NSO-0
MILL DUTY 16 AMP
ROTARY MASTER SWITCHES

Construction:
The TYPE NSO-0 Rotary Master Switch features the same rugged design components and versatility as the NSO series of Joysticks. The NSO-0 provides directional, precise proportional speed and step control of AC/DC drives and Electro-Hydraulic Valves.

Application:
Applications include In-plant Process Control, Mining Vehicles, Conveyor and Lift Systems.

Features:
- **Rugged Construction**: Brass Bearings and Square Steel Operating Shaft.
- **Mechanical Life**: 20 million cycles with Friction Brake.
- **Design Flexibility**: Combination of custom programmable Contacts, Detents, Spring Return, Potentiometers, and Electronics.
- **Handles**: Pistol Grip, Teardrop and Chrome Steel Ball Lever.
- **Precise Step Control**: Up to 7-0-7 steps or 0-16 individually detented positions.
- **Contacts**: (10) SNAP in 16A 240VAC double pole field replaceable contacts. Gold dry circuit contacts available upon request.
- **Potentiometers**: 0.5 watt 5 million revolution conductive plastic potentiometers furnished standard.
- **Electronics**:
  - ESS-420: 4-20 mA 2 wire transmitter.
  - ESS0.10.10: 0-10 and ±10V amplifiers.
  - OGR8G-M1: 8 Bit gray code Encoder.
- **Enclosures**: Variety of standard and custom steel, cast aluminum and fiberglass enclosures available; NEMA 1, 3R, 4x, 12 and 13.
NSO-0 DIMENSIONS

Panel Mounting Detail

Panel Mounting Detail without face plates

Output Device Dimensions

<table>
<thead>
<tr>
<th>Device</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potentiometer</td>
<td>1.29</td>
<td>2.92</td>
<td>1.75</td>
</tr>
<tr>
<td>ESS-420</td>
<td>1.29</td>
<td>2.92</td>
<td>1.75</td>
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<tr>
<td>OGR8G-M1</td>
<td>1.83</td>
<td>2.79</td>
<td>1.40</td>
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<td>PFC</td>
<td>1.29</td>
<td>1.31</td>
<td>1.93</td>
</tr>
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</table>

Panel Mounting Detail

NEMA 1 Panel Mounting with escutcheon plate
NEMA 12 Panel Mounting with gasket front plate and escutcheon plate.

Panel Mounting Detail

Nema 4 Mounting with round chrome escutcheon plate

Number of double pole contact blocks

<table>
<thead>
<tr>
<th>&quot;L&quot; dim. w/detent</th>
<th>NSOO1</th>
<th>NSOO2</th>
<th>NSOO3</th>
<th>NSOO4</th>
<th>NSOO5</th>
<th>NSOO6</th>
<th>NSOO7</th>
<th>NSOO8</th>
<th>NSOO9</th>
<th>NSOO10</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;L&quot; dim. w/sp.ret.</td>
<td>NSOO1_R</td>
<td>NSOO2_R</td>
<td>NSOO3_R</td>
<td>NSOO4_R</td>
<td>NSOO5_R</td>
<td>NSOO6_R</td>
<td>NSOO7_R</td>
<td>NSOO8_R</td>
<td>NSOO9_R</td>
<td>NSOO10_R</td>
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<tr>
<td>Length &quot;L&quot;</td>
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<td>1.97</td>
<td>2.52</td>
<td>2.52</td>
<td>3.15</td>
<td>3.74</td>
<td>4.33</td>
<td>4.92</td>
<td>5.51</td>
<td>6.10</td>
</tr>
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</table>

TECHNICAL DATA

Mechanical:
Operating Temperature: -25° to +70°C
Detented Positions: Up to 7-0-7 Steps
Mechanical life: Maintained action: 20 million plus cycles.
Gasketing: Non-ferrous materials and NEMA 4 gasketing available for marine applications.

Electrical:
Contacts: 10 double pole snap in blocks and up to 20 circuits furnished standard. (consult factory if additional circuits are required)
Terminals: M3.5 x 0.5 machine screw with saddle clamp.
Wire size: No. 12 AWG maximum
Rating AC: a) AC continuous 16 amps @ 240 volts
           b) AC resistive 8 amps @ 240 volts
           c) AC inductive 6 amps @ 240 volts
           d) 1 H.P. 120 VAC 1phase
           e) 2 H.P. 240 VAC 1phase
Approvals: CSA file number: 15040
           UL Recognized file number: E106738(m)