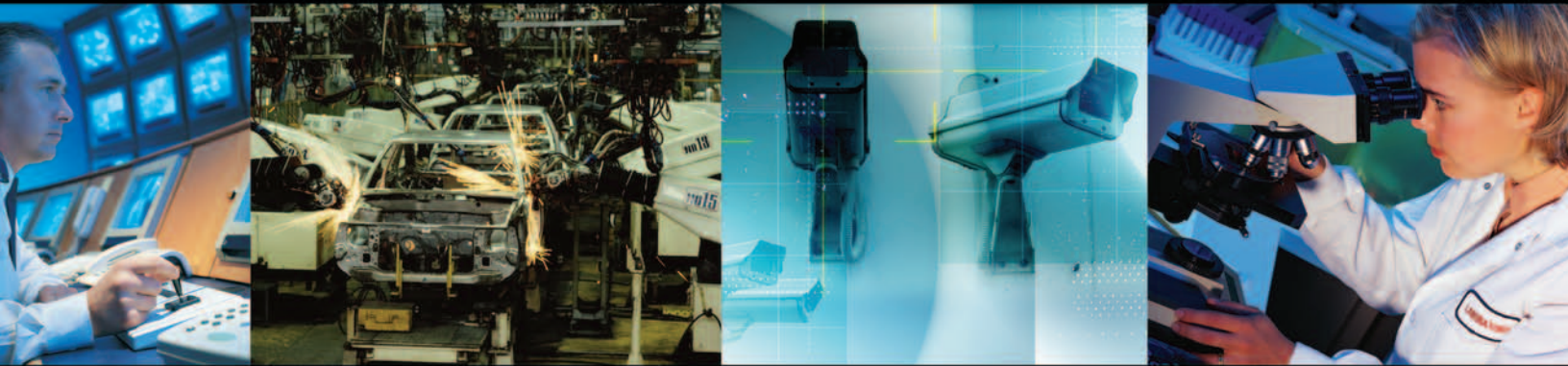


CH Products



Finger Operated HFX Series I

Hall Effect Joysticks



Finger Operated HFX Series I Joysticks

The **HFX Series I** joystick is a contactless, multi-axis controller providing long life fingertip positioning control. A compact, low-profile joystick utilizing non-contact Hall effect technology, the HFX Series I joystick is designed for low operating force, clean environment applications requiring enduring accuracy and precision. Available with several ergonomic handles and in single, dual or triple axis configurations, typical uses include CCTV equipment, robotics, factory automation, electric wheelchairs and medical devices.

Available Models

Model 1100: Two axis

Model 1200: Two axis with buttons

Model 1300: Three axis

Model 1400: Three axis with buttons

Physical Specifications

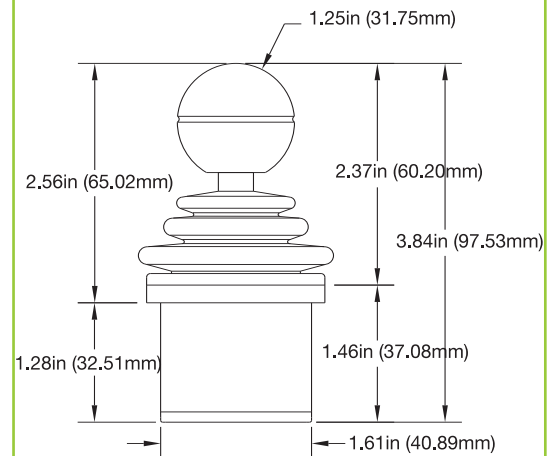
- Joystick travel: 36° (18° from center)
- Centering: Single spring, omnidirectional
- Housing: High impact glass-filled nylon
- Breakout force: .109 Nm
- Operational force: .151 Nm
- Maximum force: .169 Nm
- Operating temperature: -40°C to +85°C
- Life cycles: 3,000,000

Electrical Specifications

- Supply voltage: 5V
- Center voltage: 2.5V
- Supply current: 6mA max/axis
- Output current: 2mA max/axis
- Output tolerance: ± 2%

