



HE2 Series

IP sealed, robust hall effect fingertip joystick



HE2 Series Finger joystick



Features

- Delivery within 2 weeks
- Suitable for harsh environments (all configurations are IP67 sealed)
- Robust stainless steel shaft and brass X/Y mechanism
- Elastomer overlay handle provides a soft touch feel with optionally integrated switches
- With contactless hall effect sensor technology
- Pre-programmed proportional analog output or USB
- Available in 1, 2 or 3 axis configurations
- Cable included with mating connector & pigtail wires

Applications

- Marine and offshore control
- Mobile hydraulics
- Chest controllers
- Industrial vehicles
- Robot operations
- Crane operations

Description

This is the rugged version of the HE1 finger-operated joystick, available in 1, 2 or 3 axis models. It is developed specifically for harsh environments and all configurations are tested for minimum IP67 grade. The HE2 mechanism is constructed from a robust stainless steel shaft on a brass gimbal, this enables the joystick to withstand very large input forces. Further protection from the elements is achieved by sealing all above panel parts, allowing the HE2 to resist all ingress of dust and submersion in 1m of water.

This model is ideal for marine and offshore applications, chest packs, and other industrial applications that require a reliable high precision joystick that can resist the elements. The electrical output options are similar to the HE1, including analog voltage, USB HID 1.1 and cursor control. All necessary mounting hardware and electrical cables are always included in the package.

Specification

MECHANICAL (X & Y AXIS)	
Angle Of Movement	40° (20° Each Direction)
Expected Cycle Life	5 Million
Centering	Spring Return
Max. Applied Force	667 N (150 lbf)
Material	Glass / Mineral Filled Nylon
MECHANICAL (Z AXIS)	
Angle	90° (45° Each Direction)
Centering	Spring Return
Max. Applied Torque	1,58 Nm (14 lbfIn)

Specification

ELECTRICAL

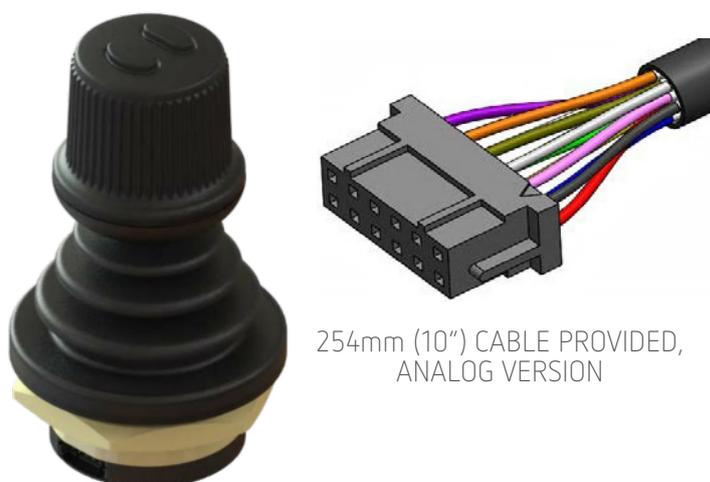
Sensor Type	Hall Effect
Resolution	12 Bit
Supply Voltage	5VDC \pm 0.01VDC
Output Voltage	See Options
Return To Center Voltage	\pm 50MV
Overvoltage Max.	20VDC
Reverse Polarity Max.	-25VDC

ENVIRONMENTAL

Operating Temperature	-40°C to 85°C (-40°F to 185°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
IP Sealing Above Panel	IP67 Standard
Emc Immunity Level	EN61000-4-3 *Compliance To 30A/m
Emc Emissions Level	EN61000-6-3
Esd Immunity Level	EN61000-4-2 *Compliance To \pm 15kV/ \pm 8kV
Vibration Testing	Per SAE J1455 Section 4.9 & MIL-STD810G 514.6
Mechanical Shock	Per SAE J1455 Section 4.10 & MIL-STD-202G

HIROSE DF11-12DP-2DS(24) CONNECTOR (ANALOG)

PIN #	WIRE COLOR	DESCRIPTION
1	Black	Ground
2	Red	Power (+5v)
3	Pink	n/a
4	Blue	X Axis Sensor
5	Grey	n/a
6	Yellow	Y Axis Sensor
7	Brown	n/a
8	Green	Z Axis Sensor
9	Orange	Button 1
10	White	Button Common
11	Violet	Button 2
12	n/a	n/a



