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### Carrier HH18HA493

# Carrier Bryant Payne HH18HA493 Roll Out Switch User Manual

Model: HH18HA493

## 1. INTRODUCTION

The Carrier Bryant Payne HH18HA493 Roll Out Switch is a critical safety component designed for use in heating systems, specifically furnaces. This device is engineered to detect abnormal conditions, such as flame rollout or excessive temperatures in the burner compartment, which could indicate a dangerous malfunction. When such a condition is detected, the switch automatically opens, interrupting the electrical circuit to the gas valve and shutting down the furnace to prevent potential hazards. This is a manual reset type switch, meaning it must be manually reset after tripping, indicating that the underlying issue must be investigated and resolved by a qualified technician before the furnace can be restarted.

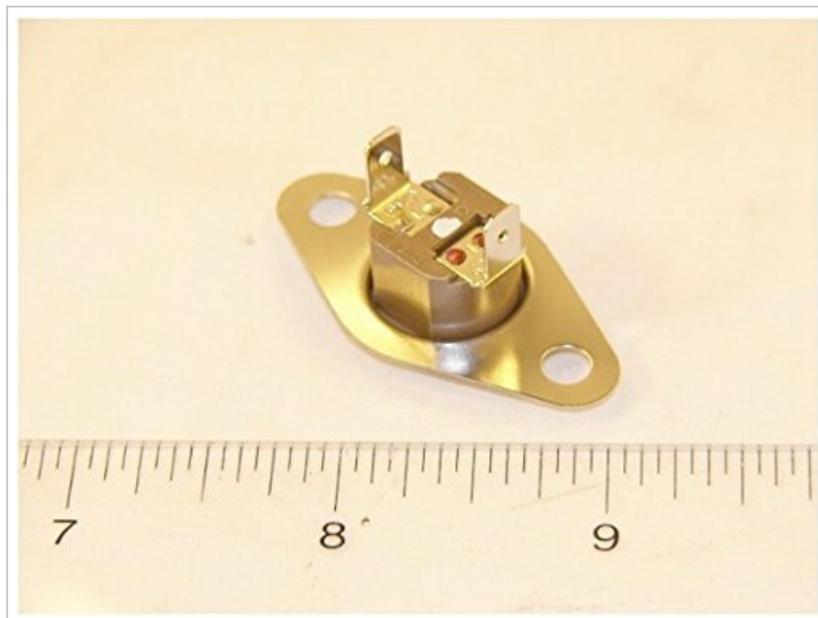


Figure 1: Carrier Bryant Payne HH18HA493 Roll Out Switch. This image displays the compact design of the safety switch, typically featuring a metal body with electrical terminals and a manual reset button.

## 2. SAFETY INFORMATION

**WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or loss of life. Installation and service must be performed by a qualified installer, service agency, or the gas supplier.**

- **Disconnect Power:** Always ensure that all electrical power to the furnace is disconnected at the main service panel before attempting any installation, maintenance, or service. Failure to do so can result in electrical shock.
- **Gas Supply:** If working near gas lines, ensure the gas supply to the appliance is turned off. Gas leaks can cause explosions or fires.
- **Qualified Personnel:** This component is part of a complex heating system. Installation and troubleshooting should only be performed by trained and qualified HVAC technicians.
- **Original Parts:** Use only genuine Carrier, Bryant, or Payne replacement parts to ensure proper operation and safety.
- **Hot Surfaces:** Furnace components can be extremely hot. Allow sufficient time for the furnace to cool before handling any parts.

### 3. SETUP AND INSTALLATION

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The HH18HA493 Roll Out Switch is designed for specific furnace models. Refer to your furnace's service manual for exact location and installation procedures. The following is a general guide and should not replace manufacturer-specific instructions.

