



# Instruction Sheet

## SR501-4 Switching Relay

102-375

SUPERSEDES: March 1, 2013

EFFECTIVE: December 20, 2013

Plant ID# 9300-2865

### Features:

- External Indicator Lights
- Universal Replaceability
- Snap-in PC Board
- Simplified Wiring
- Sealed Relays
- Fuse Protected Outputs
- 100% Factory Tested
- Contractor Friendly PC Board Layout
- Universal Thermostat Compatibility
- UL Approved
- Extended 3 Year Warranty

### Operation:

Connect a thermostat to the "T T" terminals on the switching relay. When the thermostat calls for heat, the relay is energized and power is given to the circulator.

### Power Input:

Connect 120 volt ac power to terminals N and H.

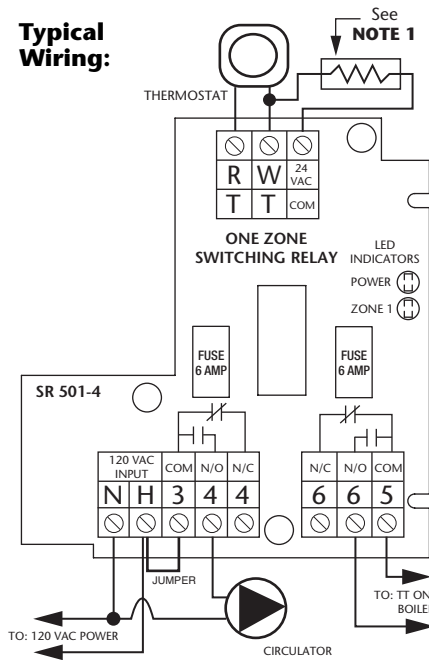
### Jumper Placement:

The jumper is factory installed between terminals H and 3 to switch power on terminals 4 n/o and 4 n/c.

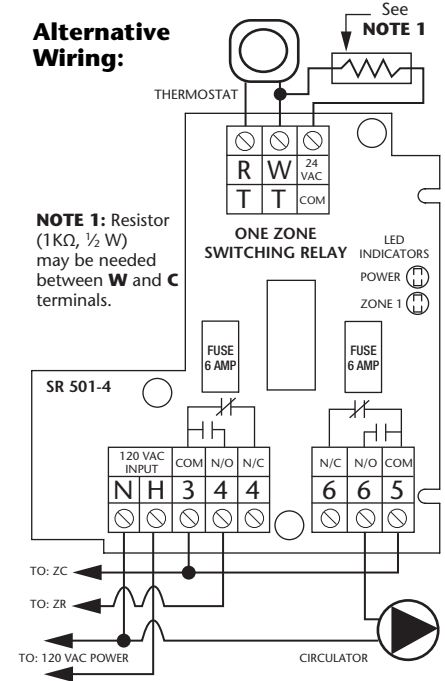
### Terminal Description:

- T & T Thermostat Connection
- COM Common side of transformer, to power some setback thermostats
- N Neutral wire of power input
- H Hot wire of power input
- 3 Common terminal for 4 n/o and 4 n/c
- 4 n/o Normally open terminal
- 4 n/c Normally closed terminal
- 6 n/c Normally closed terminal
- 6 n/o Normally open terminal
- 5 Common terminal for 6 n/o and 6 n/c

### Typical Wiring:



### Alternative Wiring:



**NOTE 1:** Resistor (1KΩ, ½ W) may be needed between W and C terminals.

**NOTE 2:** 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.

### Troubleshooting:

- Problem:** Digital thermostats do not work correctly when connected to a switching relay.
- Solution:** Some thermostats are a "Power Stealing" type which means they are powered by the switching relay with just 2 wires (R & W). A resistor may be needed in order to have the thermostat work properly. This resistor should be placed between the W & C (common) terminals of the switching relay. If the thermostat manufacturer does not supply a resistor, a 1000 ohm ½ watt resistor has proven to work with most models and is readily available at electronic supply outlets (e.g. Radio Shack). If the thermostat is battery powered, then check that the batteries are fresh and installed correctly.
- Problem:** No heat in a zone or room of building.
- Solution:** LED diagnostic lights will help find a component that is not working properly. The green LED should always be on, indicating that power is connected and the solid-state fuse is good. When there is a call for heat, the red LED will come on indicating power to the zone circulator. This indicates the thermostat is working correctly. If the red LED does not come on, then check the thermostat and thermostat wiring for errors.

### Specifications:

PRODUCT NUMBER	NUMBER OF ZONES	INPUT VOLTAGE	MAXIMUM COMBINED LOAD	TYPE 1 ENCLOSURE		
				WIDTH	HEIGHT	DEPTH
SR501-4	1	120/60/1 VAC	12 amps	4 7/8"	6 5/8"	2 3/8"

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

### TACO SR501-4 REPLACEMENT CROSS-REFERENCE

MANUFACTURER	MODEL	CONNECTIONS										
		H	N	3	4 NO	4 NC	5	6 NO	6 NC	R/T	W/T	C
Argo	AR821	1	2	3	4		5	6		T		
	AR822	L1	L2	3	4 NO	4 NC	5	6 NO	6 NC	R/T	G/T	C
Colombus	MR10	L1	L2	3	4 NO	4 NC	5	6 NO	6 NC	R/T	G/T	C
Erie	SR100	L1	N	3	4 NO	4 NC	5	6 NO	6 NC	R/T	G/T	C
Honeywell	RA89A	1	2	3	4					T	T	
	RA832A	1	2	3	4		X	X		T	T	
	R845A	1	2	3	4		5	6		T	T	
White-Rogers	889-189	1	2	3	4					T	T	
	829-845	1	2	3	4		5	6		T	T	

