

PRO-6

HEAVY-DUTY SINGLE AXIS JOYSTICK CONTROLLER

PRO-6 – Single Axis Heavy-Duty Joystick

PRO-6H – Single Axis Heavy-Duty Hall-effect Joystick

Construction:

The ultra-rugged PRO-6 provides precise proportional control for electro-hydraulic valves and AC/DC variable speed drives. Your specific control requirements can be accommodated by a variety of standard and custom engineered electronic amplifiers.

It features smooth, field-adjustable friction brake with positive center detent for applications where speed must remain constant under continuous shock and vibration. Unit is designed for mechanical operating life of 20 million cycles and offers universal mounting capability and various electronic amplifiers to accommodate control requirements.

Application:

For use on Cranes, Agricultural, Mining, Paving and Forestry equipment.

Features:

- Versatile design
- Heavy duty construction
- 2.6" mounting centered between stacked controllers
- Long life, compression type return spring system
- 20 Million cycle mechanical operating life
- Rugged 10mm diameter handle shaft
- Tooled fixed cams

Options:

- Multiple mounting systems
- Friction held handle
- Large variety of optional handle configurations including; deadman and mechanical interlock options
- Large selection of proportional outputs including potentiometer, Hall-effect, PWM and CAN bus
- Hall-effect, output meets or exceeds CE EMC Requirements



PRO-6 ORDERING INFORMATION

Drive Arrangement: Single axis
Basic Assembly: 4.1" shaft length and boot supplied standard
Handle: 1.25" diameter round ball
Handle Action: Spring Return
Output: Proportional, discrete
Output Devices: Potentiometer, PWM, CAN, 11A snap action switch

PRO-6 Technical Data

Mechanical:

- **Mechanical Life:** 20 million cycles
- **Gear Ratio:** 3.5:1
- **Detented Positions:** 0° Null
- **Handle Travel:** ±36° for potentiometer
- **Potentiometer Rotation:** ±126°

Environmental:

- **Operating Temperature:** -25 to +70° C
- **Storage Temperature:** -40 to +70° C
- **Protection above the panel:** IP54

Electrical:

- **Contacts:** 11A 125, 250 VAC Form C V series snap action switch (4 max.) with .187" quick connect tab
- **Potentiometers:** 0.5 watt 5K 3-wire or 10K 4-wire, 5 million Revolutions.
Connections: 6 position terminal block with #6 screw terminal

Options:

- **Handle:** See handle section for a selection of handle options
- **Handle Action:** Friction Brake
- **Mounting:** See mounting section for a selection of mounting options
- **Special Pots:** Please consult factory with special potentiometer requirements
- **Electronics:** PWM Amplifiers, Pot Amplifiers, Motor Control, CAN bus.
Connections: Varies with product

Please consult factory for other available options not listed.

PRO-6H ORDERING INFORMATION

Drive Arrangement: Single axis
Basic Assembly: 4.1" shaft length and boot supplied standard
Handle: 1.25" diameter round ball
Handle Action: Spring Return
Output: Proportional
Output Devices: Hall-effect
Immunity: Meets or exceeds CE EMC requirements

PRO-6H Technical Data

Mechanical:

- **Mechanical Life:** 20 million cycles
- **Gear Ratio:** 3.5:1
- **Handle Travel:** $\pm 20^\circ$

Environmental:

- **Operating Temperature:** -25 to +70° C
- **Storage Temperature:** -40 to +70° C
- **Protection above the panel:** IP54
- **Hall effect EMC Emissions:**
Complies with EN61000-6-4:2007
Class A Group 1, 80 – 1000 MHz
- **Hall effect 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 15 Kv air, 8 Kv contact

Electrical:

