

Intermatic WH21

Intermatic WH21 Electric Water Heater Timer Instruction Manual

Model: WH21 | 208-277V, 6,250 Watts

INTRODUCTION

The Intermatic WH21 Electric Water Heater Timer is designed to automatically control the operation of your electric water heater, allowing you to schedule hot water availability during periods of high demand and turn it off during low-demand times. This helps optimize energy consumption and reduce utility costs. This manual provides essential information for the safe installation, operation, and maintenance of your WH21 timer.

IMPORTANT SAFETY INFORMATION

RISK OF ELECTRICAL SHOCK:

- This device is a single-pole time control and should **not** be used as a power disconnect.
- Always turn off power at the main electrical panel before servicing this switch or the equipment it controls. Failure to do so can result in serious injury or death.
- Connect only to No. 10 AWG copper conductors or larger to the switch terminals. Ensure all wiring complies with local electrical codes.
- Installation should be performed by a qualified electrician or a knowledgeable individual with experience in electrical wiring.

PRODUCT OVERVIEW

The Intermatic WH21 timer is a robust mechanical device designed for reliable performance. It features:

- Up to 12 ON/OFF settings per day for precise scheduling.
- A manual override button to temporarily turn the water heater ON or OFF outside of the programmed schedule.
- Durable construction suitable for residential electric hot water heater applications.

