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Hall Effect Standard Joysticks Model 1100

Option 0 Model 1100 (2 axis)

[Option 0 Model 1100 Drawing](#)



Option 1 Model 1100 (2 axis)

[Option 1 Model 1100 Drawing](#)



STANDARD FEATURES:

- Reliable, non-contacting Hall Effect sensors
- Corrosion resistant stainless steel pivot pins
- Durable rubber boot and sealing gasket
- Industrial quality solid magnets
- Precision centerless ground stainless steel shaft
- Non-binding Teflon™ coated wires

OPTIONAL FEATURES:

- Dual decode
- Center detect
- USB
- Desktop housing
- Environmental: IP57 above panel

PHYSICAL SPECIFICATIONS:

- Joystick travel: 36° (18° from center)
- Centering: single spring, omnidirectional
- Return to center repeatability: ±1%
- Panel thickness: 0.046 to 0.125in. (1.17 to 3.17mm)
- Housing: high impact glass-filled nylon
- Shaft: 0.25 in (6.35mm) diameter, stainless steel
- Handle: thermoset phenolic (model 1100 ball tip)
- Boot and gasket: thermoplastic rubber
- Operation force: X/Y axes = 2.25N nominal
- Breakout force: X/Y axes = 1.25N nominal
- Weight (2 axis w/ball tip handle) = 0.2 lbs (0.091 kg)
- Weight (3 axis w/one button) = 0.215 lbs (0.098kg)
- Operating temperature: -40°C to 85°C
- Storage temperature: -55°C to 165°C
- Flammability rating: 94HB
- Mechanical MTBF: 3,000,000 cycles under normal use

ELECTRICAL SPECIFICATIONS:

- Supply voltage: Vdd = 5V
- Center voltage: 2.5V (±25mV)
- Supply current (2 axis): 4.8mA min to 11.0mA max
- Supply current (3 axis): 7.2mA min to 16.5mA max
- Resolution: Infinite
- Response: 40-80uSec
- Output current: ±2mA
- Output voltage tolerance: ±2%
- Electrical MTBF: 1,000,000 operational (power on) hours

CH Products
 970 Park Center Dr.
 Vista, CA 92081
 Tele 760-598-2518
 Tele (USA Only)
 FAX 760-598-2524



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HFX Standard Joysticks Part Number Configuration & Availability Guide

Description	Key	Feature	Feature Availability			
Model	HFX-1	Mod. 1100, 2 axis	1100			
	HFX-2	Mod. 1200, 2 axis with pushbutton		1200		
	HFX-3	Mod. 1300, 3 axis			1300	
	HFX-4	Mod. 1400, 3 axis with pushbutton(s)				1400
Joystick Handle	0	Ball Tip	X			
	1	Tapered (see note 2)	X			
	2	2 axis with pushbutton		X		
	3	3 axis			X	
	4	3 axis with 1 pushbutton				X
	5	3 axis with 2 pushbuttons				X
	6	Low profile			X	
Limiter Plate	S	Square	X	X	X	X
	D	Diamond	X	X	X	X
	R	Round	X	X	X	X
	M	Slotted (single axis)	X	X	X	X
	P	Plus "+"	X	X	X	X
	X	Cross "x"	X	X	X	X
Mounting Option	0	Flush	X	X	X	X
	1	Drop In	X	X	X	X
	2*	Raised	X	X	X	X
	3	Snap On	X	X	X	X
	4	Rear Mount	X	X	X	X
Output Option	0	0V to +5V rail-to-rail	X	X	X	X
	1	+0.5V to 4.5V with Fault Detection	X	X	X	X
	2	+0.25V to 4.75V with Fault Detection	X	X	X	X
	3	+2V to +3V	X	X	X	X
	4	+1V to +4V	X	X	X	X
Additional Options	DC	Center Detect	X	X	X	X
	U	USB (Universal Serial Bus)	X	X	X	X
	D**	Dual Decode	X	X	X	X

	F	Friction Clutch	X	X	X	X
	V***	Voltage Regulator	X	X	X	X
Housing Options	MJO	MJ Housing with 0 buttons	X	X	X	X
	MJS	MJ Housing with 2 buttons	X	X	X	X
	MJ4	MJ Housing with 4 buttons****	X	X	X	X
	MJ4S	MJ Housing with 4 buttons*****	X	X	X	X

Notes:

- 1) X denotes availability.
- 2) Tapered handle is not compatible with either the Flush or Rear Mount Option A mounting options or the friction clutch.
- 3) Example Part Number: HFX-11D11: HFX Model 100, 2 Axis Joystick, tapered handle, Diamond Limiter Plate, Drop-in Mounting, and +0.5V to +4.5V output with fault detection.

- * = Denotes charge contact factory for pricing.
- ** = Dual Decode CANNOT be used with USB or Voltage Regulator.
- *** = Contact Factory for Available Voltage Options.
- **** = Buttons located in the four corners of the housing.
- ***** = Buttons are located 3 on the right side of the housing and one button is in the lower left corner.

