mxuteuk HB2-BS545

mxuteuk HB2-BS545 Emergency Stop Push Button Switch Instruction Manual

Model: HB2-BS545

1. Introduction

This manual provides essential information for the safe and effective installation, operation, and maintenance of the mxuteuk HB2-BS545 Emergency Stop Push Button Switch. Please read these instructions carefully before use and retain for future reference.
The HB2-BS545 is a 22mm red mushroom head emergency stop push button switch designed for industrial applications. It features a latching mechanism, requiring a twist to reset after activation. It includes both a Normally Closed (NC) and a Normally Open (NO) contact.

2. Safety Information

WARNING: Electrical components can cause serious injury or death. Installation and maintenance should only be performed by qualified personnel.

- Always disconnect power before installing, wiring, or performing maintenance on the switch.
- Ensure all wiring complies with local and national electrical codes.
- Verify the voltage and current ratings of the switch are compatible with your application.
- Do not operate the switch if it appears damaged or faulty.
- The emergency stop function is critical for safety. Regularly test its functionality.

3. Product Overview

The mxuteuk HB2-BS545 is a robust emergency stop switch with a prominent red mushroom head for easy identification and activation. It is designed for quick and gentle operation in critical situations.

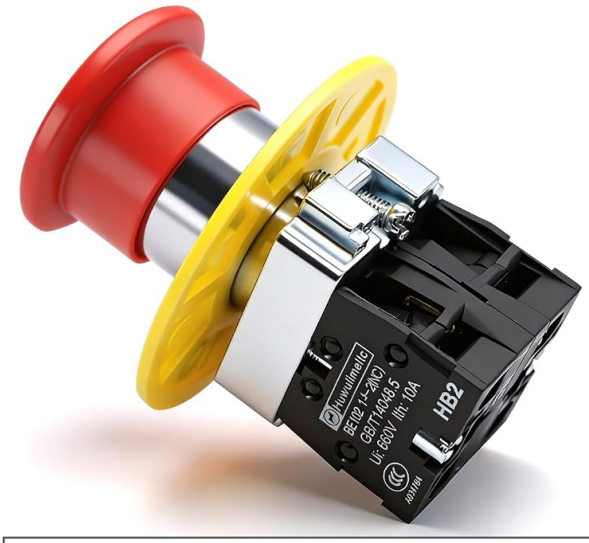


Figure 1: Overview of the mxuteuk HB2-BS545 Emergency Stop Push Button Switch.

Key Features:

- **Contact Type:** 1 Normally Closed (NC) and 1 Normally Open (NO)
- **Operation:** Latching (Push to stop, twist to reset)
- **Mounting Hole Diameter:** 22mm (7/8")
- **Button Diameter:** 40mm (1.6")
- **Rated Current (Ith):** 10A
- **Rated Insulation Voltage (Ui):** 600V AC
- **Electrical Life:** Approximately 500,000 operations
- **Material:** Plastic body, silver contacts, brass conductor

PRODUCT INFORMATION



Operation: Maintained (Latching)

