

# SMA ACTUATOR

ALMATECH's bi-stable Actuator based on smart material and sustaining high deformation at high temperature, offers high reliable push-pull action for release systems.

## Benefits

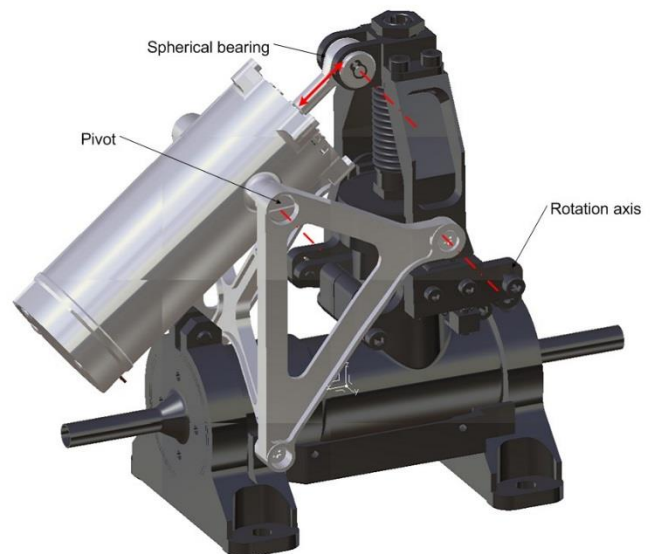
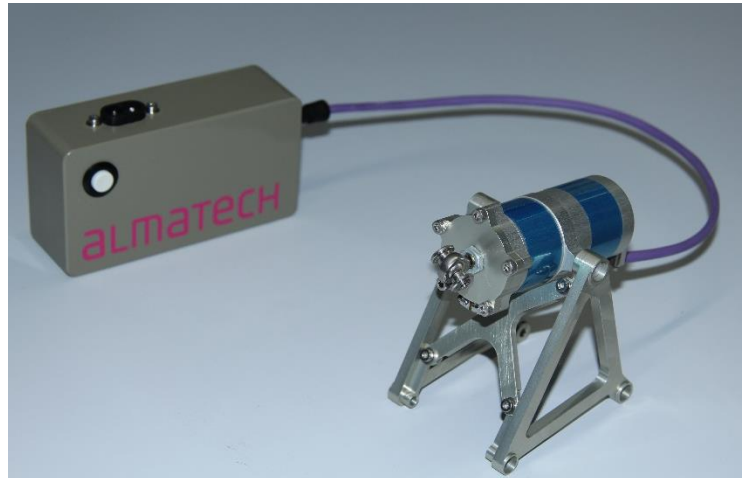
- High activation temperature
- Long
- Bistable
- High reliable push-pull action
- Highly customizable design
- Light and compact

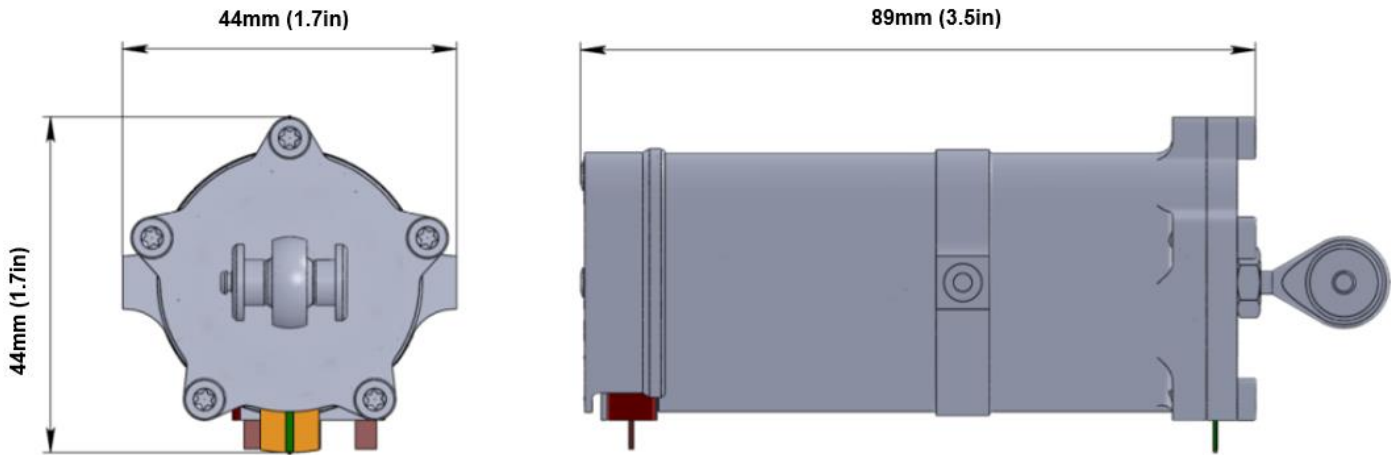
## Key Features

- More than 1000 cycles
- Actuation above 120°C
- Electrically resettable
- Space compliant materials

## Application

- Pin pullers
- Latching/unlatching devices
- Solar array deployment
- Payload release
- Hdrm (hold-down release mechanism)





## Technical Data

Characteristics	Value
Mass :	118 grams
Overall Dimensions	44mm x 44mm x 89mm (1.7in x 1.7in x 3.5in)
Min tested lifetime ( <i>halted &amp; fully functional</i> ):	1055*
Tested SMA wire lifetime:	> 7657 cycles*
Power Consumption:	49.8 W (27.8V, 1.79A)
Verified output force:	96N**
Latching position:	1.5 mm
Maximal stroke:	2.5 mm
Push duration (SMA heating in air):	6.5± 0.4 s
Pull duration (SMA cooling in air):	11.9±5.4 s
Max environmental op. temperature:	120°C
tested launch vibration load:	28.3g <sub>RMS</sub>

*\*Specific program required 1000 cycles. This can be further extended, in particular considering industrial batch SMA wire production currently available.*

*\*\*Test load was adapted to the quality of the wire samples specially produced. Industrial quality level CuAlX wires are commercially available and allow to meet the design load up to 175N*