



# Instruction Sheet

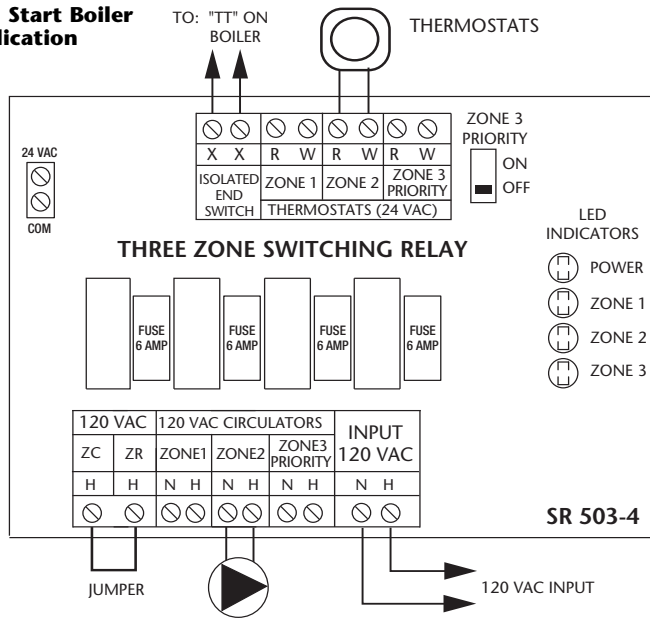
## SR503-4 Switching Relay

102-379

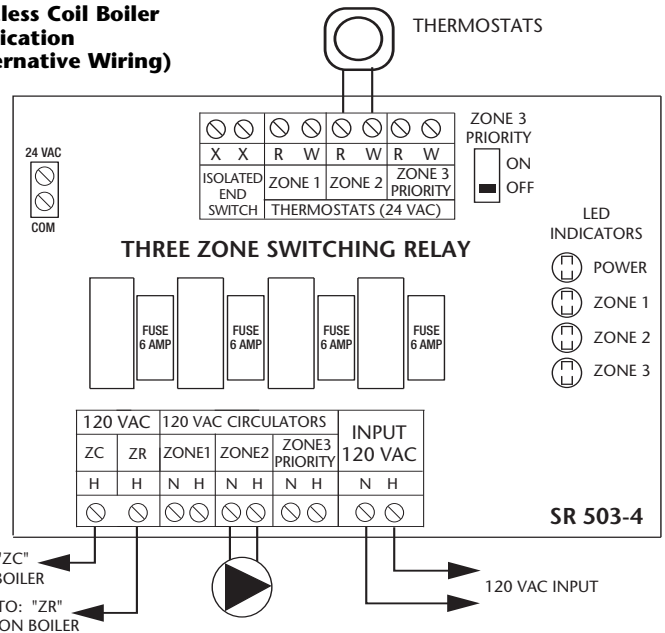
SUPERSEDES: New  
Plant ID# 9300-2867

EFFECTIVE: May 1, 2010

### Cold Start Boiler Application



### Tankless Coil Boiler Application (Alternative Wiring)



**Operation:** When any thermostat calls for heat, the appropriate circulator is energized and the isolated end switch (X and X) will start the boiler.

**Priority Operation:** When zone 3 is switched to the priority setting and is actuated, all other zones will stop operation until zone 3 is satisfied. When zone 3 is not switched to priority, all zones will operate independently.

**Priority Protection Operation:** When the priority switch is set to ON, and if the priority zone calls continuously for more than one hour, power is returned to all the other zones, allowing each zone to function independently. Once the priority zone is satisfied, the control's auto-reset is activated and the priority zone is again allowed to have priority for up to one hour starting from when it calls next.

**Jumper Placement:** The jumper should be placed between terminals ZC and ZR. Connect the isolated end switch to the aquastat control on the boiler.

**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.

**Priority Operation:** When zone 3 is switched to the priority setting and is actuated, all other zones will stop operation until zone 3 is satisfied. When zone 3 is not switched to priority, all zones will operate independently.

**Priority Protection Operation:** When the priority switch is set to ON, and if the priority zone calls continuously for more than one hour, power is returned to all the other zones, allowing each zone to function independently. Once the priority zone is satisfied, the control's auto-reset is activated and the priority zone is again allowed to have priority for up to one hour starting from when it calls next.

**Jumper Placement:** REMOVE the jumper between terminals ZC and ZR. Connect terminal ZC to ZC on the aquastat control. Connect terminal ZR to ZR on the aquastat control. Confirm polarity is consistent between boiler aquastat and switching relay.