Mounting Hole Size: 22Mm

Switch Rating: 10A/660V

Structure: 1NC 1NO

Switch Life: 500,000 Times

Button Color: Red

Material: Nylon Body, Silver Contact, Brass Conductor

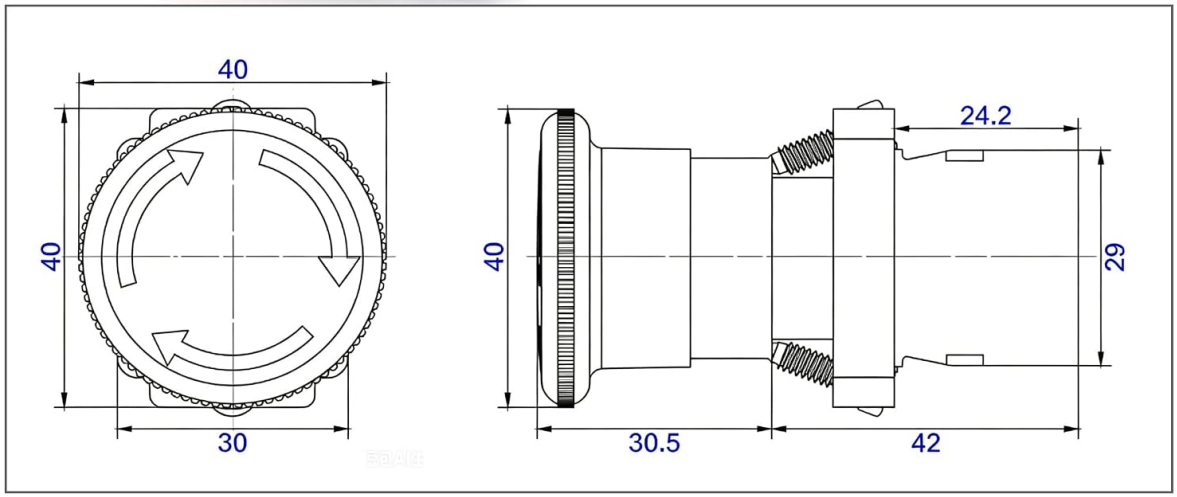


Figure 2: Detailed product information including dimensions and key specifications.

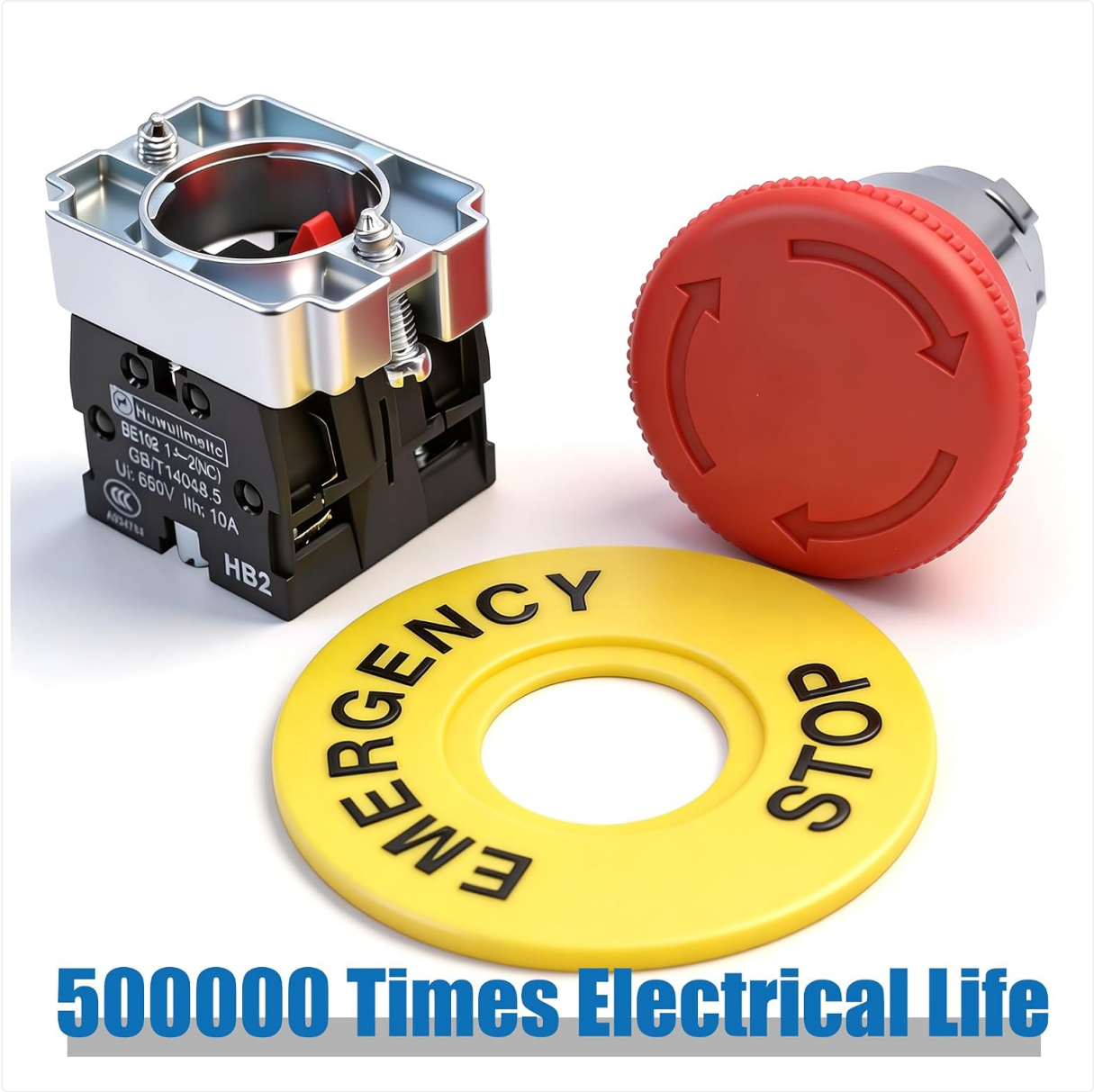


Figure 3: The switch is designed for an electrical life of approximately 500,000 operations.

