



Taco SR501-4 Switching Relay Instruction Manual

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Taco SR501-4 Switching Relay Instruction



Product Information

The SR501 Switching Relay is designed to control two SR504/506 Switching Relays. It is a one-zone switching relay with LED indicators that show power and zone 1. The input voltage is 120VAC, and it has two 6-amp fuses. It has a jumper for DHW circulator and thermostat slave priority. The product also comes with replacement switching relay fuses and an optional power stealing thermostat resistor. The SR504-4 Switching Relay is a four-zone switching relay with LED indicators that show power, zone 1, zone 2, zone 3, and zone 4. It has five 6-amp fuses, and the input voltage is 120VAC. It also has a jumper for DHW circulator and thermostat slave priority. The product comes with a limited warranty statement from Taco, Inc. that covers any product or part proven defective under normal use within three years from the date of start-up or three years and six months from the date of shipment, whichever occurs first. The warranty does not cover products or parts that have been subject to misuse, misapplication, or abuse.

Product Usage Instructions

Before using the product, make sure to read the user manual and follow the instructions carefully. Here are some general usage instructions:

1. Connect the SR501 Switching Relay to two SR504/506 Switching Relays to control them.
2. Switch on the AQUASTAT and DHW HEATER.
3. Use the MASTER switch to control the SR 501-4.
4. Connect the R, W, and 24 VAC wires to the appropriate terminals.
5. Connect the T and T COM wires to the appropriate terminals.
6. Use the LED indicators to monitor power and zone 1.
7. Use a 6-amp fuse for the product.
8. Connect the NH3 wires to the appropriate terminals.
9. Connect the N/C, N/O, and COM wires to the appropriate terminals.
10. Connect the TT ON BOILER wires to the appropriate terminals.
11. Use a jumper for DHW circulator and thermostat slave priority. Use the isolated end for ZONE 1, ZONE 2, ZONE 3, and ZONE 4.
12. Switch on or off the priority for the zone using the PRIORITY switch.
13. Use a 120VAC input for the product.
14. Use a 24 VAC thermostat to control the product.
15. Use a fused com for the product.
16. Use the X, R, W, WR, and H wires to connect the product to other devices.
17. Remove the jumper for SR504-4 Switching Relay.
18. Use a 120VAC input for the product.

If you have any doubts about whether a particular substance is suitable for use with the product or for any application restrictions, consult the applicable Taco instruction sheets or contact Taco at [401-942-8000].

