

# 1MT11 Miniature Piston Actuator

The 1MT11 Miniature Piston Actuator is a pyrotechnic-actuated device that produces linear motion



*Its compact size, light weight, high reliability and environmental resistance make it ideal for aerospace applications. This actuator is available with a variety of bridges with different firing characteristics.*

## Variations

Modifications in stroke length, force, shape of piston, type of action and environmental resistance can be made to meet specific requirements.

## 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

Insulation Resistance, Shunted Leads to Case

Before firing: 50 megohm Min. @ 500 Vdc

Squib Type	Bridge Resistance* @70°F (21°C) Ohm	All-Fire Current @ -65°F (-54°C) 10 ms Amp, Min.	No-Fire Current @ 160°F (71°C) 5 min Amp, Min.
A	6.0 ± 1.0	0.30	0.03
B	4.0 ± 1.0	0.55	0.10
C	1.8 ± 0.2	1.00	0.10
F	0.33 ± 0.04	4.50	1.00
T	0.70 ± 0.10	2 Amp (15 ms)	0.5

\*Test current limited to 0.010 amp

# 1MT11

## Specifications Continued

Mechanical	
Size	See drawing
Weight	1.0 gm
Stroke	1/8" (3.175 mm)
Load	10 lb (44N)
Function Time*	10 ms
*See Firing Characteristics of Pyrotechnic-Actuated Devices for effect of current on ignition time.	
Environmental	
Temperature	Operating range: -65°F to +160°F (-54°C to +71°C)
Cycling	MIL-STD-202A, Method 107
Storage	Functions normally after 2 hr at -65°F (-54°C) or +160°F (+71°C)
Humidity	Functions normally after 8 hr at 110°F (43°C) and 95% relative humidity.
Shock	(1) 1/2 sine wave pulse of 400 g's for 1.5 ms in each of 3 mutually perpendicular planes.  (2) 1/2 sine wave pulse of 100 g's for 11 ms in each of 3 mutually perpendicular planes.

## Specifications Continued

Environmental cont.	
Vibration	Transportation and sinusoidal vibration of 5-2000-5 Hz at 30 g's or .34" (8.64 mm) d.a. for 15 min per cycle, 4 cycles per plane and 3 mutually perpendicular planes.
Acceleration	30 g's for 1 min in each of 3 mutually perpendicular planes.
Chemical	
Ignition Compound	KDNBF or LMNR/KCLO <sub>3</sub>
Freight Classification	
Shipping Name	Release Devices, Explosive
Identification Number	UN0173
Hazard Classification	1.4S



FOR 1MT11, BODY LENGTH IS .530 INCH (13.462) AND STROKE LENGTH IS .125 INCH (3.175)

DIMENSIONS IN ( ) ARE IN MM



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