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Robertshaw RS8210

Robertshaw RS8210 Pro Series Non-Programmable Thermostat User Manual

Model: RS8210
Brand: Robertshaw

Introduction

The Robertshaw Pro-Series RS8210 is a non-programmable thermostat designed for multi-stage heating and cooling systems (2 Heat / 1 Cool). This unit offers straightforward operation and installation, making it an economical choice for controlling your HVAC system. It includes essential features for efficient temperature management and system protection.
Key features include:

- Easy installation for quick setup.
- Simple operation with a large, easy-to-read 4.6-square-inch blue backlit display.
- Dynamic system control with adjustable temperature differential (swing).
- Five-minute selectable on/off compressor delay protection to prevent short-cycling.
- Adjustable room temperature calibration and setpoint limits.
- Filter change reminder for timely maintenance.

Setup and Installation

The RS8210 thermostat is designed for quick and easy installation. Ensure all power to the HVAC system is turned off at the circuit breaker before beginning installation.

Package Contents

Verify that your package contains the following items:

- Robertshaw RS8210 Thermostat Unit
- Mounting Screws and Wall Anchors
- 2 AAA 1.5V Alkaline Batteries (included)
- Installation Manual
- Operation Manual



Image: Contents of the Robertshaw RS8210 thermostat package, showing the thermostat unit, installation and operation manuals, and mounting hardware (screws and wall anchors).

Mounting the Thermostat

1. Turn off power to your heating and cooling system at the main power panel.
2. Remove the old thermostat from the wall.
3. Carefully label each wire connected to your old thermostat before disconnecting them.
4. Mount the new RS8210 thermostat base plate to the wall using the provided screws and anchors.

