



# Instruction Sheet

## SR503 Switching Relay

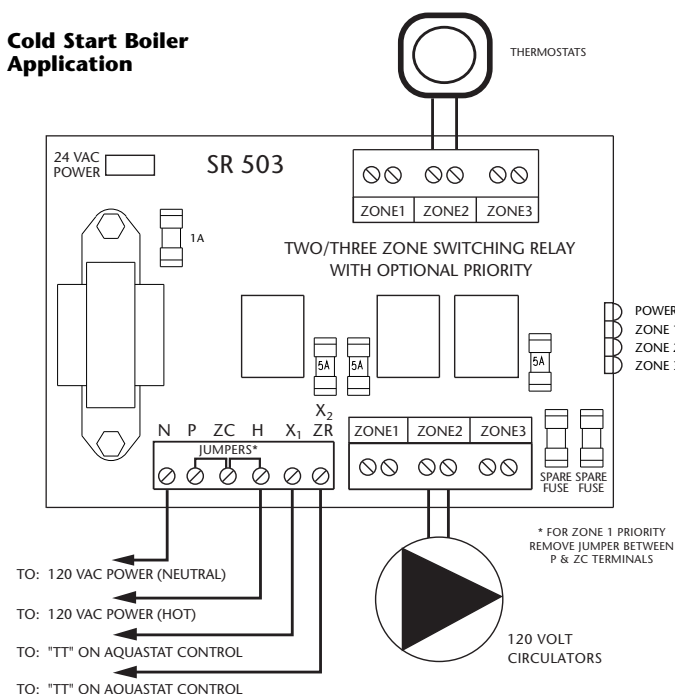
102-167

SUPERSEDES: New

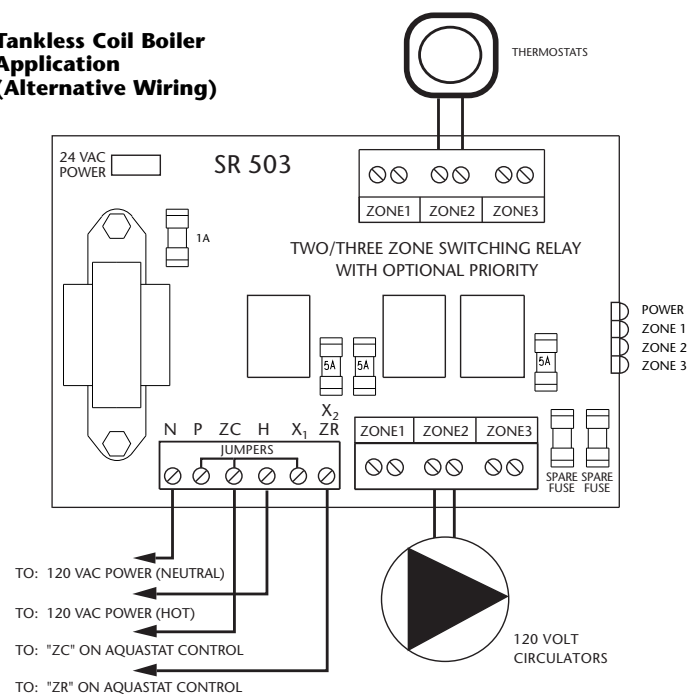
EFFECTIVE: June 1, 2006

Plant ID# 9300-2094

### Cold Start Boiler Application



### Tankless Coil Boiler Application (Alternative Wiring)



**Operation:** When the thermostat calls for heat, the appropriate circulator is energized and the isolated end switch (X<sub>1</sub> and X<sub>2</sub>) will start the boiler.

**Jumper Placement:** The jumper should be placed between terminals ZC and H. Connect the isolated end switch, X<sub>1</sub> and X<sub>2</sub> to the boiler aquastat control. **For zone 1 priority, remove jumper between terminals P and ZC.**

**Power Input:** Connect 120 volt ac power input to terminals N and H. Neutral wire to terminal N. Hot wire to terminal H.

**Operation:** When any thermostat calls for heat, the boiler is given a signal to start. The appropriate circulator is energized only when the boiler temperature is above the set low limit.

**Jumper Placement:** The jumper should be placed between terminals ZC and X<sub>1</sub>. Connect terminal ZC to ZC terminal on the aquastat control. Connect terminal ZR to ZR terminal on the aquastat control. Confirm polarity is consistent between boiler aquastat and switching relay. **For zone 1 priority, remove jumper between terminals P and ZC.**

**Power Input:** Connect 120 volt ac power input to terminals N and H. Neutral wire to terminal N. Hot wire to terminal H.

**Note:** When using Alternative Wiring diagram, the boiler operating control's ZC terminal will see the load of the circulator(s).

**Warning:** When using Alternative Wiring diagram, wiring instructions must be followed so power originates from the boiler aquastat. Failure to follow these wiring instructions may result in a secondary source of power being connected to the boiler that may activate it under certain circumstances, causing injury or death.

### The Taco Connection:

Combine the reliability of the Taco Zone Valves, Priority Zoning Circulators, Thermostats, and the "00" family of circulators with the advanced features of the Taco Zone Controls to achieve total system integration. No matter the application, Taco now provides the products to maximize system performance while simplifying both installation and service.

### External Diagnostics:

Externally visible lights show full functionality of the switching relay. The green light should always be on, indicating that power is connected. When the thermostat calls for heat, both the appropriate circulator and red indicating light is energized.

