

THERMA-FUSER™

THERMALLY POWERED VAV DIFFUSERS

ADJ-D FIELD ASSEMBLY WITH MODEL TK DIFFUSER

INSTRUCTIONS FOR FIELD ASSEMBLY OF DIGITAL WALL ADJUSTER OPTION ONTO EXISTING MODEL TK THERMA-FUSER DIFFUSERS

Models: TK-C VAV cooling only
 TK-HC VAV cooling and VAV heating

Note: The Digital Wall Adjuster uses a Master and Secondary diffuser wiring scheme. These instructions are for field assembly of the Master and Secondary diffusers. For installation and maintenance instructions please visit our website www.acutherm.com for the Digital Wall Adjuster Installation and Operating guide.

1. Lay the diffuser on the inlet/neck and open/unlatch the hinged appearance panel.
2. Locate the hole in the diffusion plate counter clockwise from the thermostat/actuators (see Fig. 1).
3. Using this hole as a guide, carefully drill through the insulation material to the back of the diffusion plate.
4. Insert grommet into the hole in the diffusion plate.
5. Turn the diffuser over and with the neck of the diffuser pointing up locate the corner of the diffuser with the thermostat/actuators.
6. Locate the screw on top of the housing clockwise from the corner with the thermostat/actuators (see Fig. 2).
7. With the terminal box sitting on the slope of the back of the housing, align one edge of the terminal box with the screw on the flat of the housing and the other with the bend between the slope and the flat of the housing (see Fig. 3).
8. Using the terminal box as a template mark one 5/16" hole and two .136" holes on the slope of the diffuser housing.

Caution: When drilling holes in the diffuser housing precautions must be taken to prevent the drill from damaging the insulation material behind the housing (Sliding a piece of sheet metal behind the housing will help protect the insulation material). Damage to the insulation material will affect diffuser performance.

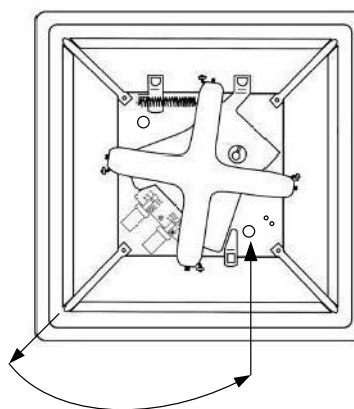


Fig. 1

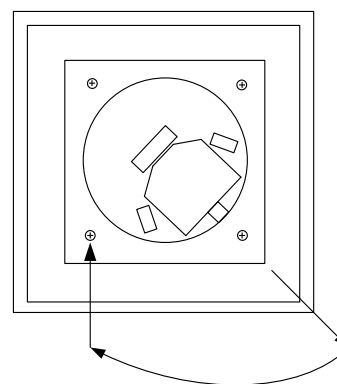


Fig. 2

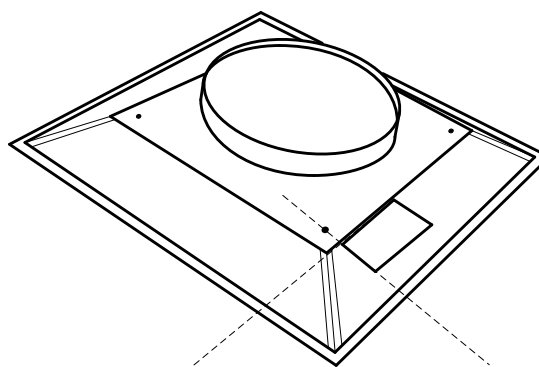


Fig. 3

9. Drill the two .136" holes and mount the terminal box using two #44 x 3/8" rivets.

Caution: Rivets should not be too long as to interfere with diffuser operation.

10. Using the terminal box as a guide, drill a 5/16" hole.
11. Insert the grommet in the 5/16" hole in the housing/terminal box.
12. Adjust the cooling (and heating) thermostat set point to 76°F/24°C.

Caution: For proper operation of the Digital Wall Adjuster, the set point(s) must remain at 76°F/24°C.

13. Prepare resistance heaters following Heater Sub-Assembly Instructions (attached).
14. Slip one shrink band and heater over the cooling thermostat and another over the heating thermostat. One edge should be against the hub of the thermostat.
15. Carefully position the shrink band such that the wires come from the left of the cooling thermostat and the right of the heating thermostat (see Fig. 5).
16. Heat the shrink band with a hair dryer until the band is tight.

Caution: Do not over heat the Mylar film below the thermostats as it may cause shrinkage.

17. Rout the wires behind the spoke connected to the damper, through the grommet in the diffusion plate, through the 5/16" hole in the housing and into the terminal box (see Fig. 5).
18. Fold up and latch the appearance panel.
19. Connect the red wire(s) to terminal 3 and the black wire(s) to terminal 4 (see Fig. 6).

Make the connections on the side opposite the label leaving the label side open for diffuser installation.

