M3 MINI JOYSTICK

The M3 rugged, finger operated hall-effect joystick is ideally suited for use in portables for remote control systems or for precision control of mobile and industrial machinery. The glass-filled Zytel housing, non-ferrous components and sealed construction make this device suitable for corrosive and hostile environments. Available in single or dual axis operation.

SPECIFICATIONS

GENERAL DATA

# of Axis	Single or Dual
Output Options	Hall-Effect
Joystick Action	Spring Return
Handle Travel	+/- 10 degrees each axis
Gate	Open or Cross
Handle Compatibility	Tapered, 2 piece, push button, or mechanical interlock
Life	20 million cycles
Materials	High strength, glass filled nylon housing.
Est. Shipping Weight	2 lbs.
Est. Shipping Dimensions	8 x 6 x 6 in.

MOUNTING DATA

Mounting Style	Panel (from below)
Mounting Footprint	1.9" x 1.9" See literature for additional mounting specifications

ENVIRONMENTAL DATA

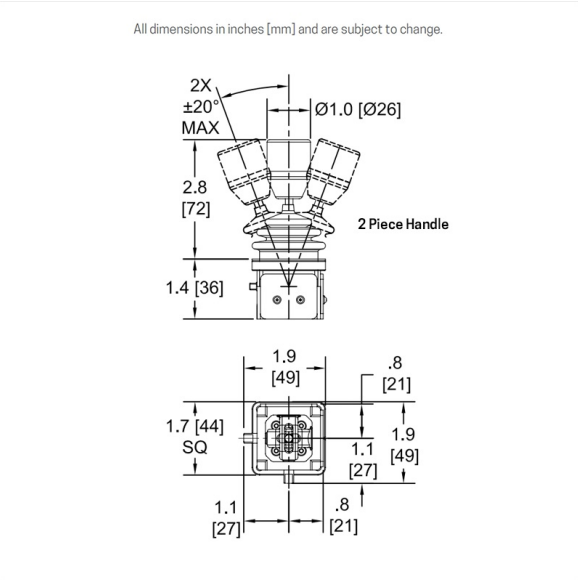
IP Rating	IP55
Operating Temperature	-13 to +158 degrees F [-25 to +70 degrees C]
Storage Temperature	-40 to +158 degrees F [-40 to +70 degrees C]

ELECTRICAL DATA

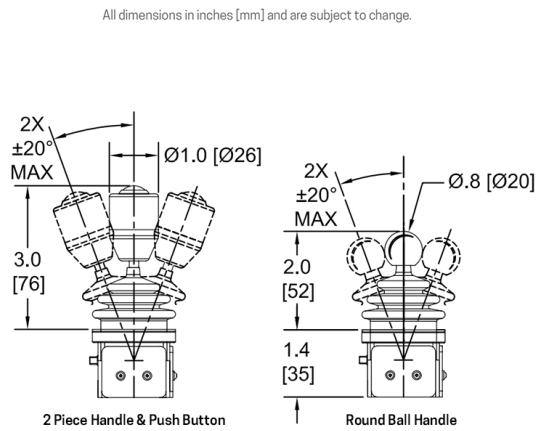
Hall-Effect Specifications	Supply Voltage: 4.5 to 5.5 VDC Output Voltage: Ratiometric 0.5 - 2.5 - 4.5 +/- 0.15V @ 5.0V supply Additional supply and output options available Output Current: 10mA Power Consumption: 20 mA @ full load Termination: 20 AWG wire 6" leads with mini-fit connector EMC Emissions: Complies with EN61000-6-4:2007 Class A Group 1, 80-1000 MHz EMC Immunity: Complies with or exceeds EN61000-6-2:2005, expanded to include: RFI Immunity of 100 V/M @ 80-1000 MHz ESD Immunity of 15Kv air, 8Kv contact
Additional Specifications	Reference product literature for additional specifications

