Ultra Electronics
Measurement Systems Inc

Model 469 Miniature Force Joysticks

The Model 469 offers a 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 technology was first patented and introduced by Ultra MSI (U.S. Patent No. 3454920). These devices have been utilized in hundreds of applications in a variety of industries and are in extensive world-wide use today.

The Model 469 precision joystick control is available as a stand alone device for customer integration, can be an installed in Ultra MSI Control Grips for a thumb-operated grip control or integrated into custom input systems and panels per customer requirements.

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

Model 469

Applications:

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

Technical Info:

- Diameter: .655" Below Panel
- Depth: 1.21" Below Panel
- Overall Length: 1.66" Without Knob
- Mounting: Bushing, Servo, or Grip Type
- Input Voltage: +-6 VDC
- Resolution: Infinite, No Dead Zone
- Linearity: +-2% of Full Scale Output
- Sensitivity: .45 Volts/lb+-20%
- Operating Force: 0 to 3.1 lbs (Mechanical Stop).
- Null Hysteresis: 0.5% of Full Scale Max
- Operating Temp: -55C to +71C
- Storage Temp: -62C to +85C
- Vibration: 10g's Peak, 55 to 2000 Hz
- Reliability: 200,000 Hrs MTBF Continuous Use
- Shock: 30g's, 11mSec, Half Sine

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
- Capable of sealing to NBC Military requirements (Hermetically Sealed)

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

Refer to Options Matrix for more options

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