

# INSTALLATION INSTRUCTIONS

## Model SWC5 Hydronic Heating Control.

### Features:

- Controls five heating zones plus a domestic hot water priority zone.
- Expandable by adding additional SWC5 Controls.
- Controls external DHW circulator and System Circulator.
- Can be expanded to control separate system circulators in applications with both low temperature in-floor installations and high temperature baseboard radiators.
- Simplifies and consolidates all hydronic control wiring.
- UL Listed. UL 873 Standard for Temperature Indicating and Regulating Equipment.



**Operation:** When a zone's thermostat calls for heat, the associated zone valve motor is energized. Upon closure of the associated Zone Valve end switch, the system circulator is energized. If there is a call for heat from the domestic hot water tank, the system circulator is de-energized and the DHW circulator is energized. If terminals **P1** and **P2** are connected with a jumper, the System circulator also continues to run when there is a DHW call for heat. When any zone valve end switch is closed or when there is a DHW call for heat, the boiler is activated by a contact closure on the boiler TT leads. Multiple SWC5 controls can be interconnected as shown in the following figures. Wiring between multiple SWC5 controls expands 24VAC and End Switch connections. DHW priority can be maintained across multiple SWC5 Controls.

**Power Input:** 120VAC, Class 1, 10 Amps maximum. 24VAC, Class 2, 100VA maximum.

### Power Outputs: 120VAC, Class 1:

- DHW Circulating Pump, 1/6<sup>th</sup> HP, 2A maximum.
- System Circulating Pump, 1/6<sup>th</sup> HP, 2A maximum,
- 120VAC to external Class 2 transformer.
- Expansion to additional SWC5 Controls via terminal P2, 2A maximum.

**Thermostats:** Thermostats are interconnected to zone valve actuators through the SWC5 Control. The Heat Anticipator setting for each thermostat is determined by the zone valve motor current demand.

**Zone Valves:** The Zone Valves used with the SWC5 Control must have an end switch. Either 3 wire or 4 wire zone valves can be used. See the attached figures for wiring information.

**External Transformer:** The external transformer must have a VA rating greater than the total load of all zone valves and thermostats combined, with a maximum rating of 100 VA. Example: 5 thermostats at 1 VA each plus 5 zone valves at 7 VA each equals 40 VA. The suggested transformer would have a 50VA rating.

**Indicators:** **Power**-Green, illuminated when 24VAC is present. **Zone 1 through 5**-Red, illuminated when the associated thermostat is calling for heat. **DHW CIRC**-Red, illuminated when the Domestic Hot Water Circulator is energized. **SYSTEM CIRC**-Red, illuminated when the System Circulator is energized.

**Warning:** Follow all local and national electrical codes. Use Copper wire only. Keep all 120VAC, Class 1 wiring separate from Class 2, 24VAC wiring. Failure to follow this warning could result in electrical shock hazard that could lead to injury or death.

## LIMITED WARRANTY

DW Sales Corporation will repair or replace this control if shown to be defective within 24 months of manufacture. DW Sales Corporation shall not be responsible for any cost other than the original purchase price of this control. Any claim for replacement or repair must be made in writing directly to DW Sales Corporation and the control under consideration must be returned prior to refund or replacement.

DW Sales Corporation, P O Box 4945, 503 Gregg Drive, Buena Vista, Colorado, 81211

