

### MARR-5 14mm Reed Switch

**OBSOLETE** DATE: 07/17/2017 PCN/ECN# N/A  
 REPLACED BY: MVSR-20



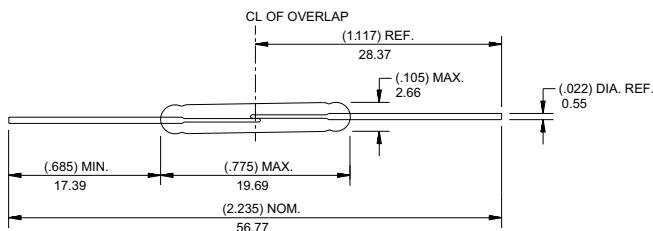
#### Agency Approvals

Agency	Agency File Number	Ampere-Turns Range
	E47258 E471070	17-38 AT
	DEMKO 14 ATEX 1393U	17-38 AT

Note: Contact Littelfuse for specific agency approval ratings.

#### Dimensions

Dimensions in mm (inch)



#### Electrical Ratings

Contact Rating <sup>1</sup>		W/WA - max.	10
Voltage <sup>3</sup>	Switching <sup>2</sup> Breakdown <sup>4</sup>	Vdc - max. Vdc - min.	1000 2000
Current <sup>3</sup>	Switching <sup>2</sup> Carry	Adc - max. Adc - max.	0.50 1.30
Resistance	Contact, Initial Insulation	Ω - max. Ω - min.	0.100 10 <sup>12</sup>
Capacitance	Contact	pF - typ.	0.2
Temperature	Operating Storage <sup>5</sup>	°C °C	-75 to +125 -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.

#### 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
- 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

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## 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.

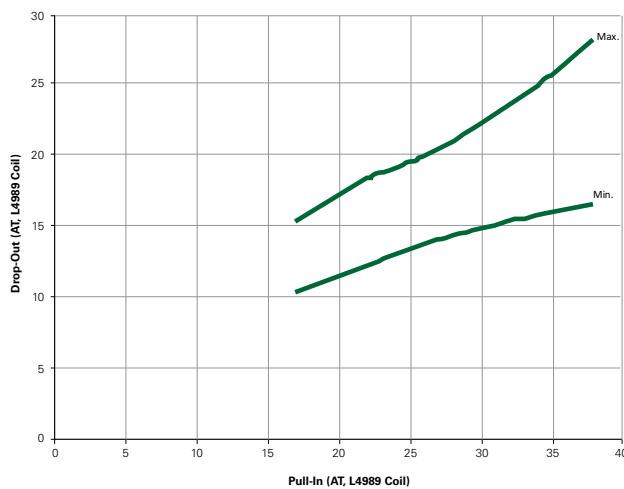
  

Magnetic Characteristics		
Pull-In Range <sup>3</sup>	Ampere Turns	17-38
Rating Sensitivity <sup>4</sup>	Ampere Turns	35
Test Coil		L4989

Notes:

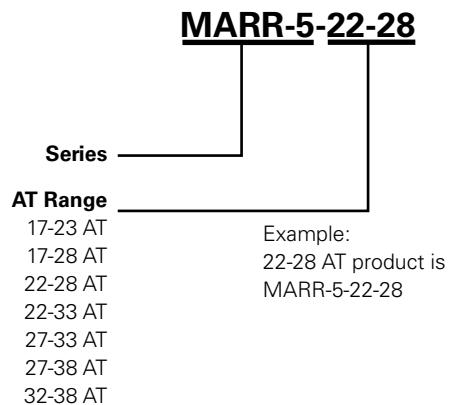
1. Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
2. Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.
3. Pull-In Range - Contact Littelfuse for narrower AT ranges available.
4. Rating Sensitivity - The value at which contact ratings and operating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