



TS series

PROPORTIONAL THUMB JOYSTICK

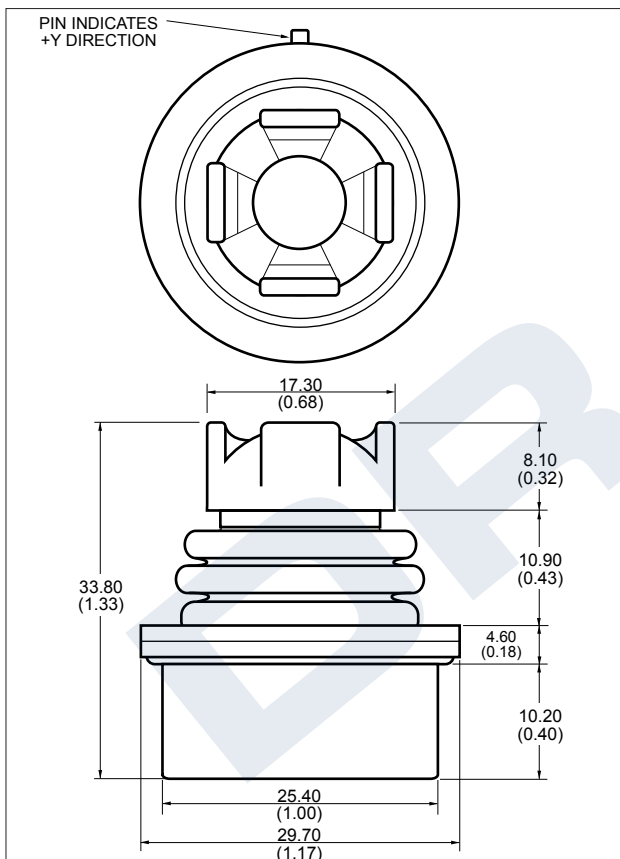
CH Products Thumbstick is a proportional two axes joystick in a miniature package. Featuring non-contacting Hall effect technology for long-life performance, the Thumbstick is available with nine output options including single and dual (redundant) outputs. Similar in size and operation to “gamepad” controls, typical applications include pendant and remote controls and well as joystick handle and arm rest integration.



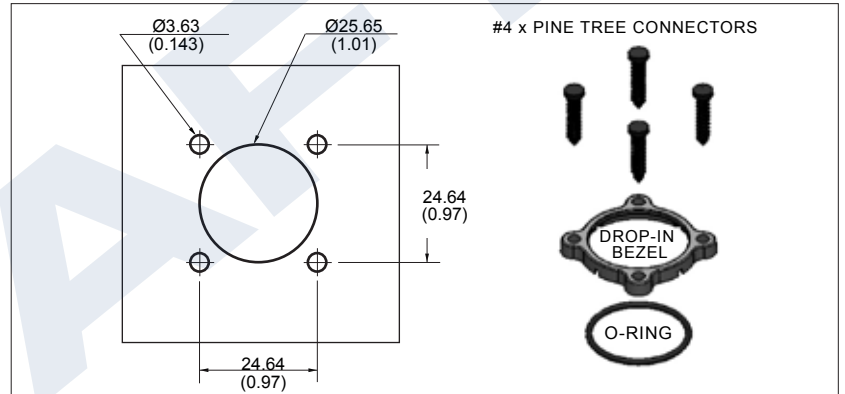
KEY FEATURES

- Miniature size
- Non-contact Hall effect technology
- Electronics pressure washable to IP69K (80°, 9000Pa, 15l/min @ 10cm)
- Designed for grip and gamepad mounting
- Electronics sealed to IP68
- Redundant outputs available
- Rear or drop-in mounting available

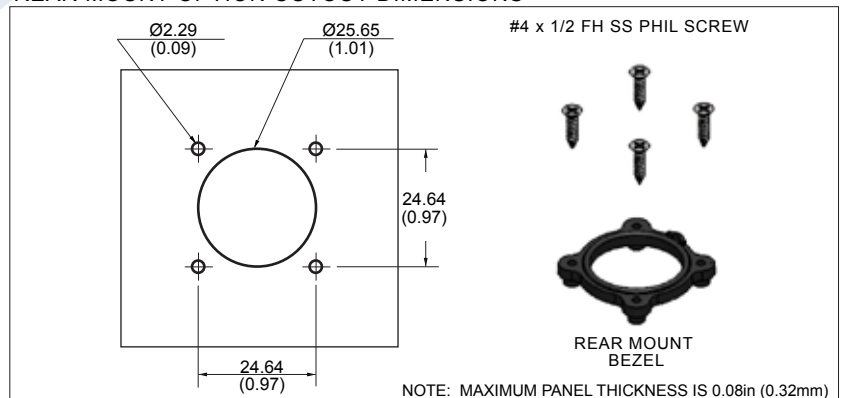
DIMENSIONS



DROP-IN OPTION CUTOUT DIMENSIONS



REAR MOUNT OPTION CUTOUT DIMENSIONS



Notes: - Dimensions are in mm
- Specifications and drawings are provided for informative purposes only. The company reserves the right to change specifications without notice.

