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
• Toolied 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-4N 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, stepped
Output Devices: Potentiometer, 16A 300VAC contact block

PRO-4N Technical Data

Mechanical:
- Mechanical Life: 20 million cycles
- Gear Ratio: 3.5:1
- Detented Positions: Up to 5-0-5
- Handle Travel: ±36° for proportional
  ±10° first step and ±6.5° every step thereafter for
  detented positions
- Potentiometer Rotation: ±126°

Environmental:
- Operating Temperature: -25 to +70° C
- Storage Temperature: -40 to +70° C
- Protection above the panel: IP55

Electrical:
- Contacts: 16A, 240 VAC double pole contact block (PRO-4N) (3 max.) with dead front saddle clamp terminals
- Potentiometers: 0.5 watt 5K 3-wire or 4-wire center tap, 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 or Maintained action
- Mounting: See mounting section for a selection of mounting options
- Special Pots: Please consult factory with special potentiometer requirements
  Connections: 6 position terminal block with #6 screw terminal

Please consult factory for other available options not listed.
PRO-4N OVERALL DIMENSIONS

Number of double contact blocks |
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>1.38</td>
<td>1.97</td>
</tr>
</tbody>
</table>

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

MOUNTING STYLE 1
Standard (3) holes w/Ø1.380 [Ø35.0] center hole
Ø1.378 [Ø35.0] 2X Ø.212 [Ø5.4]
.433 [11.0] 1.890 [48.0]

MOUNTING STYLE 2
Standard (3) holes w/Ø1.630 [Ø41.0] center hole
Ø1.630 [Ø41.0] 2X Ø.212 [Ø5.4]
.433 [11.0] 1.890 [48.0]

MOUNTING STYLE 3
Standard (3) holes w/Ø1.700 [Ø43.0] center hole
Ø1.700 [Ø43.0] 2X Ø.212 [Ø5.4]
.433 [11.0] 1.890 [48.0]

OPTIONAL MOUNTING HOLES

Remove lever before mounting
Note: BH-104 uses Style 4

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Stratford, CT • 1-800-333-5762 • www.jrmerritt.com

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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 OVERALL HANDLE OPTION DIMENSIONS

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