

## General Instructions

The BL-LVC/LVD low voltage relay kits are used as accessories for the BN and LC series baseboards. Transformer relays are made by Honeywell, model series R841 or White Rodgers, model series 24A05. Operation of the relay is to be controlled by a suitable low voltage thermostat, for sensing and control of air temperature, all relays are rated 24V secondary.


The Relays are provided with integral pigtail leads (Class 1 wiring) a minimum of 6 inches long, marked "Use copper conductors only" and positioned so that knockout is provided near low voltage terminals. Mounts inside wiring compartments in baseboard heaters by screws.

## IMPORTANT INSTRUCTIONS

When using electrical appliances, basic precautions should always be followed to reduce the risk of fire, electric shock and injury to person, including the following:


1. Read all instructions before using this heater.
2. This relay kit is for the use with BN and LC series baseboards only. Electrical specification as below:

Cat. No.	Model No. of Relay	Contact Ratings
BL-LVC-11	R841C1193	120Vac, 22A
BL-LVC-21	R841C1201	208Vac, 22A
BL-LVC-31	R841C1227	240Vac, 22A
BL-LVC-41	R841C1219	277Vac, 17A
BL-LVC-11	24A05A-1	120Vac, 22A
BL-LVC-21	24A05E-1	208Vac, 22A
BL-LVC-31	24A01G-3	240Vac, 25A
BL-LVC-41	2405Z-1	277Vac, 17A
BL-LVD	R841D1044	120/208/240/277Vac, 22/22/22/19A

 **WARNING:** To prevent electrical shock, disconnect from power sources before installing or servicing. Install in suitable enclosure. Keep free from contaminants.

## SAVE THESE INSTRUCTIONS

### Installation Instructions

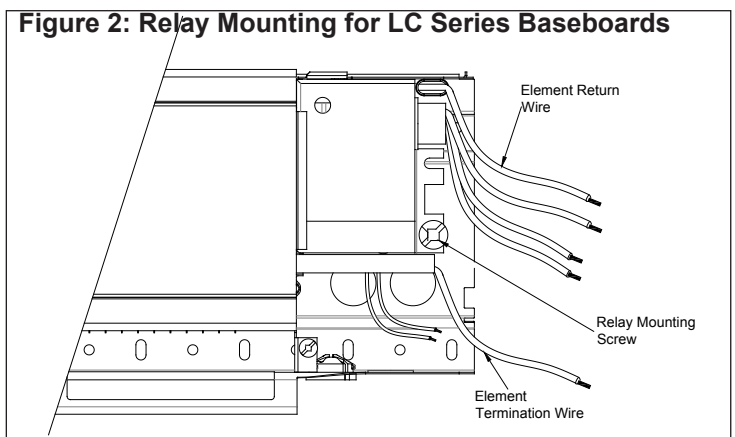
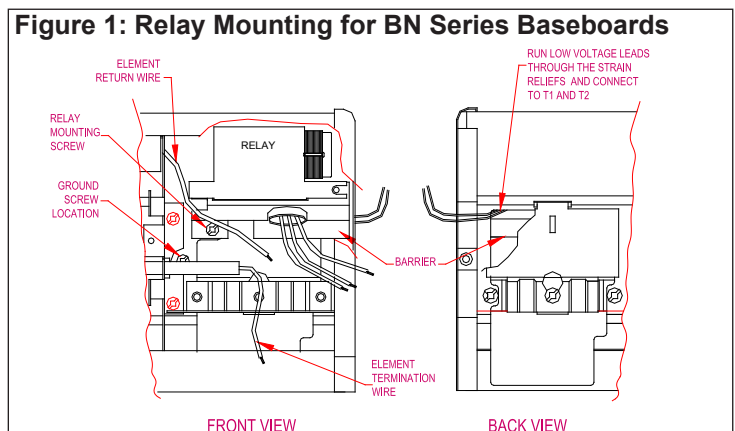
 **WARNING:** Wiring procedures and connections should be in accordance with the National Electric code (NEC) and local codes.

1. Be sure power is disconnected.
2. Remove front panel and right hand terminal box cover.
3. For BN series: Feed low voltage thermostat leads into right hand terminal box through the existing strain relief. Loosen the cable clamp on the back if necessary.
4. For LC series: Remove 3/8" diameter knockout and use for entry of low voltage leads. Insert bushing provided to

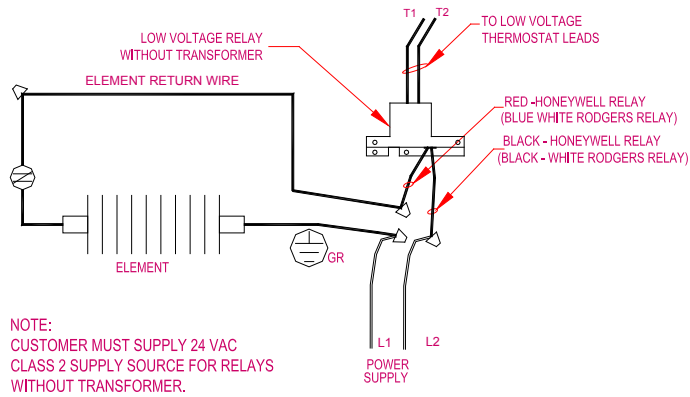
protect low voltage leads.

5. Connect leads labelled T1 and T2 on relay to thermostat leads.
  6. For BN series: Remove hook on inside of cable clamp by twisting with a standard pair of pliers.
  7. Mount relay as shown in figures using #10-32 x 1/4" screw. If necessary move the ground screw/ground wire to the location shown on Figure 1.
- ! NOTE FOR BN INSTALLATION:** Ensure that the low voltage connections are contained in the relay area above the barrier or behind the wall.
8. Connect line voltage side of relay circuitry inside terminal box as shown in Figures 3 and 4.
  9. Replace terminal box cover and front panel.
  10. Care must be taken that no wires are pinched when the kit is installed.

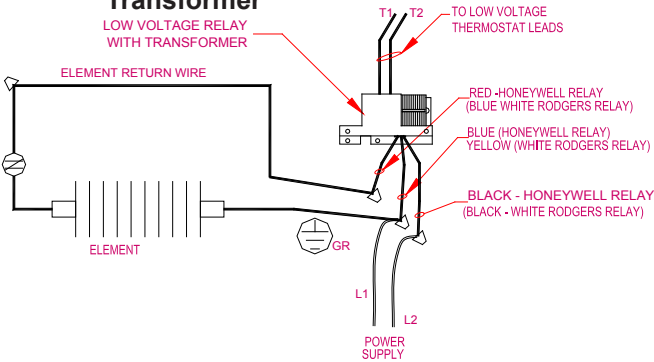
**! NOTE:** From a cold start, the relay contacts activate approximately 65 seconds after the thermostat calls for heat. Anticipator setting on the thermostat should be 0.20 amps per relay. When relays without integral transformers are installed a 24 VAC class 2 source must be incorporated in the thermostat circuit.



**Figure 3: Terminal Connections for Relay Without Transformer**



**Figure 4: Terminal Connections for Relay With Transformer**



## Operation

**CAUTION:** This relay kit must be properly installed before it is used.

**NOTE:** See Heater Manual for Operating Instructions.

## Maintenance

**CAUTION:** Before removing the front cover for cleaning, make certain the power has been turned off at the circuit breaker panel.

**CAUTION:** Allow adequate time for the element and body casing to cool before attempting to work on the heater.

**NOTE:** See Heater Manual for Cleaning Instructions.

**WARNING:** The user can perform cleaning ONLY, all other servicing should be performed by qualified service personnel.

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