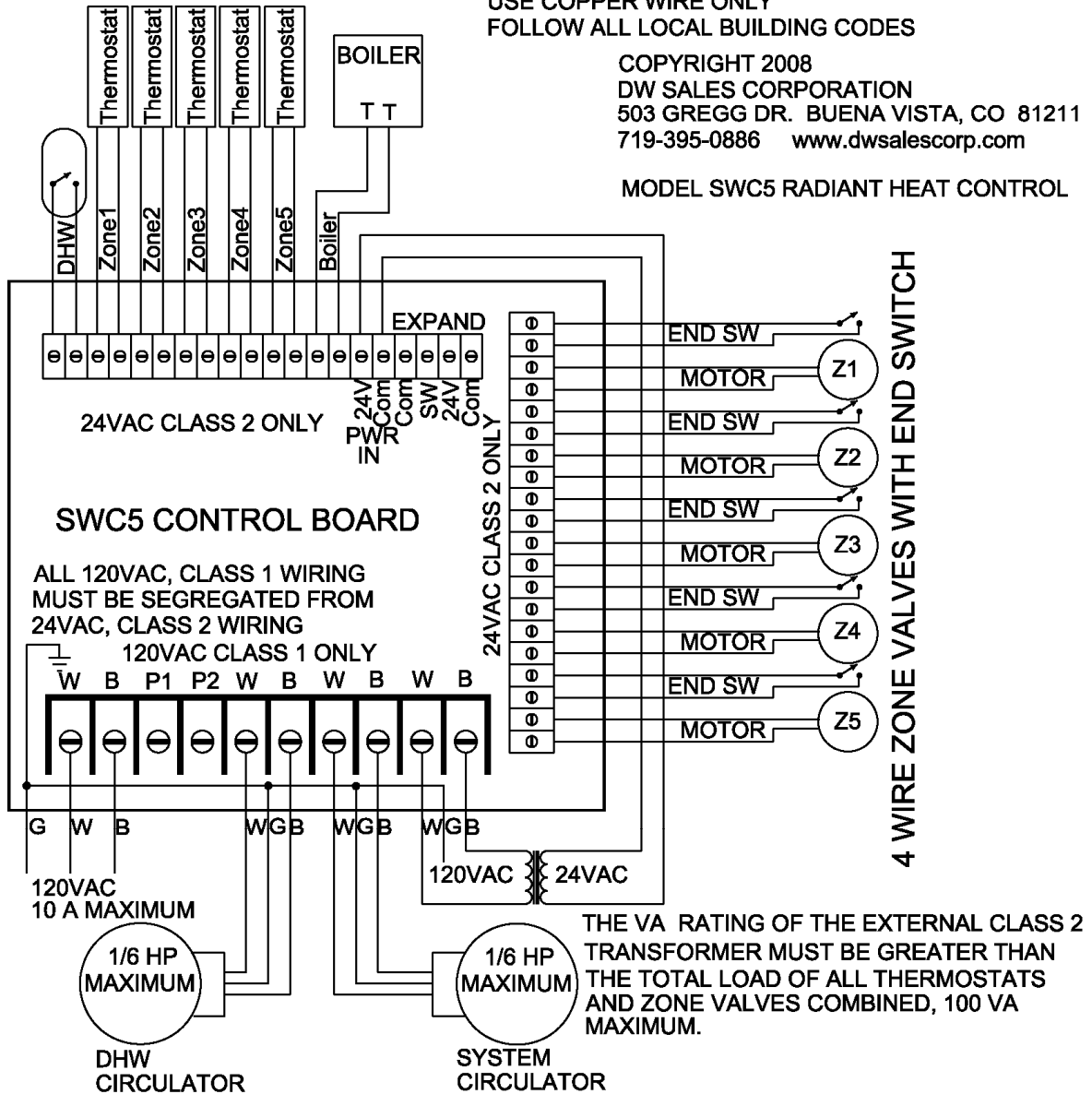
# SINGLE SWC5 CONTROL INSTALLATION INSTRUCTIONS

## FIVE ZONE RADIANT HEAT WIRING EXAMPLE WITH DOMESTIC HOT WATER PRIORITY

USE COPPER WIRE ONLY  