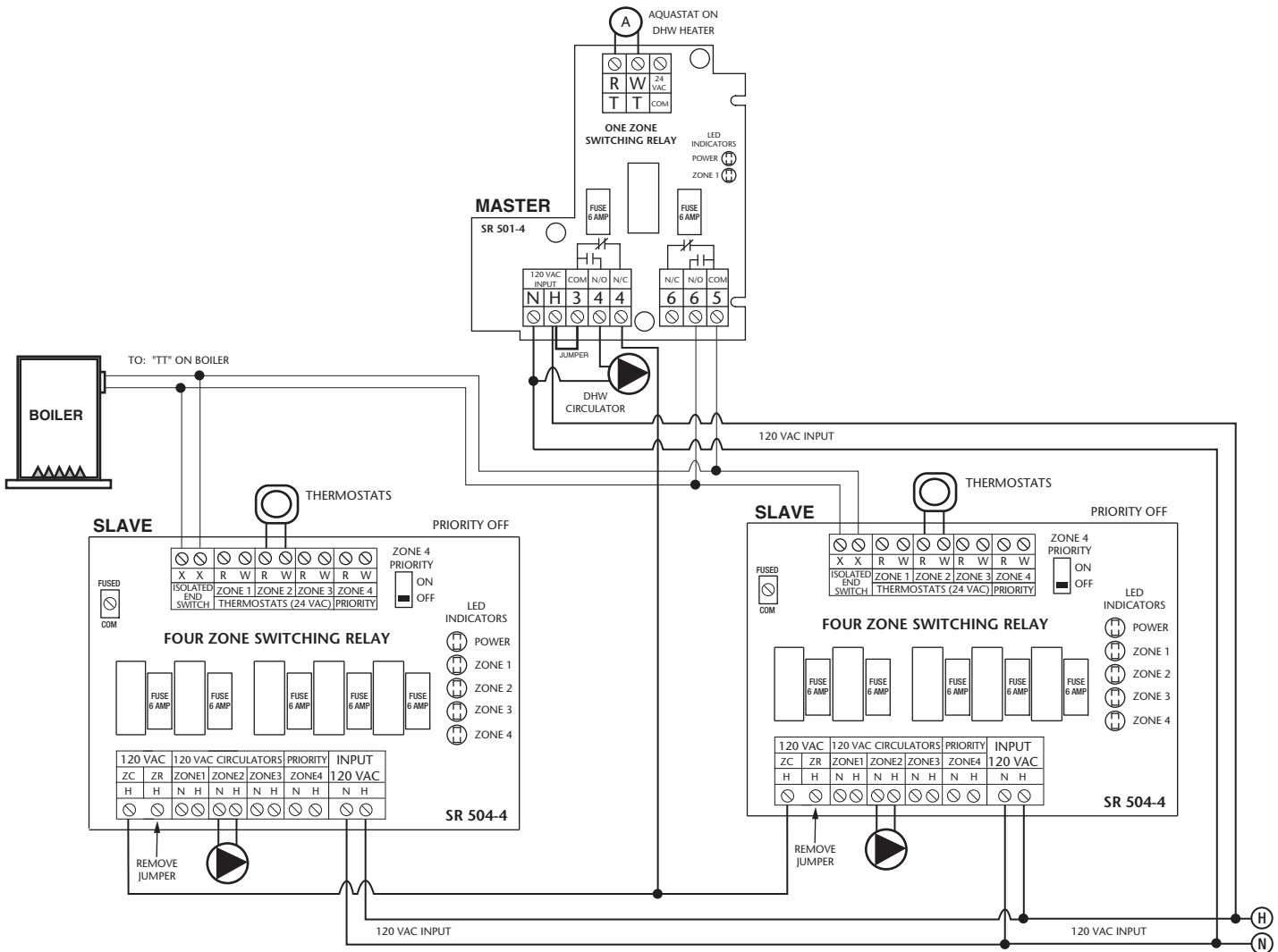
**WARNING:** Wiring connections must be made in accordance with all applicable electrical codes. Use copper wire only. 120 VAC wiring must have a minimum temperature rating of 75°C. Failure to follow this instruction can result in personal injury or death and/or property damage. 12-18 gauge wire recommended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

For information on Taco's Switching Relays (SR) including catalog sheet, instruction sheets, Visio stencils and our highly praised Zone Controls Wiring Guide, scan the QR code to the right or go to our website: <http://www.taco-hvac.com>.



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.

# SR501 Switching Relay Controlling 2 SR504/506 Switching Relays



Replacement Switching Relay fuses part number: SR6A-001RP  
(Manufacture: Littelfuse, Part Number: 229006)

Optional power stealing thermostat resistor part number: SRTR-001RP  
(Value: 1000 Ohms, 1/2 watt or higher)

## 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).

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Any Taco product or part not installed or operated in conformity with Taco instructions or which

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