

Instruction Sheet

Priority Zoning Circulator

SUPERSEDES: November 1, 2006

Patent No. 5,622,221

EFFECTIVE: May 1, 2010

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.

WARNING: Do not use in swimming pool or spa areas; pump has not been investigated for this application.

WARNING: In the event the retaining screws have been pulled out of the housing, DO NOT replace them. Use of any other screw may short out the stator windings, creating a risk of electrical shock.

WARNING: To avoid electrical shock, disconnect the power supply to the circulator and the main electrical unit.

CAUTION: When installing electrical connections, do not apply mechanical loads to the capacitor box; otherwise, retaining screws may be pulled out of the housing, making circulator unusable.

CAUTION: Installations at higher elevations over 5000 feet must have higher fill pressure of 20 psi minimum to prevent pump cavitation and flashing. Premature failure may result. Adjust expansion tank pressure to equal fill pressure. A larger size expansion tank may be required.

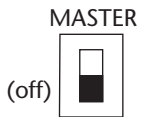
CAUTION: 1. The addition of petroleum based fluids or certain chemical additives to systems utilizing TACO equipment voids the warranty. 2. Use supply wires suitable for 90°C – ATTENTION: Employer des fils d'alimentation adéquats pour 90°C.

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.

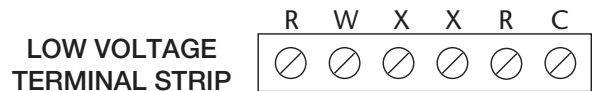


Priority Zoning Circulator Operation:

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.



Terminals R & W: Maximum 24VAC

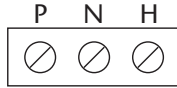
Thermostat – Connect terminals R and W to the individual room thermostat or aquastat control.

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:

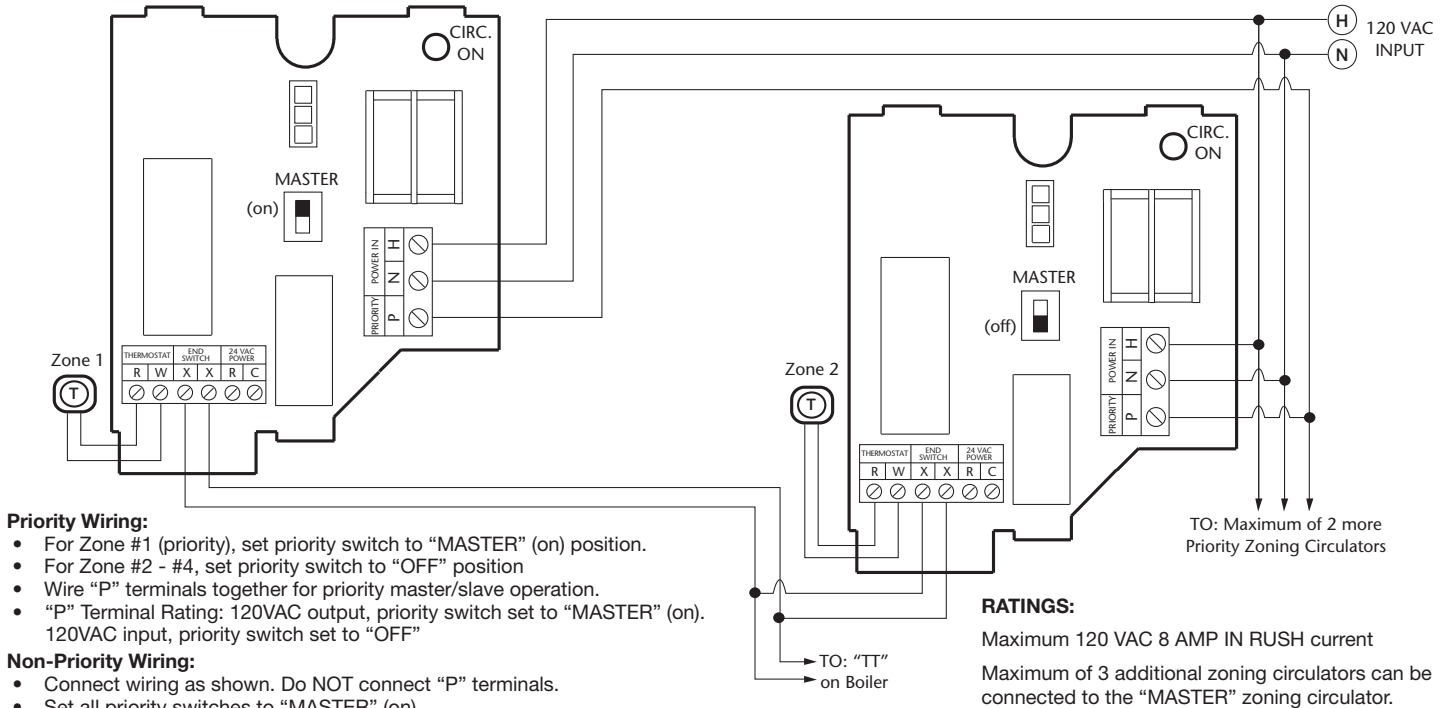
1. Restore Electrical Power.
2. Turn room thermostat “ON”.
3. Circulator will start:
 - Green LED light turns “ON”
 - Relay-contact will close between terminals X & X

