TV-VAVB3-E2, TV-VVTBP-E2, TV-VVTZC-E2



Mounting Instructions

NOTE This document contains mounting information only. See the controller's *Installation and Start-Up Guide* for more information.

The TV-VVTZC-E2 provides zone level temperature and air quality control for Variable Volume and Temperature (VVT) applications. The TV-VVTBP-E2 regulates the supply duct static pressure for VVT applications.

The TV-VAVB3-E2 provides zone level temperature and air quality control for Variable Air Volume (VAV) applications.

Mount the TV-VAVB3-E2 or the TV-VVTZC-E2 on the air terminal's damper actuator shaft. Mount the TV-VVTBP-E2 on the bypass duct damper actuator shaft. For service access, allow at least 12 in. of clearance between the front of the controller and adjacent surfaces.

Tools required:

- 5/16 in. or 8 mm wrench or socket
- No. 1 and 2 Phillips head screwdriver

To mount the controller and actuator

- 1. Turn the damper shaft to fully close the damper position. Ensure the damper is closed.
- 2. Mount the actuator to the terminal or bypass duct by sliding the clamp assembly onto the damper shaft.
- 3. Mount and secure an enclosure to cover the controller.
- 4. Secure the controller and the actuator by screwing the rear mounting tab into the terminal or bypass duct, using the screw supplied with the controller.
- 5. Hold down the controller's actuator release button and rotate the actuator clamp in the same direction that closed the damper. Rotate the clamp until it stops, then rotate it back one notch.
- 6. Release the button.
- 7. Tighten the actuator clamp to the damper shaft by tightening the two M5 nuts.







- 8. Hold down the actuator release button and rotate the damper from fully closed to fully open. If the damper traveled less than 90 degrees, do the following to prevent the damper opening past fully open:
 - a. Loosen the appropriate stop clamp screw.
 - b. Move the stop clamp until it contacts the edge of the actuator cam.
 - c. Tighten the screw.
- 9. Hold down the actuator release button, rotate the damper to verify that it opens and closes, then release the button.

10. TV-VAVB3-E2 only

Connect the tubes to the controller's airflow sensor ports. Then connect those tubes to the duct's high and low pressure tubes. Avoid sharp bends in the tubing.

TV-VVTBP-E2 only

Connect the tube provided to either one of the controller's airflow sensor ports. Using 1/4" poly tubing, connect the other end to a duct static pressure probe (for example, Dwyer Instruments part #A-491, or the equivalent, for a 6" length probe) located in the supply air duct downstream of the bypass damper, but before the first branching of ductwork.

Leave the remaining airflow port open if using a ducted return, or connect it to room space if using plenum return.

NOTES — FOR EITHER CONTROLLER

- Tubing should be at least 2 ft. (.61 meters) long for stable airflow measurement. The combined high and low tubing length should not exceed 16.4 ft. (5 meters) in order to ensure accurate measurements.
- You can connect the duct's high and low pressure tubes to either port. The controller automatically determines the polarity and calculates for positive flow.







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