

# 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

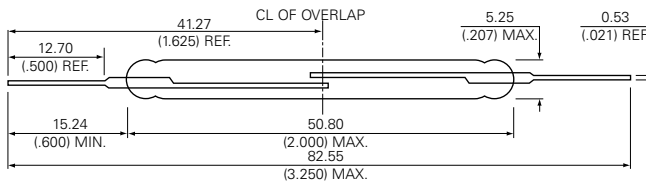
## Agency Approvals

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. Adc - max.	2.1 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

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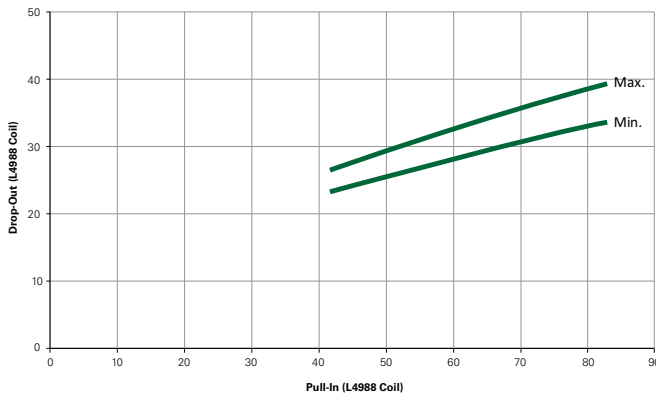
## Product Characteristics

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

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