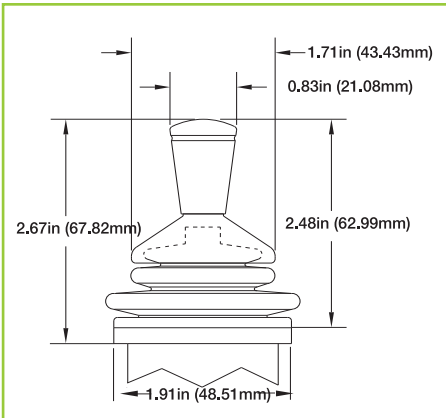
Model 1100

Option 0



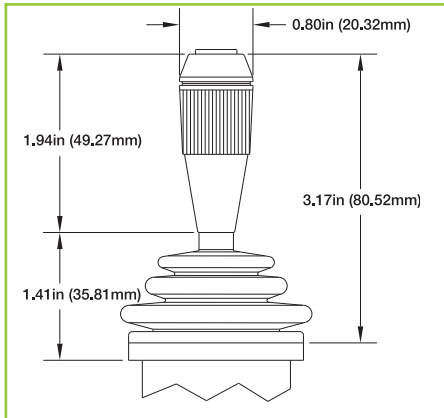
Model I100

Option 1



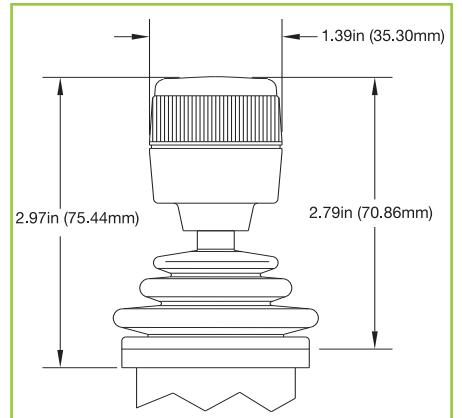
Model I200

Option 2



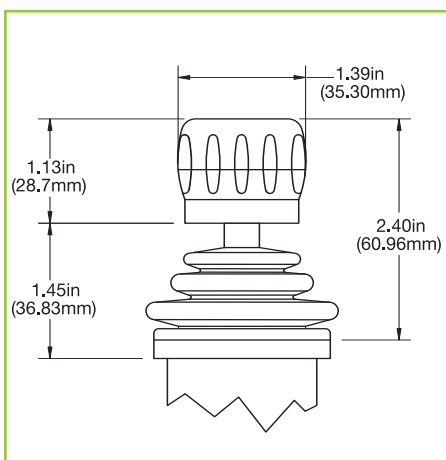
Model I300

Option 3



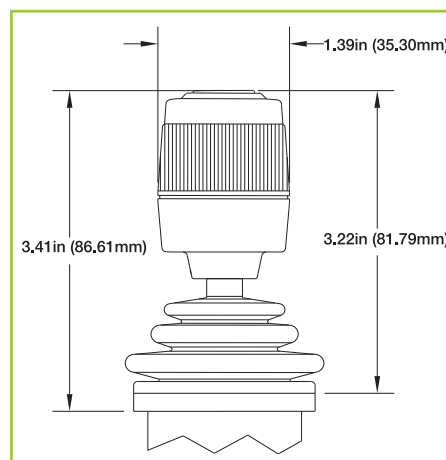
Model I300

Option 6



Model I400

Options 4 & 5



Configuration Options

Sensor Output Options

- 0V to 5.0V
- 0.25V to 4.75V

Optional Features

USB

Universal Serial Bus provides USB 1.1 interface. No driver is needed.

Analog Deadband

Assures return to center voltage.

Center Detect/Fault Detect

Produces an electrical HI signal when stick is moved off center and produces an electrical LO signal if the sensor output voltage deviates from range (<0.5V or >4.5V).

Dual Decode

Provides center detect function and monitors dual sensors. If the sum and the difference of the sensor outputs vary by more than 9%, the circuit becomes electrically LO. Requires dual sensors.

Joyball

Cursor emulation available with USB or Sun.

Voltage Regulator

Used when input or output voltage is greater than 5V or when bipolar output is required. Contact factory for available configurations.

Centering Plate

Increases mechanical return to center and repeatability.

