

PECO TH109-009

Peco TH109-009 Multi Use Line Voltage Thermostat User Manual

Model: TH109-009 | Brand: PECO

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of the Peco TH109-009 Multi Use Line Voltage Thermostat. This robust thermostat is designed for controlling refrigeration, industrial heating/cooling, or staged heat/cool/ventilation systems. Its rugged, weather-resistant enclosure and large, visible dial make it suitable for various demanding environments, including those with moist conditions. The TH109-009 complies with N.E.C. 547 and NEMA 4X requirements.

2. SAFETY INFORMATION

WARNING: To prevent electric shock or equipment damage, always disconnect power to the thermostat and the controlled equipment before installation, servicing, or removing the cover. All wiring must comply with local electrical codes and ordinances.

- This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
- Ensure the power source matches the thermostat's voltage requirements (24 Volts).
- Installation should be performed by a qualified technician.
- Do not operate the thermostat with a damaged enclosure.
- Keep the thermostat away from direct water spray or excessive moisture beyond its NEMA 4X rating.

3. PRODUCT OVERVIEW

The Peco TH109-009 is a durable and reliable thermostat designed for demanding applications. Key features include:

- Controls refrigeration, industrial heating/cooling or staged heat/cool/ventilation systems.
- Rugged, weather-resistant enclosure.
- Large, visible dial for easy temperature adjustment.
- Tolerates moist conditions, suitable for indoor/outdoor use.
- Complies with N.E.C. 547 and NEMA 4X requirements.



Figure 3.1: Front view of the Peco TH109-009 thermostat, showing its gray enclosure and large black control dial.

4. SETUP AND INSTALLATION

The TH109-009 is designed for wall mount installation. Ensure the mounting location is free from excessive vibration and provides adequate access for wiring and operation. This unit operates on 24 Volts AC/DC.

4.1 Mounting

1. **Disconnect Power:** Before beginning, ensure all power to the circuit is disconnected at the main breaker or fuse box.
2. **Select Location:** Choose a suitable wall-mount location that is representative of the area to be controlled and away from direct heat sources, drafts, or obstructions.
3. **Secure Mounting:** Use appropriate screws and anchors to securely fasten the thermostat's base to the wall. The unit measures approximately 8.25 x 5.5 x 3.37 inches.



Figure 4.1: The Peco TH109-009 thermostat held in a hand, illustrating its approximate 8-inch height for scale.

4.2 Wiring

Refer to the wiring diagram provided inside the thermostat's cover for specific connections. Ensure all connections are tight and secure. This thermostat includes one relay for control.

- Verify the voltage of your system is 24 Volts.
- Connect the power supply wires to the designated terminals.
- Connect the load wires (to the heating/cooling/ventilation system) to the appropriate relay terminals.
- After wiring, carefully replace the cover, ensuring no wires are pinched.
- Restore power to the circuit.

5. OPERATING INSTRUCTIONS

The Peco TH109-009 thermostat features a simple mechanical knob for temperature control.

1. **Temperature Setting:** Rotate the large black dial on the front of the thermostat to set the desired temperature. The dial is marked with temperature increments.
2. **System Response:** The thermostat will activate or deactivate the connected heating, cooling, or ventilation system based on the set temperature and the ambient temperature.
3. **Monitoring:** Periodically check the ambient temperature and the system's response to ensure optimal performance.

6. MAINTENANCE

The Peco TH109-009 is designed for minimal maintenance due to its rugged construction. However, periodic checks can ensure long-term reliability.

- **Cleaning:** Gently wipe the exterior of the thermostat with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure no liquid enters the enclosure.
- **Connections:** Annually, with power disconnected, inspect wiring connections for tightness and signs of corrosion.
- **Sensor Coil:** Ensure the external sensor coil (if applicable to your specific setup) is clean and free from debris that could impede accurate temperature sensing.

7. TROUBLESHOOTING

If you experience issues with your Peco TH109-009 thermostat, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Thermostat not responding / No power	No power to the unit; tripped breaker/fuse; loose wiring connection.	Check power supply; reset breaker/replace fuse; inspect and tighten wiring (with power off).
Inaccurate temperature control	Thermostat located near heat source/draft; sensor coil obstructed/dirty; calibration issue.	Relocate thermostat if possible; clean sensor coil; consult a qualified technician for calibration.
System runs continuously or not at all	Incorrect wiring; faulty relay; thermostat setting too extreme.	Verify wiring against diagram; adjust temperature setting; if problem persists, professional service may be required.

If the issue persists after attempting these steps, contact a qualified HVAC technician or PECO customer support.

8. SPECIFICATIONS

Brand	PECO
Model Number	TH109-009
Controller Type	Mechanical knob
Color	Gray
Specific Uses For Product	Indoor/Outdoor use
Temperature Control Type	Manual
Included Components	1 x Relay
Power Source	Ac/dc
Item Weight	1 Pounds (approx. 0.45 kg)
Voltage	24 Volts
Shape	Rectangular
Display Type	Manual

Control Type	Dial Control
Mounting Type	Wall Mount
Style	Industrial
Backlight	No
Specification Met	NEMA
UPC	879978000288
Product Dimensions	8.25 x 5.5 x 3.37 inches (approx. 21 x 14 x 8.6 cm)
First Available Date	May 11, 2010


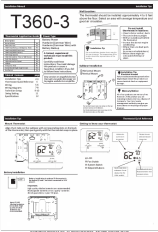
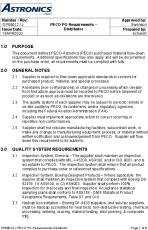
9. WARRANTY AND SUPPORT

Specific warranty terms and customer support contact information are not provided within this manual. For warranty details or technical assistance, please refer to the product packaging, the manufacturer's official website, or contact your point of purchase.

Manufacturer: Peco

© 2023 PECO. All rights reserved. Information subject to change without notice.

Related Documents - TH109-009

	<p>PECO T8168B-2 BACnet Thermostat Installation Guide</p> <p>Installation guide for the PECO T8168B-2 BACnet thermostat, covering features, applications, technical specifications, wiring, configuration, and troubleshooting.</p>
	<p>PECO T360-3 Thermostat Installation Manual</p> <p>Comprehensive installation guide for the PECO T360-3 thermostat, detailing wall location selection, wiring procedures, subbase installation, technician setup options, swing settings, RF pairing, and technical specifications.</p>
	<p>PECO PO Requirements - Distributor: Supplier Compliance Guide</p> <p>This document outlines the essential Purchase Order (PO) requirements for distributors and suppliers to PECO-Astronics (PECO), covering quality systems, inspection, documentation, and export compliance.</p>



[PECO PTO Driven Grass Collection System Operator's Manual for Kubota Commander](#)

Comprehensive operator's manual and assembly guide for the PECO Model 28120901 PTO Driven Grass Collection System. This attachment is designed for Kubota Commander 48" and 54" mower decks, providing detailed installation steps, parts lists, and operational information.



[PECO Counterfeit Part Prevention Policy \(CPPPP\) - Astronics](#)

Astronics PECO's Counterfeit Part Prevention Policy (CPPPP) details procedures for preventing, detecting, and mitigating counterfeit electronic parts in the supply chain, aligning with AS5553 standards.



[PECO T109 & T115 NEMA 4x Industrial Thermostats | Rugged Controls](#)

Explore PECO's T109 and T115 Series NEMA 4x industrial thermostats. Designed for harsh climates, offering reliable heating and cooling control for applications like refrigeration, HVAC, and animal confinement.