

INSTALLATION

Note: Disconnect power to the HHSC+ ventilation control before beginning the installation! The HHSC+ is typically powered by the HVAC system transformer; in this case, shut off power to the HVAC system and verify that there is no voltage on HHSC+ terminals R and C.

1. Mount the E-Sensor on the fresh air duct:
 - a. Choose a location on the fresh air duct that is dry and protected from weather, preferably within two feet of the FAD damper location. The damper cable included in the kit is 2' long, but may be extended with field wiring of min. 22 gage low-voltage wire if necessary.
 - b. Reinforce flex duct and/or insulation with duct tape applied around the hole, and cut a 1" round or square hole in the side or top of the duct. For especially thick insulation, it may be necessary to cut back insulation ¼" from the outline of the E-Sensor when installed (see Figure 3) and seal off with tape. DO NOT cover the sides or top of the E-Sensor with insulation or tape.
 - c. Slide the two included Zip Ties through the slotted tabs on the base of the E-Sensor; SEE Figure 1.
 - d. Place the square Duct Gasket over the probe on the E-Sensor; see Figure 2.
 - e. Install the E-Sensor with the probe projecting into the duct, and secure to duct with the Zip Ties; see Figure 3. The E-Sensor probe may be oriented at any angle within the duct, but must protrude a minimum of ½" into the duct.
 - f. Ensure that the duct is adequately supporting the E-Sensor, and add a hanger or support tie if necessary.

Note: DO NOT mount the E-Sensor underneath any horizontal part of the fresh air duct!

2. Connect Damper Cable (included):

The Damper Cable has different 4-pin modular connectors on opposite ends that correspond to matching sockets on the E-Sensor and the FAD damper. Snap the corresponding connector into the E-Sensor socket marked "Damper" (see Figure 4), and the corresponding connector on the other end of the cable into the FAD damper socket. The Damper Cable may be extended if necessary, see Installation Step 1a. Make sure that the Damper Cable is adequately supported and is unlikely to be disturbed during further installation and maintenance.

Figure 1



Figure 2



Figure 3



Figure 4



3. Install Makeup Air Harness (if used):

Refer to the Makeup Air Configurations Table below, and corresponding wiring diagrams, for the desired system configuration. If makeup air connections are to be made to the E-Sensor, snap the modular 2-pin connector on the included Makeup Air Harness into the E-Sensor socket marked "Makeup Air" (see Figure 4) and complete the field wiring to the Makeup Air Sensing device, as shown in the wiring diagrams.

4. Connect the Control Harness:

Make sure the wiring from the HHSC+ to the included Control Harness is complete and correct. Snap the 4-pin modular connector on the Control Harness into the E-Sensor socket marked "Control" (see Figure 4). The installation is now complete.

Makeup Air Sensing Device Connection(s)	System Operation Upon Sensing Makeup Air Demand	Application Notes
HHSC+ Control Only, Wiring Diagram B	HHSC+ sends fan-on over-ride command to HVAC circulation fan, sends command to open FAD damper.	If installed, the E-Sensor may prevent the FAD damper from opening, depending on settings and outdoor conditions. The HVAC fan would be commanded to run, regardless of outdoor conditions.
E-Sensor Only, Wiring Diagram C	The E-Sensor will command the FAD damper to open, regardless of outdoor conditions and status of HHSC+ and HVAC circulation fan.	The HVAC fan would not be commanded to run by Makeup Air demand. The HVAC heating/cooling system may or may not be active, depending on thermostat action.
HHSC+ Control AND E-Sensor, Wiring Diagram D	The HHSC+ sends fan-on override command to HVAC circulation fan, sends command to open FAD damper. The E-Sensor allows the FAD damper to open for makeup air regardless of outdoor conditions.	Make-up air will be actively forced into the house, regardless of outdoor conditions