

## Goodman 20162903

# Goodman 20162903 160°/120° Primary Limit Switch Instruction Manual

Model: 20162903

## 1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of the Goodman 20162903 160°/120° Primary Limit Switch. This component is designed to ensure the safe and efficient operation of compatible HVAC systems by preventing overheating.

## 2. SAFETY INFORMATION

**WARNING:** Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or loss of life. Read and understand these instructions completely before proceeding. Installation and service must be performed by a qualified installer or service agency.

- Always disconnect electrical power to the appliance before installing or servicing the limit switch.
- Wear appropriate personal protective equipment (PPE) during installation and service.
- Ensure all wiring connections are secure and comply with local electrical codes.
- Do not bypass or tamper with safety devices.

## 3. PRODUCT OVERVIEW

The Goodman 20162903 is a primary limit switch designed for use in Goodman HVAC systems, typically furnaces. Its function is to monitor the temperature within the heat exchanger or plenum. If the temperature exceeds a preset limit (160°F in this case), the switch will open, interrupting the circuit to the burner and preventing the furnace from overheating. It will reset once the temperature drops to a safe level (120°F).



An image showing the Goodman 20162903 primary limit switch. It features a metal mounting plate with two screw holes and a central black circular component with two metal spade terminals for electrical connections. A small blue dot is visible on the black component.

#### 4. SPECIFICATIONS

Feature	Specification
Brand	Goodman
Part Number	20162903
Switch Type	Primary Limit Switch
Operation Mode	Automatic
Activation Temperature	160°F
Reset Temperature	120°F
Connector Type	Clamp
Terminal Type	Screw
Material	Metal
Item Dimensions (L x W x H)	6.2 x 3.1 x 2.9 inches
Item Weight	1.06 ounces

Feature	Specification
International Protection Rating	IP00
UPC	076335072715

## 5. INSTALLATION AND SETUP

**NOTE:** Installation should only be performed by a qualified HVAC technician.

1. **Power Disconnection:** Turn off all electrical power to the furnace or HVAC unit at the main service panel before beginning any work.
2. **Locate Existing Switch:** Identify the current primary limit switch in your furnace. It is typically mounted on the heat exchanger or plenum.
3. **Disconnect Wiring:** Carefully disconnect the electrical wires from the terminals of the old limit switch. Note the position of each wire for correct re-connection.
4. **Remove Old Switch:** Unscrew or unclip the old limit switch from its mounting location.
5. **Install New Switch:** Position the Goodman 20162903 limit switch in the same location as the old one. Secure it using the appropriate screws or clips. Ensure it is firmly mounted.
6. **Connect Wiring:** Reconnect the electrical wires to the terminals of the new limit switch, ensuring they match the original configuration. Double-check all connections for tightness.
7. **Restore Power:** Once installation is complete and all connections are verified, restore electrical power to the HVAC unit.
8. **Test Operation:** Initiate a heating cycle and monitor the furnace's operation to ensure the new limit switch functions correctly and the furnace operates safely.

## 6. OPERATING PRINCIPLES

The primary limit switch operates automatically. During normal furnace operation, as the heat exchanger heats up, the temperature-sensing element within the limit switch monitors the internal temperature. If the temperature rises above 160°F, the switch will open, interrupting the control circuit to the gas valve or heating element, thereby shutting down the burner. This prevents the furnace from reaching dangerously high temperatures. Once the temperature inside the plenum or heat exchanger cools down to approximately 120°F, the switch will automatically close, allowing the furnace to resume normal operation.

## 7. MAINTENANCE

The Goodman 20162903 Primary Limit Switch is a sealed component and does not require routine user maintenance. However, it is recommended to have your HVAC system, including safety components like the limit switch, inspected annually by a qualified technician. During inspection, the technician can:

- Check for proper operation of the limit switch.
- Inspect wiring for signs of wear or damage.
- Ensure the mounting is secure.
- Clean any dust or debris that may accumulate around the switch, which could affect its temperature sensing.