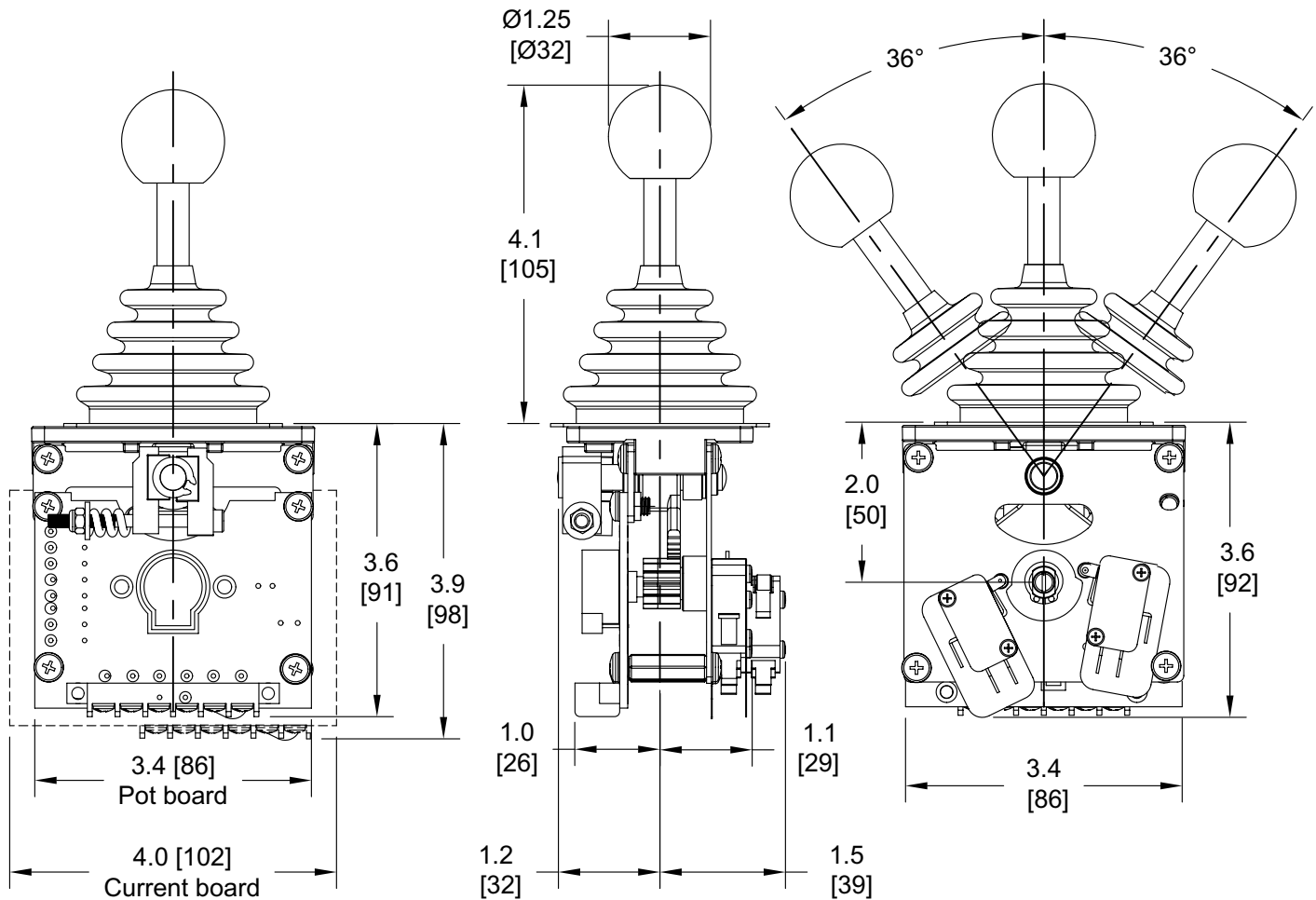
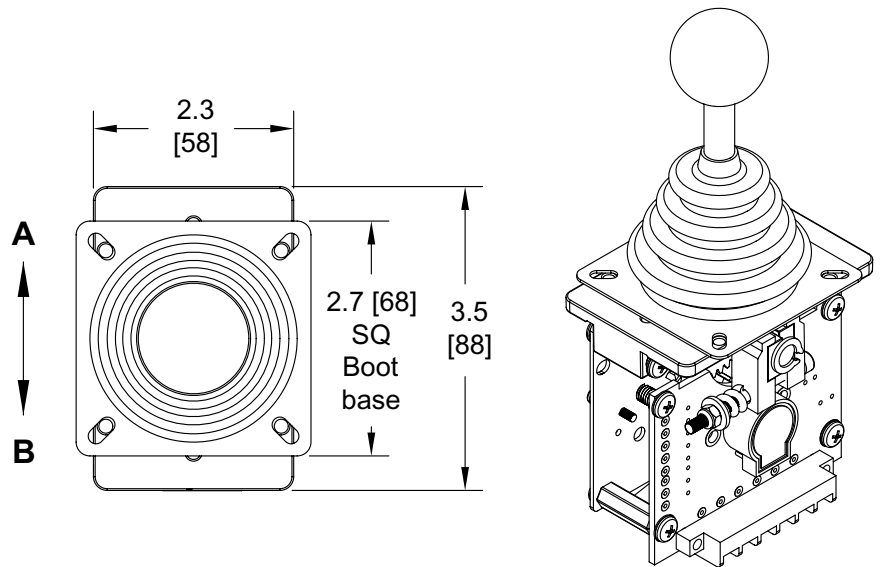
- **Hall Effect:**
Supply Voltage: 4.5 to 5.5VDC
Output Voltage: Ratiometric 0.5 – 2.5 – 4.5V
 $\pm 0.15V$ @ 5.0V supply
Output Current: 10 mA
Power Consumption: 20 mA @ full load
Connections: 4 position terminal block with #6 screw terminal

