

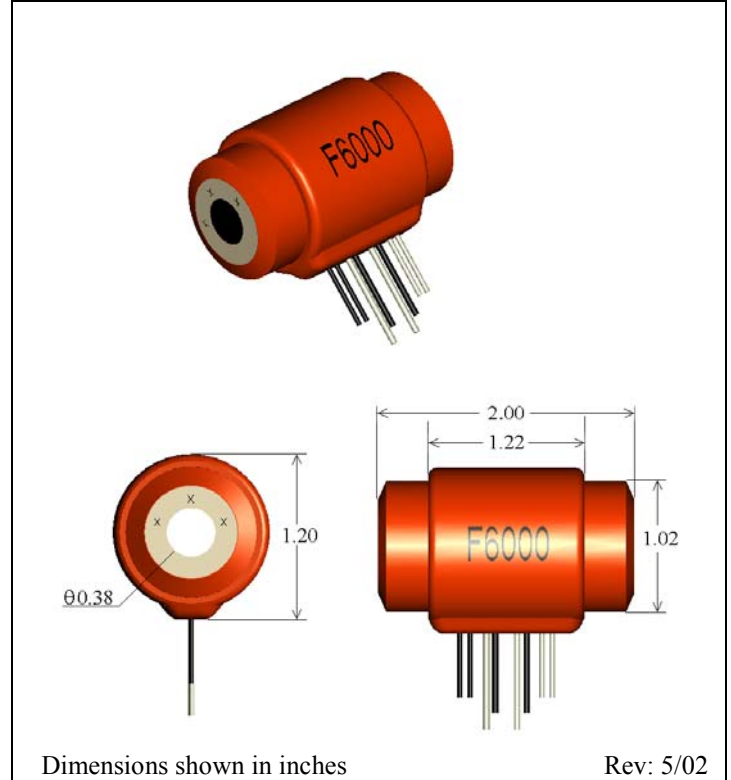


Innovative Mechanism Solutions

# Frangibolt<sup>®</sup> Actuator (Model FC6-32-7SR2)

The FC6 size Frangibolt Actuator was originally designed for deployment of the solar panels aboard the Coriolis spacecraft built by Spectrum Astro. It is designed to operate with a NAS 3/8" size bolt or stud<sup>1</sup>. The 10,000 lbf breaking strength of the Fastener is suitable for applications which require up to 5,000 lbf load holding capability. As with all other Frangibolt actuators, the FC6-32-7SR2 is designed to have a high fatigue life and is easily reset using TiNi's portable compression tool FBT-CT3. Temperature sensors in the form of thermocouples or RTDs (Resistive Temperature Detectors) may be incorporated by adding a TC or RTD to the part number, respectively.

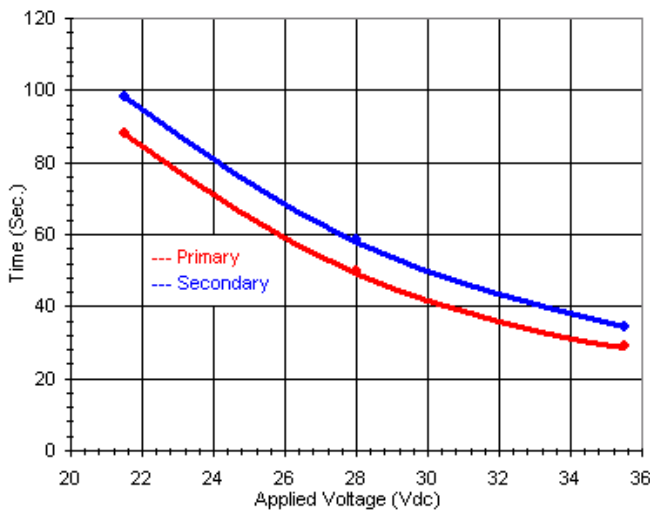
<sup>1</sup> TiNi Aerospace must provide the specially notched Titanium fastener. This is largely application dependent and is readily manufactured to customer specification.



Dimensions shown in inches

Rev: 5/02

## Function Time<sup>2</sup> (@ 23 °C)



## Specifications

Max Load Support & Release	22,000 N (5000 lbf)
Max Joint Length	8.25 cm (3.25 in)
Operational Voltage	22 to 36 Vdc
Minimum Operating Temp.	-65 °C (-85 °F)
Maximum Operating Temp. <sup>2</sup>	+80 °C (176 °F)
Heater Resistance	7.0 Ohms
Mass	100 gm (3.53 oz)
Power Consumption	112 Watts @ 28 Vdc
Life Cycles	60 Cycles Min.
Features:	Redundant Heater Reusable TC or RTD Sensor

<sup>2</sup> Note that the function times shown above are for the higher transition temperature "FC" series Frangibolt Actuators which actuate at roughly 100°C. TiNi Aerospace also manufactures a line of "FB" series Frangibolt actuators which have a lower +75°C actuation temperature and therefore have a ~25% faster function time. Selection between the two should be based on maximum operating temperature.