4. Specifications

Detailed technical specifications for the HB2-BS545 Emergency Stop Push Button Switch:

Category	Parameter	Specification
Electrical Characteristics	Operating Temperature	-25°C ~ +55°C (Ice free)
	Operating Humidity	45~85%RH
	Contact Resistance	≤50mΩ
	Insulation Resistance	≥100MΩ
	Dielectric Strength	1890VAC/50Hz/60s
	Current Rating	10 Amps
Environmental	Vibration Resistance	50Hz, Amplitude 1.0mm
	Shock Resistance	>10g

Resistance Category	Parameter	Specification
	International Protection Rating	660 (Voltage rating, not IP code)
Mechanical Life	Momentary	≥2,000,000 times
	Maintained, Selector Switch	≥1,000,000 times
	Key-lock Selector, Emergency Switch	≥500,000 times
Electrical Life	All Types	≥200,000 times
Mounting Type		Panel Mount
Connector Type		Screw Terminals
Overall Size (Approx.)		39 x 29 x 73mm / 1.5" x 1.1" x 2.9" (L*W*H)
Fit Panel Thickness (adjustable)		6mm / 15/64" (max.)

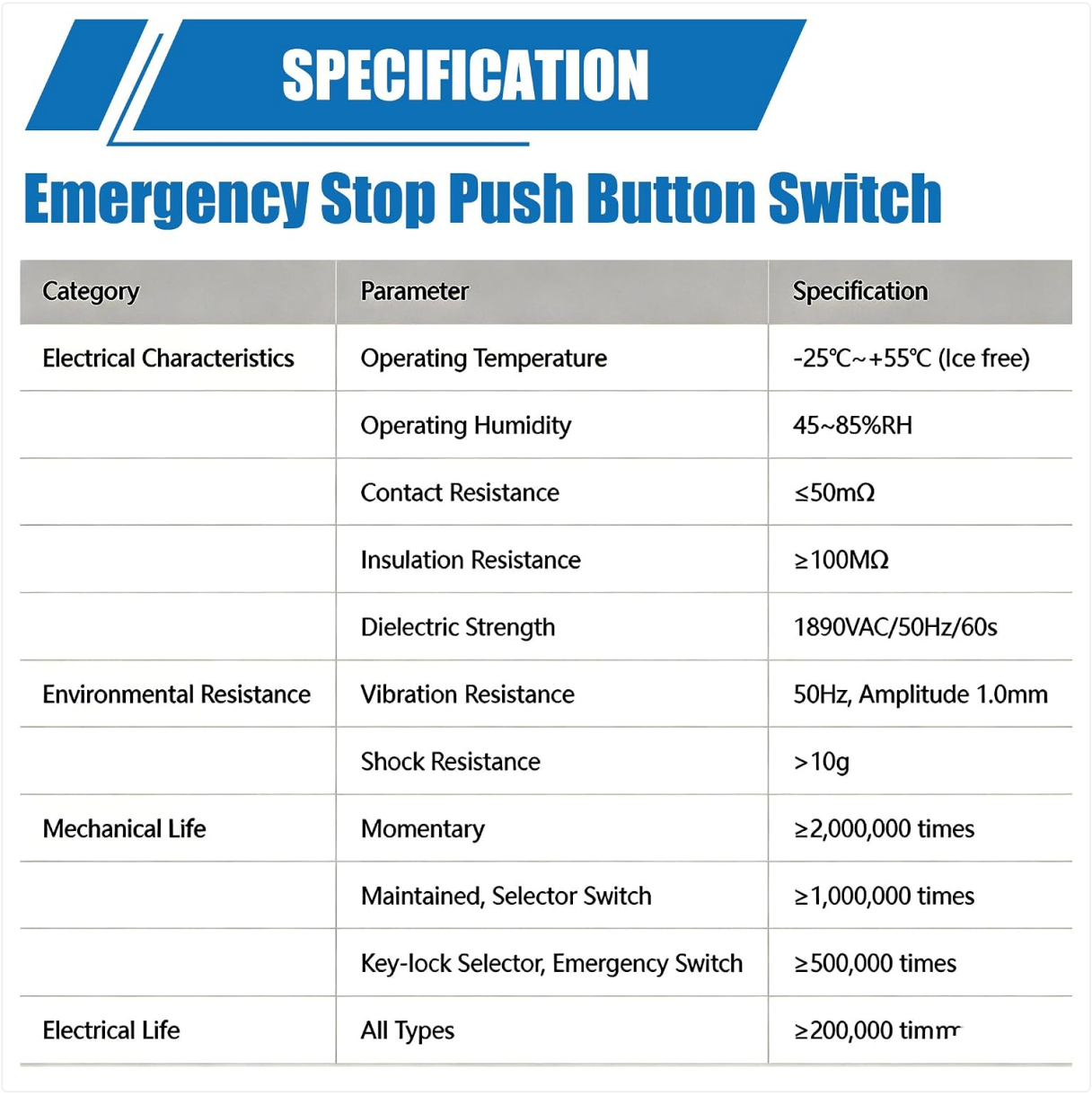


Figure 4: Visual representation of the switch specifications.

5. Installation

5.1 Mounting Instructions

1. Ensure power is disconnected from the circuit where the switch will be installed.
2. Select a suitable panel location for mounting. The mounting hole diameter required is 22mm (approximately 7/8 inch). A step drill or carbide hole saw is recommended for creating the hole.
3. Insert the switch body through the mounting hole from the front of the panel.
4. Secure the switch from the rear of the panel using the provided locking nut and washer. Tighten firmly but do not overtighten.
5. Ensure the switch is stable and does not wobble.

5.2 Wiring Instructions

The HB2-BS545 switch includes one Normally Closed (NC) and one Normally Open (NO) contact. Refer to the wiring diagram below for proper connection. The terminals are typically labeled for NC and NO contacts.

