

# DRS-DTH 39.7mm Standard Changeover Reed Switch



## Description

The DRS-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 2mA, or 0.5A up to 30W/VA. The DRS-DTH has an insulation resistance of  $10^9$  ohms minimum and contact resistance of less than 125 milli-ohms.

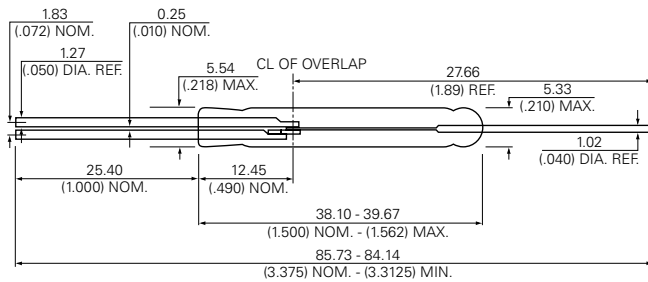
## Agency Approvals

Agency	Agency File Number	Ampere-Turns Range
	E47258 E471070	50-80 AT

**Note:** Contact Littelfuse for specific agency approval ratings.

## Dimensions

Dimensions in mm (inch)



## Applications

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

## Features

- Changeover switch
- Capable of switching 500Vdc or 0.5A at up to 30W
- Minimum voltage breakdown 1200Vdc
- Available sensitivity range 50-80 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
- Capable of switching European mains voltage
- Zero operating power required for contact closure

## Switch Type

Contact Form	C (SPDT-CO)
Materials	Body: Glass 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> Breakdown <sup>4</sup>	Vdc - max.	500
		Vac - max.	350
		Vdc - min.	1200
		Adc - max.	0.50
Current <sup>3</sup>	Switching <sup>2</sup> Carry	Aac - max.	0.35
		Adc - max.	3.0
		Ω - max.	0.125
Resistance	Contact, Initial Insulation	Ω - min.	$10^9$
		Capacitance	Contact
Temperature	Operating	°C	-20 to +125
	Storage <sup>5</sup>		-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.

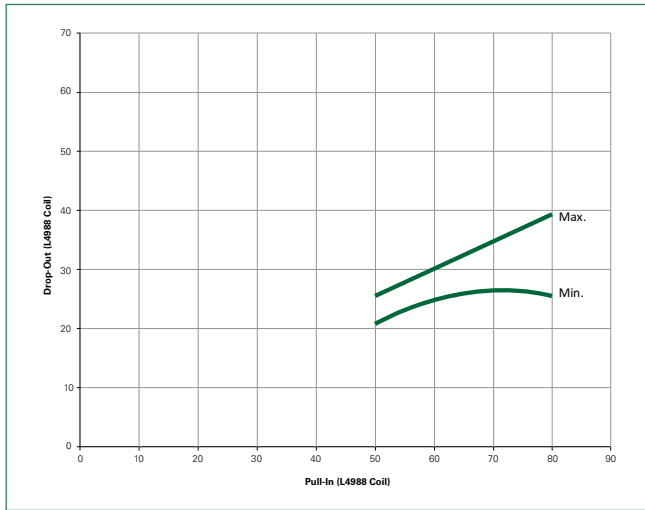
### Magnetic Characteristics

Pull-In Range <sup>3</sup>	Ampere Turns	50-80
Rating Sensitivity <sup>4</sup>	Ampere Turns	60
Test Coil	-	L4988
Drop-Out	Ampere-Turns - min.	-

#### 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.

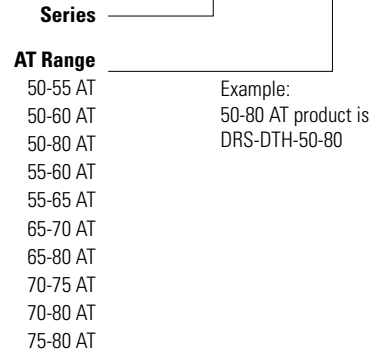
## Drop-Out vs. Pull-In Chart



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

## Part Numbering System

### DRS-DTH-50-80



**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	-	-