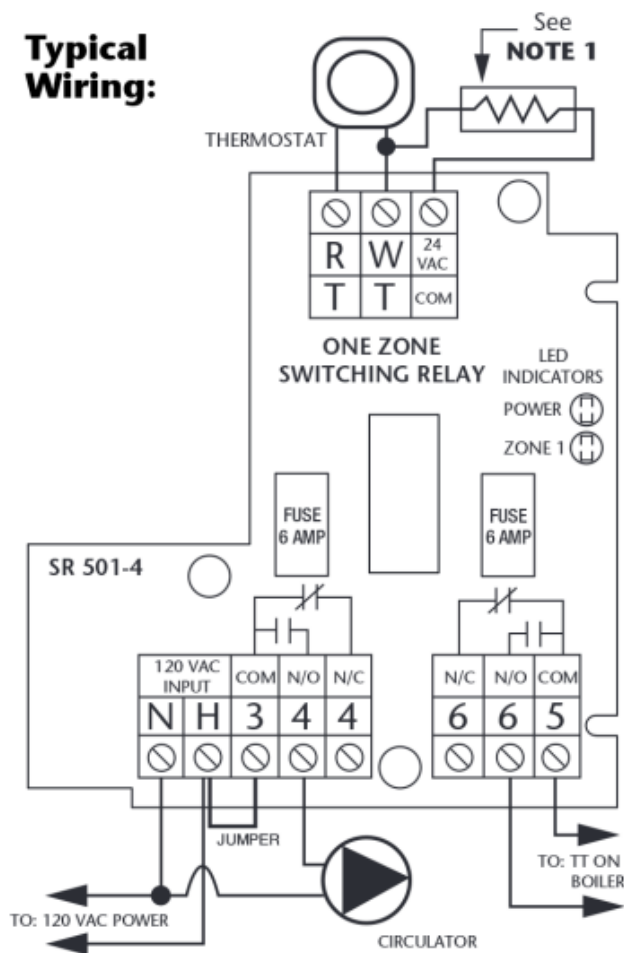
Instruction Sheet

SR501-4 Switching Relay

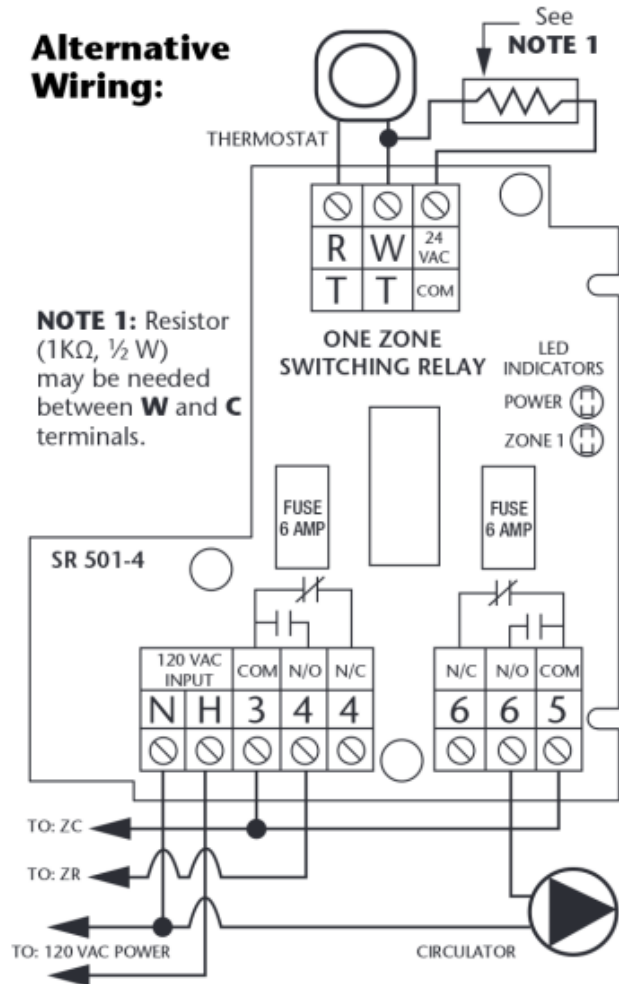
SUPERSEDES March 1, 2013

Plant 9300-2865

Typical Wiring:



Alternative Wiring:



Features

- External Indicator Lights
- Universal Replaceability
- snap-in pc Board
- Simplified Wiring
- Sealed Relays
- Fuse protected Outputs
- 100th Factory Tested
- Contractor Friendly PC Board Layout
- Universal Thermostat Compatibility
- U I. Approved
- Extended 3 Year Warranty

OPERATION

- Connect a thermostat to the “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
- COM Connection 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 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

Specifications

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										
Taco	SR501-4	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 750C. Failure to follow this instruction can result in personal injury or death and/or property damage. 12-18 gauge wire is recommended for 120 VAC connections, 14-22 gauge wire for thermostat connections, and 14-22 gauge wire for 24 VAC source connections.

NOTE 2: When using the Alternative Wiring diagram, the boiler operating control's terminal will see the load of the circulator(s).

WARNING: When using the Alternative Wiring diagram, wiring instructions must be followed so originates from the boiler aquastat. Failure to follow these wiring instructions may result in a secondary source of power being connected to the INjiler 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” 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 11M ohm 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 [N] were, then check that the batteries are fresh and installed correctly.
- Problem: No heat in a zone or room of the building. LED diagnostic lights will help find a comment that is not
- Solution. working properly. The green LED should always be on, indicating that m) over is connected and the solid-state fuse is good. When there is a call for heat, the red LED will come on indicating [NM,ver 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.