FOLLOW ALL LOCAL BUILDING CODES

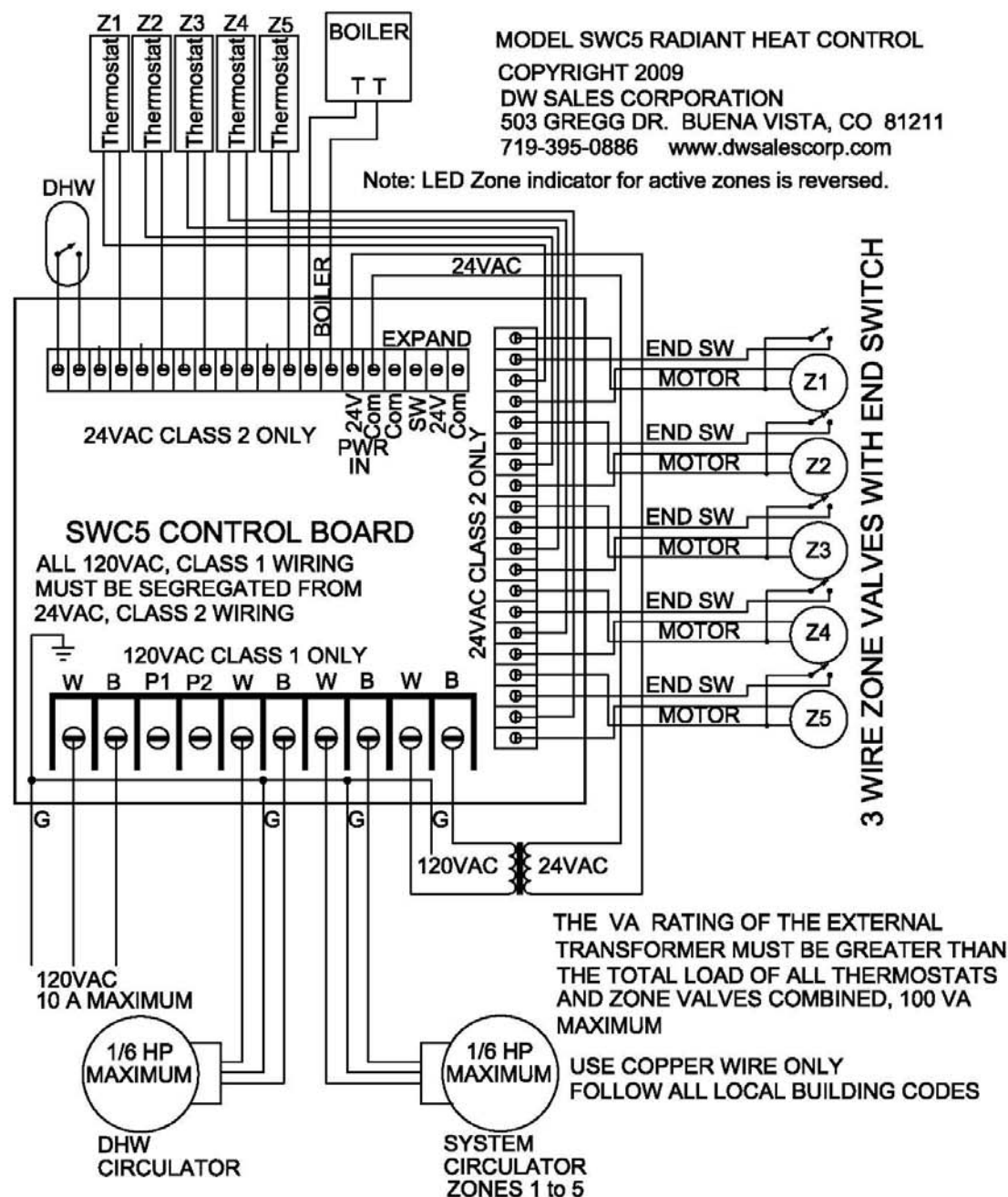
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MODEL SWC5 RADIANT HEAT CONTROL



