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Dallas, Texas, USA

KITS COMMON TO AIR HANDLERS
WITH ELECTRIC HEAT SECTIONS

507538-01
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SEQUENCER RELAY KIT

INSTALLATION INSTRUCTION FOR SEQUENCER RELAY KIT USED IN SINGLE-STAGE HEATING APPLICATIONS WHICH INCLUDE ECB29-12.5CB-6P, ECB29-15CB-6P, OR ECB29-20CB-8P ELECTRIC HEAT SECTIONS (KIT NO. 104582-01, CATALOG NO. 12Y66)

Shipping and Packing List

Check unit for shipping damage. Consult last carrier immediately if damage is found.

Quantity	Part Description
1	Harness with 67K6501 relay
1	Wiring diagram sticker (537817-01)
1	Wiring diagram sticker (537818-01)
1	Wiring diagram sticker (537819-01)
1	Wiring diagram sticker (537820-01)

NOTE - In addition to kit contents, two field-provided 1/4" self-tapping screws are required to install the relay. Use field-provided wire ties as necessary.

⚠ WARNING

Improper installation, adjustment, alteration, service or maintenance can cause personal injury, loss of life, or damage to property.

Installation and service must be performed by a licensed professional installer (or equivalent) or a service agency.

⚠ WARNING



Electric Shock Hazard. Can cause injury or death. Unit must be grounded in accordance with national and local codes.

Line voltage is present at all components when unit is not in operation on units with single-pole contactors. Disconnect all remote electric power supplies before opening access panel. Unit may have multiple power supplies.

⚠ CAUTION

As with any mechanical equipment, contact with sharp sheet metal edges can result in personal injury. Take care while handling this equipment and use protective clothing.

Application

This instruction details the installation of sequencer relay kit used in single-stage heating applications which include ECB29-12.5CB-6P, ECB29-15CB-6P, or ECB29-20CB-8P electric heat sections installed in CBX27UH or CBX32M air handler units. Kit installation enables activation of sequencing relay(s) for second-stage electric heat.

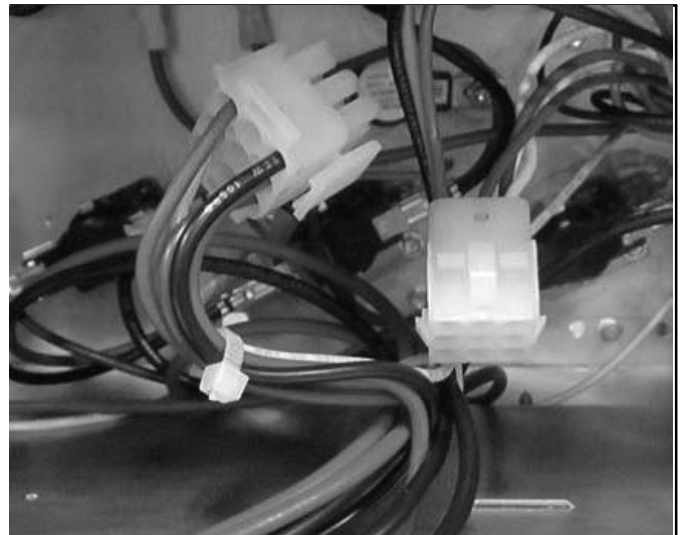
NOTE - This kit is not required for systems which include room thermostats with two-stage heating .

TABLE 1. Wiring Diagram Applications

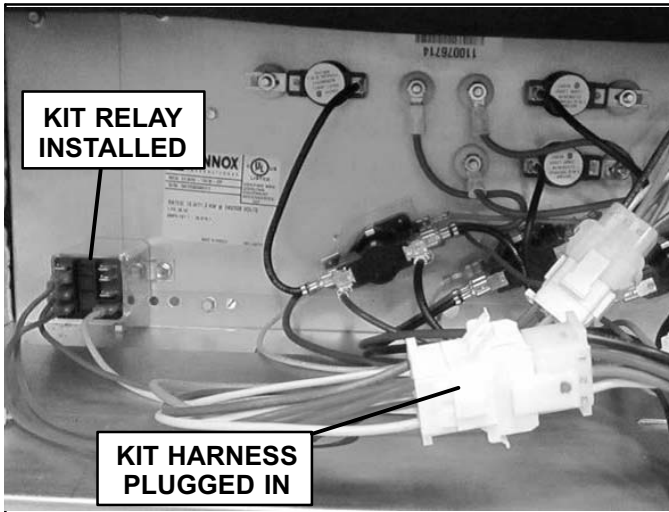
Diagram #	Air Handler / Heat Section Matchups
537817-01	CBX32M / ECB29-20CB-8P
537818-01	CBX32M / ECB29-12.5CB-6P CBX32M / ECB29-15CB-6P
537819-01	CBX27UH / ECB29-12.5CB-6P CBX27UH / ECB29-20CB-8P
537820-01	CBX27UH / ECB29-20CB-8P

Kit Installation Procedure

1. Disconnect all power to air handler unit. Remove screws securing the access panel. Remove panel and set aside.
2. Unplug electric power harness J2 in the control box.



3. Install the provided relay in the control box using field-provided self-tapping screws as shown. Plug in the new kit harness in line with the unit's existing harness as shown in the figure below.



4. Reconnect and/or reinstall any components that were disconnected or removed during kit installation.
5. Select the wiring diagram sticker provided in the kit that corresponds with the air handler / heat section matchup. Remove the paper backing and apply the sticker on the blower housing over the existing factory-installed wiring sticker.
6. Reinstall the access panel and restore power to the unit.
7. Check electric heat section operation using the sequence which follows.

Single-Stage Electric Heat Operation

1. On a call for heat, W1 from the room thermostat energizes the 24V electric heat delay relay coils on K32 and K33. The K238 relay coil will energize (no delay).
2. When relay K32 1-to-2 contacts close, the indoor blower will be energized in 1 to 20 seconds.
3. If the primary limit (S15) and secondary limit (S20) are closed, the electric heat element HE1 is energized when relay K32 contacts 3-to-4 and 5-to-6 close. Again, if the primary limit (S15) and secondary limit (S20) are closed, electric heat element HE2 is energized. when relay K33 contacts 1-to-2 and 3-to-4 close 20 to 60 seconds later.
4. When K238 relay coil is energized in the ECB29-12.5CB-6P or ECB29-15CB-6P electric heat sections, 24 volts will be provided to second-stage K34 delay relay. If the primary limit (S15) and secondary limit (S20) are closed, electric heat element HE3 is energized when relay K34 contacts 1-to-2 and 3-to-4 contacts close 30 to 90 seconds later. The ECB29-20CB-8P electric heat section has one additional electric element relay (K35) that will be energized at the same time as the K34 delay relay. Both delay relays have the same timing functions.
5. When the room thermostat demand is satisfied, the K238 relay will open without a delay. The K32, K33, K34 and K35 (ECB29-20CB model) relays will open the contacts that power the electric heat elements 1 to 30 seconds later. The K32 contacts 1-to-2 that energize the indoor blower will open after a delay of 40 to 110 seconds.