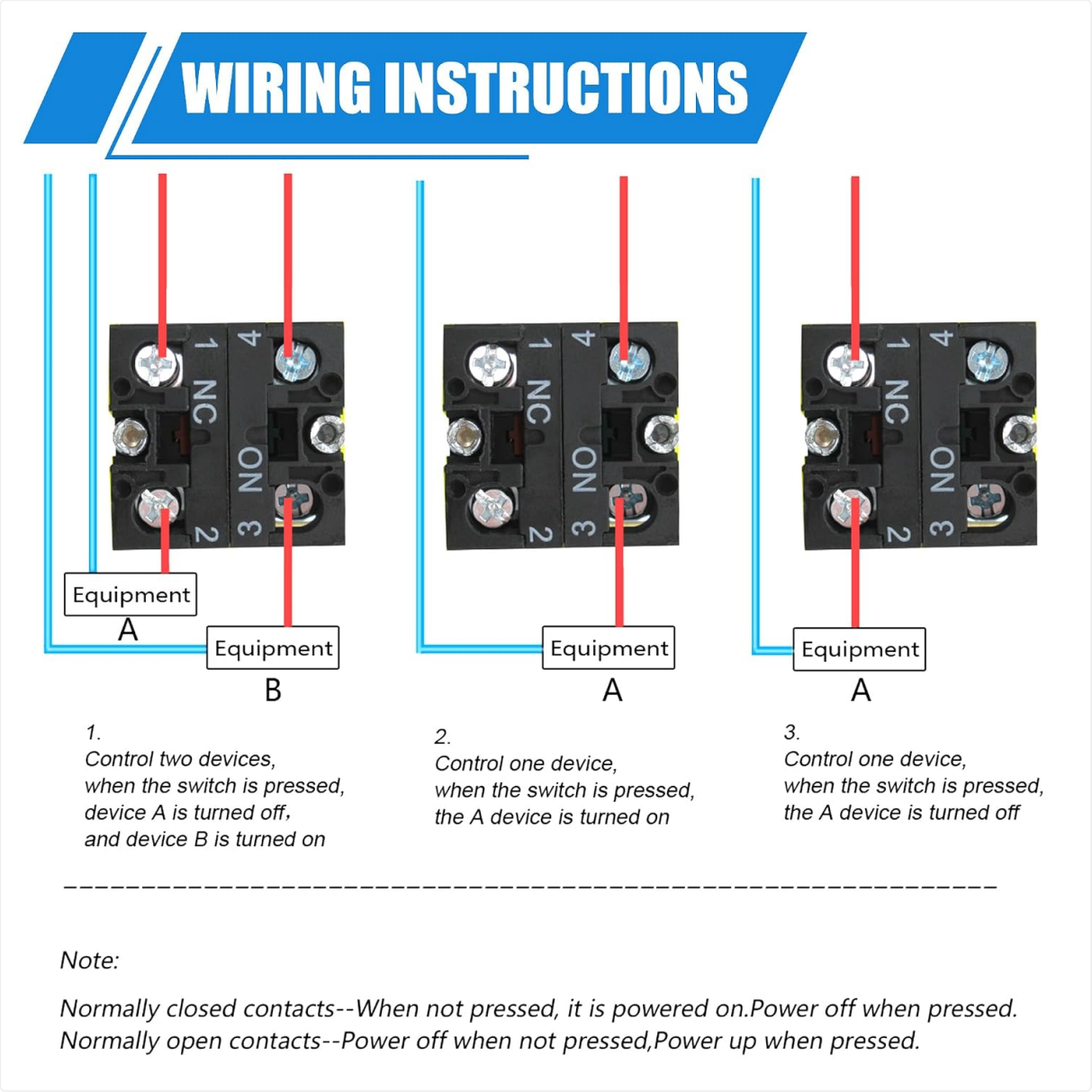


Figure 5: Wiring diagrams for various control scenarios.

- **Normally Closed (NC) Contacts:** These contacts are closed (power ON) when the button is not pressed and open (power OFF) when the button is pressed. Use NC contacts for circuits that need to

be interrupted during an emergency stop.

- **Normally Open (NO) Contacts:** These contacts are open (power OFF) when the button is not pressed and closed (power ON) when the button is pressed. Use NO contacts for circuits that need to be activated during an emergency stop (e.g., an alarm).

Connect your equipment's control wires to the appropriate terminals. Ensure all connections are secure to prevent loose wiring and potential hazards.

6. Operating Instructions

1. **To Activate (Stop):** In an emergency, firmly press the red mushroom button. The button will latch in the depressed position, interrupting the connected circuit(s).
2. **To Reset:** To disengage the emergency stop and restore power, twist the red mushroom button clockwise (or counter-clockwise, depending on installation) until it springs back to its original, unlatched position.

Always ensure the cause of the emergency has been addressed before resetting the switch and resuming operation.

7. Maintenance

- **Regular Inspection:** Periodically inspect the switch for any signs of physical damage, wear, or loose connections.
- **Cleaning:** Keep the switch clean and free from dust, dirt, and debris. Use a soft, dry cloth for cleaning. Do not use abrasive cleaners or solvents.
- **Functionality Test:** Regularly test the emergency stop function to ensure it activates and latches correctly, and that it can be reset smoothly.
- **Contact Integrity:** If the switch is used in high-current applications, periodically check for signs of arcing or degradation of the contacts.

8. Troubleshooting

- **Switch does not latch/stay pressed:** Check for any obstructions around the button mechanism. Ensure the internal latching mechanism is not damaged. If damaged, replace the switch.