Testing Priority Switch:

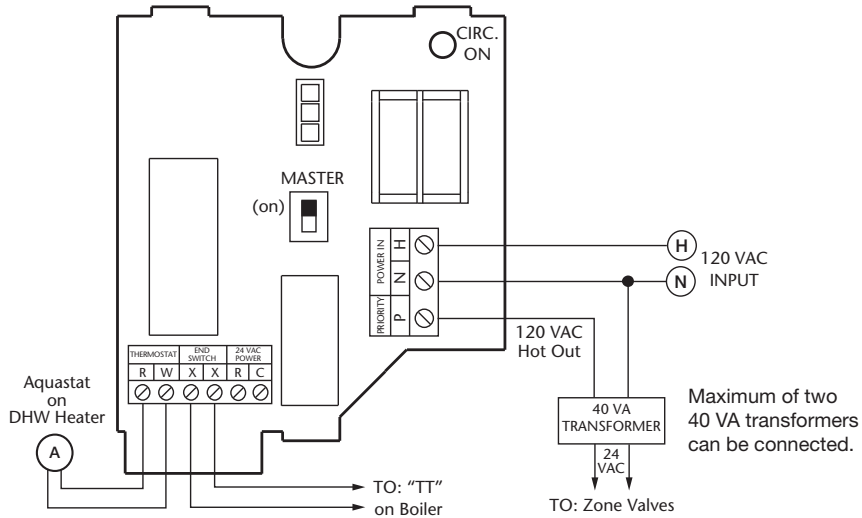
1. Turn Priority Circulator room thermostat “ON”.
2. Priority Circulator Starts:
 - Green LED light turns “ON”
 - Relay-contact will close between terminals X & X
 - All Non-Priority circulators will turn “OFF”.
3. Priority Circulator room thermostat turns “OFF”.
 - Priority Circulator stops.
 - Any Non-Priority Circulators will now begin to operate.

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



WIRING A PRIORITY ZONING CIRCULATOR WITH ZONE VALVES



Notes:

LIMITED WARRANTY STATEMENT

Taco, Inc. will repair or replace without charge (at the company's option) any Taco 00 Series circulator or circulator part which is proven defective under normal use within three (3) years from the date of manufacture.

In order to obtain service under this warranty, it is the responsibility of the purchaser to promptly notify the local Taco stocking distributor or Taco in writing and promptly deliver the subject product or part, delivery prepaid, to the stocking distributor. For assistance on warranty returns, the purchaser may either contact the local Taco stocking distributor or Taco. If the subject product or part contains no defect as covered in this warranty, the purchaser will be billed for parts and labor charges in effect at time of factory examination and repair.

Any Taco product or part not installed or operated in conformity with Taco instructions or which has been subject to misuse, misapplication, the

addition of petroleum-based fluids or certain chemical additives to the systems, or other abuse, will not be covered by this warranty.

If in doubt as to whether a particular substance is suitable for use with a Taco product or part, or for any application restrictions, consult the applicable Taco instruction sheets or contact Taco at (401-942-8000).

Taco reserves the right to provide replacement products and parts which are substantially similar in design and functionally equivalent to the defective product or part. Taco reserves the right to make changes in details of design, construction, or arrangement of materials of its products without notification.

TACO OFFERS THIS WARRANTY IN LIEU OF ALL OTHER EXPRESS WARRANTIES. ANY WARRANTY IMPLIED BY LAW INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS IS IN EFFECT ONLY FOR THE DURA-

TION OF THE EXPRESS WARRANTY SET FORTH IN THE FIRST PARAGRAPH ABOVE.

THE ABOVE WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR STATUTORY, OR ANY OTHER WARRANTY OBLIGATION ON THE PART OF TACO.

TACO WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF ITS PRODUCTS OR ANY INCIDENTAL COSTS OF REMOVING OR REPLACING DEFECTIVE PRODUCTS.

This warranty gives the purchaser specific rights, and the purchaser may have other rights which vary from state to state. Some states do not allow limitations on how long an implied warranty lasts or on the exclusion of incidental or consequential damages, so these limitations or exclusions may not apply to you.



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