



HONEYWELL
TRADELINE
CONTROLS

R841E
ELECTRIC HEATING RELAY

This is a legacy product document supported by Resideo. It is no longer manufactured

APPLICATION

The R841E Electric Heating Relay is a two-switch device used with either one 24-volt, two-wire thermostat to control one or two loads simultaneously; or with two thermostats to control two independent loads. It is a direct following relay which operates with each cycle of the thermostat (4 to 6 cycles per hour with a T822D or T87F Thermostat). It has an integral transformer. The R841E should not be used as a disconnect switch.

2. Run line-voltage wire from heaters to relay junction box. Using solderless connectors, make the connections shown in Figs. 3, 4, or 5.

3. Run thermostat cable from the thermostat to the relay. Connect to relay according to Figs. 3, 4 or 5. ALL WIRING MUST AGREE WITH LOCAL CODES. Be sure the power supply voltage agrees with the rating on the relay label.

INSTALLATION

The R841E must be mounted where the ambient temperature is within the range of -20 to 150 F the year around. The small size and silent operation of the R841 allow installation in a living area, utility room or basement. The bimetal-operated switches permit mounting the relay in any convenient position.

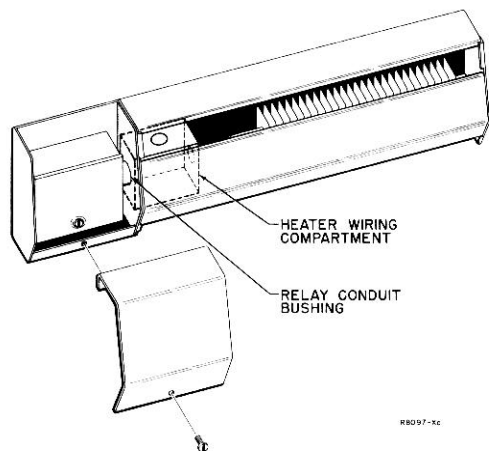


Fig. 1—Typical installation of relay in baseboard heater.

OPERATION

The cycling pattern of the R841E is determined by the thermostat. On a call for heat, the thermostat activates one or both of the low voltage resistance heaters in the R841E. The heater drives a bimetal that actuates the spst MICRO SWITCH* snap acting switch. The bimetal is ambient-temperature compensated between -20 and 150 F. At rated voltage and frequency, the R841E switch contacts "make" approximately 80 seconds (from cold start) after the thermostat calls for heat and break about 100 seconds after the thermostat stops calling for heat.

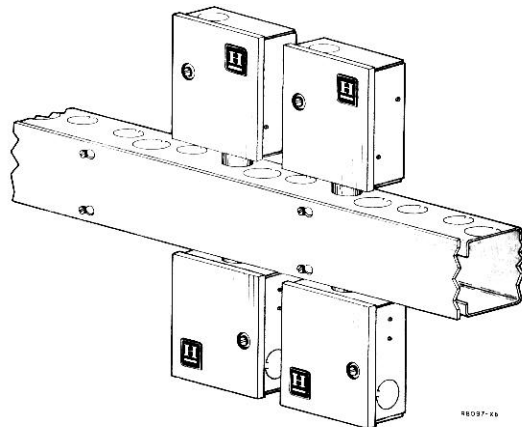


Fig. 2—Four relays mounted on wireway.

Fig. 1 shows a typical installation within a compartment enclosure on the end of a baseboard heater. In this application the conduit bushing can be connected to the wiring compartment in the heater. The back of the compartment enclosure should be equipped with embossings to clear mounting screws.

The R841E may also be mounted without compartment enclosure on a wireway or junction box (Fig. 2).

CHECKOUT

After mounting and wiring have been completed, turn on the power supply. Set the thermostat above room temperature until the electric heating equipment starts (allow about 80 seconds from cold start). Permit the system to operate long enough to prove the heating equipment functions properly. Return the thermostat to the desired room temperature before leaving the installation.

CAUTION: DISCONNECT POWER SUPPLY.

1. Fasten relay securely to mounting surface using the two mounting holes in the backplate, or the conduit bushing.

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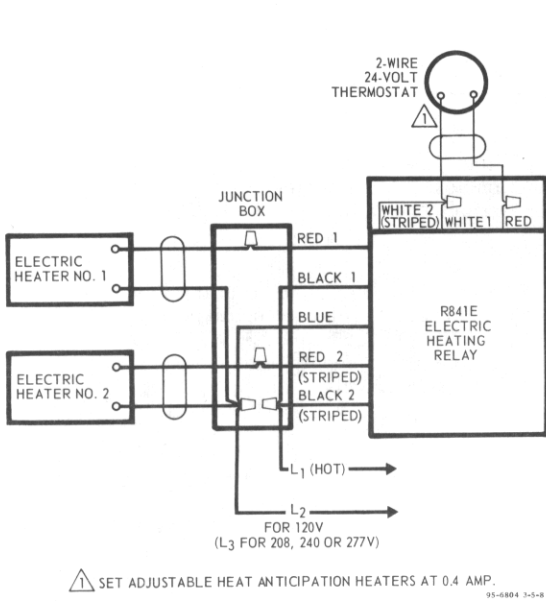


Fig. 3—Typical wiring hookup for one thermostat operating two loads simultaneously.

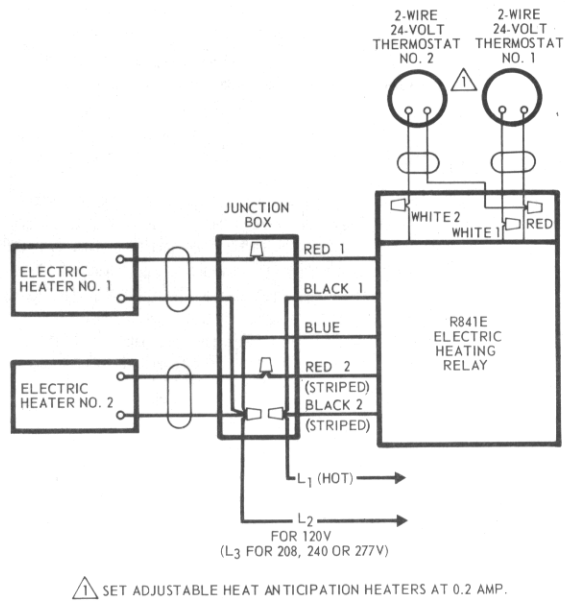


Fig. 4—Typical wiring hookup for two thermostats, each with its own load.

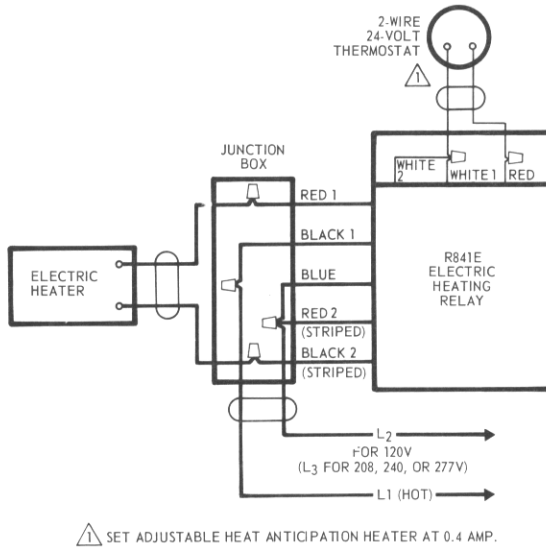


Fig. 5—Typical wiring hookup for one thermostat connected to one load so that both sides of the single phase line are switched.