Options:

- **Handle:** See handle section for a selection of handle options
- **Handle Action:** Friction Brake
- **Mounting:** See mounting section for a selection of mounting options
- **Hall Effect:**
Option 1: Supply Voltage: 7 to 30VDC
Output Voltage: 0.5 – 2.5 – 4.5V $\pm 0.15V$
Connections: 4 position terminal block with #6 screw terminal
Option 2: Supply Voltage: 4.5 to 5.5VDC
Output Voltage: Redundant - Ratiometric 0.5 – 2.5 – 4.5V $\pm 0.15V$ complementary @ 5.0V supply
Connections: 6 position terminal block with #6 screw terminal
- **Electronics:** CAN bus
Connections: Varies with product

Please consult factory for other available options not listed.

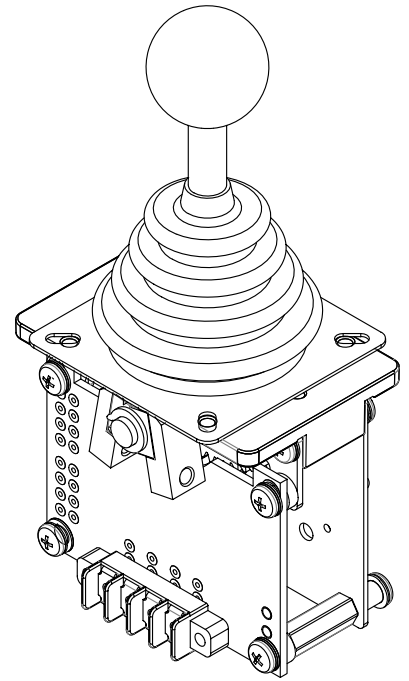
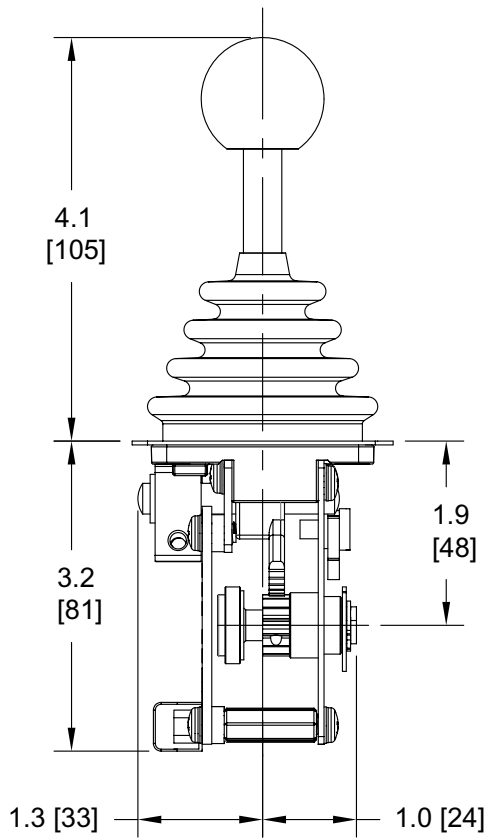
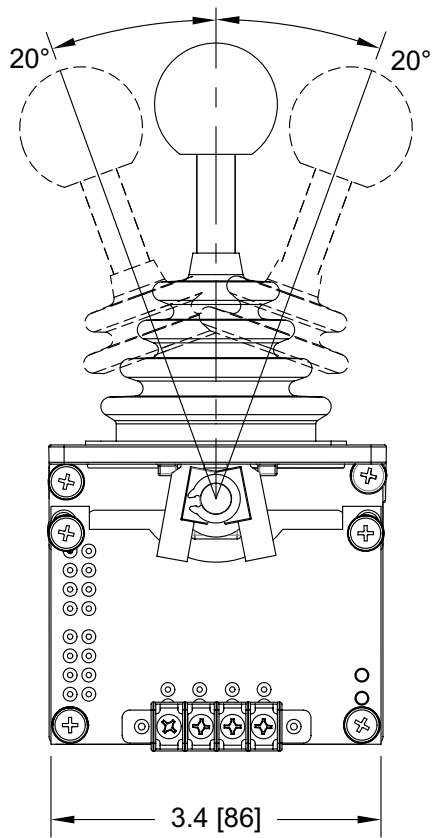
PRO-6 STANDARD OVERALL DIMENSIONS