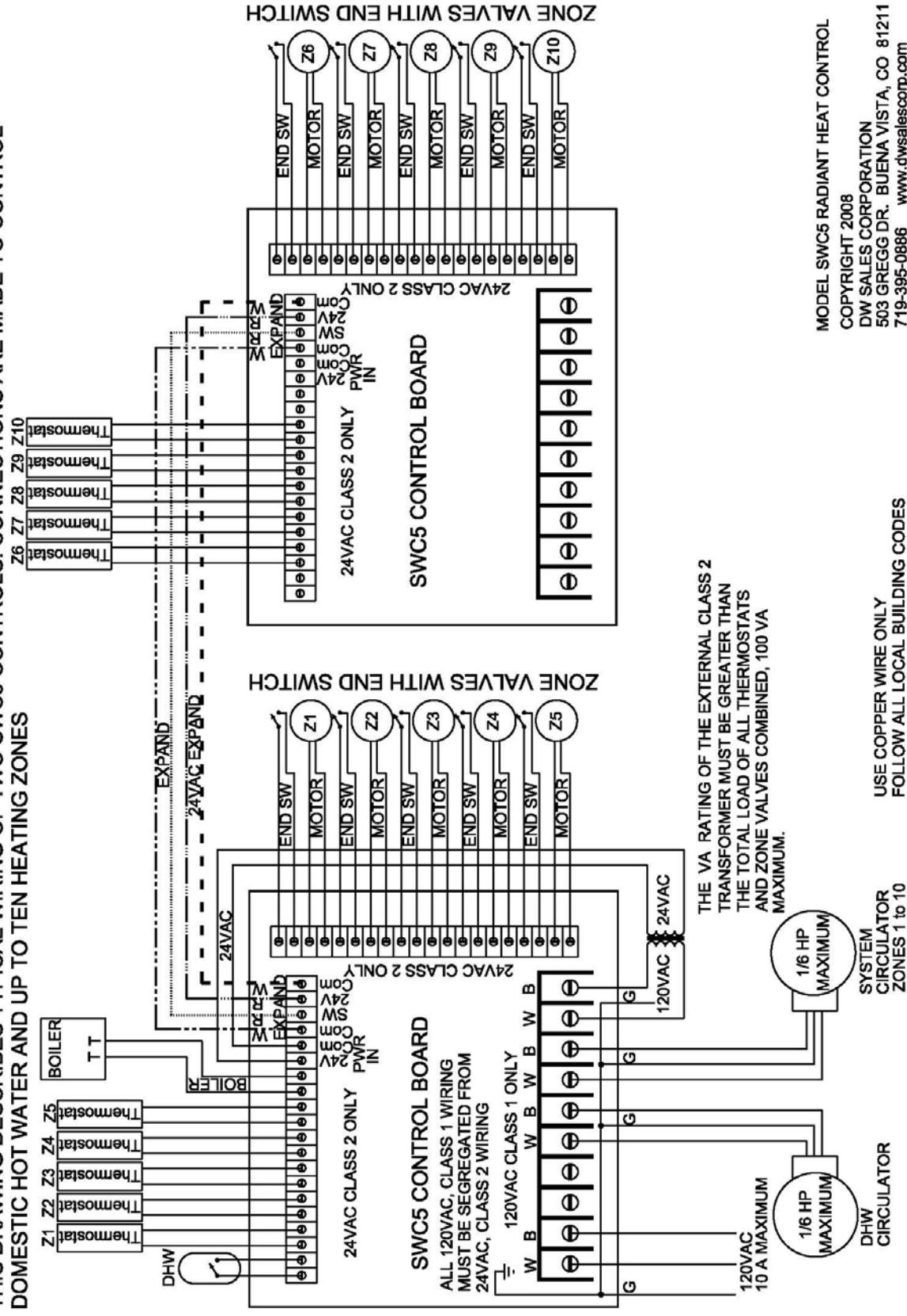
# SWC5 INSTALLATION INSTRUCTIONS FOR THREE WIRE ZONE VALVES WITH DOMESTIC HOT WATER PRIORITY

THIS DRAWING DESCRIBES TYPICAL WIRING OF THREE WIRE ZONE VALVES THAT HAVE A COMMON MOTOR AND END SWITCH LEAD.