254mm (10") CABLE PROVIDED,
ANALOG VERSION

*Extended Testing Levels

HE2 electrical specifications (usb version)

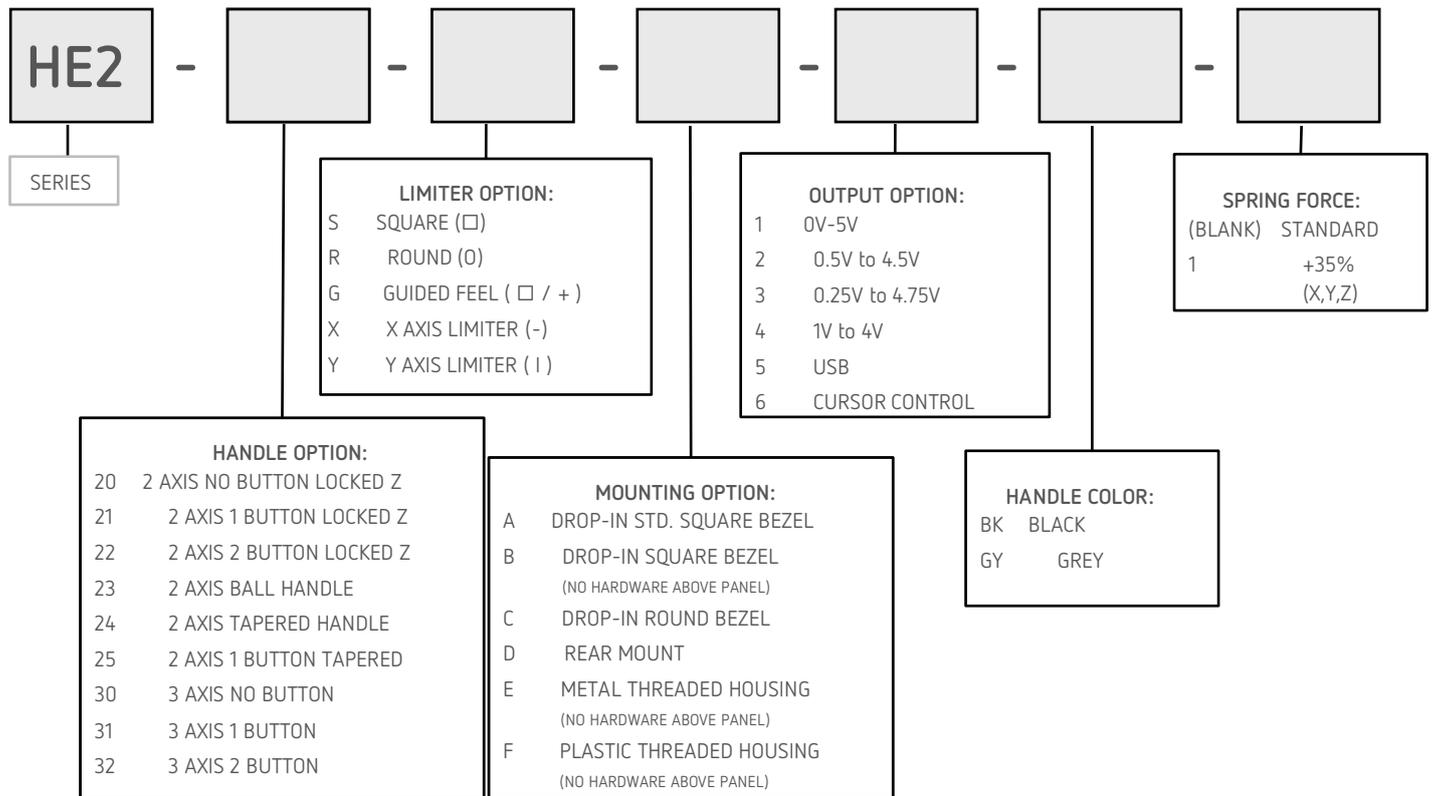
Resolution	10 bit
Supply voltage	5VDC via USB CABLE
System support	windows (all), osx, linux
Supported protocols	USB HID 1.1 game controller, standard Direct X HID drivers, joystick: 2 or 3 HID axes, pushbuttons: up to 2 HID Button
Cable	USB MALE TYPE A to RIGHT ANGLE MINI B 152cm (60") length (mini b to joystick)

Cursor control output option

The Cursor Control output option converts the analog joystick output into a USB cursor control device. This is achieved by the joystick's micro-processor converting the absolute position of the joystick into a cursor velocity or mouse position.

