

MARR-5 14mm Reed Switch



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



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^{12} 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

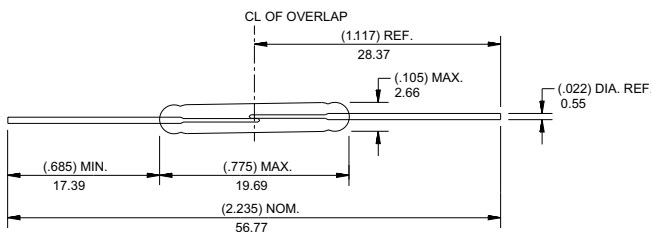
Agency Approvals

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)



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 ¹		W/VA - max.	10
Voltage ³	Switching ² Breakdown ⁴	Vdc - max. Vdc - min.	1000 2000
Current ³	Switching ² Carry	Adc - max. Adc - max.	0.50 1.30
Resistance	Contact, Initial Insulation	Ω - max. Ω - min.	0.100 10^{12}
Capacitance	Contact	pF - typ.	0.2
Temperature	Operating Storage ⁵	$^{\circ}\text{C}$ $^{\circ}\text{C}$	-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.

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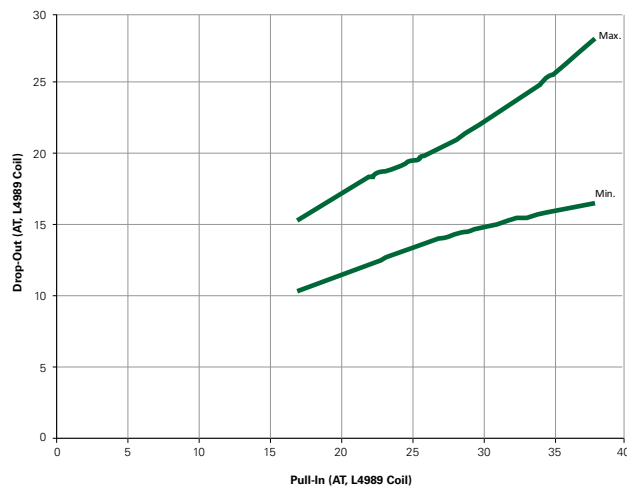
Product Characteristics

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

Notes:

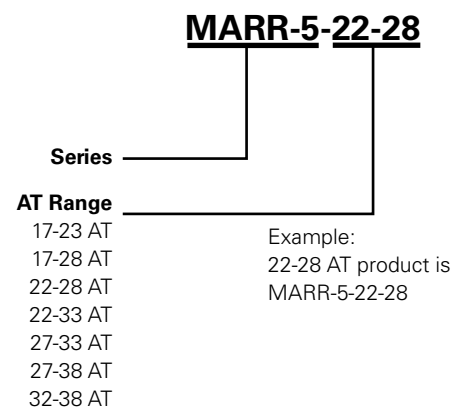
1. Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
2. Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.
3. Pull-In Range - Contact Littelfuse for narrower AT ranges available.
4. Rating Sensitivity - The value at which contact ratings and operating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