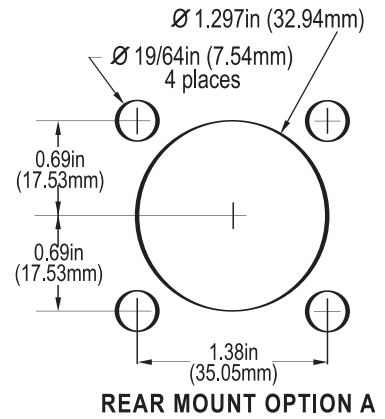
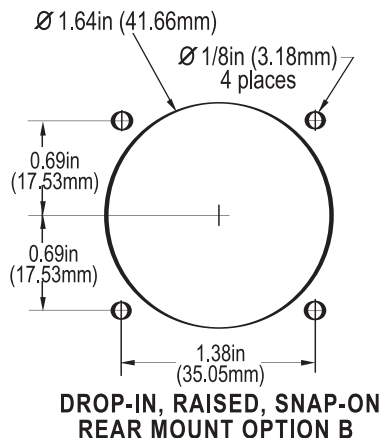
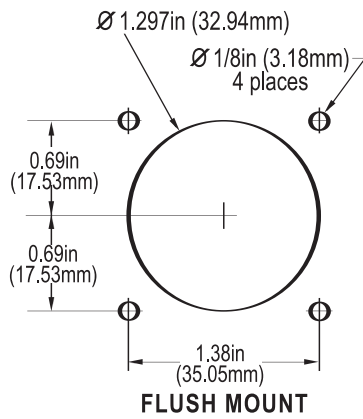
Friction Clutch

The joystick does not mechanically return to center, maintains present position.

Desktop Housing

Visit www.chproducts.com for available configurations.

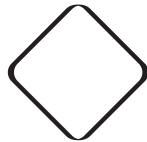
Panel Cutout Dimensions



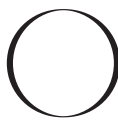
Limiter Plate Options



SQUARE



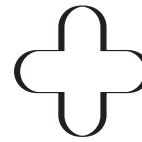
DIAMOND



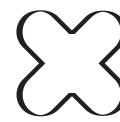
ROUND



SLOTTED (X OR Y AXIS)

