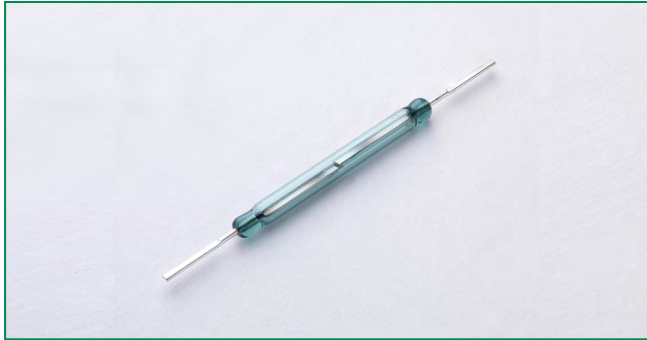


# DRS-50 50.8mm High Power Reed Switch



## Description

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

## Features

- Normally open switch
- Capable of switching 400Vdc or 3.0A at up to 100W
- Minimum voltage breakdown 600Vdc
- Available sensitivity range 42-83 AT

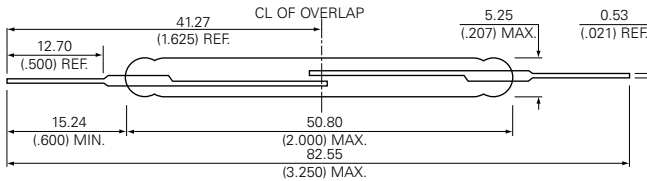
## Agency Approvals

Agency	Agency File Number	Ampere-Turns Range
	E47258 E471070	42-83 AT
	DEMKO 14 ATEX 1393U	42-83 AT

Note: Contact Littelfuse for specific agency approval ratings.

## Dimensions

Dimensions in mm (inch)



## Benefits

- Hermetically sealed switch contacts are not affected by and have no effect on their external environment
- Capable of switching European mains voltage
- Zero operating power required for contact closure

## Applications

- Security
- Limit switching
- Industrial applications
- White Goods

## 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 <sup>1</sup>		W/VA - max.	100
Voltage <sup>3</sup>	Switching <sup>2</sup>	Vdc - max.	400
	Breakdown <sup>4</sup>	Vac - max. Vdc - min.	280 600
Current <sup>3</sup>	Switching <sup>2</sup>	Adc - max.	3.0
	Carry	Aac - max.	2.1
		Adc - max.	6.0
Resistance	Contact, Initial Insulation	$\Omega$ - max. $\Omega$ - min.	0.100 $10^{10}$
Capacitance	Contact	pF - typ.	0.6
Temperature	Operating Storage <sup>5</sup>	$^{\circ}$ C	-40 to +125
		$^{\circ}$ 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

## DRS-50 50.8mm High Power Reed Switch

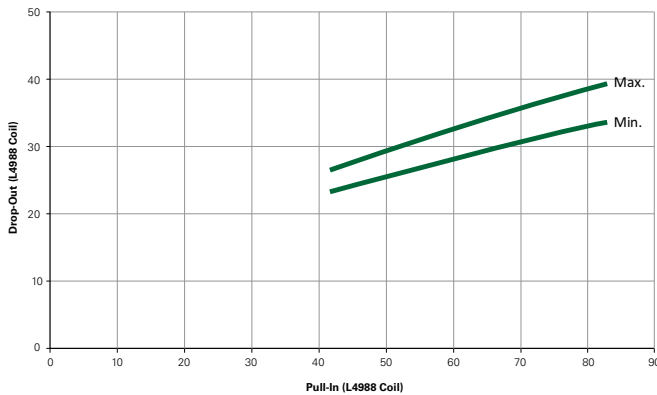
### Product Characteristics

Operating Characteristics		
Operate Time <sup>1</sup>		4.5ms - max.
Release Time <sup>1</sup>		2.5ms - max.
Shock <sup>2</sup>	11ms 1/2 sine wave	100G - max.
Vibration <sup>2</sup>	50-2000 Hertz	30G - max.
Resonant Frequency	Hz - typ.	850Hz - typ.
Magnetic Characteristics		
Pull-In Range <sup>3</sup>	Ampere Turns	42-83
Rating Sensitivity <sup>4</sup>	Ampere Turns	60
Test Coil		L4988

**Notes:**

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

**DRS-50-42-83**

Series

AT Range

- 42-48 AT
- 42-53 AT
- 42-83 AT
- 47-53 AT
- 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

Example:  
42-83 AT product is  
DRS-50-42-83

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

Disclaimer Notice - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at [www.littelfuse.com/disclaimier-electronics](http://www.littelfuse.com/disclaimier-electronics).