

APEM

NZ series

Ø11.9mm bush ultra compact switch joysticks



The NZ Series is a family of ultra compact switch joysticks, designed for the control of either machine functions or menu navigation. With above panel options that mimic the look of either a joystick or a toggle switch, the NZ Series offers an IP67 panel sealed, two axes control, in a compact below panel housing.



KEY FEATURES

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



NZ series

Ø11.9mm bush ultra compact switch joysticks

OPTION SELECTION

NZ				
	SWITCHES	LEVER / BOOT	CONNECTION	MODIFIER
	A Standard	A Half Boot + Lever	0 No harness	00 None
	B Sealed	B Full Boot + Lever	1 Polyimide Tail 5 Way	135 + Limiter Fitted
		Z Specified	2 Polyimide Tail 12 Way	136 - Limiter Fitted

Polyimide tails only available with switch option A. Switch option A has pin terminals. Switch option B has solder terminals.



SPECIFICATIONS

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 2 Amps
Nominal Current Switch Option B	-	Up to 100mA
Maximum Voltage	-	125V AC
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 ¹
Temperature Range Switch Option B	-	-40°C to +85°C 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

Exact specifications may be subject to configuration. Contact Technical Support for the performance of your specific configuration.

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

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

NZ series

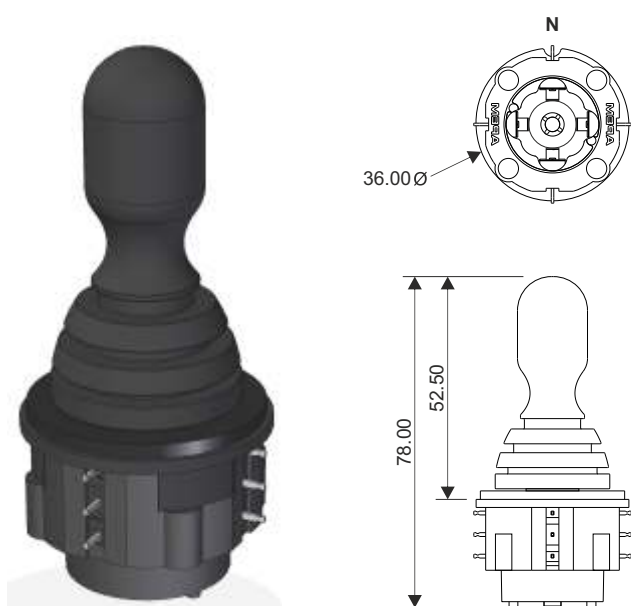
Ø11.9mm Bush ultra compact switch joysticks

MOUNTING DETAILS

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

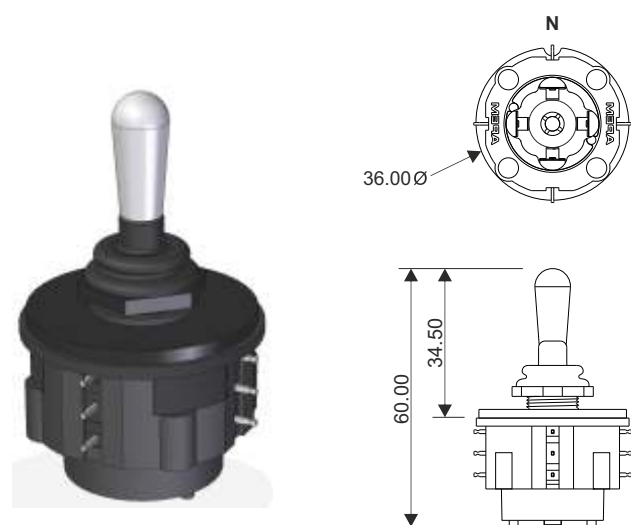


Note: The grey part to the right represents the customer panel



*Please note images shown are for illustration purposes.

NZ with Half Boot



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

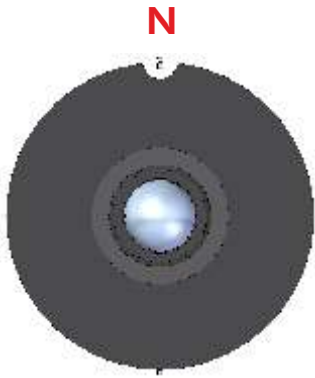


Note: The company reserves the right to change specifications without notice.

