MDCG-4 15.3mm Sub-miniature Reed Switch

RoHS   cULus

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
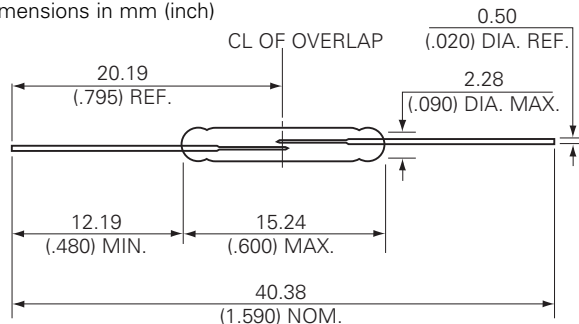- Capable of switching 200Vdc or 0.5A at up to 10W

Agency Approvals

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

Note: Contact Littelfuse for specific agency approval ratings.

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

Dimensions

Dimensions in mm (inch)

0.50 (.020) DIA. REF.
CL OF OVERLAP
2.28 (.090) DIA. MAX.
20.19 (.795) REF.
12.19 (.480) MIN.
15.24 (.600) MAX.
40.38 (1.590) NOM.

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. Vac - max.	200 140
	Breakdown [4]	Vdc - min.	250
Current [3]	Switching [2]	Adc - max. Aac - max.	0.50 0.35
	Carry	Adc - max.	1.20
Resistance	Contact, Initial Insulation	Ω - max. Ω - min.	0.100 10^{10}
Capacitance	Contact	pF - typ.	0.2
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.
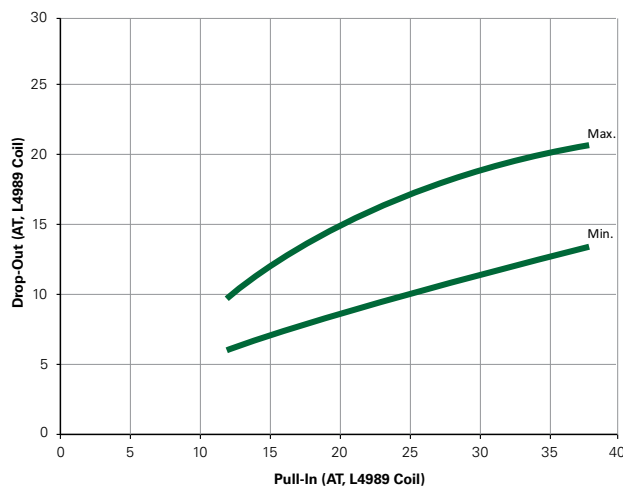
MDCG-4 15.24mm Sub-miniature Reed Switch

Product Characteristics

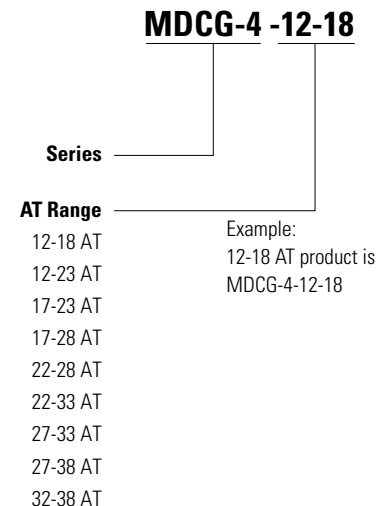| Operating Characteristics		
Operate Time [1]		0.6ms - max.
Release Time [1]		0.2ms - max.
Shock [2]	11ms 1⁄2 sine wave	100G - max.
Vibration [2]	50-2000 Hertz	30G - max.
Resonant Frequency		3.9kHz - typ.
Magnetic Characteristics		
Pull-In Range [3]	Ampere Turns	12-38
Rating Sensitivity [4]	Ampere Turns	20
Test Coil		L4989

Notes:
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

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

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Littelfuse](#):

MDCG-4-12-23 MDCG-4-17-23 MDCG-4-12-18 MDCG-4-27-33 MDCG-4-22-28 MDCG-4-27-38 MDCG-4-17-28 MDCG-4-32-38 MDCG-4-22-33