## VIAIR 90217

# VIAIR 90217 Pressure Switch Instruction Manual

Model: **90217**

### Introduction

This manual provides instructions for the proper installation, operation, and maintenance of your **VIAIR 90217 Pressure Switch**. This device is designed to automatically control an air compressor by turning it **on at 110 PSI** and **off at 145 PSI**. Adherence to these instructions is essential for safe and effective use.


Image: The VIAIR 90217 Pressure Switch, featuring its compact design and 1/8" NPT threaded connection.

## Safety Information

Observe the following safety precautions during installation and operation:

- Always disconnect power to the air compressor system before installing or servicing the pressure switch.
- Ensure all electrical connections are secure and insulated to prevent short circuits and electrical hazards.
- Verify that the pressure switch's ratings (PSI, amperage, voltage) are compatible with your air compressor system.
- Use appropriate thread sealant on the **1/8" NPT** connection to ensure an airtight seal.
- It is recommended to use this pressure switch in conjunction with a relay to handle the compressor's current draw, especially for higher amperage systems.
- Do not exceed the maximum operating pressure or temperature ratings of the switch.

## Product Overview

The VIAIR 90217 Pressure Switch is a critical component for automated air management systems. It provides reliable control by sensing air pressure and activating or deactivating an air compressor accordingly. Its sealed design offers resistance to moisture, enhancing durability in various environments.

### Key Features:

- Automatically turns air compressor **on at 110 PSI** and **off at 145 PSI**.
- Features a **1/8" Male NPT Thread** for secure connection.
- Rated for use with **12 & 24-volt systems**, up to **30 amps**.
- Designed with a **sealed construction** for moisture resistance.
- VIAIR recommends using this pressure switch with a relay for optimal performance and longevity.

## Installation Instructions

### Mounting

1. Identify a suitable **1/8" NPT female port** on your air tank or manifold.
2. Apply an appropriate thread sealant (e.g., PTFE tape or liquid sealant) to the **1/8" Male NPT threads** of the pressure switch.
3. Carefully thread the pressure switch into the port. Tighten until snug, ensuring an airtight seal, but do not overtighten to avoid damaging the threads or the switch.

### Wiring

The pressure switch acts as a control signal for your compressor. It is a **Normally Open** switch, meaning the circuit is open (compressor off) when pressure is above 145 PSI, and closes (compressor on) when pressure drops below 110 PSI.

1. Ensure the power source to the compressor system is disconnected.
2. Connect the two terminals of the pressure switch into the control circuit of your air compressor system.
3. For systems drawing more than a few amps, it is strongly recommended to wire the pressure switch to control a **relay**. The relay will then handle the high current draw of the compressor motor, protecting the pressure switch from excessive load.
4. Ensure all wiring is correctly sized for the amperage and voltage of your system (up to **30 amps** for **12 & 24-volt systems**) and properly insulated.
5. After wiring, double-check all connections for security and correct polarity before restoring power.

## Operation

Once correctly installed and wired, the VIAIR 90217 Pressure Switch operates automatically. When the air pressure in your system drops to **110 PSI**, the switch will close its internal contacts, sending a signal to turn on the connected air compressor. The compressor will continue to run until the system pressure reaches **145 PSI**. At this point, the switch will open its contacts, turning off the compressor. This cycle repeats as needed to maintain pressure within the specified range.

## Maintenance

The VIAIR 90217 Pressure Switch is designed for minimal maintenance. However, periodic inspection can help ensure its continued reliability:

- **Visual Inspection:** Regularly check the switch for any signs of physical damage, corrosion, or loose connections.
- **Connection Integrity:** Ensure the NPT threaded connection remains tight and free of leaks. Check electrical connections for tightness and proper insulation.
- **Cleanliness:** Keep the exterior of the switch clean and free from excessive dirt or debris. While sealed for moisture resistance (IP54), extreme conditions or prolonged exposure to contaminants can affect performance.
- **Functionality Check:** Periodically verify that the compressor turns on and off at the specified pressure points (110 PSI ON, 145 PSI OFF).

## Troubleshooting

If you encounter issues with your pressure switch, refer to the following table:

| Problem | Possible Cause | Solution |
|---|---|---|
| Compressor does not turn on at 110 PSI. | • No power to the switch/compressor.<br>• Loose or corroded electrical connections.<br>• Faulty relay (if used).<br>• Internal switch failure. | • Check power supply and fuses.<br>• Inspect and secure all wiring.<br>• Test or replace the relay.<br>• Replace the pressure switch if internal failure is suspected. |
| Compressor does not turn off at 145 PSI. | • Internal switch failure (contacts stuck closed).<br>• Pressure gauge inaccuracy.<br>• Air leak in the system preventing pressure buildup. | • Replace the pressure switch.<br>• Verify system pressure with a known accurate gauge.<br>• Check for and repair any air leaks in the system. |
| Air leak at the NPT connection. | • Insufficient thread sealant.<br>• Improper tightening.<br>• Damaged threads. | • Remove, reapply thread sealant, and re-install.<br>• Ensure proper tightening without overtightening.<br>• Inspect threads for damage; replace if necessary. |

## Specifications

| Feature | Specification |
|---|---|
| Model | 90217 |
| Brand | VIAIR |

| Feature | Specification |
| --- | --- |
| Switch Type | Pressure Switch |
| Operation Mode | ON-OFF |
| Pressure ON | 110 PSI |
| Pressure OFF | 145 PSI |
| Thread Size | 1/8" Male NPT |
| Current Rating | Up to 30 Amps |
| Operating Voltage | 12 & 24-volt systems |
| Contact Type | Normally Open |
| Material | Brass, Plastic |
| Contact Material | Nickel |
| International Protection Rating | IP54 (Dust protected, splash resistant) |
| Upper Temperature Rating | 200°F (93°C) |
| Item Weight | 0.1 Pounds (approx.) |
| Included Components | Pressure Switch |

## Warranty Information

All VIAIR products come with a **One Year Manufacturer Defect Warranty**. This warranty covers defects in materials and workmanship under normal use. For specific terms, conditions, and to initiate a warranty claim, please refer to the official VIAIR website or contact their customer support directly.

## Customer Support

For further assistance, technical questions, or support regarding your VIAIR 90217 Pressure Switch, please contact VIAIR customer service. You can find contact information on the official VIAIR website or through your product retailer.