Low Voltage Relay Kits
BL-LVC/LVD Series

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:

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

WARNING: To prevent electrical shock, disconnect from power sources before installing or servicing. 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: 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.

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Figure 1: Relay Mounting for BN Series Baseboards

Figure 2: Relay Mounting for LC Series Baseboards
**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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**Figure 3: Terminal Connections for Relay Without Transformer**

- Power Supply
- Low Voltage Relay Without Transformer
- Element Return Wire

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

- Power Supply
- Low Voltage Relay With Transformer
- Element Return Wire

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