NZ series

Compact switch joysticks

Distinctive features and specifications



- ❑ Compact Size
- ❑ 11.9mm Bush Mount
- ❑ Alternate Handle Selection
- ❑ Polyimide Flexi Tail Option
- ❑ Silicone Rubber Sealing Boots
- ❑ V5 switches up to 2A

MECHANICAL

- Mechanical Life: 1 Million Operations (maximum)
- Lever Travel: 15° (±7.5° from center)
- Lever Material: Stainless Steel
- Weight: 35 to 45 grams (subject to configuration type)
- Body Material: Mineral Filled Nylon-6
- Boot Material: Silicone rubber
- Mounting - Bush: Single Point 11.9mm Diameter
- Recommended Panel Thickness (for half boot): 1-4 mm – suggested 3mm
- Recommended Panel Thickness (for full boot): 1-4 mm – suggested 2mm
- Impact Test Rating: IK09 (Lever / Boot options A and B)

ELECTRICAL

- Nominal Current Switch Option A: Up to 2A
- Nominal Current Switch Option B: Up to 100mA
- Maximum Voltage: 125VAC
- Switch Contacts: Changeover gold plated silver alloy
- Contact Life: Load Dependent (Please refer to factory)

ENVIRONMENTAL

- Temperature Range Switch Option A: -25°C to +50°C (-13°F to +122°F)[1]
- Temperature Range Switch Option B: -40°C to +85°C (-40°F to +185°F)[1]
- Above Panel Seal-Lever / Boot options A and B: To IP67
  (IP Ratings quoted refer to assembled joysticks with boots fitted, and are above panel seals only).

NOTES:

– All values are nominal.

– Specifications are subject to the joystick configuration.
Contact Technical Support for the performance of your specific configuration.

1. Temperature specifications may be subject to the chosen switch option.
Please refer to factory.

NZ				
SERIES	Switches	Lever / Boot	Connection	Modifier
	A Standard B Sealed	A Half Boot + Lever B Full Boot + Lever Z Specified	0 No harness 1 Polyimide Tail 5 Way 2 Polyimide Tail 12 Way	00 None 135 + Limiter Fitted

Note: The company reserves the right to change specifications without notice.

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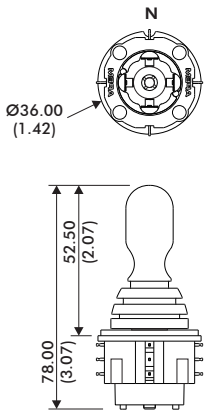
Overview

JOYSTICK MOUNTING (ALL VERSIONS)

NOTE: Both full and half boots to be tightened to 1.5Nm 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.

NZ WITH FULL BOOT



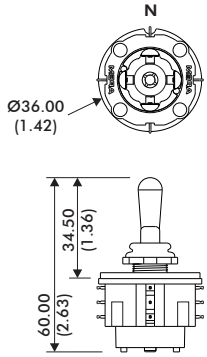


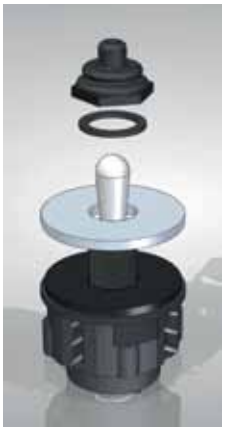


Note: The gray part to the right represents the customer panel

NZ WITH HALF BOOT







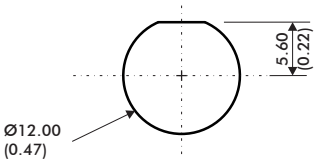
Note: The gray part to the right represents the customer panel

CONFIGURATION

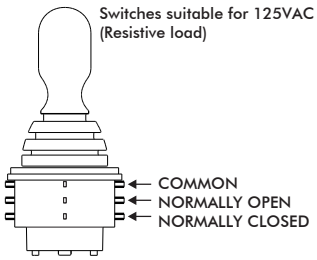


Bush flat & notch to face forward once mounted.

PANEL CUT-OUT

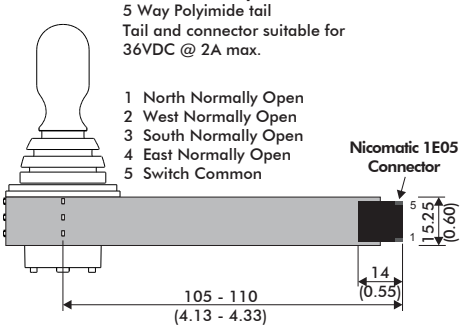


Connection Option 0
No Harness
Switches suitable for 125VAC @ 2A (Resistive load)



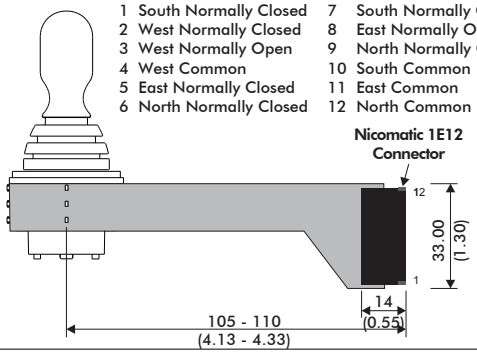
Connection Option 1
5 Way Polyimide tail
Tail and connector suitable for 36VDC @ 2A max.

1 North Normally Open
2 West Normally Open
3 South Normally Open
4 East Normally Open
5 Switch Common



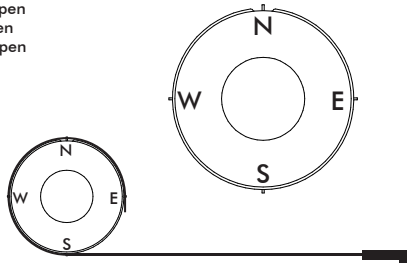
Connection Option 2
12 Way Polyimide Tail
Tail and connector suitable for Small Control Signals only (12VDC @ 100mA max.)

1 South Normally Closed
2 West Normally Closed
3 West Normally Open
4 West Common
5 East Normally Closed
6 North Normally Closed
7 South Normally Open
8 East Normally Open
9 North Normally Open
10 South Common
11 East Common
12 North Common



TOP VIEW
Options 1 and 2

Viewed from above



NOTE: Images shown are for illustration purposes only. Dimensions are in mm/(inch).

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Overview

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 2A operation and switch option B being suitable for 100mA 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 2A @ 36VDC.
- 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 100mA 12VDC.

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