Cable	USB MALE TYPE A to RIGHT ANGLE MINI B 152cm (60") length (mini b to joystick)
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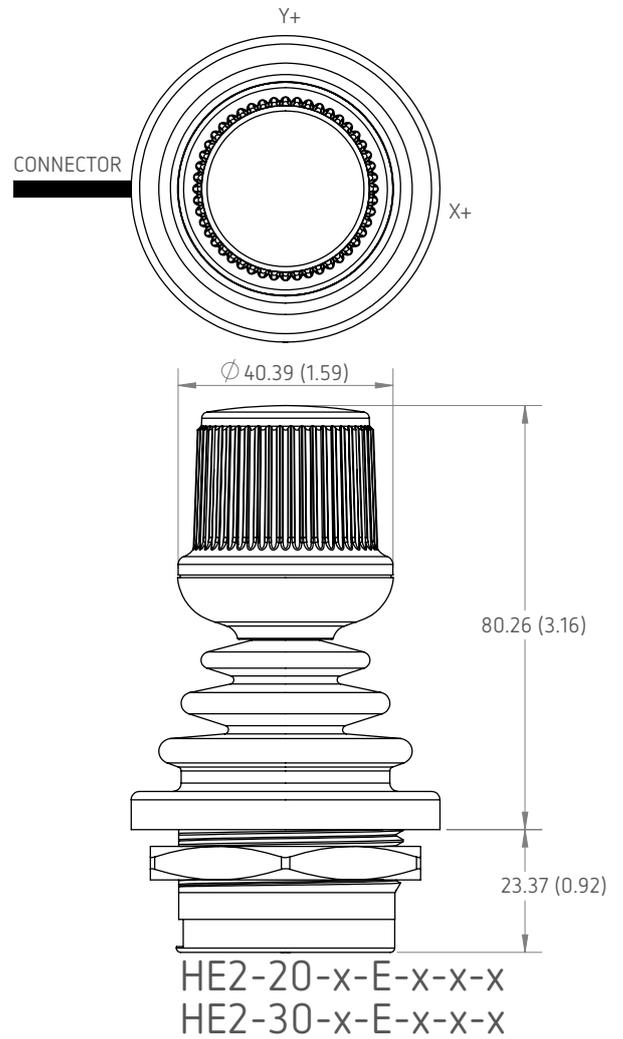
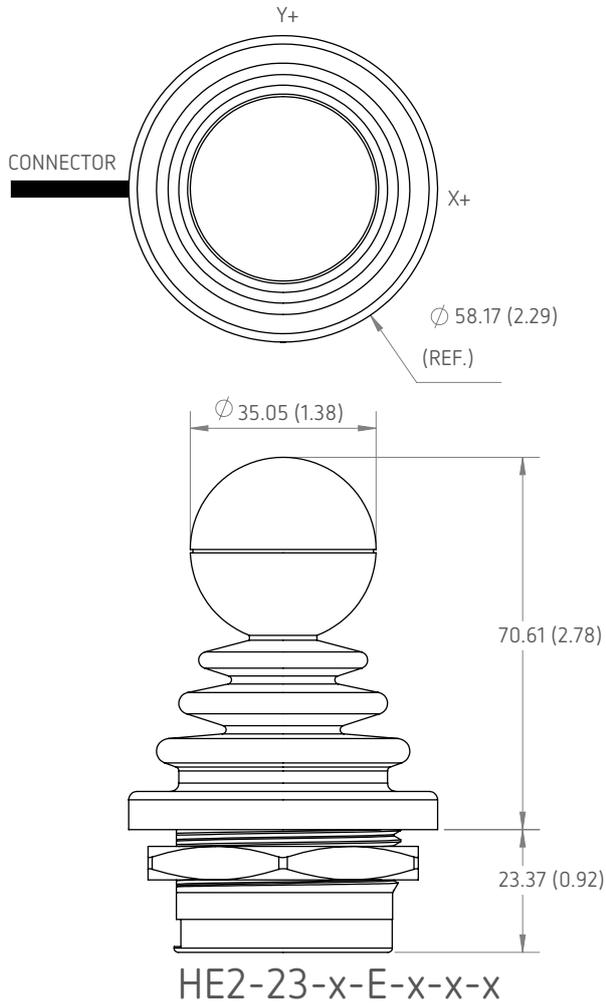
■ Product Configuration Guide



