# Axial Lead Reed Switches High Power > MARR-5

# MARR-5 14mm Reed Switch







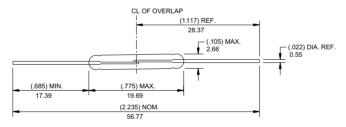
## **Agency Approvals**

Agency	Agency File Number	Ampere-Turns Range	
c <b>FU</b> °us	E47258 E471070	17-38 AT	
€x>	DEMKO 14 ATEX 1393U	17-38 AT	

Note: Contact Littelfuse for specific agency approval ratings.

## **Dimensions**

Dimensions in mm (inch)



## **Description**

The MARR-5 reed switch is a miniature, normally open switch with a 19.69mm long x 2.66mm diameter (0.775" x 0.105") glass envelope, capable of high voltage switching of up to 1kVdc at 1mA. It has high insulation resistance of 10<sup>12</sup> ohms minimum and contact resistance less than 100 milli-ohms.

### **Features**

- Miniature normally open switch
- Capable of switching 1000Vdc at 1mA or 0.5A up to 10W
- Minimum voltage breakdown 2000 Vdc
- Available sensitivity range 17-38 AT

## **Benefits**

 Hermetically sealed switch contacts are not affected by and have no effect on their external environment  Zero operating power required for contact closure

## **Applications**

- Reed relays (particularly suitable for high voltage breakdown applications)
- Security

- Limit switching
- Telecoms line switching
- Office equipment

## **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.	10
Voltage <sup>3</sup>	Switching <sup>2</sup>	Vdc - max.	1000
	Breakdown <sup>4</sup>	Vdc - min.	2000
Current <sup>3</sup>	Switching <sup>2</sup>	Adc - max.	0.50
	Carry	Adc - max.	1.30
Resistance	Contact, Initial Insulation	$\Omega$ - max. $\Omega$ - min.	0.100 10 <sup>12</sup>
Capacitance	Contact	pF - typ.	0.2
Temperature	Operating	°C	-75 to +125
	Storage <sup>5</sup>	°C	-75 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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# OBSOLETE DATE: 07/17/2017 PCN/ECN# N/A REPLACED BY: MVSR-20

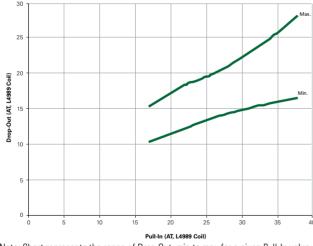
## **Product Characteristics**

Operating Characteristics						
Operate Time <sup>1</sup>		0.75ms - max.				
Release Time <sup>1</sup>		0.30ms - max.				
Shock <sup>2</sup>	11ms 1/2 sine wave	100G - max.				
Vibration <sup>2</sup>	50-2000 Hertz	30G - max.				
Resonant Frequency		3.2kHz - typ.				
Magnetic Characteristics						
Pull-In Range <sup>3</sup>	Ampere Turns	17-38				
Rating Sensitivity <sup>4</sup>	Ampere Turns	35				
Test Coil		L4989				

#### Notes

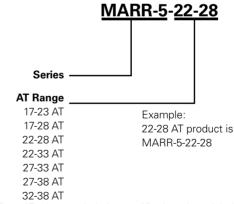
- 1. Operate (including bounce)/Release Time per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
- 2. Shock and Vibration per EIA/NARM RS-421-A and MIL-STD-202.
- 3. Pull-In Range Contact Littelfuse for narrower AT ranges available.
- 4. Rating Sensitivity The value at which contact ratings and operating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

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