



APOLLO

AP8-24 ZONE CONTROLLER MANUAL

INTRODUCTION

In modern hydronic heating systems, efficiency, comfort, and smart zone management are key. The AP8-24 Zone Controller is designed to meet these demands with precision, reliability, and flexibility. Engineered to control up to 8 heating zones independently, it allows you to tailor temperature control in different areas of a building, reducing energy waste and increasing comfort. Additional outputs designed for use with underfloor heating systems are also included as standard — specifically, dedicated pump and valve outputs that can operate a manifold pump or manifold valve as needed.

Whether you're installing underfloor heating, radiators, or fan coils, the AP8-24 simplifies the integration between thermostats, actuators, boiler, and pump. With support for 24V thermostats and dry contact outputs, this controller delivers powerful compatibility with most HVAC setups.

By choosing the AP8-24, you benefit from:

- Efficient zone control — Heat only where and when it's needed.
- User-friendly wiring and layout — Clear terminal labeling for quick installation.
- Built-in delay logic — Protects equipment and ensures smooth operation.
- Compact design with high performance — All in a durable, space-saving unit.

Ideal for residential, commercial, and multi-zone heating projects, the AP8-24 offers the intelligence and control you need to optimize comfort and system performance — all backed by MBTek's reputation for quality and innovation.

Key Advantages of the AP8-24:

- **Smart Zone Control** – Supports up to 8 thermostats and 8 actuators.
- **24V Compatible** – Designed for systems using 24V AC thermostats.
- **Safe Operation** – Built-in fuse and volt-free contacts for boiler and pump protection.
- **Easy Wiring** – Clearly labeled terminals for quick, hassle-free setup.
- **Delay Logic** – Factory-set 3-minute pump/boiler delay to ensure actuator valve opening.
- **Flexible system behavior via dip switch settings:**

Switch 1 – System Mode Selector

- ON: UFH (Underfloor Heating) mode – Any thermostat call (zone 1–8) will activate the pump and boiler.
- OFF: Actuator-only mode – Thermostat signals operate actuators only; boiler and pump remain off.

Switch 2 – Delay Function

- ON: Enables a 3-minute delay for the pump and boiler output after a heat call.
- OFF: No delay — pump and boiler activate immediately.

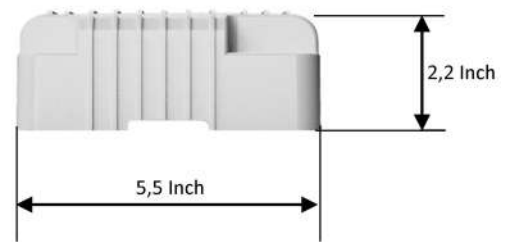
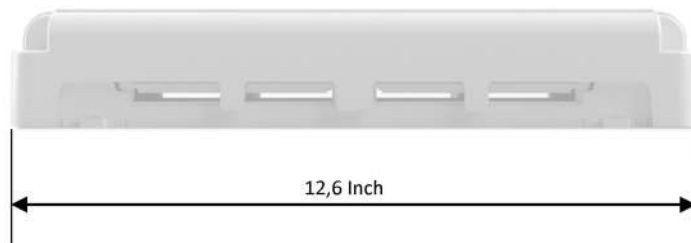
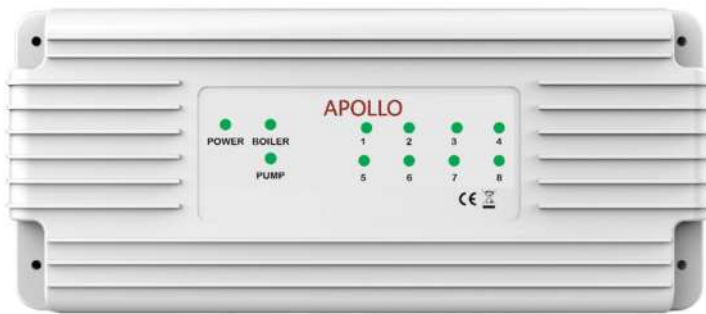
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1. PRODUCT DESCRIPTION

Model: AP8-24

Voltage: 24V AC 50/60Hz

Dimensions



This wiring center allows thermostats to control 24V actuators (normally closed). For valves requiring a mid-position or a closing signal, an external changeover relay is necessary.

The AP8-24 also provides dry contacts for activating a boiler or heat pump and controlling a manifold circulator pump.

2. CONNECTIONS

Mains Power Supply

- **Terminals:**
 - **R:** Live (24V AC)
 - **C:** Common
- **Protection:** 5A fuse (20mm anti-surge)

Boiler Output

- Dry contact output (volt-free)
- Max 5A capacity
- **Terminals:**
 - **IN:** Boiler signal input
 - **OUT:** Boiler control output

Zone Inputs (Thermostats)

- Supports 8 thermostats (STAT 1 to 8)
- Max 120W per input
- **Terminals per Zone:**
 - **R:** Live
 - **C:** Common
 - **W:** 24V AC Signal (calls for heat)

Zone Outputs (Actuators)

- Supports 8 Normally Closed actuators (Actuator 1 to 8)
- Max 120W per output (24V AC)
- **Terminals per Zone:**
 - **R:** Live
 - **C:** Common

