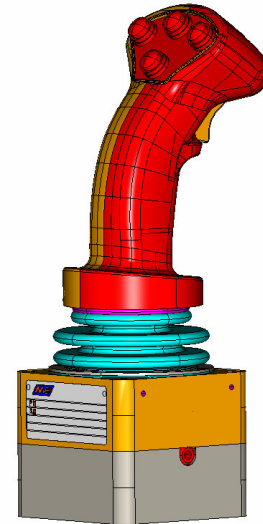


## Model 502C Hall Effect Hand Controller

A two axis non-contacting, displacement, precision, hand operated control with grip, the Model 502C utilizes Ultra MSI's patented Hall effect technology.

Providing high performance and high reliability results at a low cost, this technology has revolutionized the HMI (Human Machine Interface) industry.

First patented and introduced by Ultra MSI in 1998 (U.S. Patent No. 5850142), these devices offer many benefits over traditional potentiometer and inductive joystick designs.



**Model 502C**

### Applications:

- Robotics, Hydraulic Controls
- Construction Equipment
- Forklifts, Conveyor Systems
- Video Arcades
- Medical Surgery/Cursor
- Security Cameras, Video Cameras
- Vehicle Control, Flight Control
- Remote Operated Vehicle (ROV) Control
- Electric Wheelchairs
- Hoists, Cranes, Industrial Processing
- X-Y Inspection Table, Scientific Instrumentation

### Technical Info:

- Mounting Hole Configuration: (4) @ 2.85"
- Overall Width: 3.50"
- Depth Below Panel: 2.807"
- Height Above Panel: 7.50"
- Joystick Deflection: 28 deg in all directions
- Breakout Force: 1.75 lbs
- Full Scale Force: 5 lbs @ 26 deg deflection
- Power Requirements: 5.0 VDC @ <10mA
- Null Repeatability: +-1% of tot elect travel
- Operating Temp: -25C to +80C
- Storage Temp: -40C to +85C
- Sealing: IP67 Above Panel; IP55 Below Panel
- Shock: 200gS RMS @ 1mSec
- Vibration: 2gS RMS, 20 Hz to 2,000 Hz
- ESD Immunity: >15KV at Handle and Boot
- Life: 20 Million Cycles

### Features:

- Molded High Impact Glass-filled Nylon Grip
- Ergonomically efficient and proven grip
- (4) Momentary Pushbuttons and (1) Trigger as standard (Custom Switch Plates available)
- 20,000,000 Cycle Reliability Rating for Joystick Transducer
- Achievement of redundancies without adding size, weight and complexity
- Excellent temperature stability
- Programmable for null, sensitivity and temperature
- Low power dissipation
- Linear outputs with uniform force gradients in all directions
- High EMI immunity
- Engineered to meet most stringent environmental requirements
- Can be integrated into a full system
- Cost effective – Molded plastic design

### Options:

- Various Limiter Plate configurations to control travel characteristics
- Custom Switch Plates available – populated with switches suitable to a custom need
- Optional Switches include: Pushbutton, Toggle, 4-way, Slide, Sub-Miniature Joysticks (MSI Model 462)

Refer to Options Matrix for more options