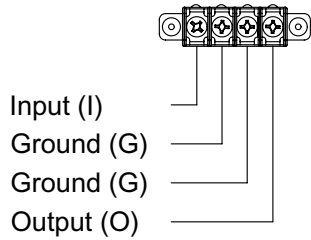
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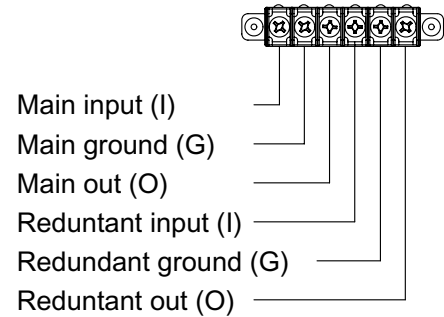
PRO-6H HALL-EFFECT OVERALL DIMENSIONS



SINGLE SENSOR

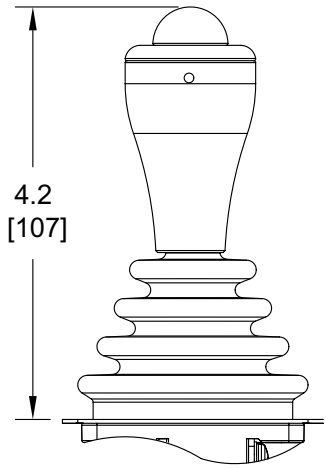


REDUNDANT

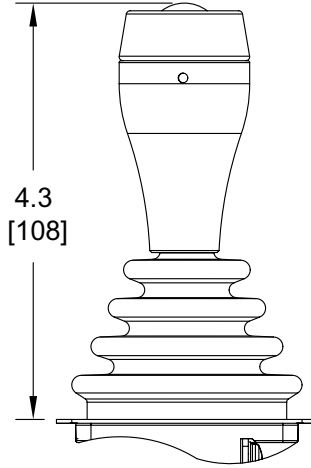


PRO-6 OVERALL HANDLE OPTIONS DIMENSIONS

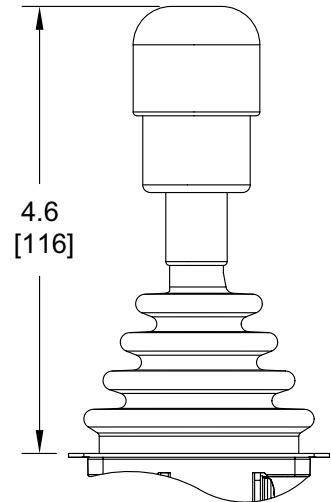
MG27