Handle Options

All handle options shown with metal threaded housing mounting option "e"

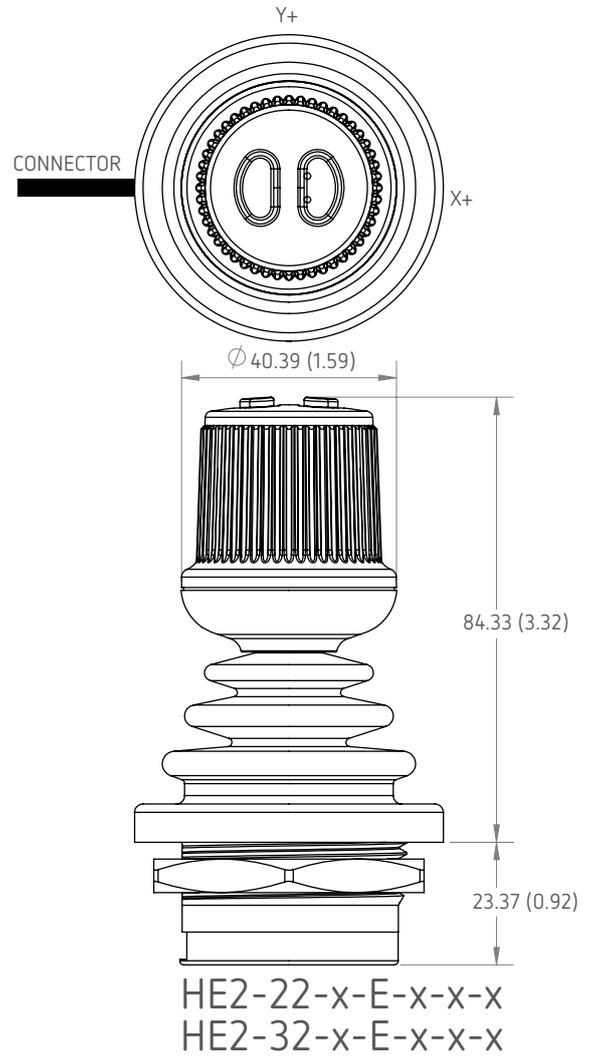
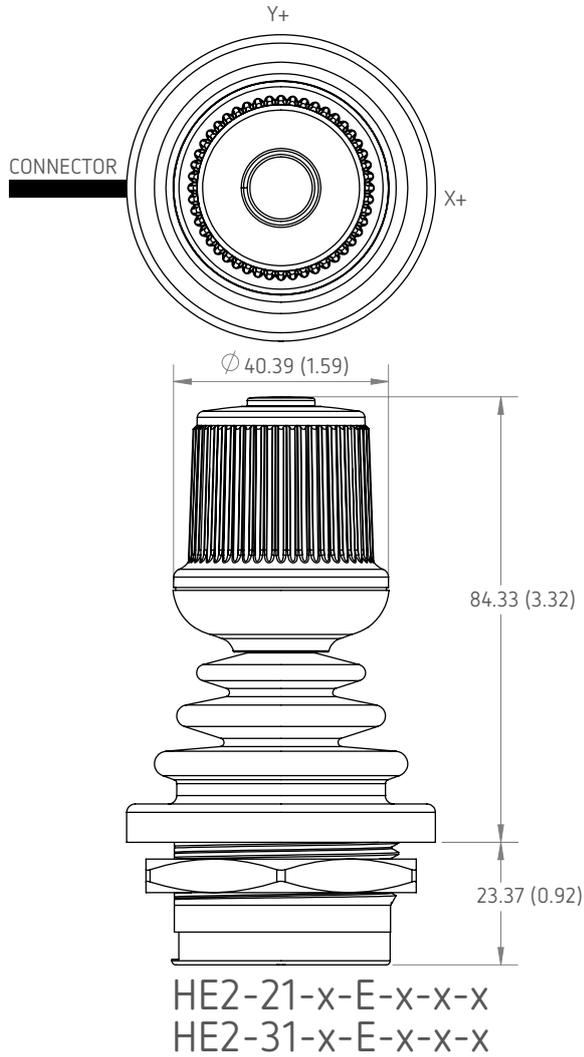
Dimensions in millimeters (inches).



