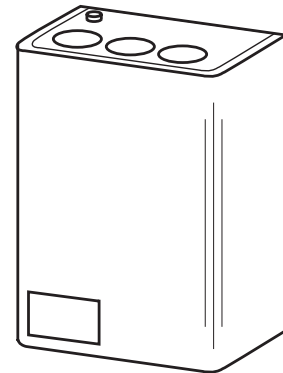


## Application

The TAC Boiler Boss SR100 series zone control relay incorporates a double pole/double throw relay to control a circulator and a boiler operating control in a single zone hydronic heating system.

## Features

- Field replaceable relay
- High capacity 10 VA transformer
- Large terminal connections
- Common 24 Vac transformer terminal
- Standard auto-test function to test system operation
- Field configurable for two SPDT "dry" contacts (shipped from factory as one 120 V SPDT contact and one SPDT dry contact)



**SR100**

## SPECIFICATIONS

### Inputs

**Power (N-L1):** 120 Vac, 50/60 Hz, 10 VA.

**Thermostat/Heat Demand Cry Contact (G/T-R/T):**

24 Vac, 0.12 A, Class 2 (Power supplied by this unit - do not connect external power source). Set thermostat anticipator per thermostat instructions to measured current or 0.12A.

### Outputs

**Thermostat Supply (C-R/T):** 24 Vac, 0.12 A, Class 2

**Low Voltage Dry Contact (5-6NO or 5-6NC):** 24 Vac, 8 A, Class 2.

**Line Voltage Dry Contact (3-4NO or 3-4NC):**

**Motor:** 1/3 hp @ 120 Vac,

**Motor:** 1/2 hp @ 240 Vac,

**General Purpose:** 10 A @ 120/240 Vac,

**Resistive:** 10 A @120 Vac,

### Environment

**Temperature Limits:**

**Shipping & Storage,** -20 to 140°F (-29 to 60°C).

**Maximum Operating,** 120°F (49°C).

**Maximum Humidity:** 85% RH non-condensing.

**Shipping Weight:** 2 lbs (906 g).

**Location:** NEMA Type 1 (IP20).

### Agency Listings

**UL/CUL:** File # E9429.

**Table-1 Model Chart.**

Model	Description
SR100	Single Zone Relay.
SR100AT	Single Zone Relay With Auto-Test.