# SWC5 INSTALLATION INSTRUCTIONS FOR TWO INTERCONNECTED CONTROLS WITH DOMESTIC HOT WATER PRIORITY

THIS DRAWING DESCRIBES TYPICAL WIRING OF TWO SWC5 CONTROLS. CONNECTIONS ARE MADE TO CONTROL  
DOMESTIC HOT WATER AND UP TO TEN HEATING ZONES



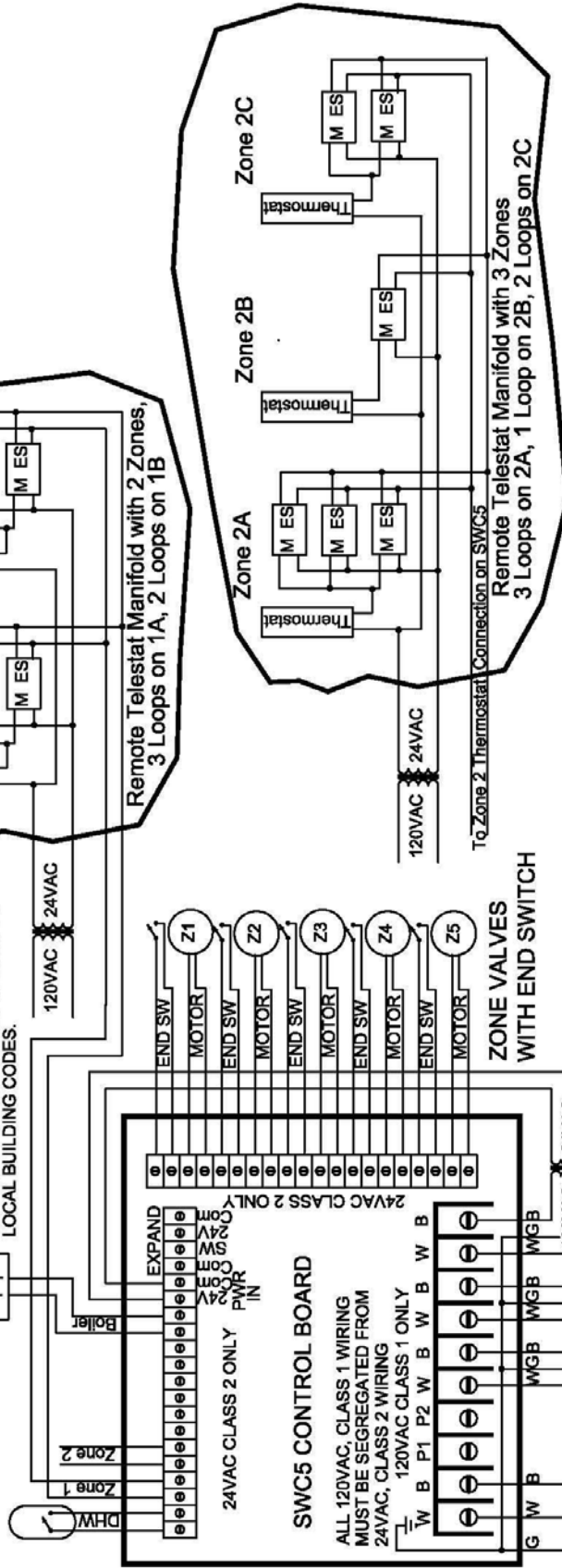
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### Interconnect with Telestat Connection Boards (typical)

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Continue similar wiring for primary zones 3, 4, and 5.  
Consult multiple SWC5 wiring diagrams for more than 5 primary zones

THE VA RATING OF THE EXTERNAL CLASS 2 TRANSFORMERS MUST BE GREATER THAN THE TOTAL LOAD OF ALL ASSOCIATED THERMOSTATS, TELESTATS, AND ZONE VALVES COMBINED, 100 VA MAX.

This wiring is typical for an INF5 Manifold Board in an installation using multiple remote secondary zones per main primary zone.