

1MT172

Micro-Miniature Piston Actuator



The 1MT172 Micro-Miniature Piston Actuator is a pyrotechnic-actuated device that delivers linear force.

Extremely small and lightweight, it is ideal for high-volume applications such as submunitions. Its co-axial design facilitates automatic insertion into the next assembly.

Variations

Actuator modifications can be made to meet customer requirements. The electrode can be nickel or gold plated, or altered in shape. Quantity and/or type of pyrotechnic charge can be changed to alter output force characteristics.

Characteristics

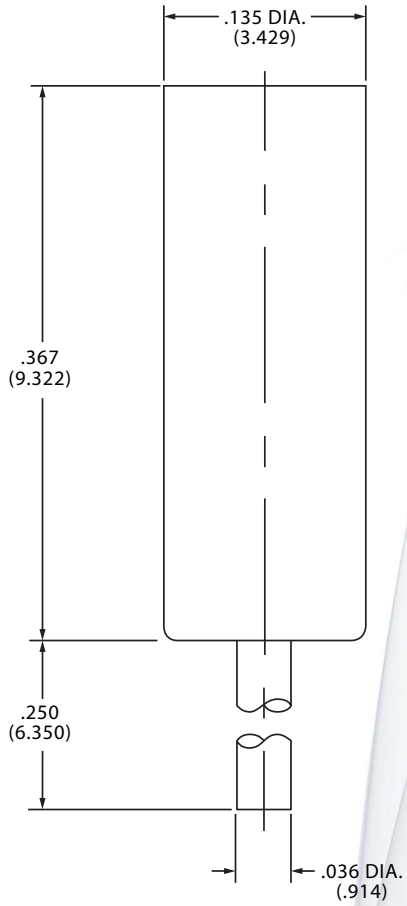
Some of the characteristics listed here are nominal; others are levels to which the units have been tested. There are no limits on design capabilities. Please consult an EaglePicher representative before using this data as a specification.

Specifications	
Electrical	
Bridge Resistance @ 70°F (21°C)	4.0 - 9.5 ohm
All-Fire Energies @ -65°F (-54°C)	Capacitor discharge: 1.6 V, 100 microfarad (1280 erg)
	Constant current: 0.15 amp, 10 ms
No-Fire Current @ 160°F (71°C)	0.010 amp, 10 sec

Specifications Continued	
Mechanical	
Size	See drawing
Weight	0.40 gm
Stroke	0.150" (3.81 mm) Max.
Load	Will shear a 0.050" (1.27 mm) diameter 6061-T6 aluminum pin*
Function Time	Ignites in less than 1.0 ms. Function time will be slightly longer depending on load
Environmental	
Temperature	Operating Range: -65° to +160°F (-54° to +71°C)
Shock	13,000 g's Min. peak, 1/2 sine wave for 1ms, measured at 10% of peak amplitude
Vibration	MIL-STD-202C, Method 204A, Test Condition C, Modified as follows: 0.08" (2.03 mm) d.a. 5 to 10 Hz, 0.06" (1.52 mm) d.a. 10 to 55 Hz, 10 g's 55 to 500 Hz
Chemical	
Ignition Compound	Barium Styphnate, KDNBF
Freight Classification	
Shipping Name	Release Devices, Explosive
Identification Number	UN0173
Hazard Classification	1.4S

* Output force is 50-300lbs

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DIMENSIONS ARE NOMINAL
DIMENSIONS IN PARENTHESIS () ARE IN MM.



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