Handle Options:

All handle options shown with metal threaded housing mounting option "e".

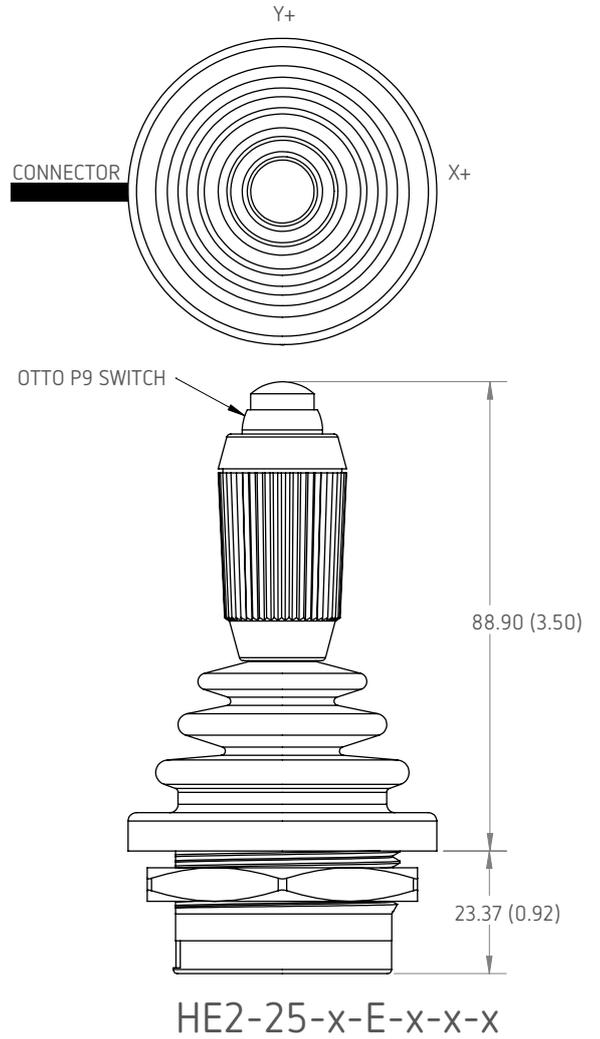
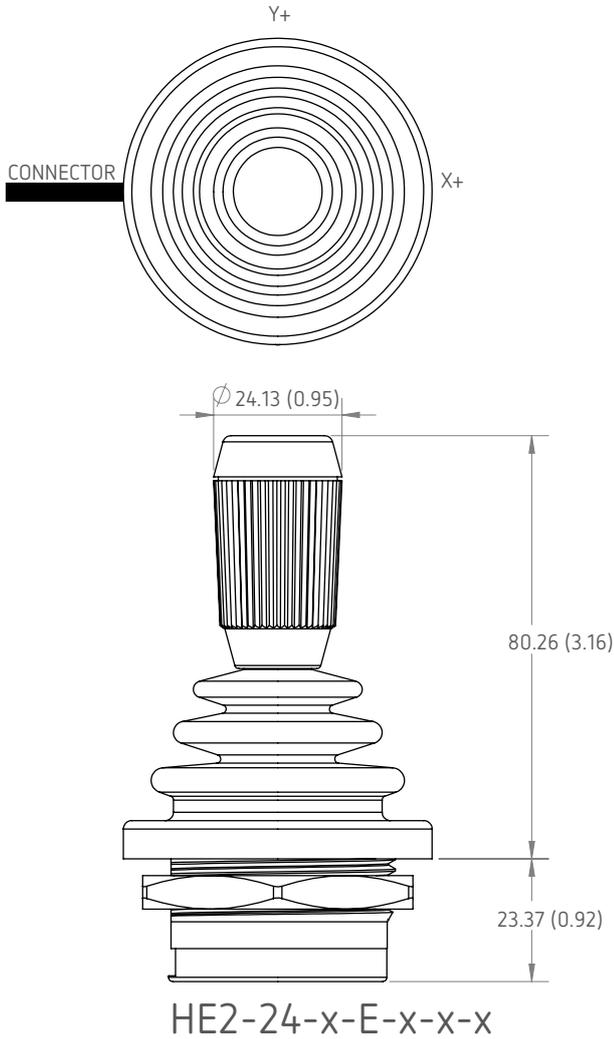
Dimensions in millimeters (inches).



