

SUPERSEDES: March 1, 2013

EFFECTIVE: December 20, 2013

Plant ID# 9300-2795

Features:

External Indicator Lights
Simplified Wiring
Sealed Relays
100% Factory Tested
Contractor Friendly PC Board Layout
Universal Thermostat Compatibility
UL Approved
Extended 3 Year Warranty

120 VAC Application:

1 zone switching relay with boiler enable or 2 zone without boiler enable.

240 VAC Application:

1 zone switching relay when switching both of the circulator hot leads (L1 & L2).

Operation:

Connect a thermostat to the R & W1 and/or W2 terminals on the switching relay. When the thermostat(s) call for heat, the relays are energized and power is given to the circulator(s).

Zone Control Power Input:

Connect 120 volt AC power input to terminals N and H. Neutral wire to terminal N. Hot wire to terminal H.

External Diagnostics:

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

Terminal Description:

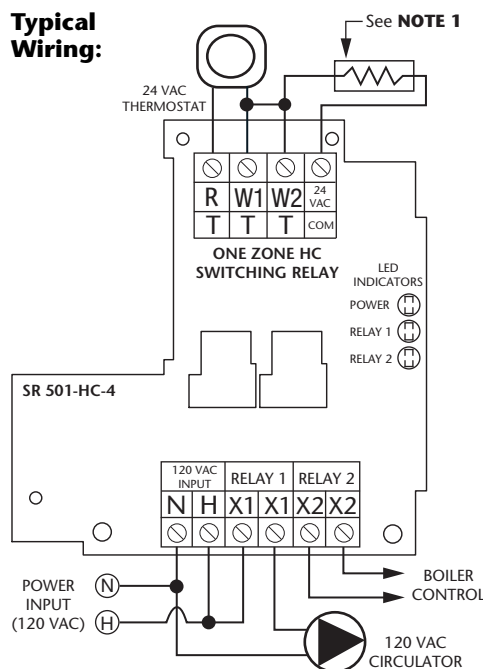
R Hot side of transformer. Connect to R on thermostat.
W1 Switched R signal from thermostat #1. Connect to W on thermostat.
W2 Switched R signal from thermostat #2. Connect to W on thermostat.
C Common side of transformer. Connect to COM on thermostat (optional).
N Neutral wire of power input.
H Hot wire of power input.
X1 Dry contacts for relay 1 (W1).
X1 Dry contacts for relay 1 (W1).
X2 Dry contacts for relay 2 (W2).
X2 Dry contacts for relay 2 (W2).

Specifications:

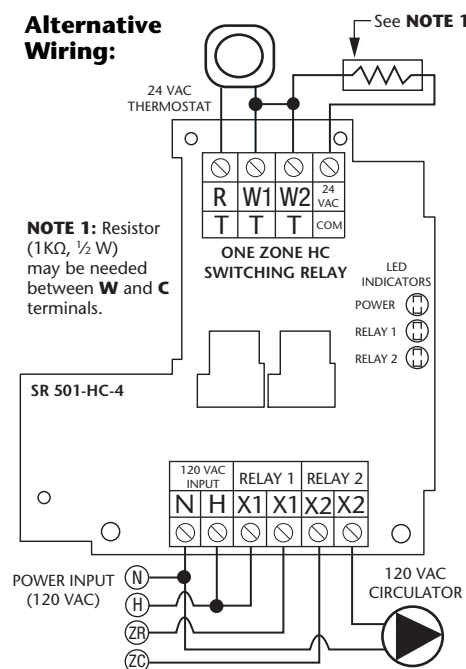
PRODUCT NUMBER	NUMBER OF ZONES	INPUT VOLTAGE	TYPE 1 ENCLOSURE WIDTH	TYPE 1 ENCLOSURE HEIGHT	TYPE 1 ENCLOSURE DEPTH
SR501-HC-4	1 or 2	120/60/1 VAC, 90 mA	4 7/8"	6 5/8"	2 1/8"
RELAY RATING: 3/4 HP (13.8 FLA, 82.8 LRA at 120 VAC) (6.9 FLA, 41.4 LRA at 240 VAC)					
The thermostat connection supplies a 24 VAC class 2 output.					

WARNING: Wiring connections must be made in accordance with all applicable electrical codes. Use copper wire only. Failure to follow this instruction can result in personal injury or death and/or property damage. 12-18 gauge wire recommended for 120/240 VAC connections, 14-22 gauge wire for thermostat connections, and 14-22 gauge wire for 24 VAC source connections.