## TYPICAL APPLICATIONS (wiring diagram)

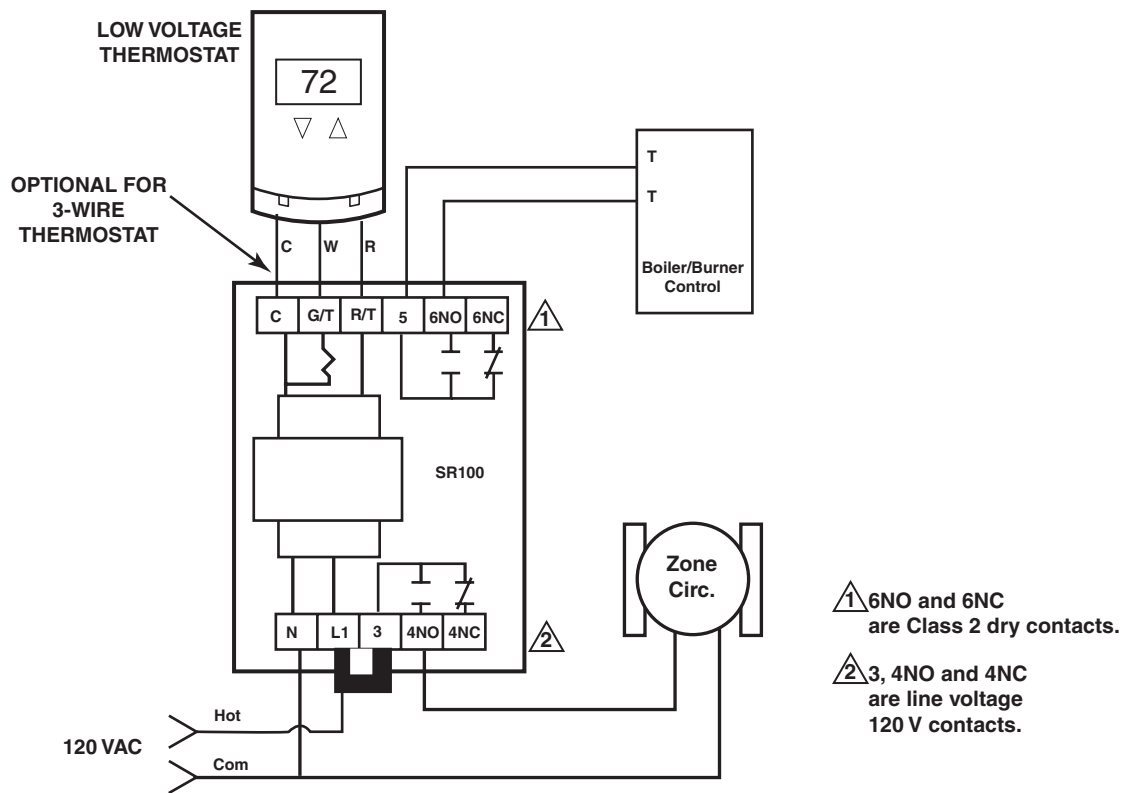


Figure-1 Typical Wiring Diagram.

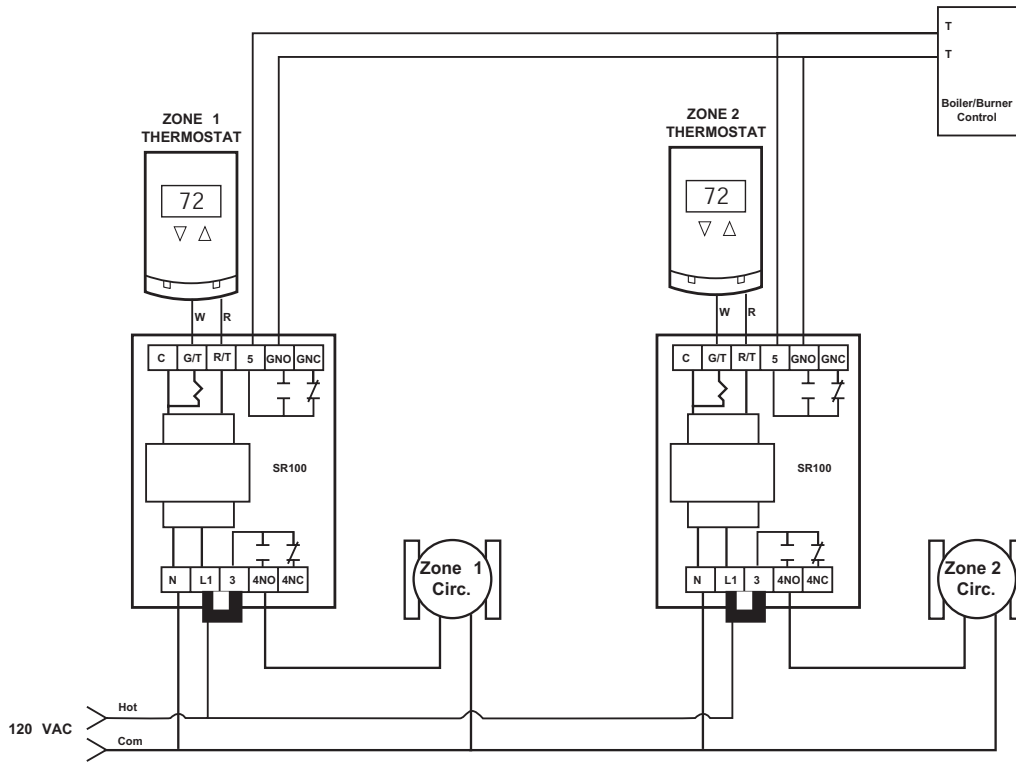


Figure-2 Multiple Zoning Using SR100 Relays.

