switch Type**

- **Contact Form**
- **Materials**
  - Body: Glass
  - Leads: Tin-plated Ni-Fe wire

**Electrical Ratings**

<table>
<thead>
<tr>
<th>Contact Rating</th>
<th>Voltage</th>
<th>Current</th>
<th>Resistance</th>
<th>Capacitance</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.
MDRR-DT 14.7mm Miniature Changeover Reed Switch

Product Characteristics

### Operating Characteristics

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operate Time</td>
<td>0.7ms - max.</td>
</tr>
<tr>
<td>Release Time</td>
<td>1ms - max.</td>
</tr>
<tr>
<td>Shock</td>
<td>11ms 1/2 sine wave</td>
</tr>
<tr>
<td>Vibration</td>
<td>50-2000 Hertz</td>
</tr>
<tr>
<td>Resonant Frequency</td>
<td>11.0kHz - typ.</td>
</tr>
</tbody>
</table>

### Magnetic Characteristics

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pull-In Range</td>
<td>10-30 Ampere Turns</td>
</tr>
<tr>
<td>Rating Sensitivity</td>
<td>20 Ampere Turns</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

![Graph showing Drop-Out vs. Pull-In relationship]

Note: Chart represents the range of Drop-Out, min to max for a given Pull-In value.

Part Numbering System

- **MDRR-DT**
  - **-15-20 F**

**Series**
- AT Range
  - 10-15 AT
  - 10-20 AT
  - 15-20 AT
  - 15-25 AT
  - 15-30 AT
  - 20-25 AT
  - 20-30 AT
  - 20-35 AT
  - 25-30 AT

**Version**
- F = FORMED
- U = UNFORMED

Example:

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

Packaging

<table>
<thead>
<tr>
<th>Packaging Option</th>
<th>Packaging Specification</th>
<th>Quantity</th>
<th>Quantity and 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>

Specifications are subject to change without notice.