4.5 [115] SHAFT



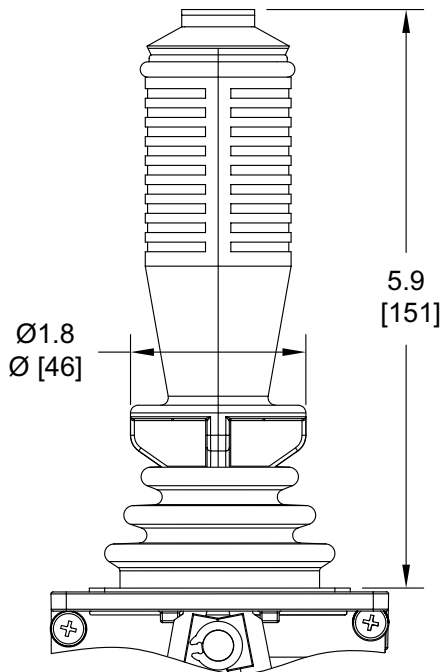
MG27V
4.5 [115] SHAFT



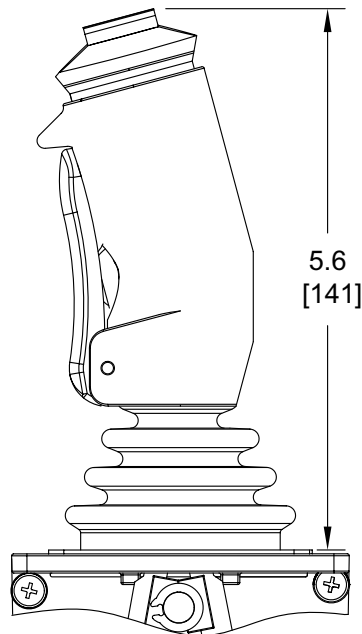
MI
5.0 [127] SHAFT



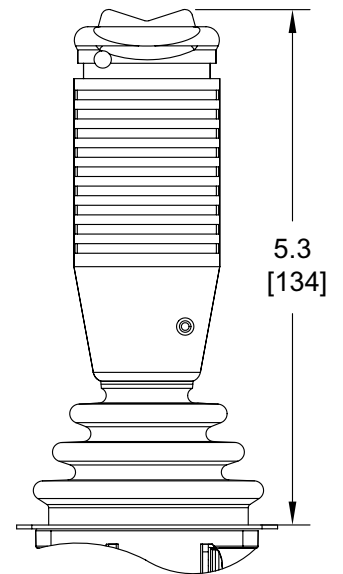
RHNC-01
3.7 [95] SHAFT



BH
3.3 [85] SHAFT



RHS-01
3.4 [87] SHAFT

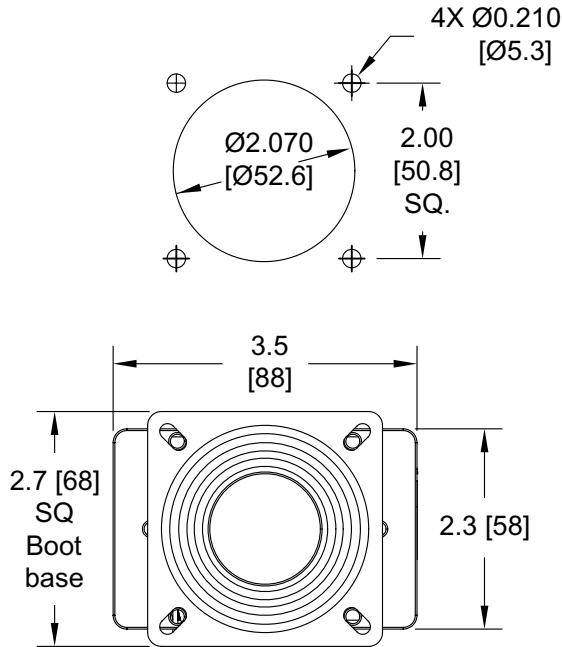


(Consult factory for other handle options)
See handle section for handle degree protection