- **Switch does not reset after twisting:** Ensure the button is twisted fully to release the latch. Check for internal damage or debris preventing the spring return. If damaged, replace the switch.
- **No power interruption when pressed (NC contact):** Verify wiring connections to the NC terminals. Check for continuity across the NC contacts when the button is pressed and released using a multimeter. A lack of continuity when pressed indicates a faulty contact or wiring issue.
- **No power activation when pressed (NO contact):** Verify wiring connections to the NO terminals. Check for continuity across the NO contacts when the button is pressed and released using a multimeter. A lack of continuity when pressed indicates a faulty contact or wiring issue.
- **High impedance/overheating:** If the switch experiences high current loads, ensure the switch's current rating (10A) is not exceeded. High impedance in the closed position can lead to overheating. If this occurs, discontinue use and replace the switch with one rated for the appropriate current.
- **Button feels loose or falls off:** This indicates a manufacturing defect or improper assembly. The switch should be securely mounted and the button should not detach. Replace the unit if this occurs.

9. Applications

The mxuteuk HB2-BS545 Emergency Stop Push Button Switch is suitable for a wide range of industrial and commercial applications where a quick and reliable emergency shutdown mechanism is required. Common uses include:

- Machine control panels
- Conveyor systems
- Automation equipment
- Safety circuits
- Industrial machinery



Figure 6: Various industrial applications where the emergency stop switch can be utilized.

10. Warranty and Support

mxuteuk products are designed for reliability and performance. For warranty information or technical support, please refer to the product packaging or contact mxuteuk customer service directly. Keep your purchase receipt for warranty claims.