

MAXIMUM COMFORT AND CONTROL IN HEATING

TSSHHC-RT-2/3-3WIRE - Installation Instructions

Electric Heating Solid State Relay with Built-in 24 V Transformer

Application

The RT-2/3 Solid State Relay is designed to control a line voltage resistive load from a 24 V control signal or dry contact.

With its unique thermal bridge design, the RT-2/3 allows for efficient heat dissipation and also features an LED indicator for visual confirmation of product switching.

This electronic switching relay provides fast commuting operation; when the RT-2/3 is combined with a short-cycled thermostat (15 seconds), it provides more precise temperature control.

The RT-2/3 has a built-in 24 V transformer and is compatible with 3-wire (R,C,W) thermostats as well as 2-wire mechanical and battery-operated thermostats. Main applications include control of electric heating systems.

Installation

The RT-2/3 must be mounted where ambient temperature is from -4°F to 140°F (-20°C to 60°C).

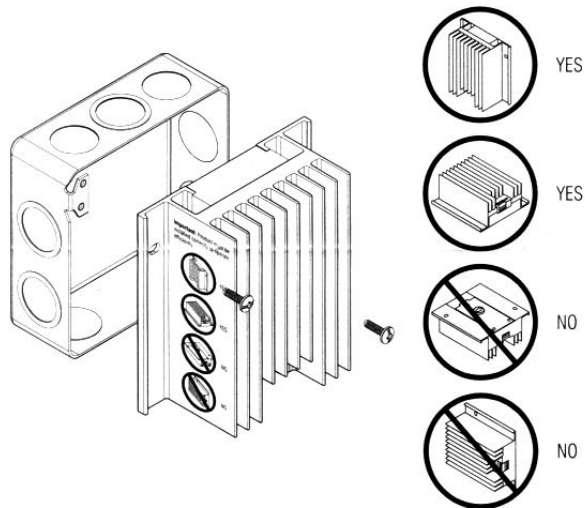
The RT850T must be mounted on a 4 x 4 electrical box for proper operation.

WARNING: The relay must be mounted so the heatsink's fins are vertical or facing upwards. You should also provide an empty space above the heatsink so the warm air can exit the heatsink area. Disregarding this warning may result in improper operation. Refer to diagrams below for correct mounting guidelines.

- 3 Once mounting and wiring have been completed, return power to the heating system.
- 4 Increase thermostat temperature in order to activate the relay (LED should be ON). Allow system operation long enough to proof installation.
- 5 Once installation has been proofed, set temperature to normal operating setpoint.

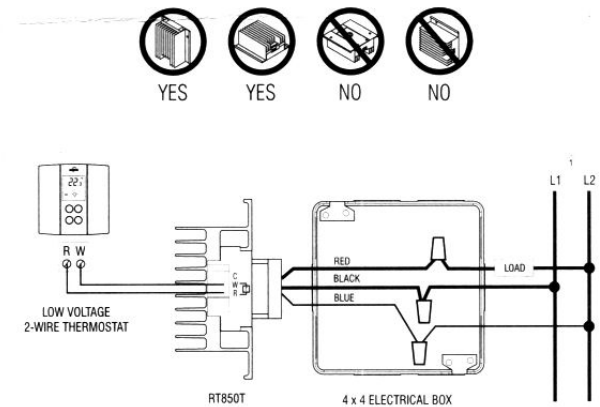
Typical Wiring Diagrams

NOTE: Relay is shown sideways for a general overview of wiring and connections. The RT-2/3 must be positioned as follows:



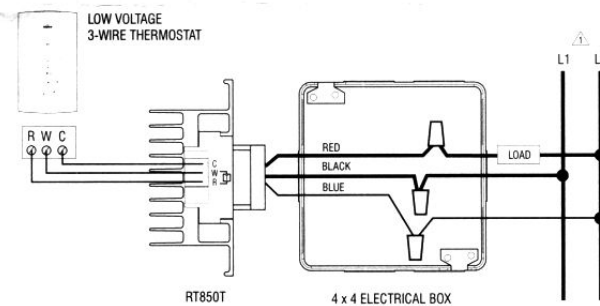
- ▶ All wiring must comply with national and local electrical code regulations.
- ▶ Installation should be carried out by an electrician.
- ▶ Disconnect power supply before installing the relay to prevent electrical shock.

- 1 Wire the relay and connect according to typical wiring diagrams (refer to figures 1 & 2).
- 2 Secure relay to the electrical box using the two mounting holes.



1 You must provide an overload protection and disconnect as required.

Figure 1: Connection to a 2-wire low voltage thermostat



1 You must provide an overload protection and disconnect as required.

Figure 2: Connection to a 3-wire low voltage thermostat

Electrical Specifications

Ensure ratings are suitable for your application.

| | | | |
|-----------------------|----------------|-----|-----|
| Voltage (VAC) | 240 | 277 | 347 |
| Resistive load (A) | 23 | | |
| Control signal | 24 VAC / 40 mA | | |
| Guaranteed OFF signal | Voff ≤ 5 VAC | | |

Transformer ratings: 24 VAC / 1.2 VA / Class 2


Ambient operating temp.: -4°F to 140°F (-20°C to 60°C)

Ambient storage: -40°F to 175°F (-40°C to 80°C)

Humidity limits: 0 to 95% non-condensing

Net weight: 1 lb. 3 oz. (552 g)

Terminal wire size: 12 AWG

Certification: 

Technical Support

If you have any questions concerning the installation of the TSSHC-RT-2/3-3wire relay, call our technical support at:

Phone: 1-800-544-5182

Fax: 1-860-399-6460

mail: SSHC, INC.

P.O. Box 769

4 Custom Drive

Old Saybrook, CT 06475

Warranty

ONE (1) YEAR LIMITED WARRANTY

This product is guaranteed against workmanship defects for a one year period following the initial date of purchase. During this period,

SSHC, INC. will repair or replace, at our option and without charge, any defective product which has been used under normal conditions. The warranty does not cover delivery costs and does not apply to products poorly installed or randomly damaged following installation. This warranty cancels and replaces any other manufacturer's express or implied warranty as well as any other company commitment. **SSHC, INC.** cannot be held liable for related or random damages following the installation of this product.

TSSHC-RT-2/3-3wire Dimensions