Product names used herein are for identification purposes only and may be trademarks of their respective companies.

[HFX Standard Joysticks Part Number Configuration & Availability Guide](#)



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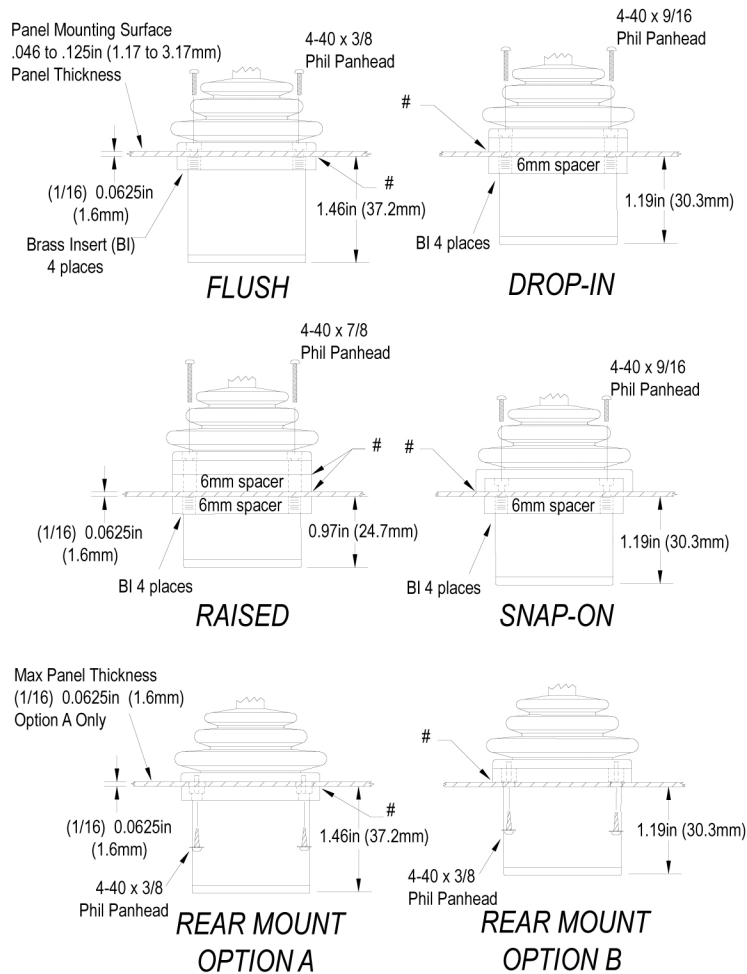
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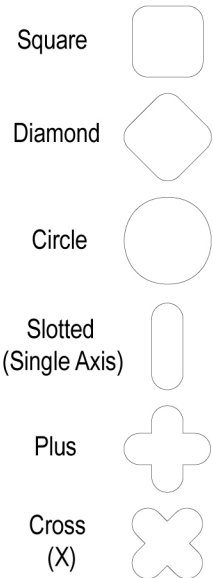
Mounting Options: In order to suit a variety of integration requirements, the HFX joystick offers six different mounting options from which to choose.



Notes: 1) # indicates suggested position for optional gasket
 2) Mounting screws are included with each unit

Limiter Plate Options: The limiter plates are used to determine the deflection pattern of the HFX joystick.

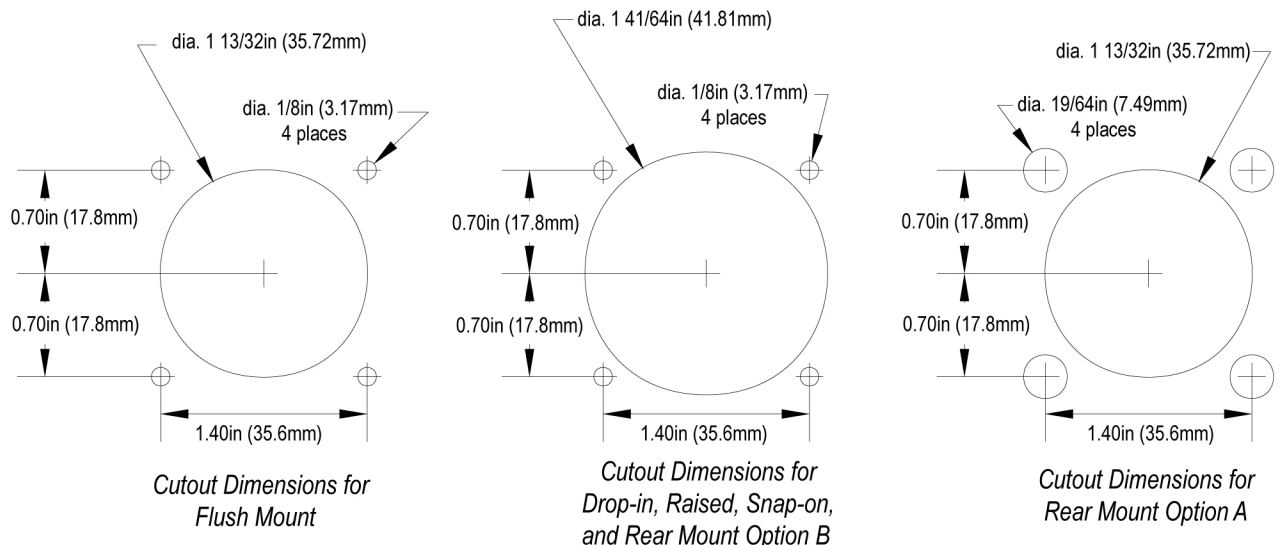
Max Deflection
 36° (+/-18°)



