

# HA15-2 15.2mm Sub-miniature HV Reed Switch



## Description

The HA15-2 Reed Switch is a sub-miniature, normally open switch with a 15.24mm long x 2.28mm diameter (0.600" x 0.090") glass envelope and capable of high voltage switching of 265Vac at 10VA. It has high insulation resistance of  $10^{10}$  ohms minimum and contact resistance less than 100 milli-ohms. It can handle light inductive loads with no suppression circuitry and switch European mains voltage.

## Features

- Sub-miniature normally open switch
- Capable of switching 100-265Vac or 0.3A up to 20VA loads outside of this window is rated 10W max (see Electrical Ratings)
- Minimum voltage breakdown 400Vdc (17-23AT) and 450Vdc (22+ AT)
- Available sensitivity range 17-33 AT

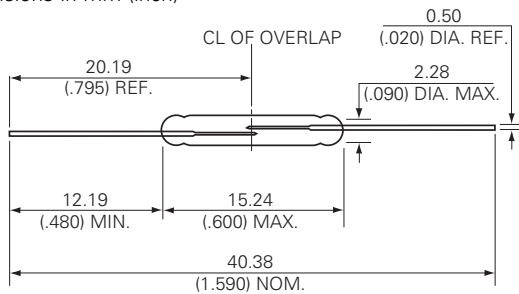
## Agency Approvals

Agency	Agency File Number	Ampere-Turns Range
	E47258 E471070	17-33 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

- Reed Relays
- Security
- Limit Switching
- Office Equipment
- Light Inductive Loads
- European Mains Voltage Switching

## 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

Sensitivity <sup>6</sup>			17-23	22+
Contact Rating <sup>1</sup>		W/VA - max.	20W for 100-265 VAC loads 10W for all other loads	
Voltage <sup>3</sup>	Switching <sup>2</sup>	Vdc - max.	200	200
	Breakdown <sup>4</sup>	Vac - max.	265 rms	265 rms
Current <sup>3</sup>	Switching <sup>2</sup>	Vdc - min.	400	450
		Adc - max.	0.40	0.50
	Carry	Aac - max.	0.30	0.35
Resistance	Contact, Initial Insulation	Adc - max.	1.4	1.5
		$\Omega$ - max.	0.100	0.100
Capacitance	Contact	$\Omega$ - min.	$10^{10}$	$10^{10}$
		pF - typ.	0.2	0.2
Temperature	Operating Storage <sup>5</sup>	$^{\circ}\text{C}$	-20 to +125	-20 to +125
		$^{\circ}\text{C}$	-65 to +125	-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 and 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 lead.
6. Rating Sensitivity - The value at which contact ratings and operating characteristics are determined. Derating may be required for lower values.

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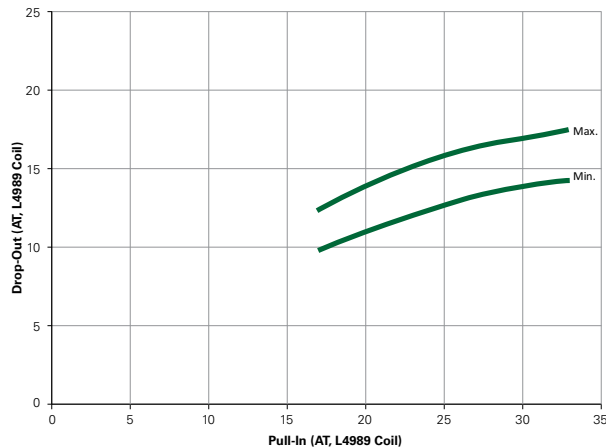
### Product Characteristics

Operating Characteristics		
Operate Time <sup>1</sup>		0.6ms - max.
Release Time <sup>1</sup>		0.2ms - max.
Shock <sup>2</sup>	11ms 1/2 sine wave	100G - max.
Vibration <sup>2</sup>	50-2000 Hertz	30G - max.
Resonant Frequency		4.0kHz - typ.
Magnetic Characteristics		
Pull-In Range <sup>3</sup>	Ampere Turns	17-33
Rating Sensitivity <sup>4</sup>	Ampere Turns	17 and 23
Test Coil		L4989
Drop-Out	Ampere-Turns - min.	5

**Notes:**

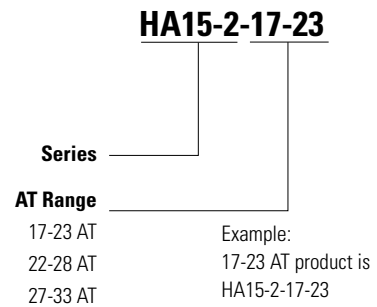
1. Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
2. Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.
3. Pull-In Range - Contact Littelfuse for narrower AT ranges available.
4. Rating Sensitivity - The value at which contact ratings and operating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