PRO-6 MOUNTING DIMENSIONS

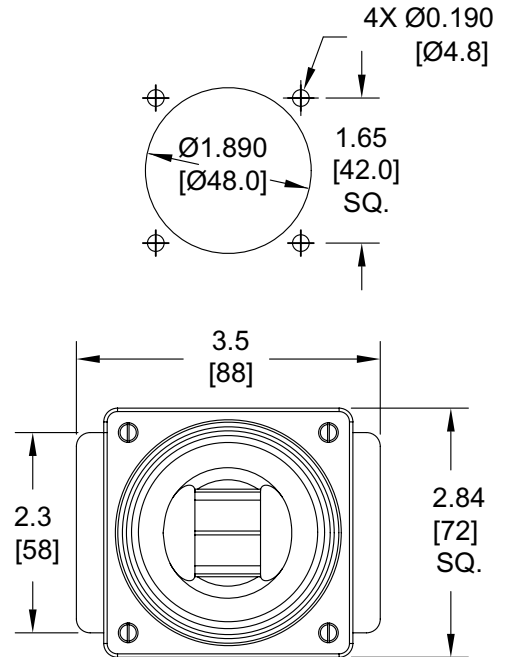
MOUNTING STYLE 1:

Standard 5 hole with
2.070Ø [52.6]
center hole

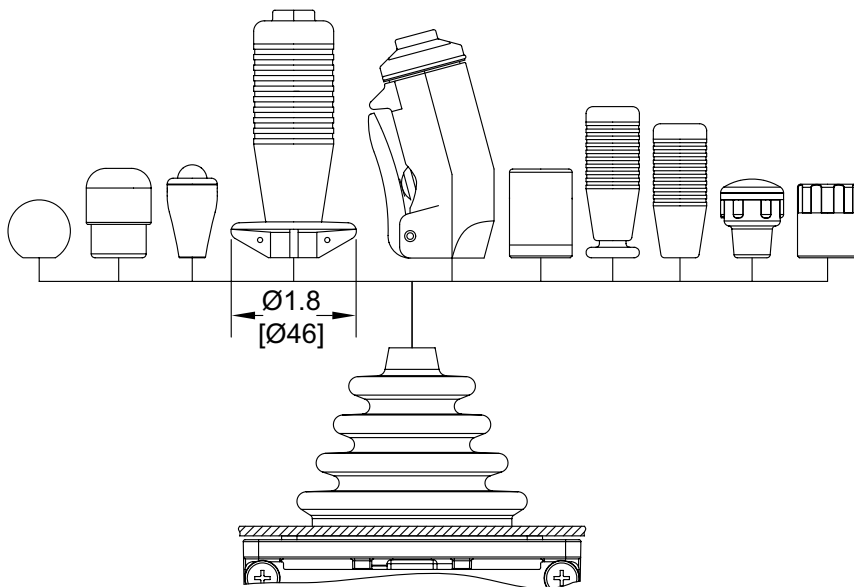


MOUNTING STYLE 2:

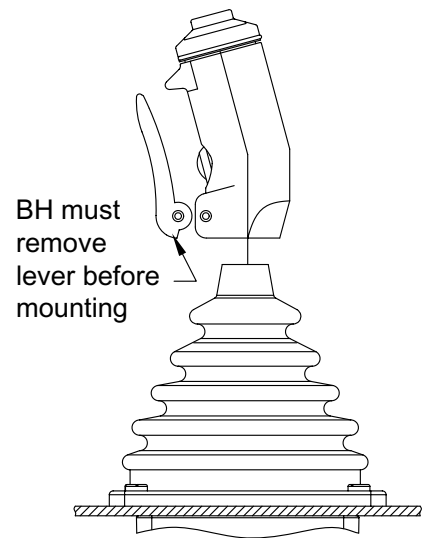
Optional CS2 5 hole with
1.890Ø [48.0] center hole,
includes mounting plate and
black aluminum escutcheon plate



