



Instruction Sheet

102-070A

Priority Zoning Circulator

SUPERSEDES: New

Patent No. 5,622,221

EFFECTIVE: November 1, 2006

Plant I.D. 001-3901

Description:

The Taco Priority Zoning Circulator combines the reliability of the "00" circulator with the convenience and efficiency of a PC board mounted switching relay package. Each Zoning Circulator has a built-in Priority Switch mounted directly on the PC board. The priority switch allows the installer to choose the zone that requires the most priority, and when activated only that circulator will run. The Priority Zoning Circulator can be used in conjunction with circulators or zone valves. It is compatible with electronic digital thermostats.

Application:

Hydronic systems that require the installer to choose one zone that has priority over all other zones.

- Indirect hot water heaters.
- Zoning with circulators.
- Add a zone to existing heating systems.
- Under-sized zones that never come up to heat can now be switched to first priority.

Installation:

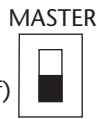
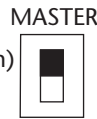
FOLLOW ALL INSTRUCTIONS IN THE SEQUENCE THAT THEY APPEAR.

Basic "00" Circulator Installation Instructions

1. Refer to instruction sheet number 102-054 for all basic circulator application/installation instructions packed separately in the Priority Zoning Circulator box.

Priority Switch:

1. All Priority Zoning Circulators are shipped with the priority switch in the "MASTER" (on) position.
2. When using the priority feature, leave the priority zone circulator in the "MASTER" position, and switch the non-priority circulators to the "OFF" position. A maximum of 1 priority "00" circulator and 3 non-priority "00" circulators can be connected together.



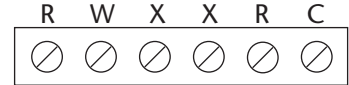
Priority Zoning Circulator Operation:

1. Priority circulator thermostat calls for heat.
2. The Priority circulator turns "ON".
3. The Non-Priority circulators turn "OFF".
4. The dry contact switch to the boiler control closes allowing the boiler to operate.

Electrical Hook-Up:

1. All electrical work must be performed by an electrician in accordance with the latest edition of the National Electrical Codes and Local Codes and Regulations.
2. Disconnect all Electrical Power.
3. Wiring Connections: Follow Basic Priority Zoning Circulator Wiring Diagrams.

LOW VOLTAGE
TERMINAL STRIP



Terminals R & W: Maximum 24VAC

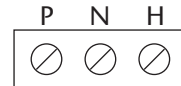
Thermostat – Connect terminals R and W to the individual room thermostat or aquastat control.

Terminals X & X: Maximum 24VAC 3AMP

Relay-Contact – Connect terminals X and X to "TT" on boiler controls.

Terminals R & C: Optional for 24VAC Output (0.5VA max)

HIGH VOLTAGE
TERMINAL STRIP



Line Voltage – Connect 115VAC to HOT(H) and NEUTRAL(N) terminals.

Priority Switch – Connect (P) to (P) of next circulator. Repeat step until all Zoning Circulator (P) to (P) connections are made.

Non-Priority – If the Priority feature is not used, do not connect the (P) terminals between circulators.

Ground – Provide the proper ground connection wire and attach it to the green ground screw inside the circulator's capacitor box.

Specifications:

Terminals R & W:

Thermostat – 24VAC SPDT 2 wire heating thermostat, or Digital Electronic 2 wire 24VAC thermostat with a maximum current draw of 30 milliamps.

Anticipator Setting – 0.20.

Cycles – Too frequent, adjust upward. Too long, adjust downward.

Terminals X & X:

Relay – Dry Contact Switch Ratings

- 24VAC 1 Phase 3 Amps

Terminals R & C:

Optional Outputs

- 24VAC 0.5 VA max

Terminal P:

Priority Connection

- 120VAC output when "MASTER" switch is "ON"
- 120VAC input when "MASTER" switch is "OFF"

Terminals N & H:

- 120VAC 8 Amp in-rush current max

Testing Sequence:

1. Restore Electrical Power.
2. Turn room thermostat "ON".
3. Circulator will start:
 - Green LED light turns "ON"
 - Relay-contact will close between terminals X & X

2. Priority Circulator Starts:

- Green LED light turns "ON"
- Relay-contact will close between terminals X & X
- All Non-Priority circulators will turn "OFF".