■ **Handle Options:**

All handle options shown with metal threaded housing mounting option "e"

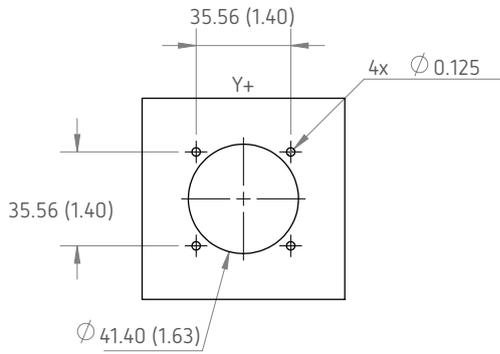
Dimensions in millimeters (inches).



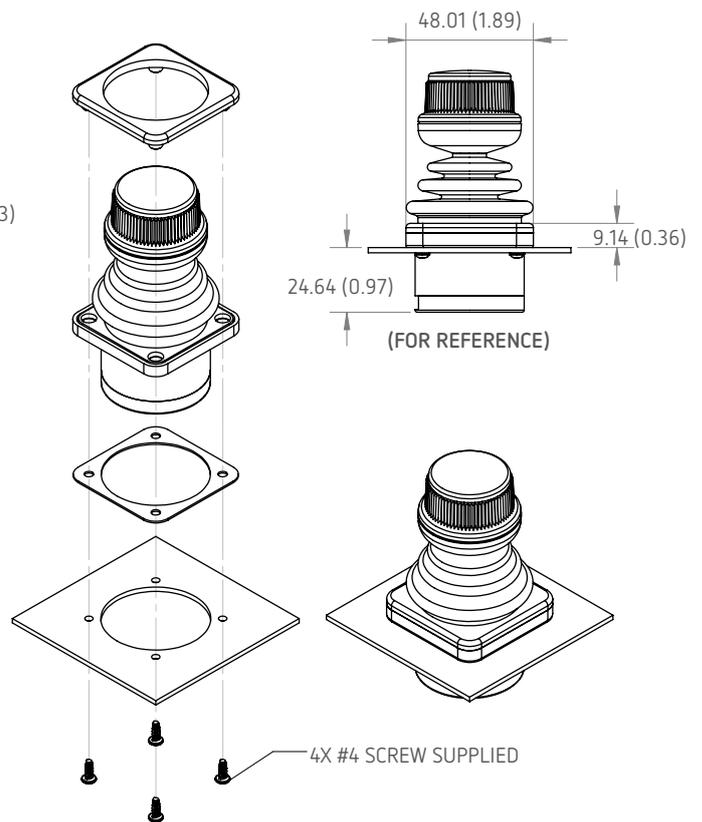
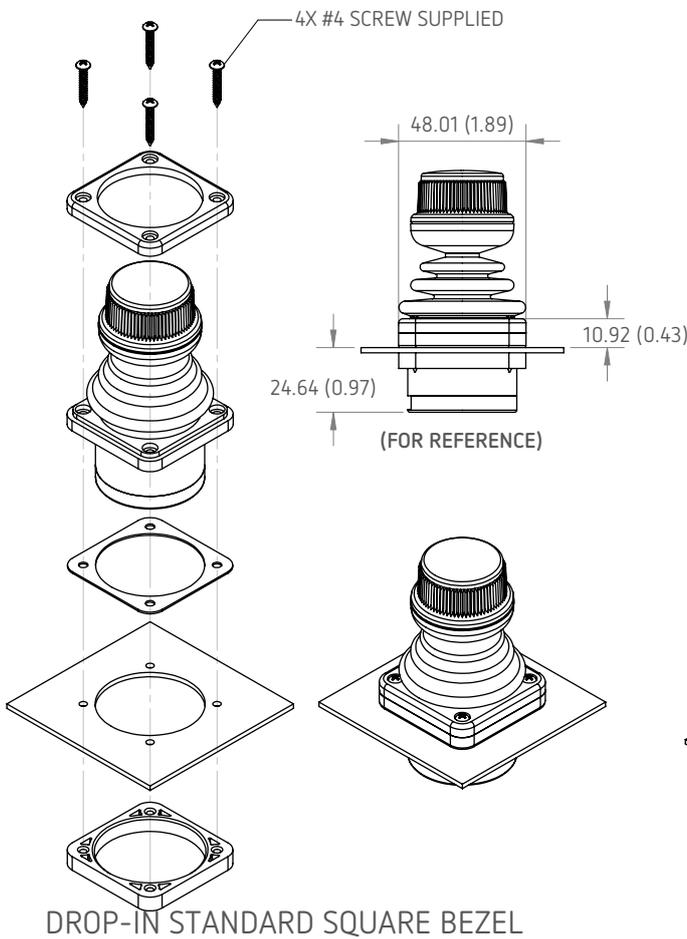
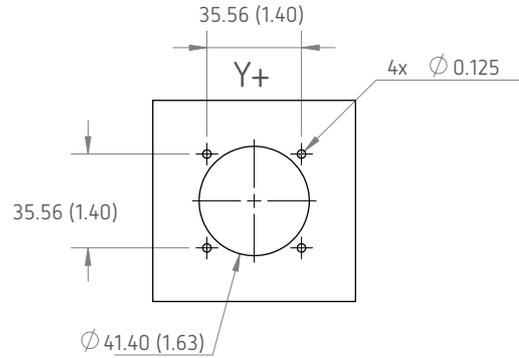
Mounting Options

