

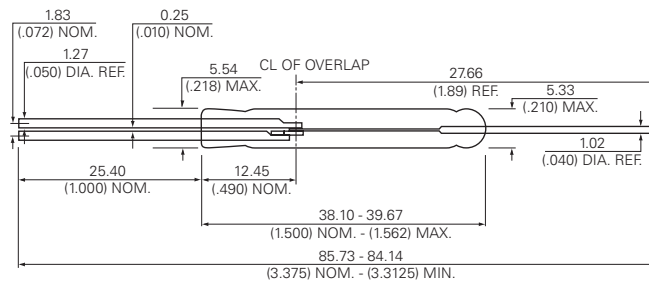
# DRR-DTH 39.7mm Standard Changeover Reed Switch

RoHS



## Dimensions

Dimensions in mm (inch)



## Description

The DRR-DTH Reed Switch is a large changeover switch with a 39.67mm long x 5.33mm diameter (1.562" x 0.210") glass envelope, capable high voltage and power switching up to 500Vdc at 30W. The DRR-DTH has an insulation resistance of  $10^9$  ohms minimum and contact resistance of less than 125 milli-ohms.

The DRT-DTH Reed Switch, another variant of the DRR-DTH, is made for heavier loads.

## Features

- Changeover switch
- Capable of switching 500Vdc or 0.5A at up to 30W
- Minimum voltage breakdown 1200Vdc
- Available sensitivity range 50-80 AT
- Minimum voltage breakdown 1200Vdc

## 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
- Capable of switching European mains voltage
- Zero operating power required for contact closure

## Applications

- Security
- Limit switching
- Industrial safety applications
- White goods applications

## Switch Type

|              |                                             |
|--------------|---------------------------------------------|
| Contact Form | C (SPDT-CO)                                 |
| Materials    | Body: Glass<br>Leads: Tin-plated Ni-Fe wire |

Note: SPDT-CO = Single-Pole, Double-Throw, Change Over

## Electrical Ratings

|                             |                        |                    |             |
|-----------------------------|------------------------|--------------------|-------------|
| Contact Rating <sup>1</sup> |                        | W/VA - max.        | 30          |
| Voltage <sup>3</sup>        | Switching <sup>2</sup> | Vdc - max.         | 500         |
|                             | Breakdown <sup>4</sup> | Vac - max.         | 350         |
|                             |                        | Vdc - min.         | 1200        |
| Current <sup>3</sup>        | Switching <sup>2</sup> | Adc - max.         | 0.50        |
|                             | Carry                  | Aac - max.         | 0.35        |
|                             |                        | Adc - max.         | 3.0         |
| Resistance                  | Contact, Initial       | $\Omega$ - max.    | 0.125       |
|                             | Insulation             | $\Omega$ - min.    | $10^9$      |
| Capacitance                 | Contact                | pF - typ.          | 2.0         |
| Temperature                 | Operating              | $^{\circ}\text{C}$ | -20 to +125 |
|                             | Storage <sup>5</sup>   | $^{\circ}\text{C}$ | -65 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.

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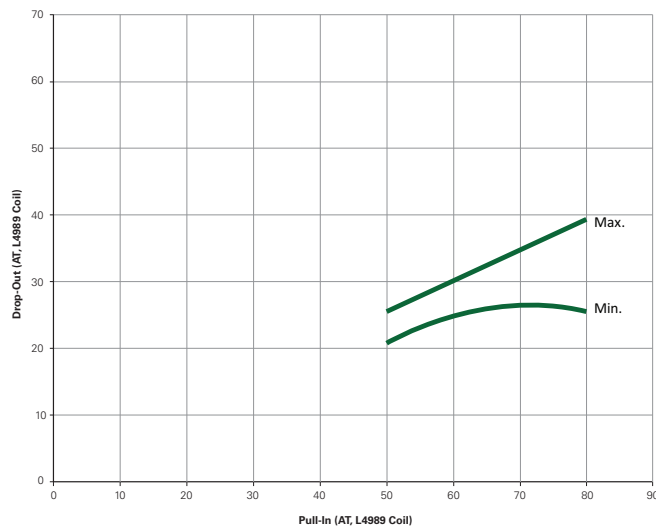
## Product Characteristics

| Operating Characteristics       |                    |                |
|---------------------------------|--------------------|----------------|
| Operate Time <sup>1</sup>       |                    | 4.5ms - max.   |
| Release Time <sup>1</sup>       |                    | 7.0ms - max.   |
| Shock <sup>2</sup>              | 11ms 1/2 sine wave | 10G - max.     |
| Vibration <sup>2</sup>          | 50-2000 Hertz      | 15G - max.     |
| Resonant Frequency              | Hz - typ.          | 2.75kHz - typ. |
| Magnetic Characteristics        |                    |                |
| Pull-In Range <sup>3</sup>      | Ampere Turns       | 50-80          |
| Rating Sensitivity <sup>4</sup> | Ampere Turns       | 60             |
| Test Coil                       |                    | L4988          |

Notes:

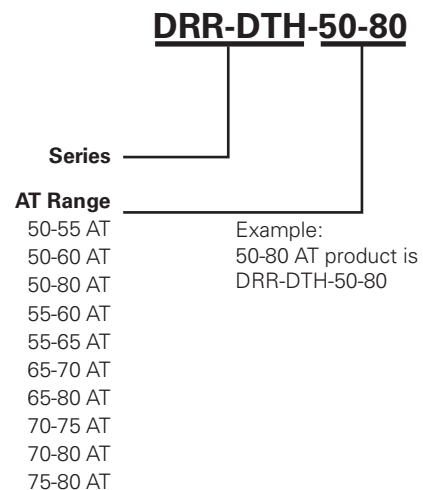
1. Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
2. Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.
3. Pull-In Range - Contact Littelfuse for narrower AT ranges available.
4. Rating Sensitivity - The value at which contact ratings and operating 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: 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          |

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