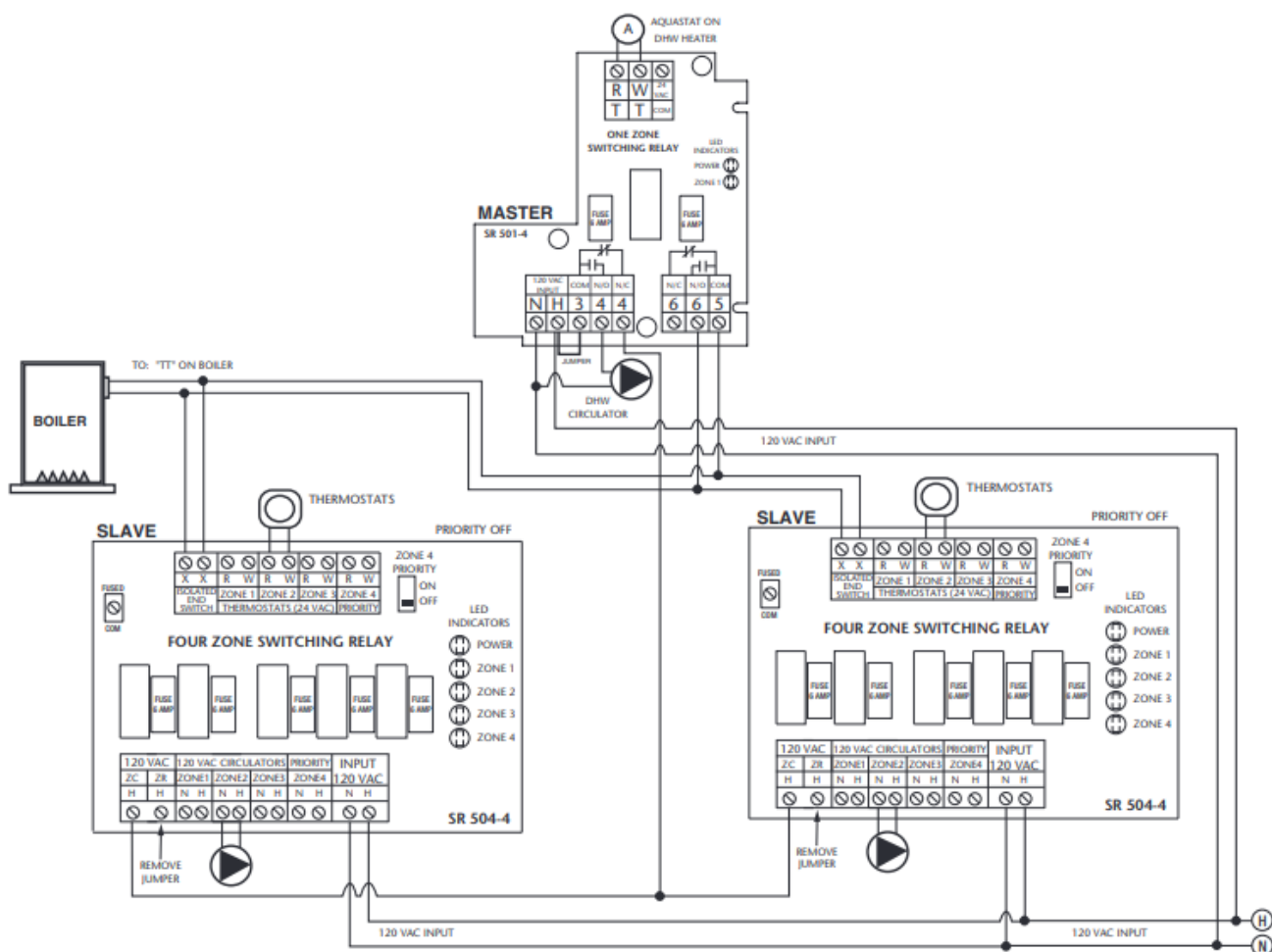


For information on Taco's Switching Relays (SR) including catalog sheet, instruction sheets, Visio stencils and our highly praised Zone Controls Wiring Guide, scan the QR code to the right or go to our website: <http://www.taco-hvac.com>.

FCC Rules

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-001 RP (Manufacture: Littlefuse, Part Number: 229006)

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

LIMITED WARRANTY STATEMENT

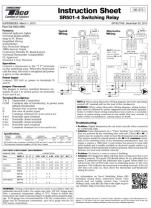
Taco, Inc. will repair or replace without charge (at the company's option) any product or part which is proven defective under normal use within three (3) years from the date of start-up or three (3) years and six (6) months from date Of shipment (whichever occurs first). In order to obtain service under 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 prod- uct or part, delivery prepaid, to the stocking dis- tributor. For assistance on warranty returns, the purchaser may either contact the local Taco stocking distributor or Taco. If the subject prod- uct 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 operat- ed in conformity with Taco instructions or which has been subject to misuse, misapplication, the addition of fluids or certain chemical additives to the systems, or other abuse, will not 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 sim- ilar in design and functionally equivalent to the defective product or part. Taco reserves the right to make changes in details of design, con- struction, 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 FIT-NESS IS IN EFFECT ONLY FOR THE DURATION 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 SPE- CAL, INCIDENTAL, INDIRECT OR CONSE- QUENTIAL 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 Bng an 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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www.TacoComfort.com | Printed in USA | 02015 Taco, Inc.

Documents / Resources



[Taco SR501-4 Switching Relay](#) [pdf] Instruction Manual

SR501-4, SR504-4, SR506-4, SR501-4 Switching Relay, SR501-4, Switching Relay, Relay