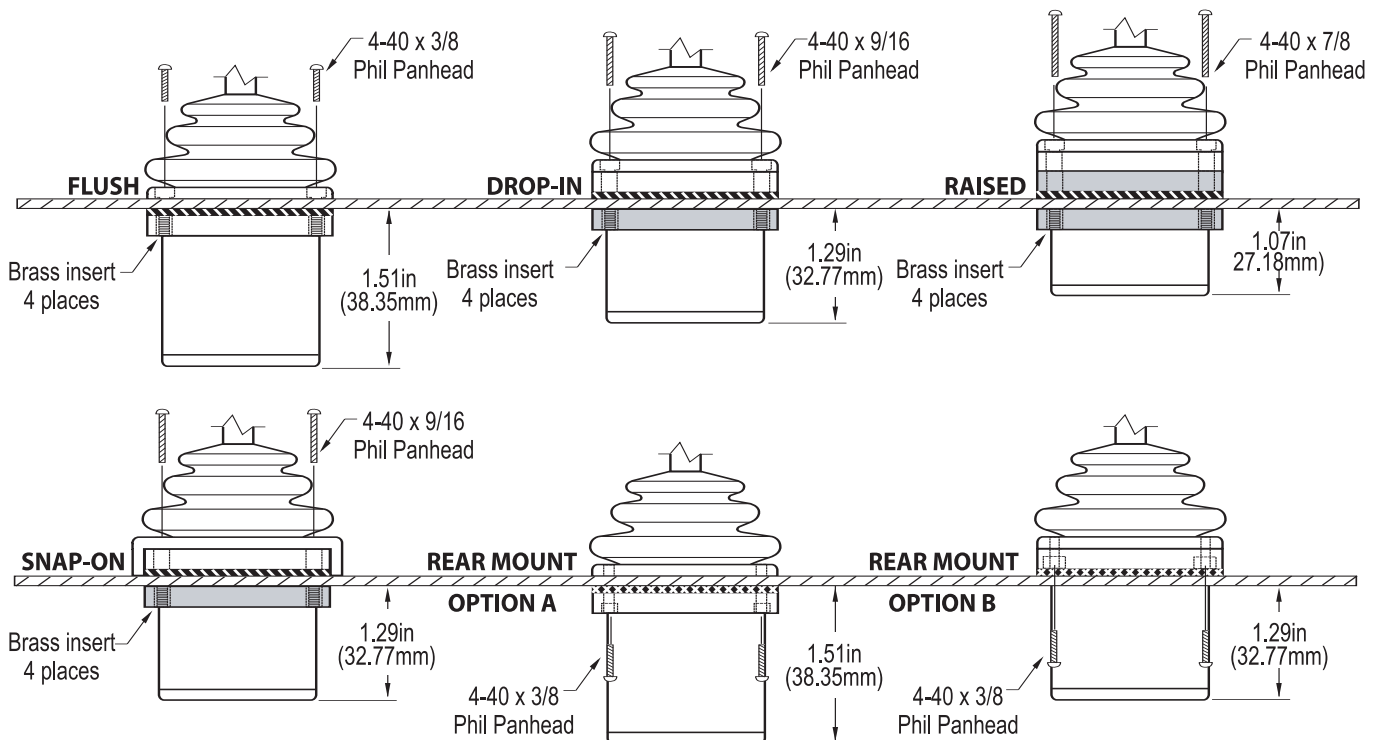


PLUS



CROSS

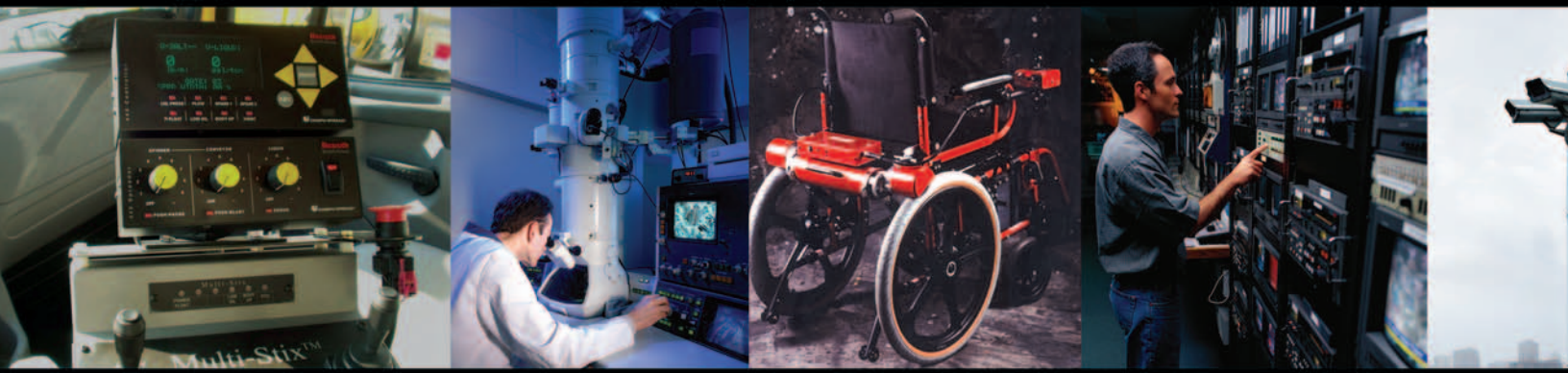
Mounting Options



	- Panel
	- 6mm spacer (0.24in)
	- Standard gasket
	- Rear mount gasket

Notes - The panel thickness can be 0.046in to 0.125in (1.17mm to 3.17mm), except for the Rear Mount Option A, where the maximum panel thickness is 0.063in (1.6mm).
 - A panel thickness of 1/16" (0.063in, 1.6mm) was considered for all the below-panel depth values.
 - The below-panel depth is extended by 0.40in (10.15mm) with the USB option.

CH Products



Finger Operated HFX Series I Hall Effect Joysticks

Typical Applications

CCTV Camera Control
Remote Control
Robotic Systems
Factory Automation
Simple Machine Control
Automated Conveyor Systems
Medical Devices

Optical Devices
Targeting Systems
Electric Wheelchairs
Military Robotics
Unmanned Vehicle Control
Electron Microscopes



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