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## White-Rodgers 8A18Z-2

# White-Rodgers W8A18Z2 Evaporative Cooling Control Panel User Manual

Model: 8A18Z-2

## 1. INTRODUCTION

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The White-Rodgers 8A18Z-2 is an evaporative cooling control panel designed to manage single-stage evaporative cooling systems. This control panel is intended for use in conjunction with the White-Rodgers 1F51N-619 thermostat. It features an integral transformer for 120 VAC or 240 VAC to 24 VAC operation, separate fan and pump relays, and options for high or low fan speed selection. Its lightweight, weather-resistant plastic case meets relevant code requirements.

## 2. SAFETY INFORMATION

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**WARNING:** Installation and servicing of this control panel must be performed by a qualified technician. Disconnect all power to the unit before installing or servicing to prevent electrical shock or equipment damage.

- Always follow local electrical codes and ordinances.
- Ensure proper grounding of the control panel.
- Do not operate the unit with damaged wiring.
- Keep children away from electrical components.
- This control panel is designed for evaporative cooling applications only.

## 3. PACKAGE CONTENTS

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Verify that all components are present before beginning installation:

- White-Rodgers 8A18Z-2 Evaporative Cooling Control Panel
- Installation Instructions (this manual)
- *Note: The White-Rodgers 1F51N-619 thermostat, required for operation, is sold separately.*

## 4. SETUP AND INSTALLATION

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The 8A18Z-2 control panel is designed for wall mounting. Ensure the mounting location is protected from direct weather exposure and allows for proper ventilation.

#### 4.1 Mounting the Control Panel

1. Select a suitable wall location near the evaporative cooler unit and a power source.
2. Open the control panel cover.
3. Secure the control panel to the wall using appropriate fasteners through the designated mounting holes.

#### 4.2 Wiring Instructions

The relay panel is removable for easier field wiring. Refer to the wiring diagram provided inside the control panel cover for specific connections. Ensure all connections are secure and comply with local electrical codes.

- **Power Supply:** Connect the 120 VAC or 240 VAC power supply to the integral transformer terminals as indicated.
- **Thermostat Connection:** Connect the White-Rodgers 1F51N-619 thermostat to the low voltage terminals (24 VAC) on the control panel.
- **Fan Connections:** Connect the evaporative cooler fan motor wires to the fan relay terminals. Select either high or low fan speed as desired.
- **Pump Connections:** Connect the evaporative cooler pump motor wires to the pump relay terminals.



Figure 1: White-Rodgers 8A18Z-2 Evaporative Cooling Control Panel. This image shows the compact, grey plastic enclosure of the control panel, designed for wall mounting and housing the internal relays and transformer for evaporative cooler operation.

### 5. OPERATING INSTRUCTIONS

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Once properly installed and wired, the 8A18Z-2 control panel operates in conjunction with the connected 1F51N-619 non-programmable thermostat.

- **Power On:** After installation, restore power to the control panel.
- **Thermostat Control:** Use the connected 1F51N-619 thermostat to set the desired temperature and operating mode (e.g., Cool, Fan Only).
- **Fan Speed Selection:** The control panel allows for selection between high and low fan speeds. This setting is typically configured during installation via wiring connections or jumpers on the relay board. Consult the wiring diagram for details.
- **Evaporative Cooling Cycle:** When the thermostat calls for cooling, the control panel will activate the pump to saturate the cooler pads and then activate the fan to circulate cooled air.

### 6. MAINTENANCE

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The White-Rodgers 8A18Z-2 control panel requires minimal maintenance. Regular inspection is recommended to ensure optimal performance.

- **Annual Inspection:** Annually, or before the cooling season, inspect the control panel for any signs of

wear, damage, or loose connections.

- **Cleaning:** Keep the exterior of the control panel clean and free of dust and debris. Use a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Wiring Check:** Periodically check all wiring connections to ensure they are tight and free from corrosion.

## 7. TROUBLESHOOTING

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Before troubleshooting, ensure all power to the unit is disconnected.

Problem	Possible Cause	Solution
No power to control panel or thermostat	Blown fuse or tripped circuit breaker. Faulty wiring connection. Defective integral transformer.	Check and replace fuse or reset breaker. Inspect all wiring for loose or damaged connections. Test transformer output (24 VAC). If no output, replace the control panel or transformer if serviceable.
Fan not operating	Thermostat not calling for fan. Faulty fan relay. Fan motor issue.	Verify thermostat settings. Test fan relay for proper operation. Consult evaporative cooler manual for fan motor troubleshooting.
Pump not operating	Thermostat not calling for cooling. Faulty pump relay. Pump motor issue.	Verify thermostat settings. Test pump relay for proper operation. Consult evaporative cooler manual for pump motor troubleshooting.

If problems persist after attempting these solutions, contact a qualified HVAC technician.

## 8. SPECIFICATIONS

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<b>Model</b>	8A18Z-2
<b>Type</b>	Evaporative Cooling Control Panel
<b>Compatibility</b>	Designed for use with White-Rodgers 1F51N-619 thermostat
<b>Input Voltage</b>	120 VAC or 240 VAC
<b>Output Voltage (Thermostat)</b>	24 VAC
<b>Combined Relay Loads (Full Load)</b>	16.0 A @ 120 VAC, 8.0 A @ 240 VAC
<b>Combined Relay Loads (Locked Rotor)</b>	96.0 A @ 120 VAC, 48.0 A @ 240 VAC
<b>Fan Relay (Full Load)</b>	12.0 A @ 120 VAC, 6.0 A @ 240 VAC
<b>Fan Relay (Locked Rotor)</b>	72.0 A @ 120 VAC, 36.0 A @ 240 VAC
<b>Pump Relay (Full Load)</b>	10.0 A @ 120 VAC, 5.0 A @ 240 VAC
<b>Pump Relay (Locked Rotor)</b>	60.0 A @ 120 VAC, 30.0 A @ 240 VAC
<b>Material</b>	Weather-resistant plastic case
<b>Color</b>	Gray
<b>Mounting Type</b>	Wall Mount
<b>Item Weight</b>	8 pounds (approx. 3.6 kg)

## 9. WARRANTY AND SUPPORT

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For warranty information and technical support, please contact White-Rodgers customer service or visit their official website. Keep your purchase receipt for warranty claims.

### White-Rodgers Contact Information:

- **Website:** [www.emerson.com/en-us/automation/commercial-residential-solutions/white-rodgers](http://www.emerson.com/en-us/automation/commercial-residential-solutions/white-rodgers)
- Refer to product packaging or the White-Rodgers website for current contact numbers and support hours.