NS2-0 / NSB2-0
Heavy Mill Duty AC & DC
Rotary Master Switches

Construction:
The TYPE NS2/NSB2-O Rotary Master Switch features the same rugged design components and versatility as the NS2/NSB2 series of Joysticks. They provide precise directional, 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:** 10 million cycles with friction brake.
- **Design Flexibility:** Combination of custom contact sequences, detents, spring return, potentiometers, and electronics.
- **Handles:** Teardrop and chrome steel ball lever.
- **Precise Step Control:** Up to 7-0-7 individually detented steps.
- **Contacts:** (10) 25A 600 VAC double pole, field replaceable contacts or 2A 250 VDC DC contacts with magnetic blow outs. Gold, dry circuit contacts available upon request.
- **Potentiometers:** .5 watt 5 million revolution conductive plastic potentiometers furnished standard.
- **Electronics:**
  - ESS-420: 4-20 milli-amp transmitter.
  - ESS0.10.10: 0-10 and ±10V amplifiers
  - OGR8G-M1: 8 Bit gray code Encoder
- **Enclosures:** Variety of standard steel and cast aluminum control consoles are available; NEMA 1, 3R, 4, 4x, 12 and 13.
**NS2/NSB2-O DIMENSIONS**

**Panel Mounting Detail**

**Insert Mounting Detail**

**Panel Mounting Detail**

**Mounting with 3.78 x 3.78" escutcheon plate**

Number of double pole contact blocks

<table>
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<tr>
<th>&quot;L&quot; dim. w/detent</th>
<th>NS201_</th>
<th>NS202_</th>
<th>NS203_</th>
<th>NS204_</th>
<th>NS205_</th>
<th>NS206_</th>
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<td>NS004_R</td>
<td>NS005_R</td>
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<td>NS007_R</td>
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<td>NS009_R</td>
<td>NS010_R</td>
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<td>4.17</td>
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**Technical Data**

**MECHANICAL:**

**Operating Temperature:** -25° to +70°C

**Detented Positions:** Up to 7-0-7 or 0-16 positions.

**Operations:** Rated duty cycle: 1000 operations per hour

**Mechanical life:** Maintained action: 10 million plus cycles.

**Handle Travel:** 0°-330°. Max. handle angle in cast enclosure ±120°.

**Potentiometer Rotation:** ±120°, 240° total.

**ELECTRICAL:**

**Contacts:** 10 double pole "snap in" blocks and up to 20 circuits furnished standard. (Consult factory if additional circuits are required.)

**Terminals:** M5 machine screw with saddle clamp.

**Wire size:** No. 12 AWG maximum

**Rating AC NS2-0:**

a) AC continuous 25 amps @ 600 volts
b) AC resistive 20 amps @ 240 volts
c) AC inductive 14 amps @ 240 volts

**Rating DC NSB2-0:** (with magnetic blow out)

a) DC resistive 5 amps @ 250 volts
b) DC inductive 2 amps @ 250 volts

**Maximum Switching Capacity AC:**

Making - 160 amps
Breaking - (0.7PF) 160 amps @ 240 volts
# NS2/NSB2-O CAST HOUSING DIMENSIONS

## Dimensions

![Diagram of the cast housing dimensions with recommended cable entry locations.](image)

## Table

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<td>NS 210A GZP7</td>
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<td>NS 210A GRZP3</td>
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1) Please specify voltage for space heater

Maximum number of double pole contact blocks

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**J.R. MERRITT CONTROLS, INC.**

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