Instruction Sheet

102-070

Priority Zoning Circulator–Models 005-0012

SUPERSEDES: September 1, 1994 | Patent Pending | EFFECTIVE: October 15, 1995

Plant I.D. 001-999

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. This modular design has two PC boards that fit all models.

Application:

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

- In-direct 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 'ON' position.
2. When using the priority feature, leave the 'ONE' priority circulator in the 'ON' 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 1 & 2: Maximum 24VAC

Thermostat – Connect terminals 1 and 2 to the individual room thermostat.

Terminals 3 & 4: Maximum 240VAC 5AMP

Relay-Contact – Connect terminals 3 and 4 to the boiler controls.

High Voltage Terminal Strip

Line Voltage – Connect 115VAC to Live and Neutral terminals.

Priority Switch – Connect PR out to PR in of next circulator. Repeat step until all Zoning Circulator PR in and PR out connections are made.

Non-Priority – If the Priority feature is not used, then don't connect the PR in or PR out terminals.

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

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Specifications:

Terminals 1 & 2:

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 3 & 4:

Relay – Dry Contact Switch Ratings

- 240VAC 1 Phase 5 Amps
- 115VAC 1 Phase 5 Amps
- 24VAC 1 Phase 5 Amps

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 3 & 4

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 3 & 4
   - 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.

BASIC PRIORITY ZONING CIRCULATOR WIRING DIAGRAM