Dimensions in millimeters (inches).

DROP-IN SQUARE PANEL DIMENSIONS



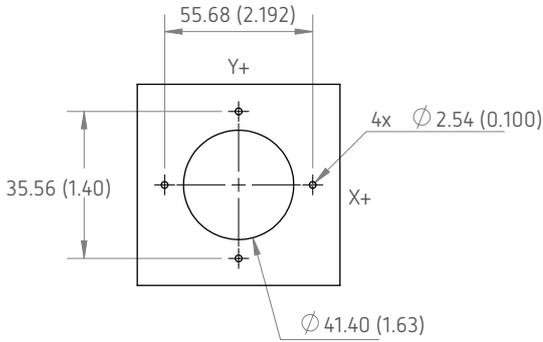
**DROP-IN SQUARE PANEL DIMENSIONS
(UNDER PANEL SCREWS)**



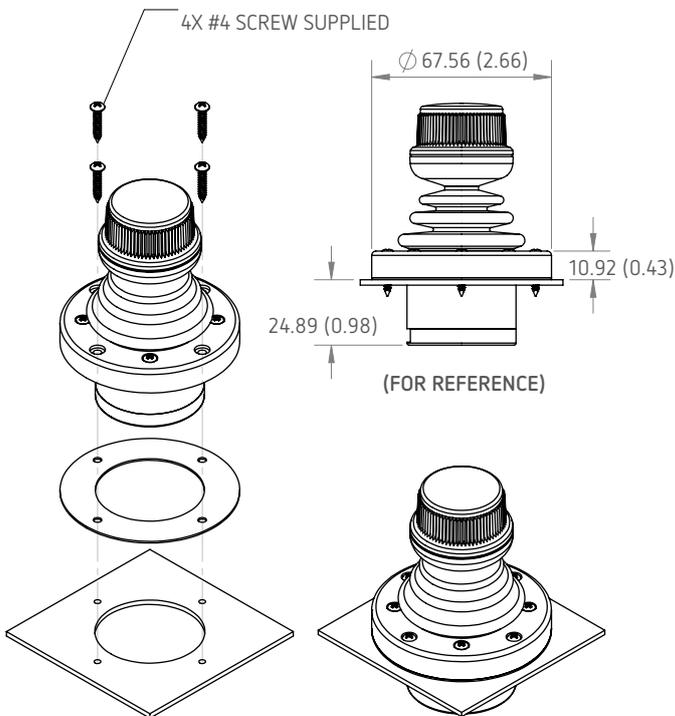
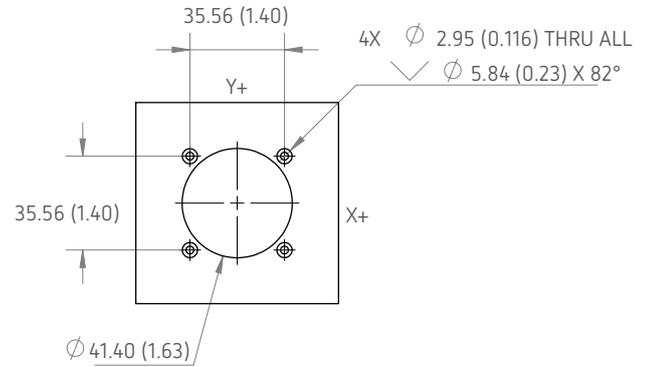
Mounting Options

Dimensions in millimeters (inches).

