

SR501-5 SWITCHING RELAY

Instruction Sheet

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
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.

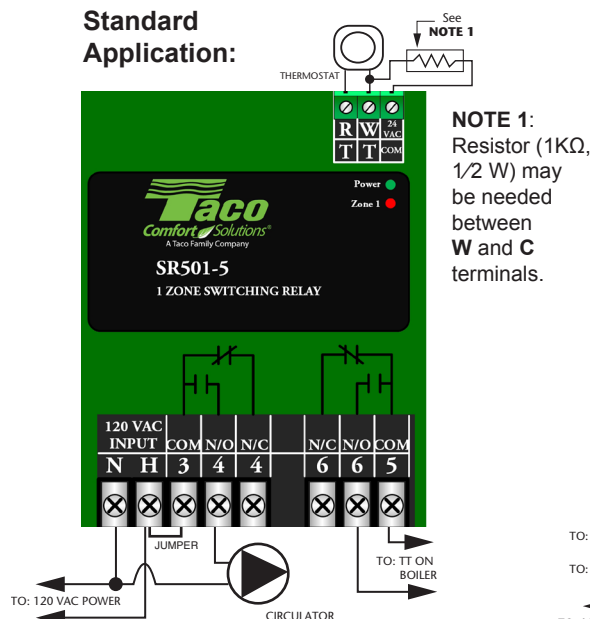
POWER INPUT:

Connect 120 volt ac power to terminals N and H.

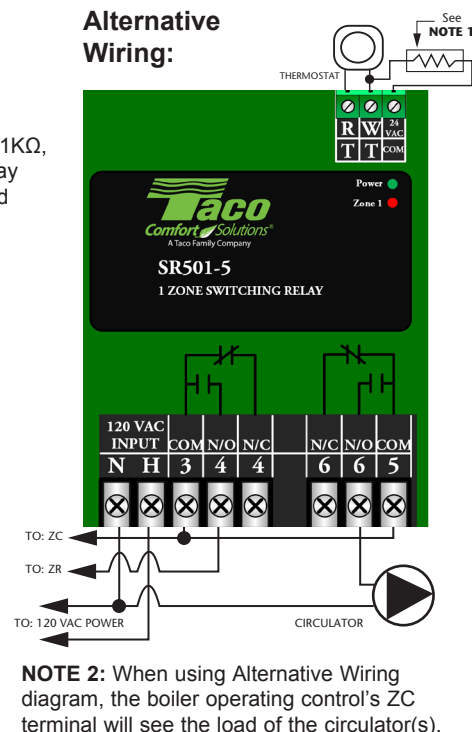
JUMPER PLACEMENT:

The jumper is factory installed between terminals H and 3 to switch power on terminals 4 N/O and 4 N/C.

Standard Application:



Alternative Wiring:



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

SPECIFICATIONS:

PRODUCT NUMBER	NUMBER OF ZONES	INPUT VOLTAGE	MAXIMUM COMBINED LOAD	TYPE 1 ENCLOSURE		
				WIDTH	HEIGHT	DEPTH
SR501-5	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 1/6 HP, 120 VAC. The thermostat connection supplies a 24 VAC class 2 output.



For information on Taco's Switching Relays (SR) including catalog sheet, instruction sheets, and our highly praised Zone Controls Wiring Guide, scan the QR code to the left or visit www.tacoinc.com.

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.

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 90°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. All 24 VAC field wiring terminations require SELV/Class 2 rated wire.



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.



Plant ID No. 9300-4106 | SUPERSEDES: NEW | EFFECTIVE: 03/14/25 | 102-570

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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. 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.

Taco SR501-5 Replacement Cross-Reference													
Manufacturer	Model	Notes	Connections										
Taco	SR501-5		H	N	3	4 N/O	4 N/C	5	6 N/O	6 N/C	R/T	W/T	C
Argo	AR821	1, 2	1	2	3	4	-	5	6	-	T	T	
	AR822		L1	L2	3	4 N/O	4 N/C	5	6 N/O	6 N/C	R/T	G/T	C
Azel	SP81		H	N	3	4 N/O	4 N/C	5	6 N/O	6 N/C	R/T	W/T	C
Caleffi	ZSR101		L	N	C	N/O	N/C	C	N/O	N/C	R/T	W/T	C
Colombus	MR10		L1	L2	3	4 N/O	4 N/C	5	6 N/O	6 N/C	R/T	G/T	C
Erie	SR100		L1	L2	3	4 N/O	4 N/C	5	6 N/O	6 N/C	R/T	G/T	C
Grundfos	UPZCP-1		L	N	C	N/O	N/C	C	N/O	N/C	R/T	W/T	C
Honeywell	RA89A	1, 2, 3, 4	1	2	3	4	-	-	-	-	T	T	-
	RA832A	1,2	1	2	3	4	-	X	X	-	T	T	-
	R845A	1,2	1	2	3	4	-	5	6	-	T	T	-
	RA889A		L1	L2	COM	N/O	N/C	X1	X2	-	R/T	W/T	C
	R8845U	1	L1	L2	COM	N/O		A	B		R/T	W/T	C
	HPSR101		H	N	COM	N/O	N/C	COM	N/O	N/C	R/T	W/T	C
Tekmar	301P	1, 4, 5	L	N	-	L	-	X	X	-	R	W	C
White-Rogers	889-189	1, 2, 3, 4	1	2	3	4	-	-	-	-	T	T	-
	829-845	1, 2	1	2	3	4	-	5	6	-	T	T	-

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 code.

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.

TACO OFFERS THIS WARRANTY IN LIEU OF ALL OTHER EXPRESS WARRANTIES. ANY WARRANTY IMPLIED BY LAW INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS 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 SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL 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 long an implied warranty lasts or on the exclusion of incidental or consequential damages, so these limitations or exclusions may not apply to you.