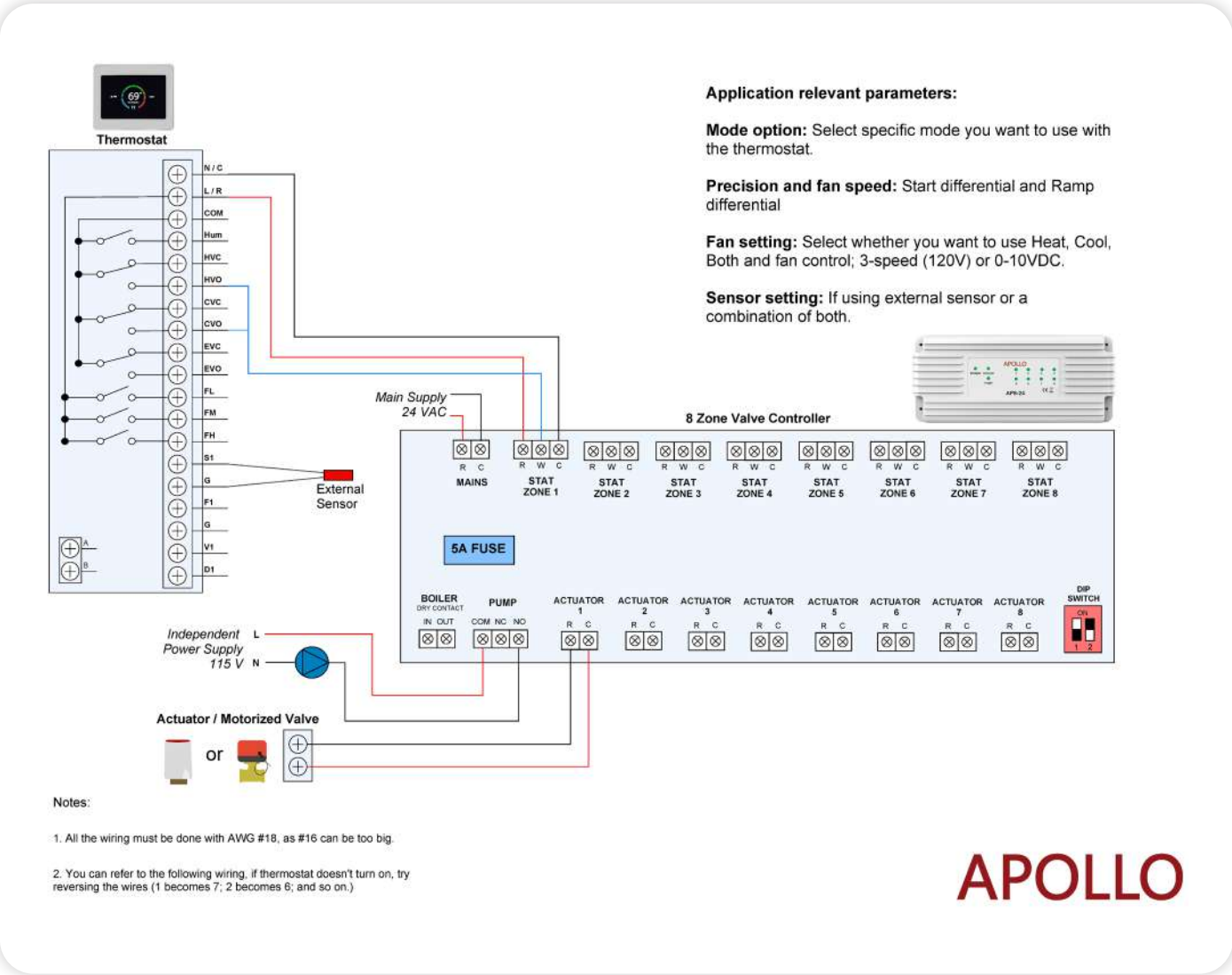
Pump Control Signal

- Dry contact for circulator pump
- Delay: 3 minutes from thermostat signal
- **Terminals:**
 - **COM:** Common
 - **NO:** Normally Open (default use)
 - **NC:** Normally Closed (optional)

3. INSTALLATION

1. Mount the controller in a clean, dry, and accessible location.
2. Use appropriate gauge wires and protect with a 5A fuse.
3. Connect thermostats to STAT inputs (1–8).
4. Connect actuators or zone valves to output terminals (1–8).
5. Wire boiler and pump via dry contact terminals.
6. Ensure all connections are secure before applying power.

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Sensor setting: If using external sensor or a combination of both.

2. You can refer to the following wiring, if thermostat doesn't turn on, try reversing the wires (1 becomes 7; 2 becomes 6; and so on.)

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- Disconnect power before wiring.
- Use only with 24V AC thermostats and actuators.
- Protect circuits with appropriate fuses.
- Do not exceed rated current values.
- If unsure, consult a qualified HVAC technician.

6. TROUBLESHOOTING

Issue	Possible Cause	Solution
No response from controller	No power / blown fuse	Check power and 5A fuse
Boiler not activating	Faulty boiler wiring / dry contact issue	Verify IN/OUT wiring and contact status
Pump runs continuously	Incorrect wiring to NC terminal	Switch to NO terminal if not required to run constantly
Zone not responding	Faulty thermostat or actuator wiring	Verify thermostat signal and actuator power

7. TECHNICAL SPECIFICATIONS

- **Power Supply:** 24V AC, 50/60Hz
- **Zone Support:** 8 (thermostats and actuators)
- **Max Load per Output:** 120W
- **Boiler Output:** Dry contact, max 5A
- **Pump Output:** Dry contact, max 5A
- **Fuse:** 5A, 20mm anti-surge

SUPPORT

For support, contact:

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