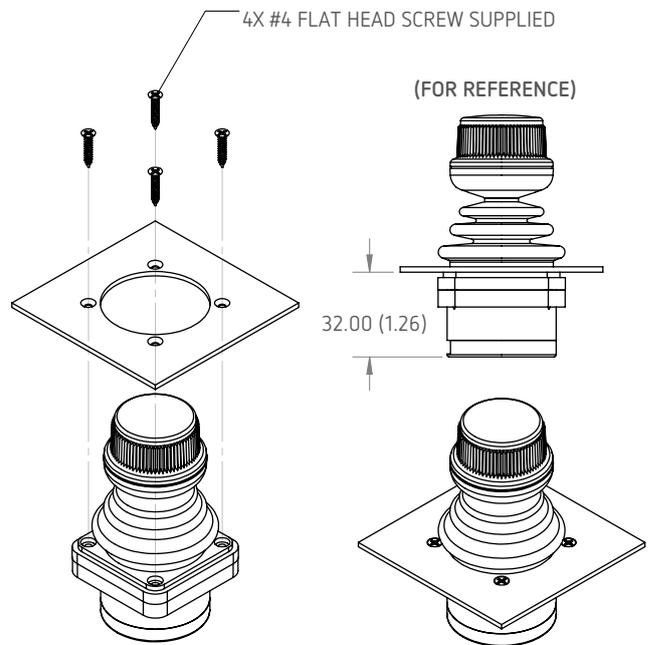
DROP-IN ROUND PANEL DIMENSIONS



REAR MOUNT PANEL DIMENSIONS



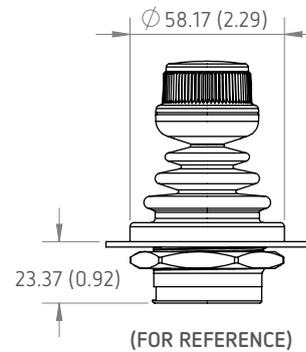
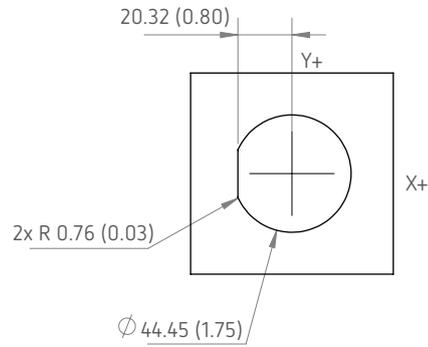
DROP-IN ROUND BEZEL



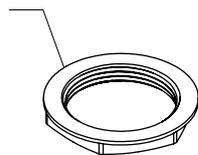
REAR MOUNT

Mounting Options
Dimensions in millimeters (inches).

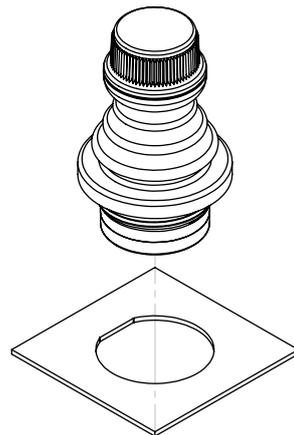
METAL OR PLASTIC THREADED HOUSING PANEL DIMENSIONS



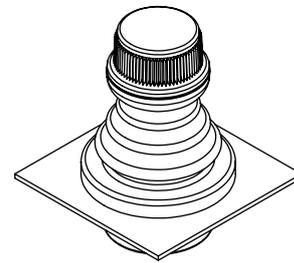
PLASTIC NUT SUPPLIED



PLASTIC
THREADED
HOUSING



METAL
THREADED
HOUSING



ALUMINUM NUT SUPPLIED