## 8. TROUBLESHOOTING

If your furnace is experiencing issues related to overheating or intermittent operation, the primary limit switch may be a factor. Common symptoms of a faulty limit switch include:

- **Furnace cycling on and off frequently (short cycling):** This can indicate the limit switch is tripping due to restricted airflow, an oversized furnace, or a faulty switch itself.
- **Burner shutting off prematurely:** If the burner shuts off before the thermostat setting is reached, and the blower continues to run, the limit switch may have tripped.
- **No heat or intermittent heat:** A completely failed limit switch (stuck open) will prevent the burner from igniting.

If you suspect a problem with your limit switch, it is recommended to contact a qualified HVAC technician for diagnosis and repair. Do not attempt to bypass or repair a faulty limit switch yourself, as this can create a significant safety hazard.

## 9. WARRANTY INFORMATION

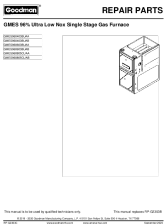

Warranty coverage for the Goodman 20162903 Primary Limit Switch is typically provided by the manufacturer or the seller at the time of purchase. Please refer to your purchase documentation or contact the original vendor for specific warranty terms and conditions. Keep your proof of purchase for any warranty claims.

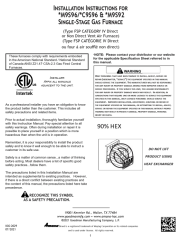


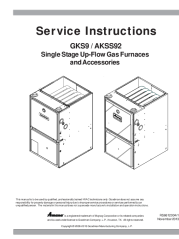
## 10. SUPPORT

For technical assistance, troubleshooting beyond this manual, or professional service, please contact a certified HVAC technician or the Goodman customer support line. When contacting support, have your product model number (20162903) and any relevant system information readily available.

Goodman Official Website: [www.goodmanmfg.com](http://www.goodmanmfg.com)

### Related Documents - 20162903

	<p><a href="#">Goodman GMES 96% Ultra Low Nox Single Stage Gas Furnace Repair Parts List</a></p> <p>Comprehensive repair parts list and diagrams for the Goodman GMES 96% Ultra Low Nox Single Stage Gas Furnace, including part numbers, descriptions, and model applicability. Essential information for HVAC technicians.</p>
	<p><a href="#">Goodman GMH95 40\" 95% Gas Furnace Technical Manual</a></p> <p>Comprehensive technical manual for the Goodman GMH95 40\" 95% Gas Furnace. Includes product identification, general operation, technical specifications, component details, wiring diagrams, blower performance data, and installation considerations for HVAC professionals.</p>

	<p><a href="#">Goodman/Amana M9S96/C9S96 &amp; M9S92 Gas Furnace Installation Instructions</a></p> <p>Comprehensive installation instructions for Goodman and Amana single-stage gas furnaces, models M9S96, C9S96, and M9S92. Covers safety, installation procedures, operation, and maintenance for Type FSP CATEGORY IV furnaces.</p>
	<p><a href="#">Goodman GSM &amp; GSMS Sealed Combustion Condensing Furnace Installation &amp; Operating Instructions</a></p> <p>Comprehensive installation and operating instructions for Goodman GSM and GSMS series sealed combustion condensing furnaces. Covers safety, installation procedures, combustion air, venting, gas piping, electrical connections, and maintenance.</p>
	<p><a href="#">Goodman CVC9/95 &amp; MVC95 Two-Stage Gas Furnace Installation Instructions</a></p> <p>This document provides comprehensive installation instructions for Goodman and Amana CVC9/95 and MVC95 series two-stage gas furnaces. It details safety precautions, installation procedures, venting requirements, electrical connections, startup, and troubleshooting for professional installers.</p>
	<p><a href="#">Goodman GKS9 / AKSS92 Gas Furnace Service Instructions &amp; Manual</a></p> <p>Comprehensive service instructions and installation manual for Goodman GKS9 and Amana AKSS92 single-stage up-flow gas furnaces and accessories. Includes troubleshooting, maintenance, and safety information for HVAC technicians.</p>