



Uponor

RADIANT HEATING SYSTEMS

RADIANT THERMOSTATS

CUT SHEET

Uponor's high-quality and durable radiant thermostats are designed specifically for hydronic radiant heating applications.

Uponor offers the following radiant thermostat models.

- Heat-only (A3030101)
- Heat and Cool (A3030102)
- Heat-only, Three-wire (A3030103)

The heat-only and heat and cool thermostats operate in heating mode over two wires. These thermostats are power-sharing, meaning they receive power for operation by sharing voltage with the connected wiring. This eliminates any need for a third wire or batteries, making them simple to install, wire and service.

The heat-only, three-wire thermostat incorporates a dedicated power source, which comes in handy when encountering third-party devices that may not be compatible with a two-wire, power-sharing thermostat.

Features and Benefits

- Specifically designed for radiant heating applications with a 1° differential
- Offers a two-wire version for wiring simplicity or a three-wire version for increased compatibility with third-party control devices
- Includes two methods for superior comfort control — differential mode and pulse width modulation (PWM) mode
- Features digital filtering for a consistent-temperature environment

Digital Filtering

The Uponor thermostat continuously measures the room temperature and employs a digital filter to create a stable reading and consistent operation. If each room temperature reading displayed as it was sensed, the temperature shown would appear erratic and inconsistent.



The filtering technique ignores sensor readings with large differences from the displayed temperature and then limits the amount any individual reading can affect the overall displayed reading. This results in a smooth display and operation.

Wiring Schematic

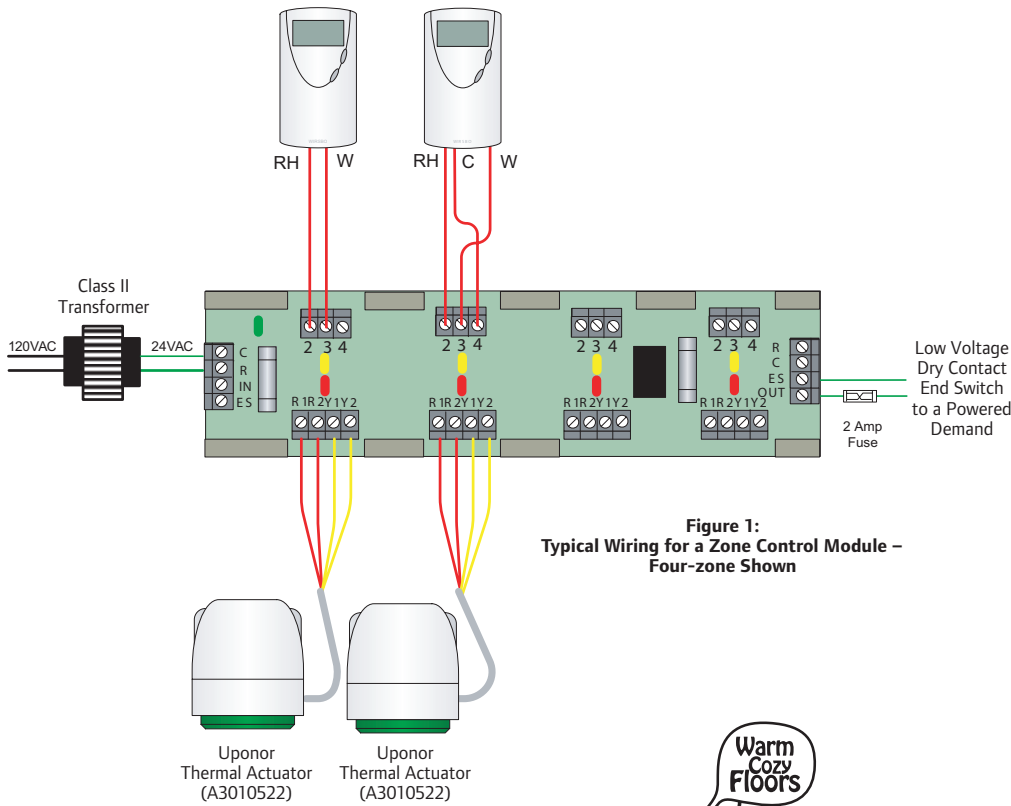
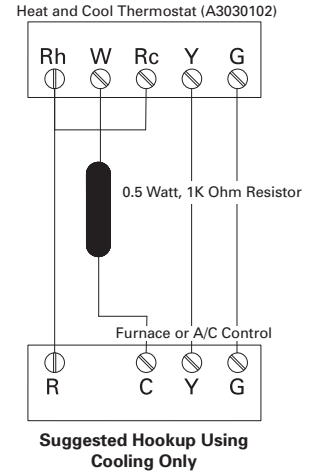
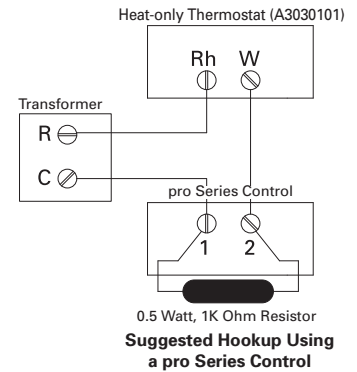


Figure 1:
Typical Wiring for a Zone Control Module -
Four-zone Shown



Suggested Hookup Using Cooling Only



Suggested Hookup Using a pro Series Control



Control Methods

Differential Mode

When the room temperature falls 1°F (0.5°C) below the desired room setting, the control devices wired to the thermostat activate.

Pulse Width Modulation (PWM) Mode

When the room temperature is 1 to 3°F (0.5 to 1.5°C) below the desired room setting, the thermostat manages the application of heat by varying the on-and-off cycles (PWM). The on-and-off times vary depending on the difference between room and desired temperatures — the further away, the greater the on time. This prevents the room temperature from rising above the desired temperature. The heating system will run continuously at temperature differences greater than 3°F (1.5°C).

Specifications

Operating Voltage	24VAC +/- 10%
Maximum Load	1.3 Amps at 24VAC (W terminal) 4 x MVA (part number A3020522) 6 x TVA (part number A3010522)
Maximum Cooling Load (Heat and Cool model only)	1.0 Amps at 24VAC (Y and G terminals)
Display Range	38°F to 99°F (2°C to 37°C)
Setting Range	38°F to 99°F (2°C to 37°C) 68°F (20°C) default setting
Minimum Limit	38°F (2°C) to maximum limit 50°F (10°C) default minimum setting
Maximum Limit	Minimum limit to 99°F (37°C) 86°F (30°C) default maximum setting
Units	User-configurable Fahrenheit or Celsius
Memory	Permanent settings and mode without power
Operating Modes	Off, heat, cool and fan (on equipped models)
Freeze Protection	Activation at 38°F (3.3°C) De-activation at 39°F (3.8°C)
Over-heat Protection (Heat and Cool model only)	Activation at 100.4°F (38°C) De-activation at 98.6°F (37°C)
Resolution	1° displayed, 0.25° calculated
Temperature Ranges	Shipping and storage — 14°F to 158°F, (-10°C to 70°C) Operation — 32°F to 104°F, (0°C to 40°C)
Humidity	20 to 90% non-condensing
Size	5" H x 2.72" W x 0.91" D