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

**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.

### Specifications:

PRODUCT NUMBER	NUMBER OF ZONES	INPUT VOLTAGE	MAXIMUM COMBINED LOAD	TYPE 1 ENCLOSURE WIDTH	HEIGHT	DEPTH
SR503-4	3 with Priority	120/60/1 VAC	15 amps	10 <sup>3</sup> / <sub>4</sub> "	7"	2 <sup>3</sup> / <sub>4</sub> "

All circulator relay connections, including ZC/ZR, are rated 1/3 hp (6 FLA, 36 LRA) at 120 VAC. End switch connections are rated 24 VAC, 1 amp. All thermostat connections supply a 24 VAC class 2 output.

### Features:

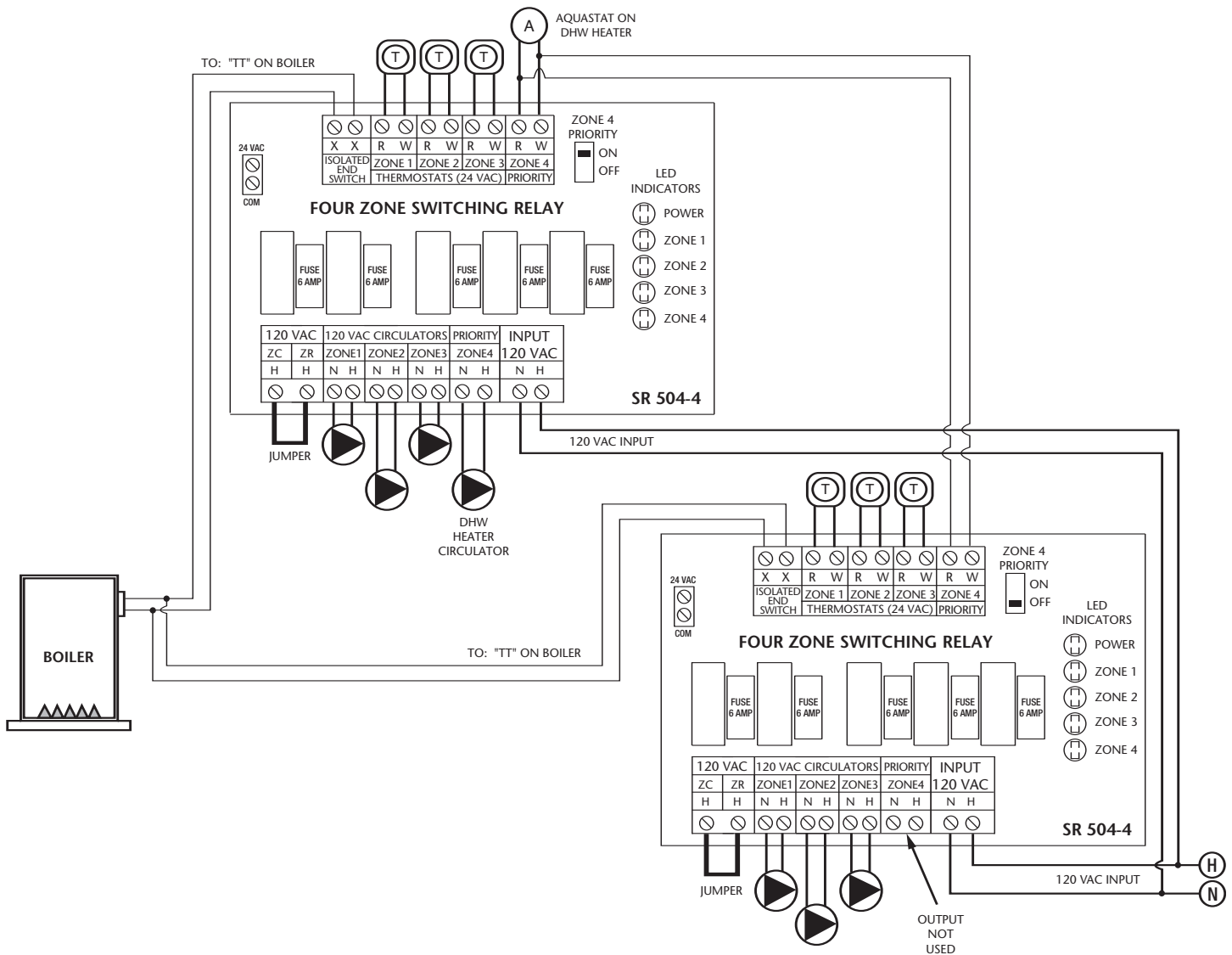
External Indicator Lights  
Switchable Priority  
Priority Protection  
Simplified Wiring  
Sealed Relays  
Fuse Protected Outputs  
Compact Design  
100% Factory Tested  
Isolated End Switch

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

**WARNING:** Wiring connections must be made in accordance with all applicable electrical codes. Use copper wire only. 120 VAC wiring must have a minimum temperature rating of 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.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## Two Standard Switching Relays Connected Together (SR502 – SR506)



## 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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**Do it Once. Do it Right.®**

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