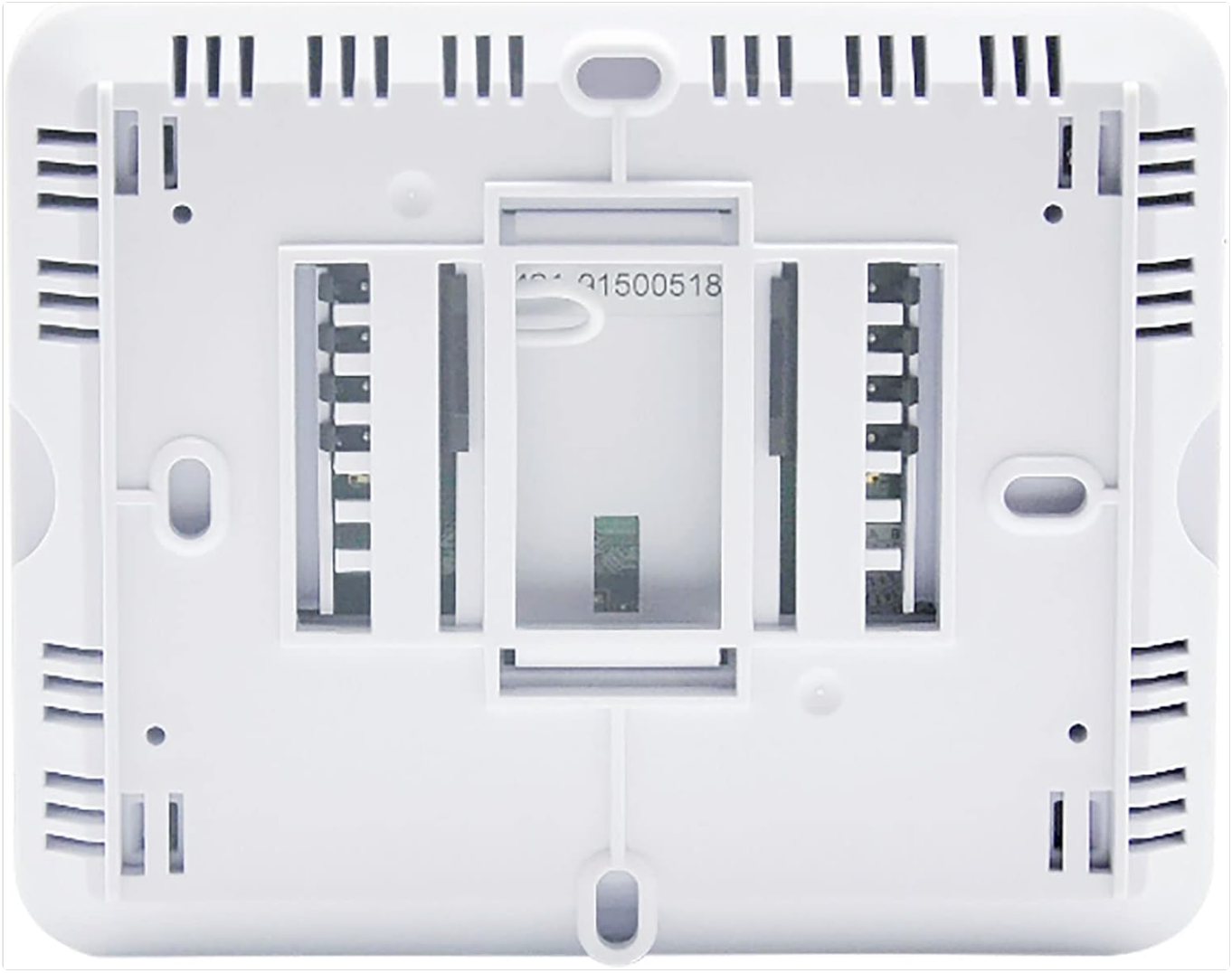

Image: Back view of the Robertshaw RS8210 thermostat, highlighting the mounting points and the internal structure where wiring connections are made.

Wiring Connections

Connect the labeled wires to the corresponding terminals on the RS8210 thermostat. Refer to the wiring diagram below and the labels provided in your package for correct connections. The thermostat supports 2 Heat / 1 Cool multi-stage systems.

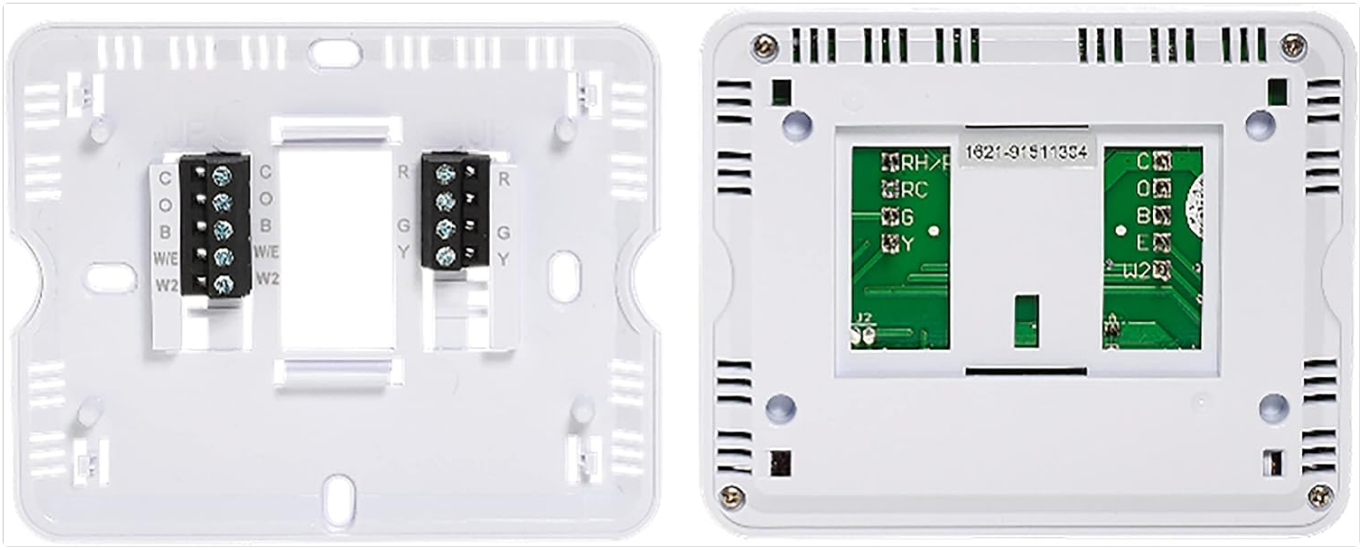

Image: Close-up view of the wiring terminals inside the Robertshaw RS8210 thermostat, showing the connection points for HVAC system wires.