### Features:

- External Indicator Lights
- Priority
- Simplified Wiring
- Fully Enclosed Snap-Out Relays
- Fuse Protected Outputs
- Compact Design
- 100% Factory Tested
- Isolated End Switch
- Contractor Friendly PC Board Layout
- Universal Thermostat Compatibility
- UL Approved
- 24 volt Power Input or Output Terminal
- Extended 3 Year Warranty
- Made in the USA

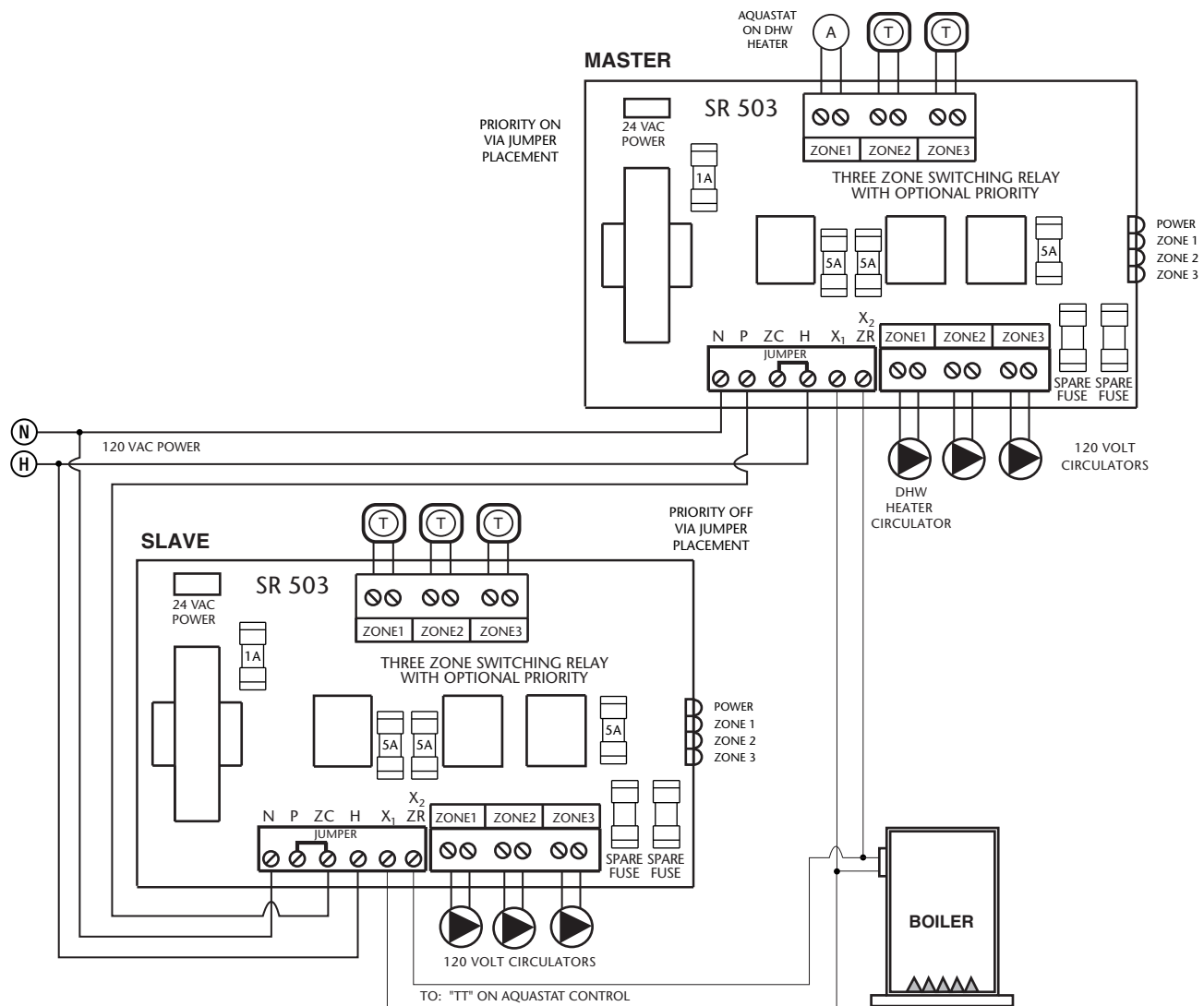
### Specifications:

PRODUCT NUMBER	NUMBER OF ZONES	TRANSFORMER VOLTAGE	MAXIMUM COMBINED LOAD	DIMENSIONS OF ENCLOSURE WIDTH	HEIGHT	DEPTH
SR503	3 with Priority	120 VAC Input	15 amps	10 1/4"	6 3/4"	2 3/4"

All Switching Relays are relay type DPST, have a thermostat current of .18, and have a single phase motor rating per zone of 1/3 hp (5.0A) @ 120 VAC.

**Warning:** Wiring connections must be made in accordance with all applicable electrical codes. Use copper wire only with a minimum temperature rating of 60/75°C. Failure to follow this instruction can result in personal injury or death and/or property damage. 12-18 gauge wire recommended for 120 VAC connections, 14-22 gauge wire for thermostat connections, and 14-22 gauge wire for 24 VAC source connections.

# SR502/503 Switching Relay Controlling Another SR502/503 Switching Relay



## LIMITED WARRANTY STATEMENT

Taco, Inc. will repair or replace without charge (at the company's option) any product or part which is proven defective under normal use within three (3) years from the date of start-up or three (3) years and six (6) months from date of shipment (whichever occurs first).

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.

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**TACO, INC.**, 1160 Cranston Street, Cranston, RI 02920 Telephone: (401) 942-8000 FAX: (401) 942-2360.

**TACO (Canada), Ltd.**, 6180 Ordan Drive, Mississauga, Ontario L5T 2B3. Telephone: 905/564-9422. FAX: 905/564-9436.

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