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› VIAIR Pressure Switch Model 90105 Instruction Manual

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VIAIR Pressure Switch Model 90105 Instruction Manual

Brand: VIAIR | Model: 90105

INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your VIAIR Pressure Switch Model 90105. This pressure switch is designed to control air compressor systems by activating at 60 PSI and deactivating at 90 PSI. It features a 1/8" M NPT port and 1/4" spade connectors, compatible with 12-volt and 24-volt DC systems up to 20 amps.

Package Contents

- 1 x VIAIR Pressure Switch Model 90105



Image: VIAIR Pressure Switch Model 90105, showing the 1/8" M NPT threaded port and the two 1/4" spade electrical connectors.

SAFETY INFORMATION

Read and understand all safety warnings and instructions before installing or operating this product. Failure to do so may result in property damage, serious injury, or death.

- **Electrical Hazard:** Disconnect all power sources before performing any electrical connections or maintenance. Ensure wiring is correctly sized for the 20 Amp rating and operating voltage (12V/24V DC).
- **Pressure Hazard:** Always depressurize the air system before installing or removing the pressure switch. Use appropriate thread sealant for NPT connections to prevent leaks.
- **Moisture Warning:** This pressure switch is **NOT MOISTURE PROOF**. Avoid exposing the switch to water, excessive humidity, or other liquids. Installation in a dry, protected environment is recommended.
- **Temperature:** Do not operate the switch outside its specified temperature range.
- **Over-pressurization:** Ensure your air system includes a safety relief valve set below the maximum pressure rating.

of any component to prevent over-pressurization.

SETUP AND INSTALLATION

Pre-Installation Checklist

- Verify the pressure switch specifications (60 PSI ON / 90 PSI OFF, 1/8" NPT, 20 Amps, 12V/24V DC) match your system requirements.
- Ensure the air system is completely depressurized.
- Gather necessary tools: wrench for NPT fitting, wire crimpers, appropriate electrical connectors (if not using existing spade terminals), thread sealant.
- Confirm the installation location is dry and protected from moisture.

Installation Steps

1. Mechanical Connection:

- Apply a suitable thread sealant (e.g., PTFE tape or liquid sealant) to the 1/8" M NPT threads of the pressure switch.
- Carefully thread the pressure switch into the designated 1/8" F NPT port on your air tank or manifold.
- Tighten the switch using a wrench until snug, ensuring an airtight seal. Do not overtighten.

2. Electrical Connection:

- Identify the two 1/4" spade connectors on the pressure switch.
- Connect the appropriate electrical wires from your compressor's control circuit to these spade connectors. Typically, one connection is for the power input from the relay/fuse, and the other connects to the compressor's positive terminal.
- Ensure all electrical connections are secure and insulated to prevent short circuits.
- Confirm the system voltage (12V or 24V DC) and current draw (up to 20 Amps) are within the switch's ratings.

3. System Test:

- Once installed, slowly pressurize the air system and check for any air leaks around the NPT connection.
- Monitor the compressor's operation to ensure the switch activates at approximately 60 PSI and deactivates at approximately 90 PSI.

OPERATING INSTRUCTIONS

Functionality

The VIAIR Pressure Switch Model 90105 is a normally closed (NC) switch designed to control an air compressor based on system pressure. When the air system pressure drops to approximately 60 PSI, the switch closes, completing the circuit and activating the compressor. When the system pressure reaches approximately 90 PSI, the switch opens, breaking the circuit and deactivating the compressor.

System Integration

This pressure switch is typically wired in series with a relay that controls the main power to the air compressor. This setup ensures that the high current draw of the compressor does not pass directly through the pressure switch, extending its lifespan and ensuring reliable operation.

MAINTENANCE

Regular inspection and basic maintenance can help ensure the longevity and reliable performance of your pressure switch.

- **Visual Inspection:** Periodically inspect the switch for any signs of physical damage, corrosion on the electrical terminals, or air leaks around the threaded connection.
- **Electrical Connections:** Ensure the 1/4" spade connectors remain clean and securely attached. Loose connections can lead to intermittent operation or overheating.
- **Environmental Protection:** As the switch is NOT MOISTURE PROOF, regularly check that its installation location remains dry and free from water ingress.
- **Cleaning:** If necessary, gently clean the exterior of the switch with a dry cloth. Do not use solvents or expose to liquids.

TROUBLESHOOTING

If you experience issues with your VIAIR Pressure Switch, refer to the following table for common problems and solutions.

Problem	Possible Cause	Solution
Compressor does not turn ON at 60 PSI.	• Faulty electrical connection. • No power to the switch/compressor circuit. • Switch malfunction.	• Check spade connections for security and corrosion. • Verify power supply and fuse/breaker for the compressor circuit. • Test switch continuity with a multimeter (when depressurized, switch should be closed; when pressurized above 90 PSI, it should be open). Replace if faulty.
Compressor does not turn OFF at 90 PSI.	• Switch malfunction (stuck closed). • Air leak in the system preventing pressure buildup.	• Test switch continuity. Replace if faulty. • Inspect air lines, fittings, and tank for leaks.
Air leak around the switch.	• Improperly sealed NPT threads. • Damaged switch housing.	• Depressurize system, remove switch, reapply thread sealant, and reinstall. • Replace the switch if the housing is damaged.
Corrosion on electrical terminals.	• Exposure to moisture. • Environmental factors.	• Clean terminals with a wire brush or contact cleaner. Apply dielectric grease for protection. • Relocate the switch to a drier environment or provide better moisture protection.

SPECIFICATIONS

Feature	Detail
Model Number	90105

Feature	Detail
Pressure Range	60 PSI ON / 90 PSI OFF
Port Size	1/8" Male NPT
Electrical Connectors	(2) 1/4" Spade Connectors
Operating Voltage	12V / 24V DC Systems
Current Rating	20 Amps
Operation Mode	ON-OFF (Normally Closed)
Contact Type	Normally Closed
Contact Material	Nickel
Product Dimensions (L x W x H)	1.75 x 1 x 1 inches
Weight	1.3 ounces
Moisture Protection	NOT MOISTURE PROOF

WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official VIAIR website or contact VIAIR customer service directly. Keep your purchase receipt for warranty claims.

Contact information can typically be found on the manufacturer's packaging or website.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question