NS2/NSB2-KA
HEAVY MILL DUTY AC & DC
MASTER SWITCH

Construction:
The type NS2/NSB2-KA series of master switch controllers are characterized by their versatility and rugged construction for step and stepless AC & DC controls.

Application:

Features:
- **Rugged Construction**: Cast construction, double ball bearing operating shaft.
- **Mechanical Life**: 20 Million Cycles.
- **Serviceability**: Corrosion resistant components.
- **Handle**: Variety of handle styles and handle operated deadman functions.
- **Precise Step Control**: Up 7-0-7 individually detented steps.
- **Contacts**: (10) 25A 600 VAC double pole field-replaceable contacts. Type NSB2 DC contacts with magnetic blow outs
- **Potentiometers**: 0.5 watt 5 million revolutions conductive plastic furnished standard.
- **Transformers**: Type DGO rotary differential transformers for variable speed drives.
- **Electronics**: ESS-420: 4-20 milli-amp 2 wire transmitter.
  ESS0.10.10: 0-10 and ±10V amplifiers.
  Absolute Encoder: 8 Bit 24VDC gray code.
  PFC and PFC/CR Proportional Feathering Control electronic amplifiers for operation of Electro-Hydraulic Proportional Valves.
- **Enclosures**: Variety of standard steel consoles available; NEMA 1, 3R, 4 and 12.
### NS2/NSB2-KA ORDERING INFORMATION

**Basic Assembly:** 9 1/2" Shaft length and round ball handle supplied standard.

**Drive Arrangement:** N = Left, U = Right

**Handle:** Reference Handle for a selection of custom handles and handle operated deadman functions.

**Contacts:** Each contact block supplied with 2 poles. Maximum number of Contacts in each axis = 10 (5 double pole contact blocks).

**Detents:** Reference NS2/NSB2-KA dimensions for types available and applicable handle angle.

**Potentiometers:** 0.5 watt 5 million operations standard, specify resistance and type required. (Consult factory for custom requirements.)

**Electronics:** See PFC or PFC/CR, (Proportional Feathering Control electronics) for ordering information.

**Rotary Transformer:** See DGO transformer ordering information.

### NS2-KA Technical Data

#### Mechanical:
- **Operating Temperature:** -25°C to +70°C
- **Detented Positions:** Up to 7-0-7
- **Mechanical Life:** 20 million plus cycles
- **Gear Ratio:** 3:1
- **Handle Travel:** ± 40°
- **Potentiometer rotation:** ±120°
- **Operations:** Normal duty cycle 1000 operations per hour

#### Electrical:
- **Contacts:** Double Pole contact blocks, 20 circuits maximum. (consult factory if additional circuits required.)
- **Rating AC:**
  - NS2-KA
  - AC continuous 25 amps @ 600 volts
  - AC resistive 20 amps @ 240 volts
  - AC inductive 14 amps @ 240 volts
- **Rating DC:**
  - NSB2-KA (with magnetic blow-out)
  - Resistive 5 amps @ 250 volts
  - Inductive 2 amps @ 250 volts
- **Maximum Switching Capacity:**
  - Making – 160 amps
  - Breaking – (0.7PF) 240V 160 amps.
- **Electro Mechanical Life:** Breaking AC current.
  - Resistive: 1 million operations @ 16 amps 240 V
  - 10 million operations @ 4 amps 240 V
  - Inductive: 1 million operations @ 15 amps 240 V
  - 10 million operations @ 2 amps 240 V
- **Approvals:** CSA file No. 15040
**NS2-KA DIMENSIONS**

### Panel Mounting Detail

- **Z**
  - RH00
  - MG21...
  - BH

- **IP00**
- **IP65**
- **L1**
- **Mechanical Interlock**
- **4X Ø 276 [Ø7] or M6**
- **4.72 [120]**
- **5.63 [143] SQ.**
- **4.72 [120]**

### Handle options

- **"W"**
- **2X 40° MAX.**
- **NEMA 12**
- **Cover Removable**
- **Contact Drive Can be rotated**
- **Every 90°**

### Number of double contacts

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<th>Number of double contacts</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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### Weight:

- **Operating head - 10 lbs [4.5 kg]**
- **Each double pole**
- **Contact block - 0.9 lbs [0.4 kg]**

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

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