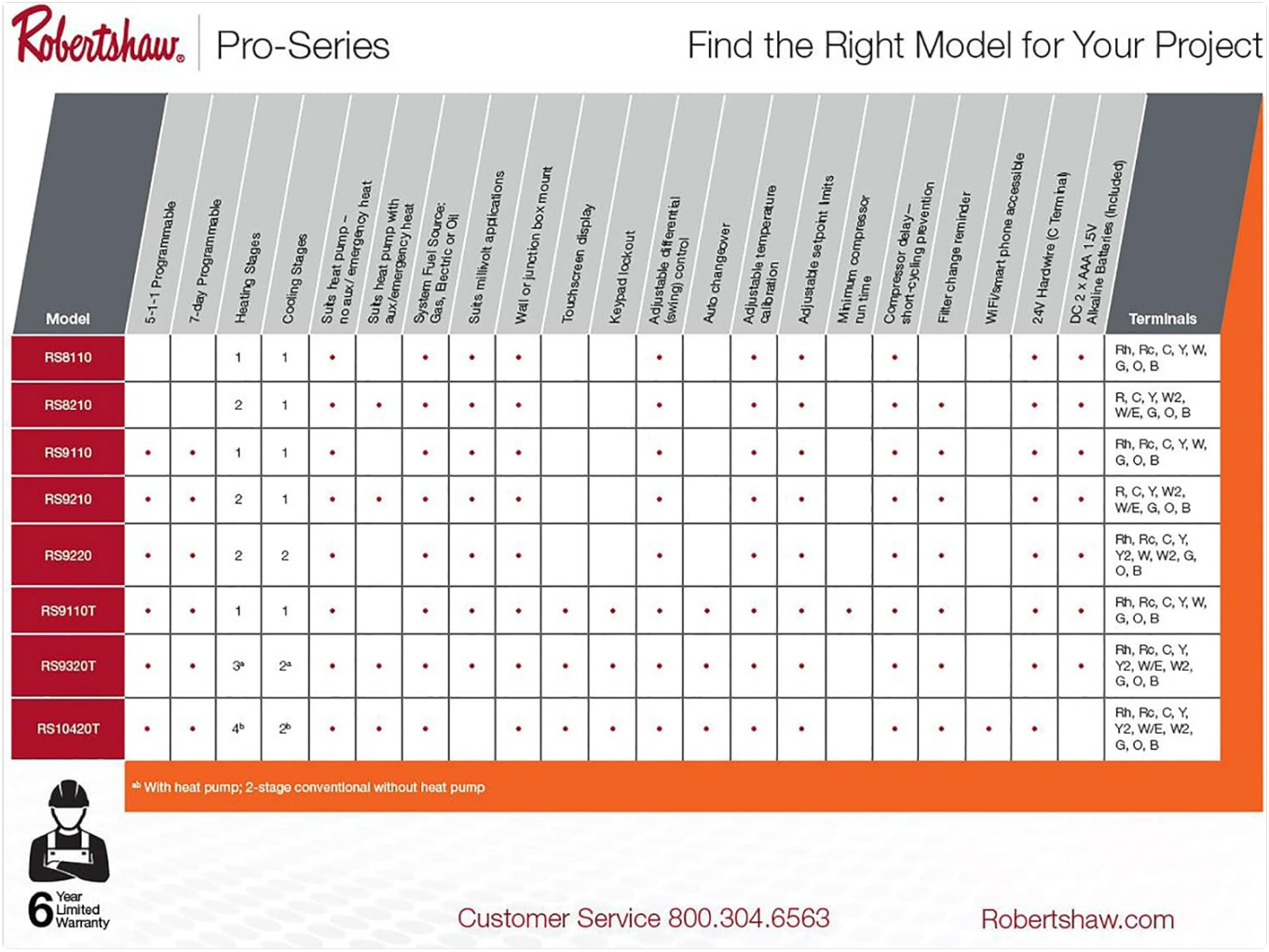

Image: A diagram showing wiring labels and corresponding terminal connections for Robertshaw Pro-Series thermostats, including the RS8210 model.

Power Source

The RS8210 thermostat can be powered by both 2 AAA 1.5V alkaline batteries (included) and hardwired 24V AC power from your HVAC system. It is recommended to use both for reliable operation and to ensure the display remains active during power outages.



Image: Side view of the Robertshaw RS8210 thermostat, showing the location of the battery compartment.

Initial Power-Up

Once wiring is complete and batteries are inserted, restore power to your HVAC system. The thermostat display should illuminate, and you can proceed with initial setup.

Operating Instructions

The RS8210 thermostat features a user-friendly interface with a large LCD and intuitive buttons for controlling your home's climate.

Display Overview



Image: Front view of the Robertshaw RS8210 thermostat, showcasing its large, blue backlit LCD display with current room temperature and setpoint.

The 4.6-square-inch blue backlit display shows the current room temperature, setpoint temperature, time, and system status indicators.