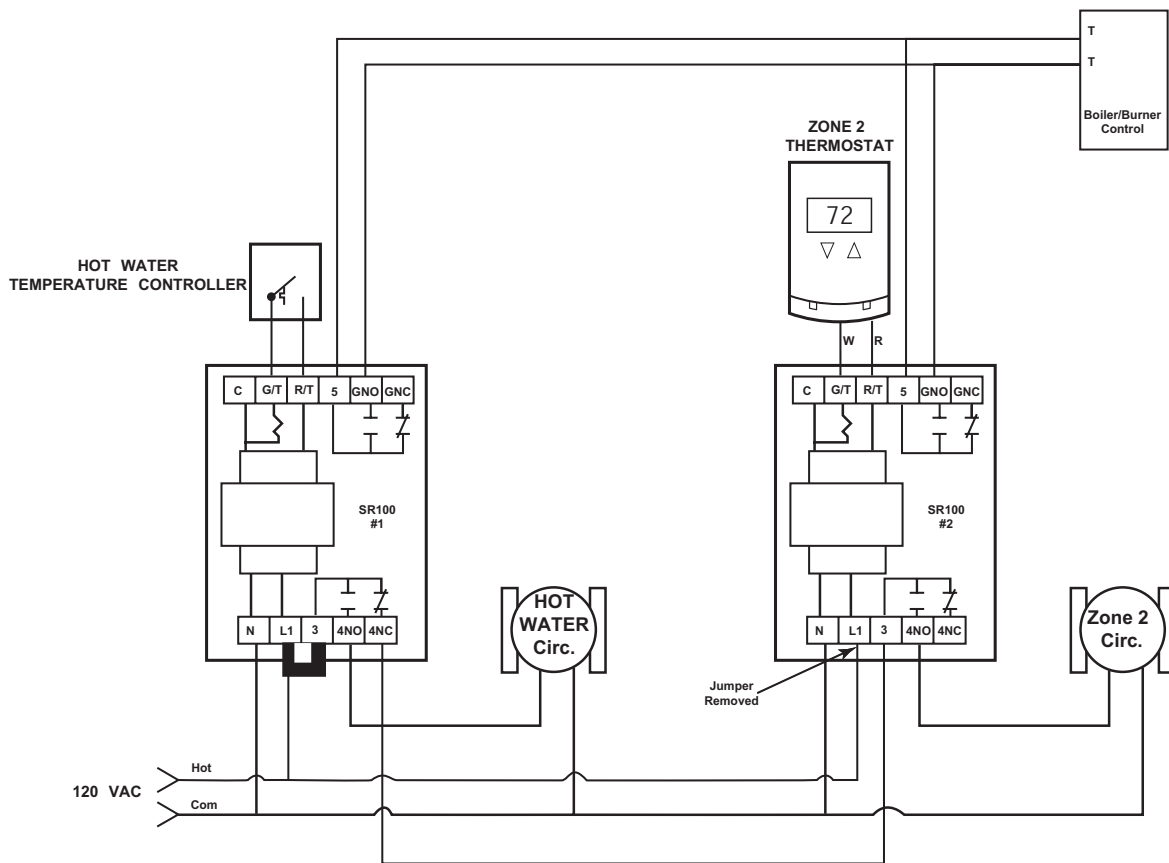


Figure-3 SR100s With Domestic Hot Water Priority.

# INSTALLATION

## Inspection

Inspect the package for damage. If damaged, notify the appropriate carrier immediately. If undamaged, open the package and inspect the device for obvious damage. Return damaged products.

## Requirements

- Tools (not provided)
  - Digital multimeter
  - Screwdriver
- Training: Installer must be a qualified, experienced technician

## Precautions

### General

#### ▼ **WARNING**

- Electrical shock hazard! Disconnect power before installation to prevent electrical shock or equipment damage.
- Make all connections in accordance with the electrical wiring diagram and in accordance with national and local electrical codes.

#### ▼ **CAUTION**

- Avoid electrical noise interference. Do not install near large conductors, electrical machinery, or welding equipment.
- Avoid locations where excessive moisture, corrosive fumes, vibration, or explosive vapors are present.

## Mounting

Mount the SR/100AT to a suitable surface. Slotted keyholes and standard holes are provided for mounting purposes. Do not mount on a surface that exceeds 120°F (49°C).

## Wiring

For typical wiring refer to Figure-1. For Additional application diagrams refer to Figure-2 and Figure-3. The SR100/100AT is not limited to these applications, but can directly replace most relays that incorporate a DPDT switching action, subject to the switch load.