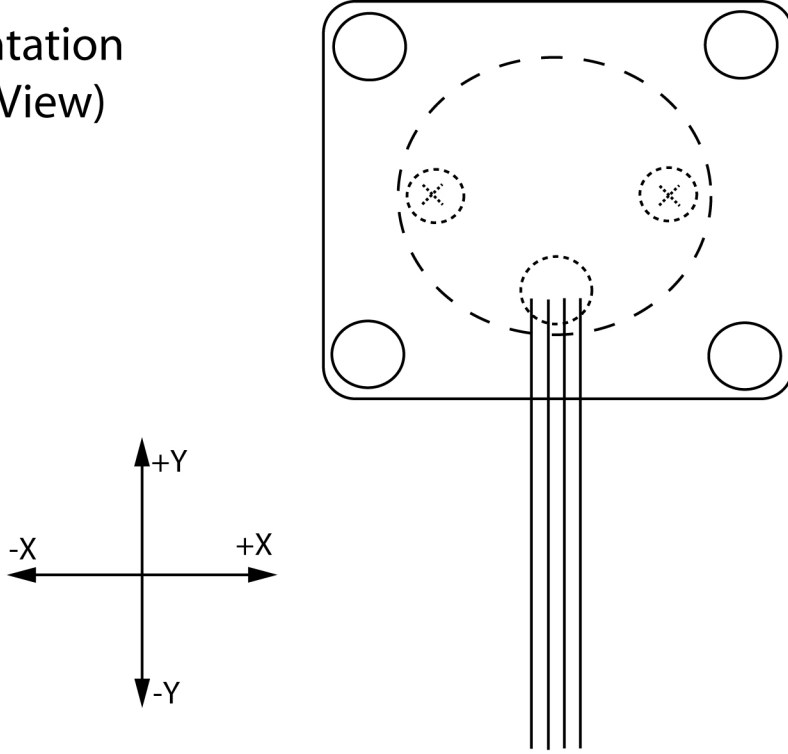
Wire Color Code

Red = Vdd Green = Z-axis*
 Black = Gnd White = Switch Com*
 Blue = X-axis Orange = Switch 1*
 Yellow = Y-axis Violet = Switch 2*
 * = optional

Mounting Cutout Dimensions

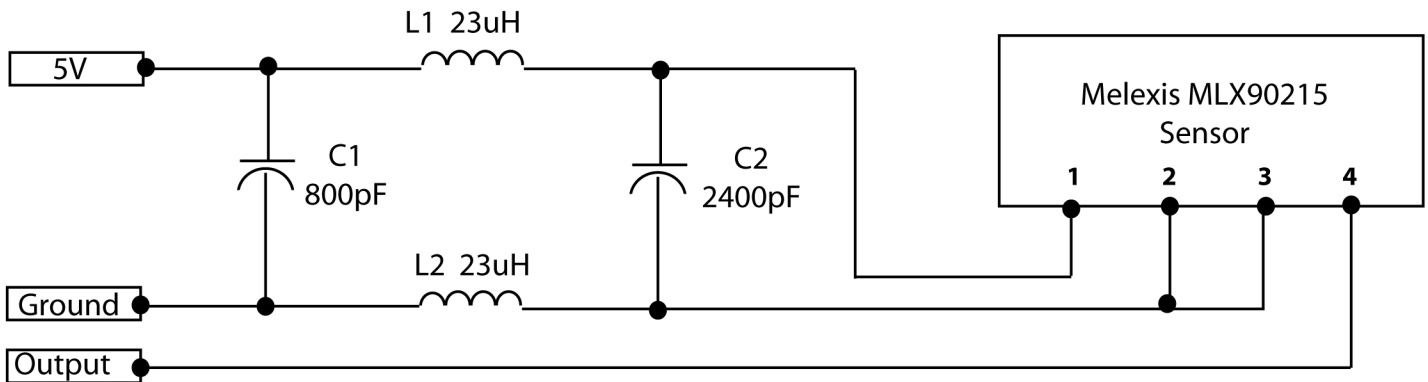


Orientation (Top View)



Example Wiring Diagram (optional)

The recommended wiring for additional filtering of the HFX joystick is to attach an 800pf capacitor and wire per diagram below.



- Pin 1 = Vdd (Supply)
- Pin 2 = Vss (Ground)
- Pin 3 = Vss (Ground)
- Pin 4 = Output