

1000HE series

Switch joysticks for harsh environments

Distinctive features and specifications



- Double seal
- Single or double pole
- Gold contacts
- Oil / acid / alkali resistant boot
- 22mm diameter bush mounting
- V4 switches
- Two handle options
- Outer hex nut for wrench tightening

MECHANICAL

- Mechanical Life: 1 Million Operations
- Lever Travel: 24° (12° from center)
- Lever Material: Stainless Steel
- Mass/weight: 70g (2.47oz)
- Body Material: Mineral Filled Nylon-6
- Handle Material: Aluminum / Phenolic
- Boot Material: Kumho / Neoprene
- Mounting - Bush: Single Point 22mm Diameter

ENVIRONMENTAL

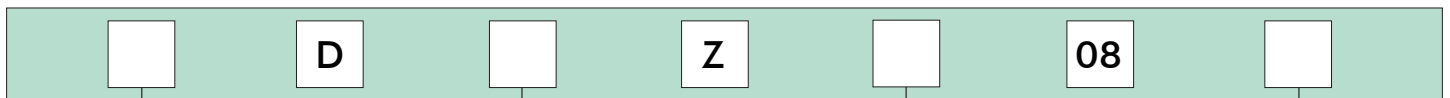
- Temperature Range: -20°C to 50°C
(-4°F to 122°F)³
- Above Panel Seal (IP): To IP67

ELECTRICAL

- Number of Switches: 2, 4, or 8
- Nominal Current: 6A, 10A
- Maximum Voltage: 250V AC
- Contacts #1 6A - V4: Gold
- Contacts #3 10A - V4: Silver
- Contacts #4 Right Angle: Silver
- Contacts #5 Faston Style - V4: Silver
- Contacts #7: Silver
- Switch Contacts: Changeover
- Contact Life: Load Dependent

NOTES:

- All values are nominal
- Exact specifications may be subject to configuration. Contact Technical Support for the performance of your specific configuration.
- 3. Temperature specification may be subject to the chosen switch option. Please refer to factory.



Switches

- 1 6A - V4
- 3 10A - V4
- 4 Right angle V4
- 5 5A/250VAC - V4
Faston Style
- 7 10A/250VAC - V4
IP67

Poles

- 1 Single Pole
- 2 Double Pole

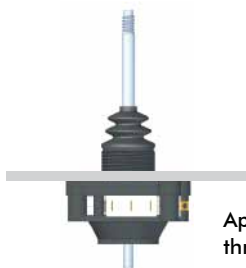
Handle

- BE Round
- BH Toggle

Modifier

- 135 + Limiter Fitted
- 136 - Limiter Fitted

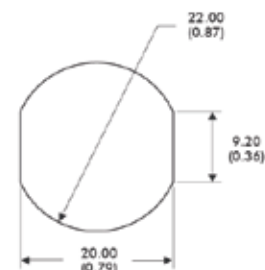
PANEL CUT-OUT



NOTE:

The joystick is mounted from beneath the panel.

Apply the assembled base through the mounting cut-out.



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Overview

Handle Identifier (BE)

23.50 (0.93)

85.00 (3.35)

23.00 (0.91)

44.00 (1.73)

External Boot Identifier (8)

See following page for Installation Instructions.

Ensure that the rubber O-ring is in position before threading the top section on.

Machined HEX finishing NUT - Apply torque of 1-1.5 Nm to seal.

Kumho Sealing Boot
Oil, Petroleum & UV resistant

Apply Loctite 270

Existing 1000 series 22mm (0.87in) bushing and panel cut-out.

Nitrile Rubber O-Ring

Apply the assembled base through the mounting cut-out in the panel (shown above left)

Note: Double Pole Version is 27.5mm (1.08in) deep below panel

Handle Identifier (BH)

30.00 (1.18)

80.00 (3.15)

External Boot Identifier (8)

See following page for Installation Instructions.

Ensure that the rubber O-ring is in position before threading the top section on.

Machined HEX finishing NUT - Apply torque of 1-1.5 Nm to seal.

Kumho Sealing Boot
Oil, Petroleum & UV resistant

Apply Loctite 270

Existing 1000 series 22mm bushing and panel cut-out.

Nitrile Rubber O-Ring

Apply the assembled base through the mounting cut out in the panel (shown above left)

Note: Users may still select their choice of V4 Micro switch and number of poles according to the standard 1000 series option list. Users may also select the joystick to have an open square gate (when no limiter is fitted) or a metal slot or cross limiter factory fitted.

NOTES:

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

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

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Overview

SWITCHES

Five switch options are specified as standard. All are configured with change-over contacts, allowing the user flexibility of connection.

- Option 1 - V4 6A/240VAC should be specified where the joystick will be switching smaller current levels. These switches are supplied with gold flash terminals to ensure reliable switching at very low current levels.
- Option 3 - V4 10A/240VAC should be specified where the joystick will be switching up to 10A.
- Option 4 - V4 5A/250VAC with right angle terminals, should be specified for PCB mounting or simpler termination.
- Option 5 - V4 5A/250VAC with 2.8mm Faston style terminals.
- Option 7 - V4 10A/250VAC sealed to IP67.

Life and reliability of the switches are heavily determined by the type of application and parameters such as load. Contact factory for further advice about the expected switch performance under differing loads or DC supplies.

MECHANICAL OPERATION

All 1000 HE series are sprung to center and are supplied with an open square gate. As standard option the 1000 HE series may be factory fitted with either a single axis (-), cross (+), or diagonal (X) metal limiter. All joysticks are supplied as standard without a cable harness, allowing the user flexibility of connection. Alternatively, the joystick may be factory configured with cable harness, upon customer request.

DOUBLE POLE OPERATION

The construction of the joystick is designed so that both switches nominally trigger simultaneously. Such simultaneous triggering is subject to a $\pm 2^\circ$ tolerance (between switches) owing to the mechanical tolerances and hysteresis of each switch.

INSTALLATION INSTRUCTIONS

From beneath the panel, pass the joystick lever through the mounting cut-out, ensuring the correct orientation. If additional security is required, apply some Loctite 270 to the thread at the end of the lever. Ensure the rubber O-ring is in position in the groove on the underside of the hex nut at the base of the assembled top section.

While holding the lower base in position, take the assembled top section and screw it on to the lever and joystick bush, using the handle. This should be fitted finger tight until the rubber O-ring meets the panel.

Tighten the hex nut, applying a torque of 1-1.5Nm to seal and add a bond if necessary. After installation ensure boot is not twisted.

