PRO-4
SINGLE AXIS
JOYSTICK CONTROLLER

PRO-4 – Single Axis Joystick
PRO-4H – Hall-effect Joystick
PRO-4N – VNSO Contact block
PRO-4B/B – Bang / Bang

Construction:
The ultra-rugged PRO-4 provides precise proportional or discrete 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 configurations.

Also available with Hall-effect or VNSO contact blocks.

The versatile design of the PRO-4 accommodates a variety of handle options including mechanical interlock and lever actuated deadman as well as proportional and discrete outputs including 11A micro-switches, potentiometers, Hall-effect, PWM, CAN Bus, and bang / bang.

Application:
For use on Scissor Lifts, Work Platforms, Bucket Trucks, Cranes, Agricultural, Mining and Forestry equipment.

Features:
• Versatile design
• Heavy duty construction
• 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
• Stepped detents
• Large selection of proportional outputs including potentiometer, Hall-effect, PWM and CAN Bus
• Hall-effect, output meets or exceeds CE EMC Requirements
PRO-4 ORDERING INFORMATION

Drive Arrangement: Single Axis
Basic Assembly: 3.25" 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 micro-switch

PRO-4 Technical Data

Mechanical:
- Mechanical Life: 20 million cycles
- Gear Ratio: 3.5:1
- Detented Positions: see PRO-4N
- 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: IP55

Electrical:
- Contacts: 11A 125, 250 VAC Form C V7 micro-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-4 MOUNTING DIMENSIONS

MOUNTING STYLE 4:
5 Holes With
2.25∅[35] Center Hole

MOUNTING STYLE 5:
5 Holes With
4.50[114.3] X 2.625[66.7] Center Cut

MINIMUM MOUNTING DIMENSIONS WITH POTENTIOMETERS AND 2 MICROSWITCHES

(Consult factory for other handle options)
PRO-4 MOUNTING DIMENSIONS

MOUNTING STYLE 1:
Standard 3 holes with 1.38Ø[35] center hole

2X Ø0.212 [Ø5.4]
Ø1.378 [35.0]
0.433 [11.0]
1.890 [48.0]
0.433 [11.0]

1.25Ø Ball MI MG27 MG20

MOUNTING STYLE 2:
Standard 3 holes with 1.63Ø[41] center hole
1.57Ø[40] boot

2X Ø0.237 [Ø6.0]
Ø1.63 [41.0]
0.433 [11.0]
1.890 [48.0]
0.433 [11.0]

STD. 2 pc RHS RHS MI MG25

MOUNTING STYLE 3:
Standard 3 holes with 1.70Ø[43] center hole
1.57Ø[40] boot

2X Ø0.212 [Ø5.4]
Ø1.70 [43.0]
0.433 [11.0]
1.890 [48.0]
0.433 [11.0]

BH remove lever before mounting

OPTIONAL MOUNTING HOLES

Forward A Back B

For hole Ø see handle style

2.244 [57.0] 0.197 0.433 [5.0] [11.0] 1.73 [44]
6X M5 or 10-32
2.283 [58.0] 0.433 [11.0]
2.598 [66.0] 1.890 [48.0]

Consult factory for other handle options

J.R. MERRITT CONTROLS, INC.

Stratford, CT • 1-800-333-5762 • www.jrmerritt.com
### PRO-4 OVERALL HANDLE OPTION DIMENSIONS

<table>
<thead>
<tr>
<th>Handle Option</th>
<th>Shaft Diameter</th>
<th>Handle Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROUND BALL 1.57 [40]Ø</td>
<td>4.5 [115] SHAFT</td>
<td>Ø1.57 [Ø40] 4.8 [123]</td>
</tr>
<tr>
<td>2 PIECE HANDLE 4.5 [115] SHAFT</td>
<td></td>
<td>Ø2.2 [Ø56] 4.7 [119]</td>
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<tr>
<td>MG27V 4.5 [115] SHAFT</td>
<td></td>
<td>Ø1.8 [Ø46] 5.0 [128]</td>
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<tr>
<td>MG27 4.5 [115] SHAFT</td>
<td></td>
<td>5.0 [127] 4.6 [117]</td>
</tr>
<tr>
<td>RHN-01 HANDLE 3.7 [95] SHAFT</td>
<td></td>
<td>Ø2.2 [Ø56] 6.3 [161] or Ø1.8 [Ø46]</td>
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<tr>
<td>BH HANDLE 3.3 [85] SHAFT</td>
<td></td>
<td>5.9 [151]</td>
</tr>
<tr>
<td>RHS HANDLE 1.57 [40] Ø BOOT 3.4 [87] SHAFT</td>
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<td>5.6 [142]</td>
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</tbody>
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(Consult factory for other handle options)