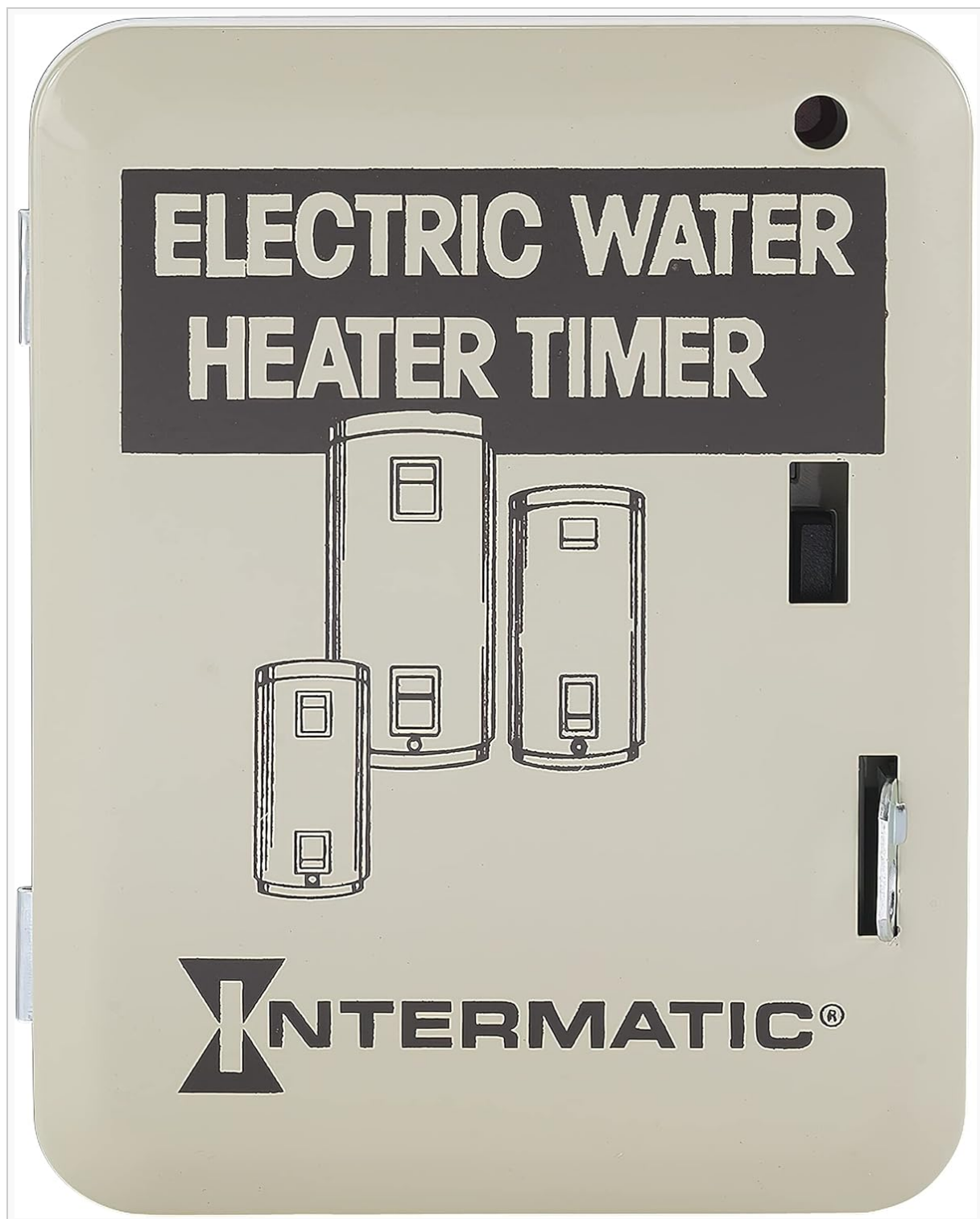


Image 1: Front view of the Intermatic WH21 Electric Water Heater Timer. The gray box features the text "ELECTRIC WATER HEATER TIMER BY INTERMATIC" and a manual ON/OFF switch. This switch allows for temporary manual control of the water heater, overriding the programmed schedule.

SETUP AND INSTALLATION

Proper installation is crucial for the safe and effective operation of your water heater timer. Refer to the internal wiring diagram and follow these general steps:

1. **Power Disconnect:** Locate your main electrical panel and turn off the circuit breaker supplying power to your water heater. Verify that power is off using a voltage tester.
2. **Mounting:** Mount the WH21 timer securely to a wall near your water heater. Ensure it is in a location that allows for easy access and visibility.

3. **Wiring:**

- Open the timer enclosure to access the wiring terminals.
- Identify the incoming power lines (LINE) and the wires leading to the water heater (LOAD).
- Connect the incoming power lines to the designated LINE terminals on the timer.
- Connect the water heater load wires to the designated LOAD terminals on the timer.
- Connect the ground wire to the ground terminal within the timer enclosure.
- Ensure all connections are tight and secure. Use No. 10 AWG copper wire or larger as specified.

4. **Close Enclosure:** Once wiring is complete, replace the insulator and securely close the timer enclosure.

5. **Restore Power:** Return to your main electrical panel and turn the circuit breaker back on.



Image 2: Internal view of the Intermatic WH21 Electric Water Heater Timer. This image displays the mechanical time dial with AM/PM markings and the wiring terminals labeled for LINE, LOAD, and GROUND connections. A caution label regarding electrical shock and wire gauge requirements is also visible.

OPERATING INSTRUCTIONS

The WH21 timer is designed for straightforward operation:

1. **Setting the Current Time:** Gently pull the time dial outwards and rotate it clockwise or counter-clockwise until the current time aligns with the indicator arrow. Push the dial back in to secure it.
2. **Programming ON/OFF Cycles:** The timer allows for up to 12 ON/OFF settings per day. To set a schedule:

- Locate the small ON (red) and OFF (black) trippers around the perimeter of the time dial.
 - To set an ON time, slide an ON tripper to the desired time on the dial.
 - To set an OFF time, slide an OFF tripper to the desired time on the dial.
 - Ensure there is at least a 30-minute interval between ON and OFF settings.
3. **Manual Override:** The timer features an external manual lever (visible on the front cover, Image 1). This lever allows you to temporarily turn the water heater ON or OFF, overriding the programmed schedule. The timer will resume its preset program at the next scheduled ON or OFF operation.

MAINTENANCE

The Intermatic WH21 timer is designed for minimal maintenance. However, periodic checks can ensure continued reliable operation:

- **Visual Inspection:** Periodically inspect the timer for any signs of damage, loose connections, or corrosion.
- **Cleaning:** Keep the exterior of the timer clean and free from dust and debris. Use a dry cloth for cleaning. Do not use liquid cleaners.
- **Power Outages:** In the event of a power outage, the mechanical clock will stop. You will need to reset the current time once power is restored to ensure the programmed schedule operates correctly.

TROUBLESHOOTING

If you encounter issues with your Intermatic WH21 timer, consider the following:

- **Timer Not Operating:**
 - Check if the circuit breaker for the water heater is ON.
 - Ensure the current time is correctly set on the dial.
 - Verify that the ON/OFF trippers are correctly positioned for the desired schedule.
 - Confirm all wiring connections are secure and correct according to the diagram.
- **Water Heater Not Turning ON/OFF as Scheduled:**
 - Check if the manual override lever is in the correct position (not overriding the schedule).
 - Ensure the ON/OFF trippers are firmly in place and not loose.
 - Verify the time dial is rotating. If not, the internal mechanism may require service.

For persistent issues, contact a qualified electrician or Intermatic customer support.

