

MDCG-4 15.3mm Sub-miniature Reed Switch



Description

The MDCG-4 Reed Switch is a sub-miniature, normally open switch with a 15.24mm long x 2.28mm diameter (0.600" x 0.090") glass envelope, capable of switching 200Vdc at 10W. It has high insulation resistance of 10^{10} ohms minimum and contact resistance less than 100 milli-ohms. This reed switch is also available in a surface mount version, that is, MDSM-4.

Features

- Sub-miniature normally open switch
- Available sensitivity 12-38 AT
- Capable of switching 200Vdc or 0.5A at up to 10W

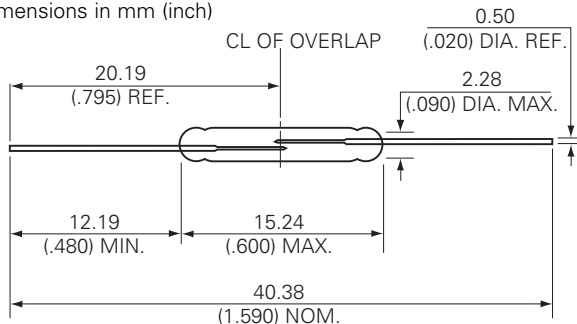
Agency Approvals

Agency	Agency File Number	Ampere-Turns Range
cRUUS	E47258 E471070	12-38 AT

Note: Contact Littelfuse for specific agency approval ratings.

Dimensions

Dimensions in mm (inch)



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

- Reed Relays
- Security
- Limit Switching
- Level Sensing
- Office Equipment
- Industrial Control

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		WVA - max.	10
Voltage ³	Switching ²	Vdc - max.	200
	Breakdown ⁴	Vac - max.	140
		Vdc - min.	250
Current ³	Switching ²	Adc - max.	0.50
	Carry	Aac - max.	0.35
		Adc - max.	1.20
Resistance	Contact, Initial Insulation	Ω - max.	0.100
		Ω - min.	10^{10}
Capacitance	Contact	pF - typ.	0.2
Temperature	Operating	$^{\circ}\text{C}$	-40 to +125
	Storage ⁵	$^{\circ}\text{C}$	-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, 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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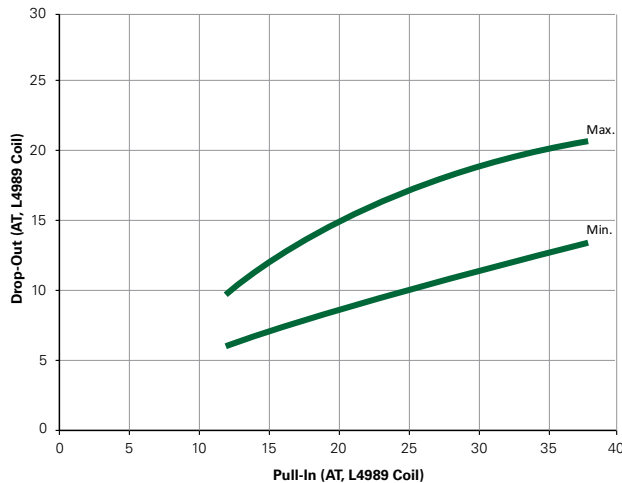
Product Characteristics

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		3.9kHz - typ.
Magnetic Characteristics		
Pull-In Range ³	Ampere Turns	12-38
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

MDCG-4 -12-18

Series

AT Range

- 12-18 AT
- 12-23 AT
- 17-23 AT
- 17-28 AT
- 22-28 AT
- 22-33 AT
- 27-33 AT
- 27-38 AT
- 32-38 AT

Example:
12-18 AT product is
MDCG-4-12-18

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