Typical Wiring:



Alternative Wiring:



NOTE 1: Resistor (1KΩ, 1/2 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).

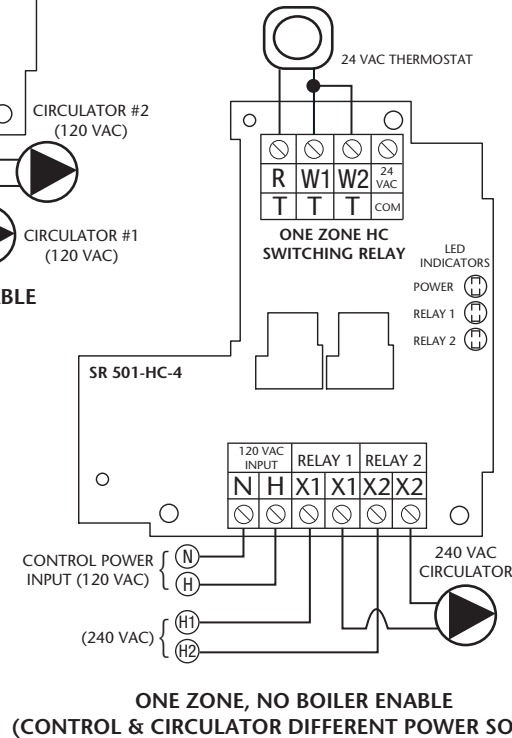
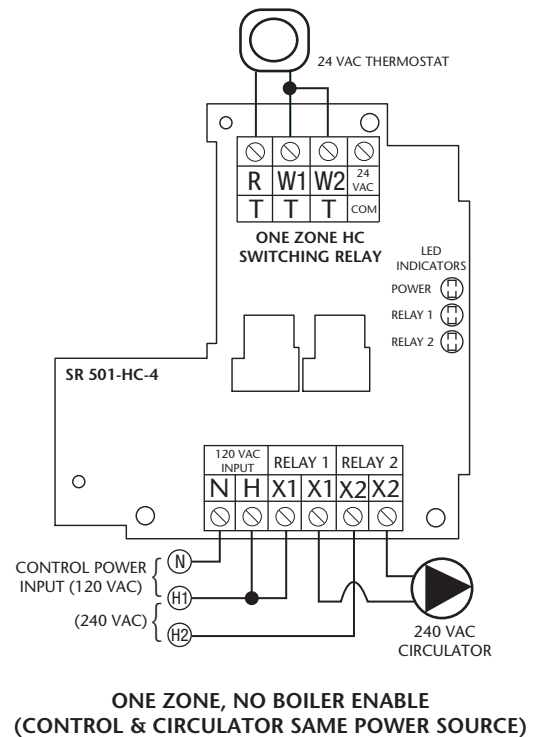
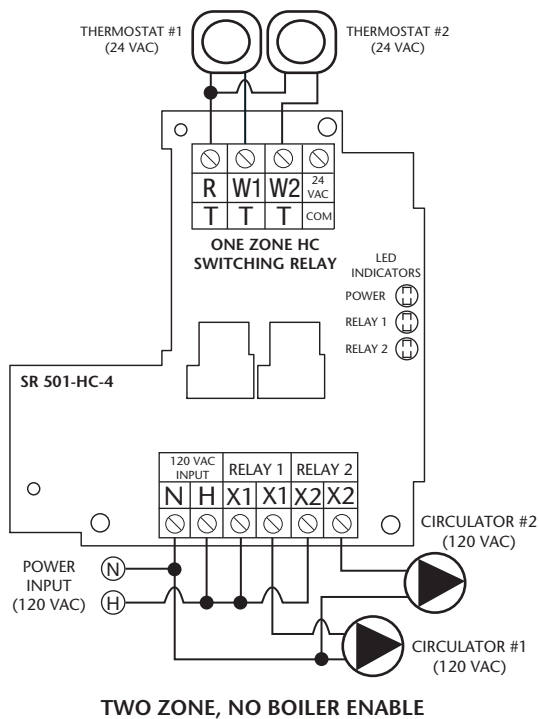
WARNING: When using Alternative Wiring diagram, wiring instructions must be followed so power originates from the boiler aquastat. Failure to follow these wiring instructions may result in a secondary source of power being connected to the boiler that may activate it under certain circumstances, causing 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 1/2 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.

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>.





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).

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.

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