NZ series

Compact switch fingertip controllers • switching technology



DISTINCTIVE FEATURES

One or two axis
Switches up to 2 A
Single or double pole
11.9 mm bush mounting
Sealed up to IP67



ENVIRONMENTAL SPECIFICATIONS

- Operating Temperature (sealed): -40 ºC to +70 ºC (-40 ºF to +185 ºF)
- Storage Temperature: -40 ºC to +70 ºC
- Sealing: IP67 (above panel with sealing boot)
- Impact Test Rating: IK09 (Lever / Boot options A and B)

ELECTRICAL SPECIFICATIONS

- Maximum Voltage: 30 VDC
- Nominal Current Switch (sealed): Up to 100 mA
- Output Impedance: <1 Ω
- Contact Life: Load dependant (Contact factory)

MECHANICAL SPECIFICATIONS

- Mechanical Angle of Movement: 15° (±7.5° from center)
- Expected Life: 1 million lifecycles
- Mass/weight: 35 g - 45 g (0.08-1.0 lbs) – subject to configuration type
- Lever Action (centering)
- Lever Travel: 15º (±7.5º from center)

MATERIALS

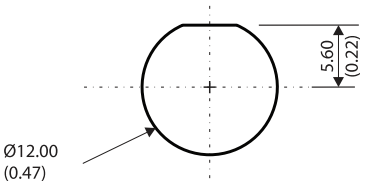
- Shaft: Stainless steel
- Boot: Silicone rubber
- Housing: Mineral filled nylon-6
- Contacts: Gold plated over nickel

The company reserves the right to change specifications without notice.

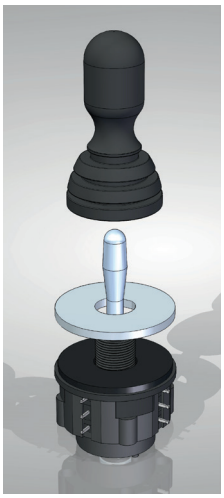
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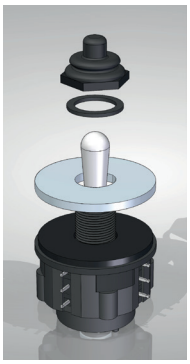
PANEL CUT-OUT



MOUNTING



Full boot

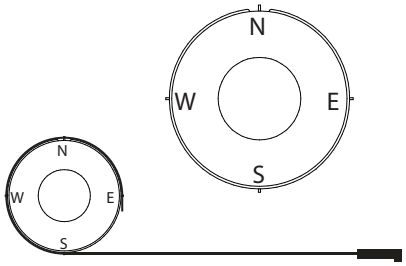


Half boot

The gray part to the right represents the customer panel

- Recommended Panel Thickness:
  for half boot: 1-4 mm – suggested 3 mm
  for full boot: 1-4 mm – suggested 2 mm
- Both full and half boots to be tightened to 1.5 Nm to ensure the optional panel gasket is fully compressed. If extra security is required,use an appropriate bond to secure the nut to the bush. Take care when fitting boots over levers, ensuring they are not twisted, once installed.

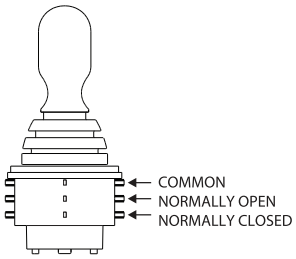
VIEWED FROM ABOVE (OPTION 1 AND 2)



CONNECTIONS

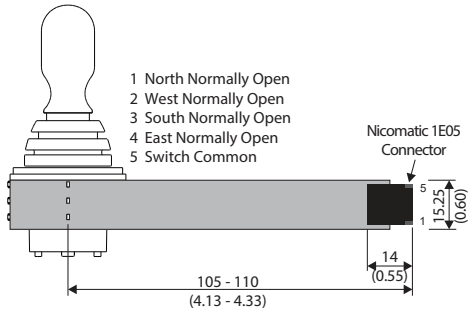
CONNECTION OPTION 0

No Harness
Switches suitable for 125 VAC @ 2 A (Resistive load)



