

## Model 462 Sub-Miniature Force Joysticks

A compact, two axis, force operated, precision fingertip or thumb joystick control which converts the input force of the operator to analog output voltages proportional to applied force and input voltage. This potentiometer based joystick technology was first patented and introduced by Ultra MSI (U.S. Patent No. 3454920). These devices have found hundreds of applications in a number of industries and are in extensive world-wide use today.

Model 462 joystick controls can be used as stand alone devices for customer integration, installed in Ultra MSI Control Grips for a thumb-operated grip control, or integrated into custom input systems and panels per customer requirements.

Their extra-small size and weight make them ideal solutions where precision control is required but larger devices are not practical.



**Model 462**

### Applications:

- Computer Graphics/Cursor Control
- Mapping
- Robotics
- Medical Surgery/Cursor
- Security Cameras, Video Cameras
- Vehicle Control, Flight Control
- Electric Wheelchair
- Hoists, Cranes, Industrial Processing
- X-Y Inspection Table

### Options:

- Knobs – A variety of knobs are available including Concave Thumb, Coolie Hat Thumb and Fingertip Handles.
- Boot Seals
- No voltage fold back
- Single Axis
- Dual Redundant
- High Force



### Features:

- A high integrity, precision control device
- Force operated – easy and natural to operate
- High resolution linear output
- Extremely small size/low weight
- Continuous resolution
- No moving parts – high reliability
- Sealed (or capable of sealing) to IP67

### Technical Info:

- Diameter: .375" Below Panel
- Depth: .50" Below Panel
- Overall Length: 1.10" Without Knob
- Mounting: Bushing Type
- Input Voltage: +5 VDC
- Resolution: Infinite
- Linearity: +5% of Full Scale Output
- Sensitivity: .55 Volts/lb+-20%
- Operating Force: 0 to 2 lbs (Mechanical Stop).
- Null Hysteresis: 0.7% of Full Scale Max
- Operating Temp: 0C to +50C
- Storage Temp: -55C to +85C
- Vibration: 10g's Peak, 10 to 500 Hz
- Reliability: 100,000 Hrs MTBF Continuous Use
- Shock: 15G's, 11mSec, Half Sine

Refer to Options Matrix for more options