Technical Drawings

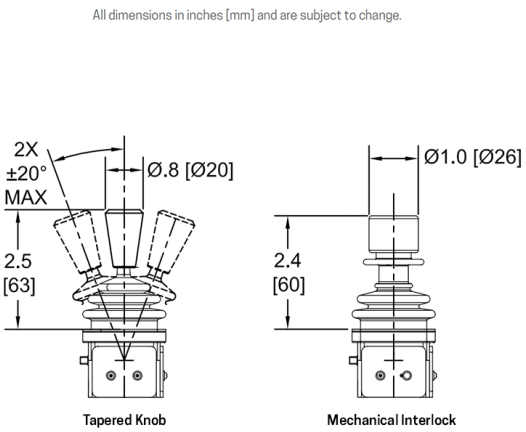
Dimensional



M3 overall dimensions. Shown with 2 piece handle.

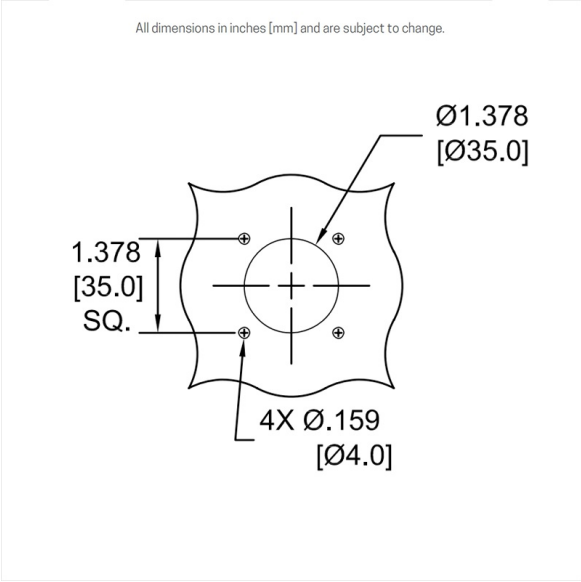


Push Button handle and round ball handle dimensions



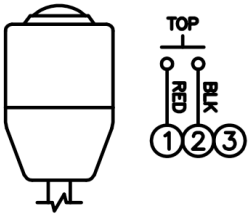
Tapered knob and mechanical interlock handle dimensions

Mounting



Panel mounting details (mounts from below)

M3 (P/B)



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Push button wiring details

Wiring
4.5 to 5.5 VDC Supply:

M3E - 1 Axis Single Sensor

PIN	COLOR	FUNCTION
1	ORN	+5.00 VDC Supply
2	GRN	Ground
3	BLU	Output

M3V - 2 Axis Single Sensor

PIN	COLOR	FUNCTION
1	ORN	+5.00 VDC Supply
2	GRN	Ground
3	BLU	A-B Output
4	GRY	C-D Output

M3E - 1 Axis Redundant

PIN	COLOR	FUNCTION	PIN	COLOR	FUNCTION
1	BLU	A-B Main output	4	WH/ORN	+5.00 VDC A-B Redundant supply
2	WH/BLU	A-B Redundant output	5	GRN	A-B Main ground
3	ORN	+5.00 VDC A-B Main supply	6	WH/GRN	A-B Redundant ground

Connections:
10-position MOLEX Minifit with female contacts - mates with connector 39-01-2101 and male contacts 39-00-0041 (24-18 AWG).

M3V - 2 Axis Redundant

PIN	COLOR	FUNCTION	PIN	COLOR	FUNCTION
1	BLU	A-B Main output	7	WH/GRY	C-D Redundant output
2	WH/BLU	A-B Redundant output	8	BLK	C-D Main ground
3	ORN	+5.00 VDC A-B Main supply	9	WH/BLK	C-D Redundant ground
4	WH/ORN	+5.00 VDC A-B Redundant supply	10	RED	+5.00 VDC C-D Main supply
5	GRN	A-B Main ground	11	WH/RED	+5.00 VDC C-D Redundant supply
6	WH/GRN	A-B Redundant ground	12	GRY	C-D Main output

Connections:
12-position MOLEX Minifit with female contacts - mates with connector 39-01-2121 and male contacts 39-00-0041 (24-18 AWG).

Wiring & connecting details