Button Functions

The thermostat features push buttons for various controls:

- **Menu Button:** Accesses the setup and configuration menus.
- **Up/Down Arrows:** Adjusts temperature setpoints and navigates menu options.
- **Fan Switch (ON/AUTO):** Controls the fan operation. "ON" runs the fan continuously; "AUTO" runs the fan only when heating or cooling is active.
- **System Mode Switch (OFF/HEAT/COOL/EMH):** Selects the operating mode for your HVAC system.
    - **OFF:** Turns the system off.
    - **HEAT:** Activates heating mode.
    - **COOL:** Activates cooling mode.
    - **EMH (Emergency Heat):** For heat pump systems, activates auxiliary or emergency heat.

Setting the Temperature

To adjust the desired temperature, use the Up and Down arrow buttons on the right side of the thermostat. The display

will show the current setpoint as you adjust it.

Advanced Settings (Contractor/Technician Setup Menu)

The RS8210 includes a contractor/technician setup menu for advanced configurations. These settings allow for fine-tuning of the thermostat's operation to match specific HVAC system requirements and user preferences. Key adjustable parameters include:

- **Adjustable Temperature Differential (Swing):** Controls the temperature variance before the system activates.
- **Five-Minute Selectable On/Off Compressor Delay Protection:** Prevents short-cycling of the compressor, extending system lifespan.
- **Adjustable Room Temperature Calibration:** Allows for minor adjustments to the displayed room temperature to match an external thermometer.
- **Setpoint Limits:** Sets minimum and maximum allowable temperature setpoints.

Consult the detailed operation manual for instructions on accessing and adjusting these advanced settings.

Maintenance

Regular maintenance ensures optimal performance and longevity of your thermostat and HVAC system.

Filter Change Reminder

The RS8210 thermostat features a filter change reminder. When activated, the display will indicate that it's time to check or replace your HVAC system's air filter. Regularly changing your air filter improves air quality and system efficiency.

Battery Replacement

The thermostat uses two AAA 1.5V alkaline batteries. When the battery indicator appears on the display, replace both batteries promptly to ensure continuous operation and prevent loss of settings. To replace batteries, gently pull the thermostat unit away from its wall plate to access the battery compartment.

Troubleshooting

If you experience issues with your Robertshaw RS8210 thermostat, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
No Display / Blank Screen	Dead batteries; No 24V AC power; Loose wiring.	Replace batteries; Check circuit breaker for HVAC system; Verify wiring connections are secure.
System Not Responding (No Heat/Cool)	System switch in OFF position; Incorrect wiring; Blown fuse in HVAC system; Compressor delay active.	Ensure system switch is set to HEAT or COOL; Recheck wiring; Consult HVAC technician for system fuse; Wait 5 minutes for compressor delay to clear.
Inaccurate Temperature Reading	Thermostat location (drafts, direct sunlight); Calibration needed.	Relocate thermostat if possible; Use the temperature calibration feature in the advanced settings menu.
Fan Not Operating Correctly	Fan switch in wrong position; Wiring issue.	Set fan switch to ON for continuous operation or AUTO for automatic; Check fan wiring.

If problems persist after attempting these solutions, it is recommended to contact a qualified HVAC technician or Robertshaw customer support.

Specifications

Feature	Detail
Model Name	Pro Series Non-Programmable Thermostat RS8210
Product Dimensions	1"D x 3.8"W x 1"H
Controller Type	Push Button
Special Features	Adjustable Temperature Differential (Swing), Filter Change Reminder
Color	White
Specific Uses	HVAC Control for Multi-Stage 2 Heat / 1 Cool Systems
Temperature Control Type	Manual
Included Components	2 AAA 1.5V alkaline batteries
Power Source	Battery and Hardwired AC Power (24 Volts)
Material	Plastic
Display Type	LCD (Blue Backlight)
Mounting Type	Wall Mount
Certification	UL certified
Item Weight	9.4 ounces (0.59 Pounds)

Product Video

▶ **Watch video online**
RS8210 Product Video

Video: An official product video from Robertshaw showcasing the RS8210 thermostat, its features, and design. This video provides a visual overview of the product.

Warranty Information

The Robertshaw RS8210 Pro Series Non-Programmable Thermostat comes with a**6-Year Limited Warranty**. This warranty reinforces the quality and reliability of Robertshaw products. For detailed terms and conditions of the warranty, please refer to the warranty card included with your product or visit the official Robertshaw website.

Support and Contact

For further assistance, technical support, or warranty claims, please contact Robertshaw customer service:

- **Customer Service Phone:** 800.304.6563
- **Website:** www.robertshaw.com

When contacting support, please have your product model number (RS8210) and purchase information ready.

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