



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

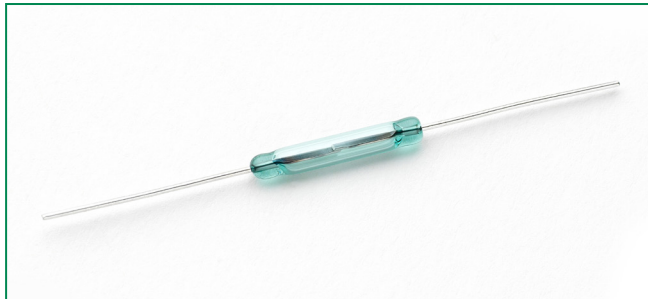
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MACD-14 14mm Close-Differential Reed Switch



Description

The MACD-14 reed switch is a close-differential, sub-miniature, normally open switch with a 14.00mm long x 2.28mm diameter (0.551" x 0.090") glass envelope, capable of switching 200Vdc at 10W.

This reed switch is also available in a surface mount version, that is, MASM-14. It has a high insulation resistance of 10^{10} ohms minimum and contact resistance less than 100 milli-ohms. Both reed switches are intended for use in applications that require low hysteresis between Pull-In and Drop-Out values.

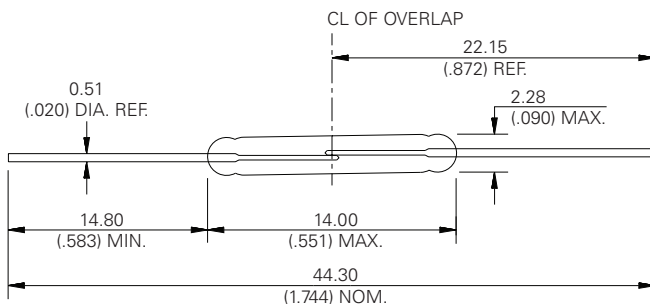
Agency Approvals

Agency	Agency File Number	Ampere-Turns Range
	E47258 E471070	10-30 AT
	DEMKO 14 ATEX 1393U	10-30 AT

Note: Contact Littelfuse for specific agency approval ratings.

Dimensions

Dimensions in mm (inch)



Features

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

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 micro-controller 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

Electrical Ratings

Contact Rating ¹		W/VA - max.	10
Voltage ³	Switching ²	Vdc - max.	200
	Breakdown ⁴	Vac - max.	140
		Vdc - min.	200
Current ³	Switching ²	Adc - max.	0.50
	Carry	Aac - max.	0.35
		Adc - max.	1.00
Resistance	Contact, Initial Insulation	Ω - max.	0.100
		Ω - min.	10^{10}
Capacitance	Contact	pF - typ.	0.3
Temperature	Operating Storage ⁵	$^{\circ}\text{C}$	-40 to +125
		$^{\circ}\text{C}$	-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 leads.

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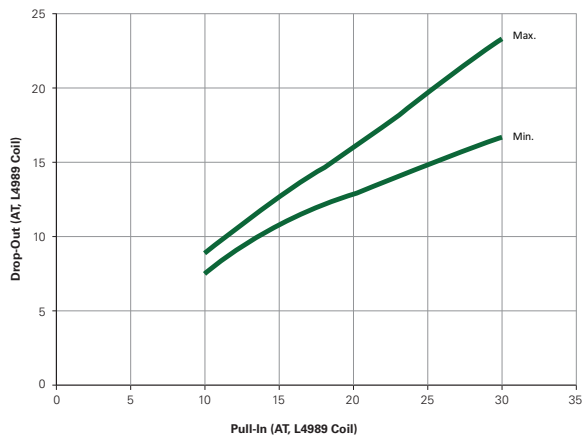
Product Characteristics

Operating Characteristics		
Operate Time ¹		0.6ms - max.
Release Time ¹		0.20ms - 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	10-30
Rating Sensitivity ⁴	Ampere Turns	20
Test Coil		L4989

Notes:

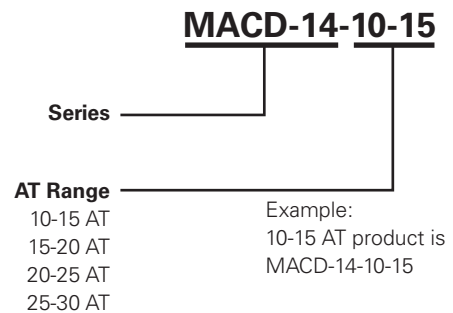
- Operate (including bounce)/Release Time - per EIA/NARM RS-421-A, diode suppressed coil (Coil II).
- Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.
- Pull-In Range - Contact Littelfuse for narrower AT ranges available.
- Rating Sensitivity - The value at which contact ratings and operating characteristics are determined. Derating may be required below this value.
- 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