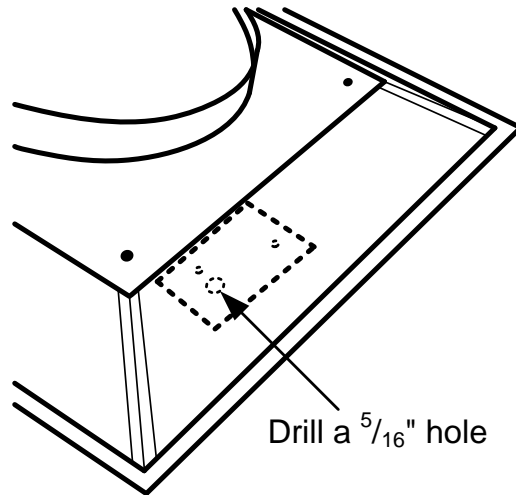


Fig. 4

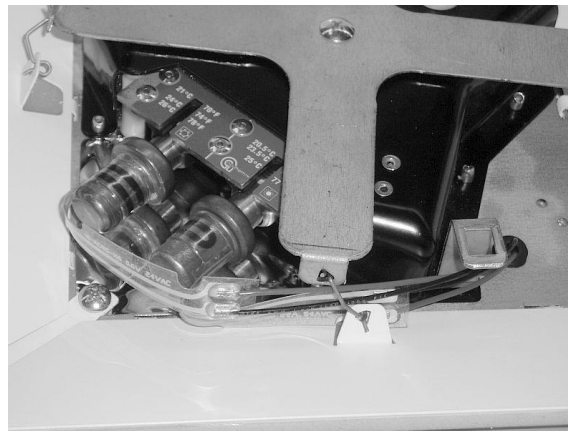


Fig. 5

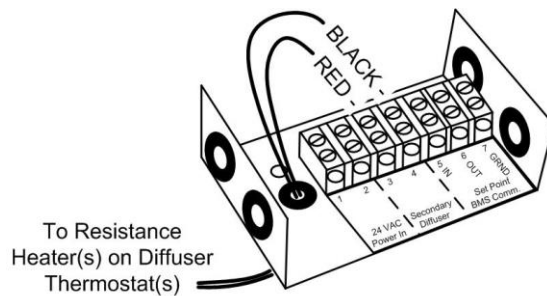


Fig. 6

If wiring a Secondary diffuser or the terminal box has been factory wired with a 35ft/10.5m plenum rated cable with 10 pin quick connector see Fig. 7 and skip steps 21 and 22.

Note: The 35ft/10.5m plenum rated cable with 10 pin quick connector is ONLY required on a Master diffuser.

20. Rout the open end of the 35ft/10.5m plenum rated cable with 10 pin connector through the grommet opposite the label on the screw terminal side (see Fig. 8).

21. Connect the wires of the 35ft/10.5 plenum rated cable with 10 pin connector (see Fig. 8):

Wire	Screw Terminal
Orange	1
Brown	2
Blue	3
Green	4
Black	5
Purple	6
White	7
Yellow	Not Used
Red	Not Used
Gray	Not Used

Make the connections on the side opposite the label leaving the label side open for diffuser installation.

- 22. Fit the cover onto the terminal box.
- 23. Diffuser is ready for installation.

For installation and maintenance instructions please visit our website www.acutherm.com for the Digital Wall Adjuster Installation and Operating guide.

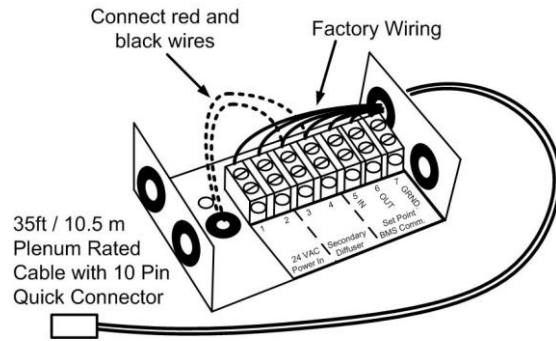


Fig. 7

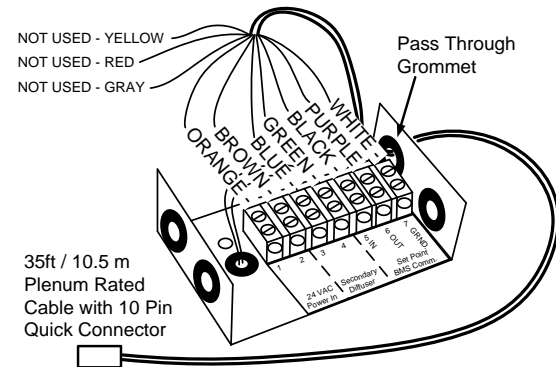


Fig. 8

Resistance Heater
Sub-Assembly Instructions

- With the flag away from you and pointing upwards
- Curl the flag toward the right.
Do not curl toward the left as it will change the resistance.
- Slip the shrink band over the curled flag.
- Slide the shrink band/flag combination over the thermostat flush with the hub of the thermostat.

