

MASM-14 14mm Close-Differential Reed Switch





Agency Approvals

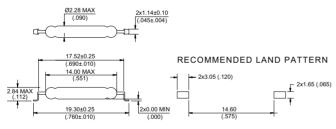
Agency	Agency File Number	Ampere-Turns Range
c SU °us	E47258 E471070	10-30 AT

Note: Contact Littelfuse for specific agency approval ratings.

Dimensions

Dimensions in mm (inch)

Electrical Ratings



Note: Land pattern is Littelfuse recommendation only. User is responsible for proper PCB design.

Description

The MASM-14 surface mount reed switch is a close-differential, sub-miniature, normally open switch with a 14mm long x 2.28mm diameter (0.551" x 0.090") glass envelope, capable of switching 200Vdc at 10W.

This reed switch is a surface mount version of MACD-14. It has high insulation resistance of 10¹⁰ ohms minimum and a contact resistance of less than 100 milliohms. Both reed switches are intended for use in applications that require low hysteresis between Pull-In and Drop-Out values.

Features

- Surface mount normally open switch
- Capable of switching 200Vdc or 0.5A at up to 10W
- Low close/open hysteresis (close differential)

Benefits

- Hermetically sealed switch contacts are not affected by and have no effect on their external environment
- Zero operating power required for contact closure
- Excellent for switching microcontroller logic level loads

Applications

- Position Sensing
- Level Sensing
- Security

- Industrial Controls
- · Office Equipment
- · Home Appliances

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

Contact Rating ¹		W/VA - max.	10
Voltage ³	Switching ² Breakdown ⁴	Vdc - max. Vac - max. Vdc - min.	200 140 200
Current ³	Switching ² Carry	Adc - max. Aac - max. Adc - max.	0.50 0.35 1.00
Resistance	Contact, Initial Insulation	Ω - max. Ω - min.	0.100 10 ¹⁰
Capacitance	Contact	pF - typ.	0.3
Temperature	Operating Storage ⁵	°C °C	-40 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, 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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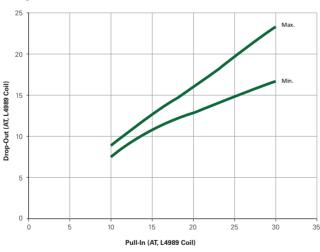
Product Characteristics

Operating Characteristics					
Operate Time ¹		0.6ms - max.			
Release Time ¹		0.2ms - max.			
Shock ²	11ms 1/2 sine wave	100G - max.			
Vibration ²	50-2000 Hertz	30G - max.			
Resonant Frequency		5.3kHz typ			
Magnetic Characteristics					
•					
Pull-In Range ³	Ampere Turns	10-15, 15-20, 20-25, 25-30			
Rating Sensitivity ⁴	Ampere Turns	20			
Test Coil		L4989			

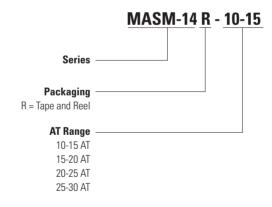
Notes

- 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. These AT ranges are the before modification AT of the MACD-14.
- 4. Rating Sensitivity The value at which contact ratings and operating characteristics are determined. Derating may be required below this value.

Drop-Out vs. Pull-In Chart



Part Numbering System



Note:

Chart represents the range of Drop Out, min to max for a given Pull-In value of the MACD-14 prior to modification into the MASM-14.

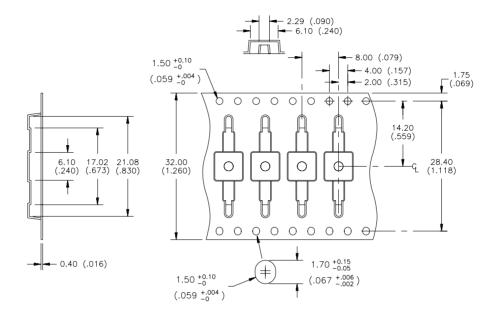
Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width
Tape and Reel	EIA-RS-481-1	3000	R	32mm



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TAPE DIMENSIONS mm (inch)



REEL DIMENSIONS mm (inch)