#### **NOTE**

The upper portion (terminals C, G/T, R/T, 5, 6NO, 6NC) is intended for 24 Vac low voltage wiring only. The lower portion of the wiring compartment (terminals L1, N, 3, 4NO, 4NC) is intended for line voltage only. Take care to ensure that line and low voltage wiring are spaced 1/4" apart per U.L. requirements.

### Line Voltage Terminals

1. Remove knockout below N & L1 terminals.
2. Connect line voltage: L1, 120 Vac hot. N, 120 Vac neutral.
3. Remove knockout below 3 & 4 NO terminals.
4. Connect 120 Vac load (circulator): 4 NO, switched 120 Vac load hot. N, 120 Vac neutral.

### Low Voltage Terminals:

1. Remove knockout above C, R/T, and G/T terminals.
2. Connect low voltage controller (thermostat): R/T, 24 Vac hot (R or RH). G/T, switching leg (W). C, 24 Vac common (C).

### To Configure as Two SPDT "Dry" Contacts

1. Remove jumper between L1 and 3.
2. Connect 3 and 4 NO/or NC and 5 and 6 NO, or NC to line on low voltage loads.

#### **NOTE**

Unit shipped from factory as one 120 V SPDT contact and one SPDT dry contact.

**NOTE**

C terminal optional for electronic thermostats.

3. Remove knockout above 5 and 6 NO terminals.
4. Connect low voltage load (boiler/burner controller): T, T1, 24 Vac load. T, T2, normally open 24 Vac load.

**Auto-Test**

If equipped with Auto-Test option:

Press the red button on the upper left portion of the relay housing. With the button pressed, the relay engages and controlled systems can be tested for proper operation.

**MAINTENANCE**

The SR100/100AT requires no maintenance. The EXP-10 relay cubes are replaceable.

Regular maintenance of the total system is recommended to assure sustained, optimum performance.

**FIELD REPAIR**

None - Replace any failed or damaged components with functional one.

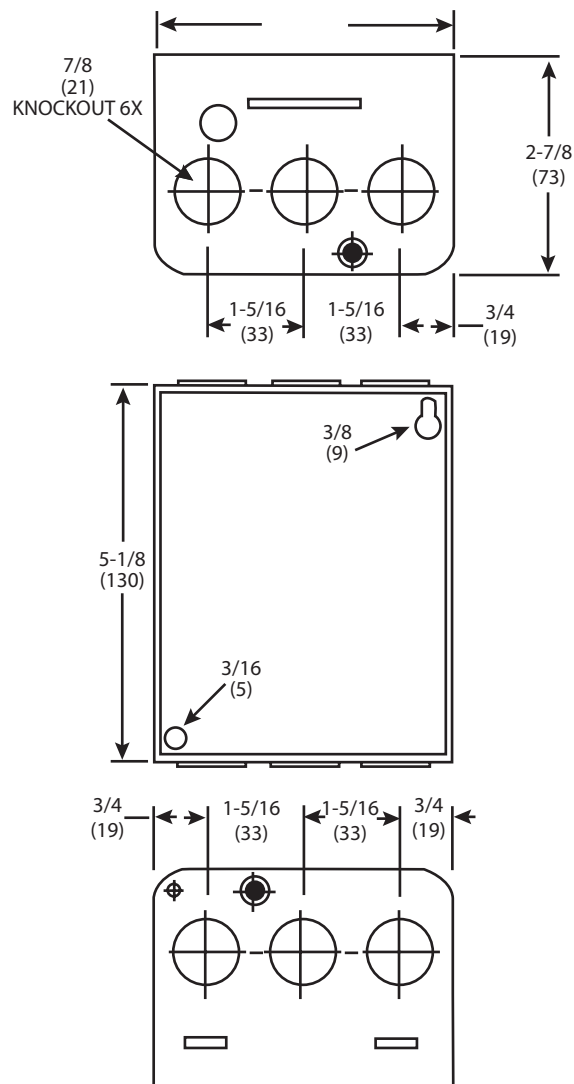
**DIMENSIONAL DATA**

Figure-4 SR100/100AT Dimensions.



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F-27018-4

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