Installation Instructions

0-100% Horizontal Dry Bulb Economizer


SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

Cautions, Warnings and Notices

1. Unpack all components of the kit.
2. Check carefully for any shipping damage. If any damage is found it must be reported immediately.
3. The return air damper, blockoff and bag of loose parts are secured to the return air damper and shipping crate. Remove the 2 screws securing the return air damper to the outside air damper. Remove 2 screws securing the blockoff to the shipping crate. Remove bag of loose parts.
4. Place the return air damper assembly into the return air opening as illustrated in Figure 2. Align holes in the top and bottom damper brackets with the unit's engagement holes. Secure damper in place with screws provided.
Figure 4. Assembly placement

Figure 5. Rubber grommet placement

Wiring Connections

1. To adjust the minimum position setting and check out the economizer, the power must be connected.
2. Close the unit disconnect and place the zone sensor fan selector in the fan "OFF" position and the heat coil selector in the "OFF" position. This will place the damper in the minimum ventilation position.
3. To adjust the minimum position setting for the required ventilation air, turn the potentiometer (on the ECA) clockwise to "open" (to increase the amount of ventilation). The damper will open to this setting each time the blower circuit is energized.
4. When adjusting minimum position, the damper may move to the new setting in several small steps. Once the damper has remained in position for 30-45 seconds without movement, it can be assumed it is at the new position.
5. Replace the filter access panel.
6. The damper will close when the blower circuit is de-energized.

Dry Bulb Settings

Standard economizer dry bulb changeover is field selectable to 4 outdoor temperatures. See Table 1 for potentiometer settings. The selection is made on the ECA.

Reference Enthalpy Settings

Economizer dry bulb changeover is field selectable to 4 points. See Table 1 for potentiometer settings. The selection is made on the ECA.

Table 1. Potentiometer settings

<table>
<thead>
<tr>
<th>Potentiometer Setting</th>
<th>Dry Bulb</th>
<th>Enthalpy</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 73ºF (22.8ºC)</td>
<td>27 Btu/lb (63 kJ/kg)</td>
<td></td>
</tr>
<tr>
<td>B 70ºF (21.1ºC)</td>
<td>25 Btu/lb (58 kJ/kg)</td>
<td></td>
</tr>
<tr>
<td>C 67ºF (19.4ºC)</td>
<td>23 Btu/lb (53 kJ/kg)</td>
<td></td>
</tr>
<tr>
<td>D 63ºF (17.2ºC)</td>
<td>22 Btu/lb (51 kJ/kg)</td>
<td></td>
</tr>
<tr>
<td>E 55ºF (12.8ºC)</td>
<td>19 Btu/lb (44 KJ/Kg)</td>
<td></td>
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</tbody>
</table>

(a) Factory Setting

Notes:

- If Options Module (RTOM) is not installed then connect plug PPF5 to J 4 on the Refrigeration Module (RTRM) in the control box.
- Replace the control box cover and the compressor access panel.
- Install the end panel, removed in Step 5, onto the economizer as follows:
  a. Bend the top of the end panel, at the crease line, outward to approximately 45 degrees.

11. Attach the return air blade brackets/linkage to the outside air damper with the screws provided.
12. Manually hand operate the dampers, slowly, to ensure no binding exists.
13. Install the rubber grommet, provided with the sensor, into the hole on the fan assembly channel, as illustrated in Figure 5.
14. Insert the mixed air sensor through the grommet, approximately one half (1/2) inch, with the end pointing toward the coil, as illustrated in Figure 5.

15. Locate wires 97A and 98A. Wire 98A will be wired to them. Connect mixed air sensor to wiring. See Figure 5.

Important: When unit is equipped with a TCI (Communication Interface), the mixed air sensor must be located downstream of the heat source for a true reading, and to utilize the "supply air tempering" feature. This requirement also applies when the unit is used with any Integrated Comfort System (ICS) device such as Tracer®, Tracer®, or ComfortTrac™.

16. Install the mist eliminators with the directional arrow pointing up. Loosen the screws holding the mist eliminator angles and adjust them to hold the mist eliminators in position. Tighten the screws. Refer to Figure 4.

Note: Ensure the directional arrow on the mist eliminator is pointing in the same direction as the airflow.

18. Using the sealant that shipped with the economizer, seal along each side, bottom, and any other areas that could be a potential air leak, as illustrated in Figure 7.

19. Replace the filter access panel.
20. Complete the setup and checkout procedures in the "Minimum Position Settings" section.

Figure 7. Economizer alignment

Figure 8. Economizer alignment

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