1. **Power Disconnection:** Turn off the electrical power to the furnace at the circuit breaker or fuse box. Verify power is off using a voltage tester.
2. **Access Panel Removal:** Remove the furnace access panels to expose the burner compartment and existing roll out switch.
3. **Locate and Remove Old Switch:** Identify the existing roll out switch. Note its mounting position and wiring connections. Disconnect the wires and carefully remove the old switch.
4. **Install New Switch:** Mount the new HH18HA493 switch in the exact same location and orientation as the old one. Ensure it is securely fastened.
5. **Wire Connections:** Reconnect the electrical wires to the new switch's terminals. Ensure connections are tight and secure. Refer to the furnace wiring diagram if unsure.
6. **Panel Reinstallation:** Replace all furnace access panels.
7. **Power Restoration and Testing:** Restore electrical power to the furnace. Initiate a call for heat and observe the furnace operation. The furnace should ignite and operate normally. If the switch trips immediately or the furnace does not operate correctly, immediately shut off power and consult a qualified technician.

**Note:** The roll out switch is typically located near the burner assembly or heat exchanger, designed to sense excessive heat or flame escaping the combustion chamber.

### 4. OPERATING PRINCIPLE

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The HH18HA493 Roll Out Switch operates as a normally closed (NC) safety device. This means that under normal operating conditions, the electrical circuit through the switch is complete, allowing the furnace to function. If an unsafe condition occurs, such as flame rollout from the burner assembly or an excessive temperature rise in the combustion area, the bimetallic disc or sensor within the switch will heat up and deform, causing the electrical contacts to open. This action breaks the circuit to the gas valve, immediately

shutting off the fuel supply and preventing further operation of the furnace.

Once tripped, the switch remains open until it is manually reset. The manual reset button is typically a small, red or black button located on the switch body. **Do not reset the switch without first identifying and correcting the cause of the trip.** Repeated tripping indicates a serious underlying problem that requires professional diagnosis.

## 5. MAINTENANCE

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The HH18HA493 Roll Out Switch itself is a sealed component and does not require routine user maintenance. However, its proper function relies on the overall health of the furnace system. Regular professional maintenance of your furnace is crucial to prevent conditions that could cause the roll out switch to trip.

- **Annual Inspections:** Have a qualified HVAC technician inspect your furnace annually. They will check for proper combustion, clean burners, inspect the heat exchanger for cracks, and ensure proper venting, all of which can prevent flame rollout or overheating.
- **Cleanliness:** Keep the area around the furnace clean and free of obstructions to ensure adequate airflow.

If the roll out switch trips, it is a clear indication of a system malfunction that requires immediate attention from a professional.

## 6. TROUBLESHOOTING

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If your furnace is not operating and you suspect the roll out switch has tripped, follow these steps:

1. **Verify Power:** Ensure the furnace has electrical power and the thermostat is calling for heat.
2. **Locate Switch:** With power disconnected, locate the HH18HA493 roll out switch (refer to your furnace manual for exact location).
3. **Check for Tripped State:** Look for a small, often red or black, button on the switch. If it is popped out, the switch has tripped.
4. **DO NOT IMMEDIATELY RESET:** A tripped roll out switch indicates a serious safety issue. **Do not simply press the reset button.**
5. **Contact a Professional:** Immediately contact a qualified HVAC technician. They will diagnose the root cause of the trip, which could include:
  - Blocked flue or chimney
  - Dirty or clogged burners
  - Cracked heat exchanger
  - Insufficient combustion air
  - Malfunctioning draft inducer motor
  - Over-firing of the furnace
6. **Resetting the Switch:** Only after the underlying problem has been identified and corrected by a qualified technician should the switch be manually reset by pressing the button firmly until it clicks.

## 7. SPECIFICATIONS

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<b>Model Number</b>	HH18HA493
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<b>Manufacturer</b>	Carrier
<b>Part Number</b>	HH18HA493
<b>Type</b>	Roll Out Switch (Safety Limit Switch)
<b>Reset Type</b>	Manual Reset
<b>Item Weight</b>	Approximately 1 pound
<b>Package Dimensions</b>	Approximately 6 x 3 x 1 inches

## 8. WARRANTY AND SUPPORT

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Warranty information for the Carrier Bryant Payne HH18HA493 Roll Out Switch is typically provided by the manufacturer or the authorized distributor at the time of purchase. Please retain your proof of purchase for warranty claims.

For technical support, service, or warranty inquiries, please contact your installing HVAC contractor or an authorized Carrier, Bryant, or Payne dealer. They have the expertise and access to specific product information to assist you.

You may also visit the official Carrier website for general support information or to locate a dealer in your area.