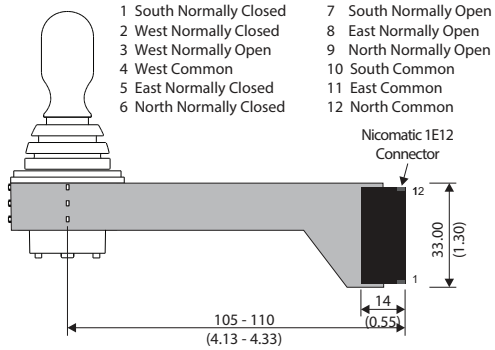
CONNECTION OPTION 1

5 Way Polyimide tail
Tail and connector suitable for 36 VDC @ 2 A max.



CONNECTION OPTION 2

12 Way Polyimide Tail
Tail and connector suitable for Small Control Signals only (12 VDC @ 100 mA max.)



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BUILD YOUR PART NUMBER

NZ _ _ _ _ _

SERIES

SWITCHES

A	Standard
B	Sealed

LEVER / BOOT

A	Half Boot + Lever
B	Full Boot + Lever
Z	Specified

CONNECTION

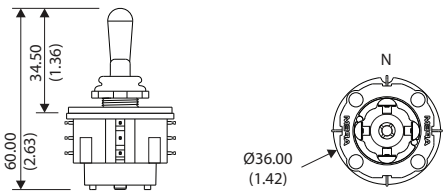
0	No harness
1	Polyimide Tail 5 Way
2	Polyimide Tail 12 Way

MODIFIER

00	None
135	+ Limiter Fitted

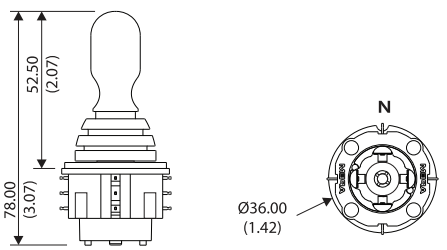
NZ WITH HALF BOOT





NZ WITH FULL BOOT





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CONFIGURATION SPECIFICATIONS

SWITCHES

The NZ series is supplied with two switch options. Both options have a gold plated silver alloy contact, providing reliable switching at low current levels. Switch option A being suitable for up to 2 A operation and switch option B being suitable for 100 mA operation. The anticipated life of the switches is heavily determined by the application and parameters such as load type. Please contact the factory for further advice about the expected switch performance under different loads of DC power supplies.

MECHANICAL OPERATION

All NZ series are supplied with an open square gate, allowing the user to move freely in all directions. This configuration allows the user to move in a diagonal direction which will provide a contact on two switches simultaneously. As a standard option the joystick may be factory fitted with an anodized aluminum limiter plate, limiting the travel to a “+” shape e.g. North, South, East and West only, with no diagonal travel, or a slot shape for North, South movement only.

LEVERS AND SEALING

The NZ series is offered with two panel sealing options:

- The silicone half boot option offers a product that closely mimics the look of a toggle switch. Lever Option A also mimics the look of a toggle lever. Additional levers to suit the half boot construction are available upon request.
- The silicone full boot option offers a product that more closely resembles a traditional joystick. Lever Option B is designed to work with a full boot. This option provides for the best possible panel seat, and has the tallest construction offered.

The half boot is supplied as standard with an additional sealing washer to seal the underside of the mounting nut. All boots are supplied as standard in black. The half boot is also available in red and green.
In all cases the NZ series is also supplied with an additional sealing gasket which may be optionally fitted to seal the body of the joystick to the underside of the panel.
NOTES: All seats offered are above panel seals. The NZ series is not sealed under panel. Switch option A are unsealed switches. Switch Option B are sealed switches.

CONNECTION DETAILS

Joysticks are supplied as standard without a cable harness, allowing the user flexibility of connection. Alternatively, joysticks specified with option A switches may be supplied with a polyimide ribbon tail, available in two configurations:

- The 5-way tail provides a connection to the four normally open contacts (North, South, East and West) and one common line. The 5-way tail is suitable for use with loads up to 2 A @ 36 VDC.
- The 12-way tail provides a connection to all twelve contacts i.e. normally open, normally closed and common on each of the four switches. The 12-way tail is suitable for use with small control signals up to 100 mA 12 VDC.

Both tails are terminated with a 0.1 inch pitch female connector housing. Male connectors are available upon request.