## DRS-50 50.8 mm High Power Reed Switch

OBSOLETE Raff


## Agency Approvals

| Agency | Agency File Number | Ampere-Turns Range |
| :---: | :---: | :---: |
| ${ }_{\text {c }}$ | $\begin{aligned} & \text { E47258 } \\ & \text { E471070 } \end{aligned}$ | 42-83 AT |
| \&x | DEMKO 14 ATEX $1393 U$ | 42-83 AT |

Note: Contact Littelfuse for specific agency approval ratings.

## Dimensions

Dimensions in mm (inch)


## Description

The DRS-50 Reed Switch is a standard, normally open switch with a 50.80 mm long $\times 5.25 \mathrm{~mm}$ diameter ( $2.000^{\prime \prime} \times .207^{\prime \prime}$ ) glass envelope, capable of high voltage and power switching up to 400 Vdc at 2 mA . Will carry 6 A and switch up to 100W/VA. It has high insulation resistance of $10^{10} \mathrm{ohms}$ minimum and contact resistance of less than 100 milli-ohms.

## Features

- Normally open switch
- Available sensitivity range
- Capable of switching 400 Vdc or 3.0A at up to 100 W
- Minimum voltage breakdown 600 Vdc


## Benefits

- Hermetically sealed switch contacts are not affected by and have no effect on their external environment


## Applications

- Security
- Industrial applications
- Limit switching

Switch Type

| Contact Form | A (SPST-NO) |
| :---: | :---: |
| Materials | Body: Glass |

Note: SPST-NO = Single-pole, single-throw, normally open

## Electrical Ratings

| Contact Rating ${ }^{1}$ |  | WNA - max. | 100 |
| :---: | :---: | :---: | :---: |
| Voltage ${ }^{3}$ | Switching ${ }^{2}$ <br> Breakdown ${ }^{4}$ | Vdc - max. <br> Vac - max. <br> Vdc - min. | $\begin{aligned} & 400 \\ & 280 \\ & 600 \end{aligned}$ |
| Current ${ }^{3}$ | Switching ${ }^{2}$ <br> Carry | Adc - max. <br> Aac - max. <br> Adc - max. | $\begin{aligned} & 3.0 \\ & 2.1 \\ & 6.0 \end{aligned}$ |
| Resistance | Contact, Initial Insulation | $\begin{aligned} & \Omega-\text { max. } . \\ & \Omega-\text { min. } \end{aligned}$ | $\begin{gathered} 0.100 \\ 10^{10} \end{gathered}$ |
| Capacitance | Contact | pF - typ. | 0.6 |
| Temperature | Operating Storage ${ }^{5}$ | $\begin{aligned} & { }^{\circ} \mathrm{C} \\ & { }^{\circ} \mathrm{C} \end{aligned}$ | $\begin{aligned} & -40 \text { to }+125 \\ & -65 \text { to }+125 \end{aligned}$ |

## 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

Expertise Applied | Answers Delivered

## DRS-50 50.8 mm High Power Reed Switch

## Product Characteristics

| Operating Characteristics |  |  |
| :---: | :---: | :---: |
| Operate Time ${ }^{1}$ |  | 4.5ms - max. |
| Release Time ${ }^{1}$ |  | 2.5ms - max. |
| Shock ${ }^{2}$ | 11ms 1/2 sine wave | 100G - max. |
| Vibration ${ }^{2}$ | 50-2000 Hertz | 30G - max. |
| Resonant Frequency | Hz - typ. | 850 Hz - typ. |
| Magnetic Characteristics |  |  |
| Pull-In Range ${ }^{3}$ | Ampere Turns | 42-83 |
| Rating Sensitivity ${ }^{4}$ | Ampere Turns | 60 |
| Test Coil |  | $\llcorner 4988$ |

Notes:

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

DRS-50-42-83

| Series |  |
| :--- | :--- |
| AT Range |  |
| 42-48 AT |  |
| 42-53 AT | Example: |
| 42-83 AT | 42-83 AT product is |
| 47-53 AT | DRS-50-42-83 |
| 47-58 AT |  |
| 47-68 AT |  |
| 57-63 AT |  |
| 57-68 AT |  |
| 62-68 AT |  |
| 62-78 AT |  |
| 67-73 AT |  |
| 67-83 AT |  |
| 77-83 AT |  |
| 62-73 AT |  |

[^0]Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity \& Packaging Code | Taping Width |
| :---: | :---: | :---: | :---: | :---: |
| Bulk | Bulk | 1000 | N/A | N/A |

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[^0]:    Note: These AT values are the before-modification values of the bare reed switch