3. Priority Circulator room thermostat turns "OFF".

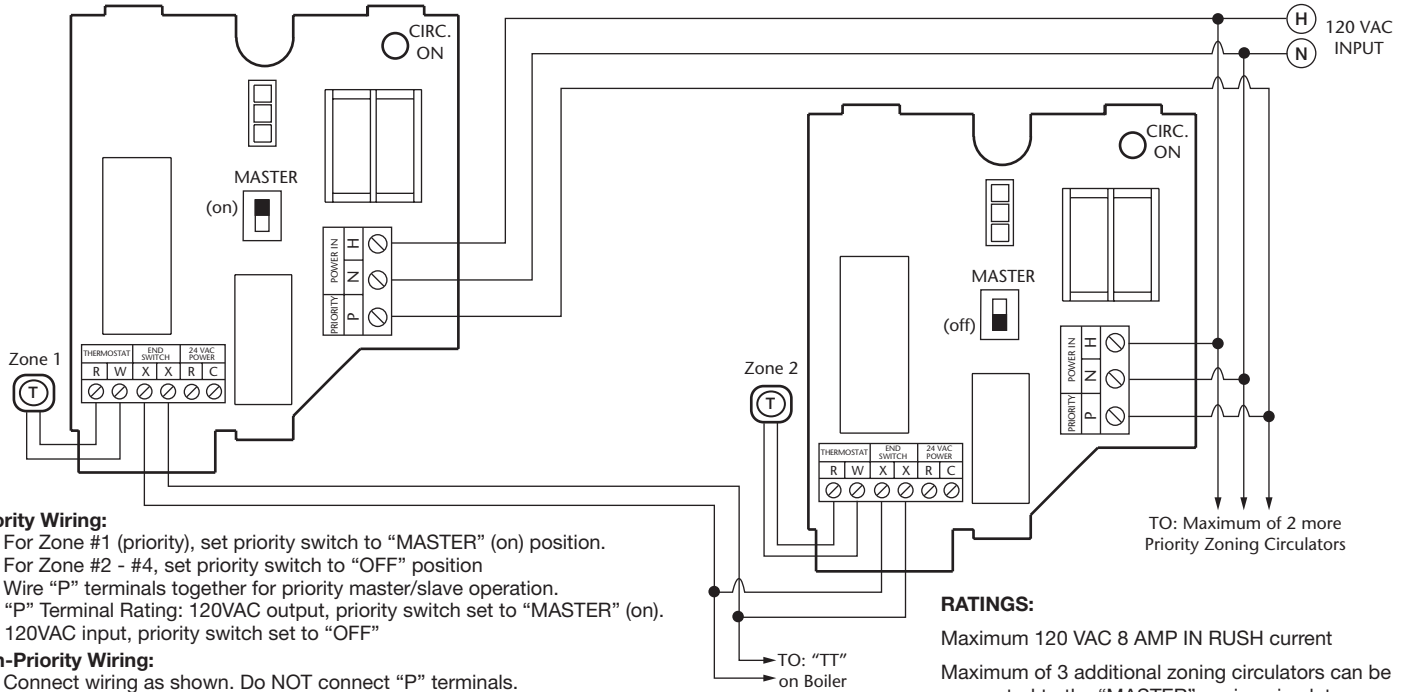
- Priority Circulator stops.
- Any Non-Priority Circulators will now begin to operate.

Testing Priority Switch:

1. Turn Priority Circulator room thermostat "ON".

PC Board Replacement Kits	
005-029RP	Models: 003, 005, 006, 007, 008
009-034RP	Models: 009, 0010, 0011, 0012, 0014
0013-018RP	Models: 0013 only

WIRING MULTIPLE PRIORITY ZONING CIRCULATORS



Priority Wiring:

- For Zone #1 (priority), set priority switch to "MASTER" (on) position.
- For Zone #2 - #4, set priority switch to "OFF" position
- Wire "P" terminals together for priority master/slave operation.
- "P" Terminal Rating: 120VAC output, priority switch set to "MASTER" (on). 120VAC input, priority switch set to "OFF"

Non-Priority Wiring:

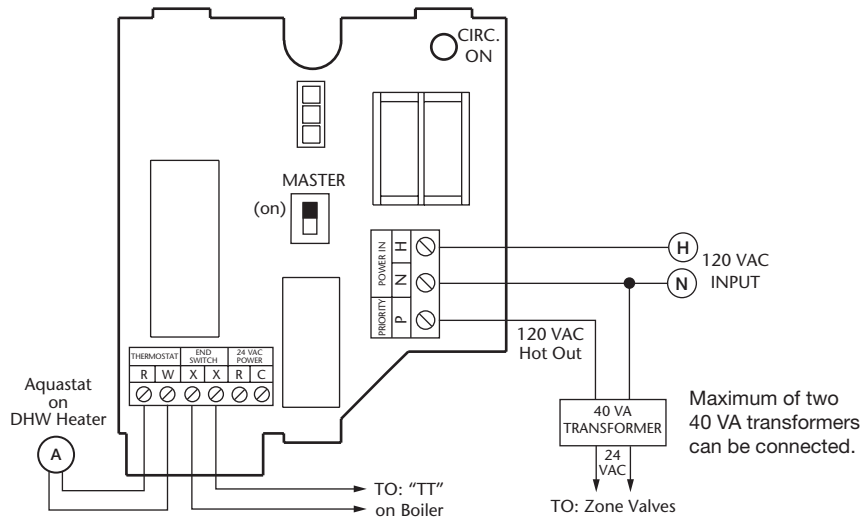
- Connect wiring as shown. Do NOT connect "P" terminals.
- Set all priority switches to "MASTER" (on).

RATINGS:

Maximum 120 VAC 8 AMP IN RUSH current

Maximum of 3 additional zoning circulators can be connected to the "MASTER" zoning circulator.

WIRING A PRIORITY ZONING CIRCULATOR WITH ZONE VALVES



Maximum of two 40 VA transformers can be connected.

Do it Once. Do it Right.®

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