NZ series

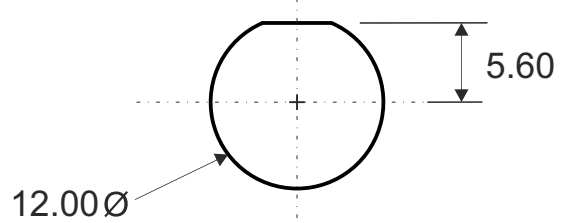
Ø11.9mm Bush ultra compact switch joysticks

CONFIGURATION



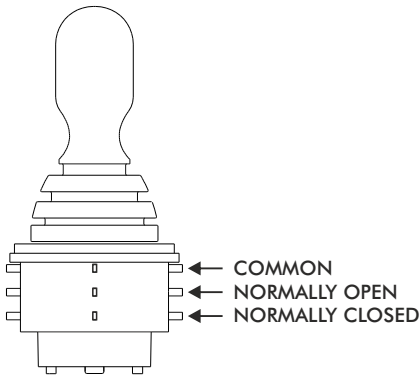
Bush flat & notch to face forward once mounted.

PANEL CUT-OUT



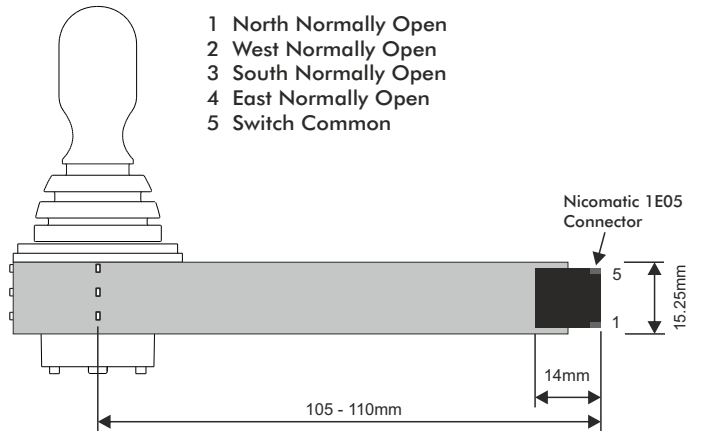
Connection Option 0 No Harness

Switches suitable for 125Vac @ 2A
(Resistive load)



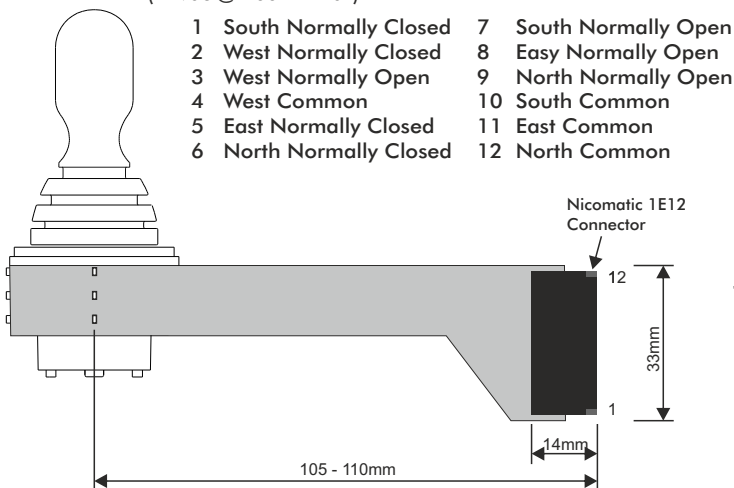
Connection Option 1 5 Way Polyimide Tail

Tail and connector suitable for
36Vdc @ 2A Max.

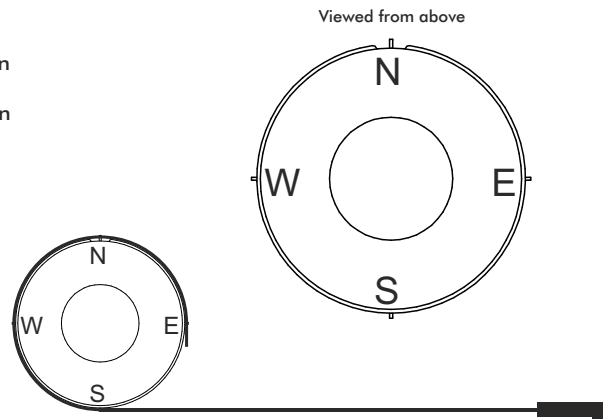


Connection Option 2 12 Way Polyimide Tail

Tail and connector suitable for
Small Control Signals only
(12Vdc @ 100mA max)



Top View Options 1 and 2



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

NZ series

Ø11.9mm Bush ultra compact switch Joysticks

CONFIGURATION OPTIONS

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 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 differing loads or 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 yield a contact on two switches simultaneously. As a standard option the joystick may be factory fitted with an anodised aluminium 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 yields 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 yields 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 seal, 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.

N.B. All seals 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 2 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 of 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 to special order.



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