SPECIFICATIONS

Mechanical (for XY Axes)

Operating Force (Nm)	-	16oz to 20oz
Maximum Applied Force (Nm)	-	25lbs
Mechanical Angle of Movement	-	±25° (50° total)
Expected Life	-	1 million
Mass/weight	-	
Lever Action (Centering)	-	Spring Centering

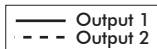
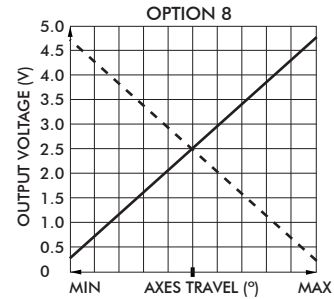
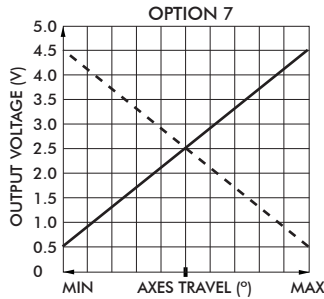
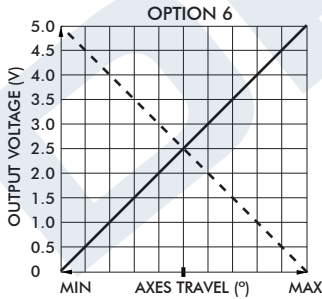
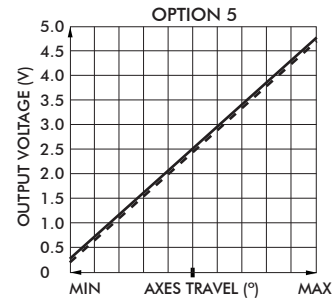
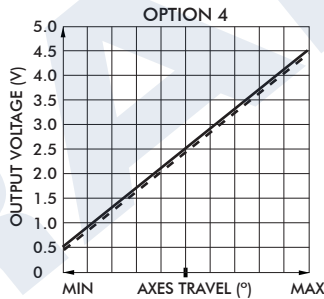
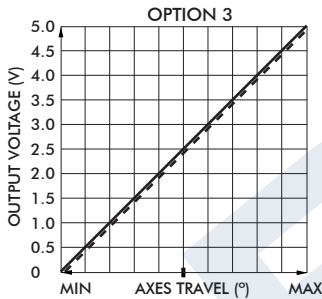
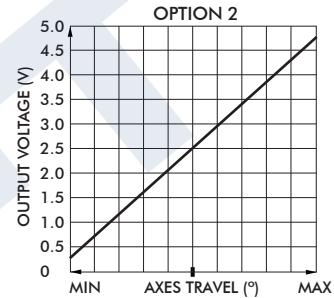
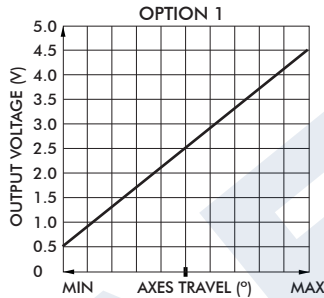
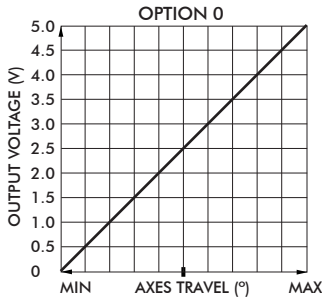
Environmental

Operating Temperature (°)	-	-20°C to +70°C
Storage Temperature (°)	-	-40°C to +70°C
Sealing (IP)	-	IP68, IP69K
EMC Immunity Level (V/m)	-	EN61000-4-3 (extended)
EMC Emissions Level	-	EN61000-6-3:2001
ESD	-	EN61000-4-2 (extended)

Electrical Sensor

Sensor	-	Hall effect
Resolution	-	1.22mV
Supply Voltage Range (Vdc)	-	5.00V
Reverse Polarity Max (Vdc)	-	-10V
Overvoltage Max (Vdc)	-	20V
Output Voltage	-	0.2V – 4.8V
Output Impedance (ohm)	-	2Ω
Return to Center Voltage (No Load)	-	±200mV
Error Signal	-	1.0%

OUTPUT OPTIONS



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