ROUND MI MG27 RHNC BH TH25 RHS RHS STD TH20
BALL



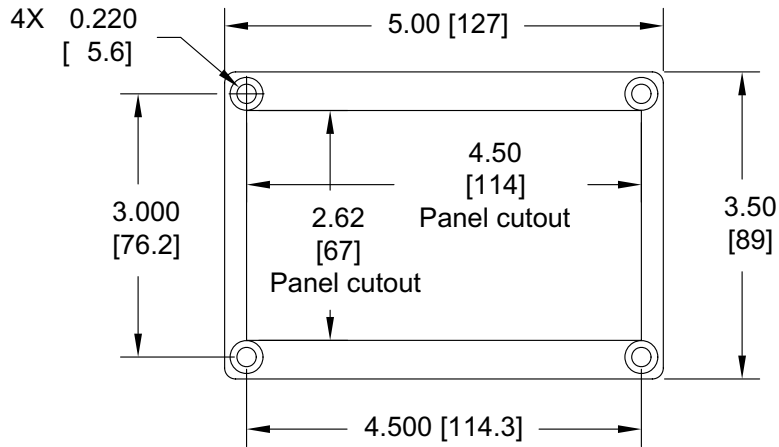
Fits all handles shown in
mounting style 1 except



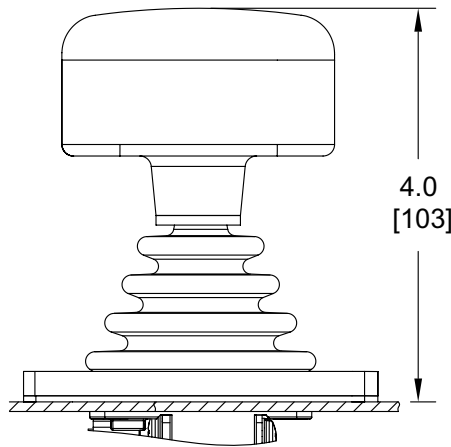
PRO-6 MOUNTING DIMENSIONS

MOUNTING STYLE 3:

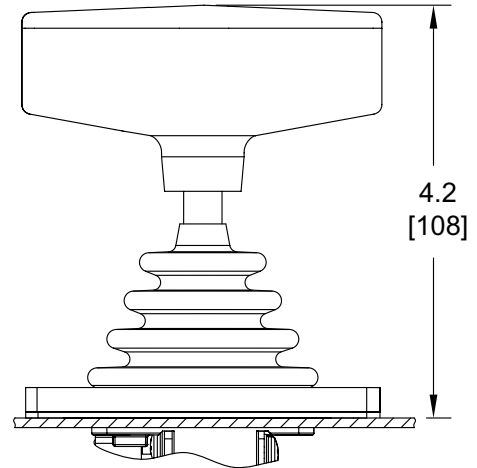
5 hole with 4.50 [114.3] X 2.625 [66.7]
center cutout



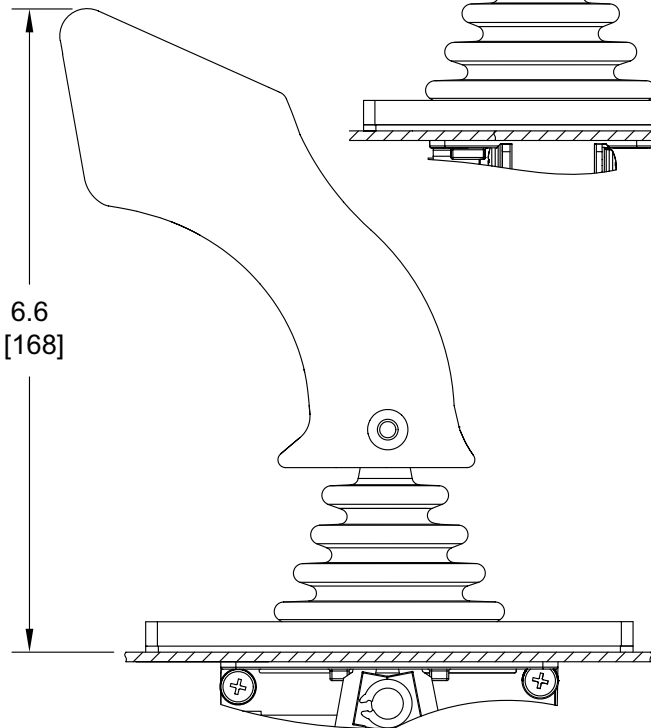
MG13



MG1



FG3



MINIMUM MOUNTING DIMENSIONS WITH POTENTIOMETERS AND 2 SNAP ACTION SWITCHES