SPECIFICATIONS

Feature	Specification
Brand	Intermatic
Model Number	WH21
Voltage Rating	208-277 VAC
Current Rating	25 Amps

Wattage	6250 Watts
Frequency	60 Hz
Number of Operations	Up to 12 ON/OFF per day
Enclosure	NEMA 1
Switch Type	Single Pole/Single Throw (SPST)
Dimensions	5.25"W x 6.75"H
Item Weight	2 pounds

WARRANTY INFORMATION




The Intermatic WH21 Electric Water Heater Timer comes with a **1-year limited warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. For specific terms and conditions, or to make a warranty claim, please refer to the official warranty documentation included with your product or contact Intermatic customer support.

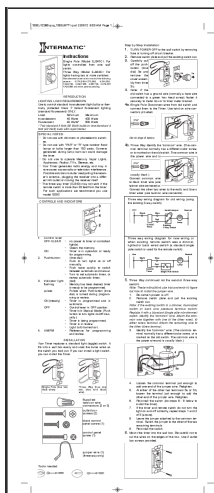
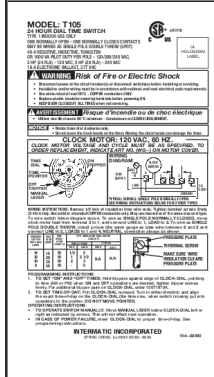
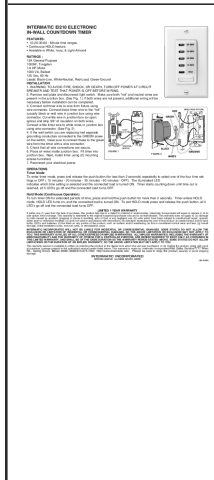
CUSTOMER SUPPORT

For further assistance, technical support, or inquiries regarding your Intermatic WH21 Electric Water Heater Timer, please visit the official Intermatic website or contact their customer service department. Contact information can typically be found on the product packaging or the manufacturer's website.

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Related Documents - WH21

	<p>Intermatic WH21 Electric Water Heater Time Switch Installation and Operation Manual</p> <p>Comprehensive guide for installing and operating the Intermatic WH21 Electric Water Heater Time Switch, featuring energy saving scheduling and manual override for optimal hot water management and energy efficiency.</p>
	<p>Intermatic WH21 Electric Water Heater Time Switch Installation and Operation Manual</p> <p>This document provides installation and operating instructions for the Intermatic WH21 Electric Water Heater Time Switch. It includes wiring diagrams, safety warnings, and programming guidance to help users set up and use the device efficiently.</p>
	<p>Intermatic TN311 Timer User Manual and Warranty</p> <p>User guide and one-year limited warranty information for the Intermatic TN311 heavy-duty grounded outlet timer. Learn how to set the program, time of day, and automatic override.</p>

 <p>The image shows the cover of the Intermatic EJ341C/EJ343C Lighting Timer Switch Installation and Programming Guide. It features the Intermatic logo at the top left, followed by the product name in large, bold letters. Below the title, there are several small diagrams and icons illustrating the installation and programming steps. The background is white with black text and graphics.</p>	<p>Intermatic EJ341C/EJ343C Lighting Timer Switch Installation and Programming Guide</p> <p>Detailed instructions for installing and programming Intermatic EJ341C (Single Pole) and EJ343C (Three Way) lighting timer switches. Covers setup, controls, programming methods, troubleshooting, and specifications.</p>
 <p>The image shows the cover of the Intermatic T105 24-Hour Dial Time Switch: Installation, Wiring, and Operation Guide. It features the Intermatic logo at the top left, followed by the product name in large, bold letters. Below the title, there are several small diagrams and icons illustrating the installation and wiring steps. The background is white with black text and graphics.</p>	<p>Intermatic T105 24-Hour Dial Time Switch: Installation, Wiring, and Operation Guide</p> <p>Comprehensive guide for the Intermatic T105 24-hour mechanical dial time switch. Covers model specifications, safety warnings, wiring instructions for various configurations (SPNO, SPNC, SPDT), programming procedures, and manual operation. Includes a detailed table of electrical ratings and wire gauge recommendations.</p>
 <p>The image shows the cover of the Intermatic EI210 Electronic In-Wall Countdown Timer - Installation & Operation Guide. It features the Intermatic logo at the top left, followed by the product name in large, bold letters. Below the title, there are several small diagrams and icons illustrating the installation and operation steps. The background is white with black text and graphics.</p>	<p>Intermatic EI210 Electronic In-Wall Countdown Timer - Installation & Operation Guide</p> <p>Comprehensive guide for the Intermatic EI210 electronic in-wall countdown timer, detailing features, installation steps, operation modes (Timer and Hold), and warranty information. Includes technical specifications and contact details for Intermatic Incorporated.</p>