101ASPC STATIC PRESSURE SENSOR

Installation Instructions

The 101ASPC static pressure switch is used to control the STMPD (round) or STCD (HD rectangular) dampers for bypass operation. The ASPC modulates these power open, power close bypass dampers to maintain proper static pressure as the zone dampers open and close. The bypass system also eliminates air noise from the supply outlets caused by excessive air velocity as the zone dampers close off. The ASPC must be field calibrated to properly control the bypass damper.

STATIC PRESSURE CONTROLLER DESCRIPTION

A. Mounting tabs
B. Supply air barb
C. Reference air, "LOW" barb
D. Diaphragm must be mounted vertically
E. Pressure adjusting screw
F. Normally closed, N/C terminal
G. Normally open, N/O terminal
H. Common, COM, terminal

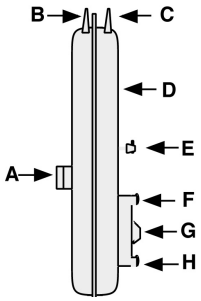


Fig. 1

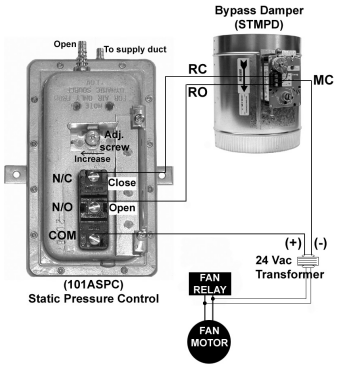
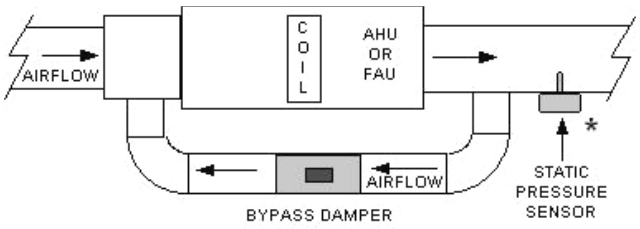


Fig. 3

STATIC PRESSURE SWITCH INSTALLATION

Tools required: Screwdriver, Drill, 5/16" drill bit, VOM set to continuity function.

1. Bypass damper and control must be powered by a field provided, dedicated 24vac 40va transformer.
2. Install the air tube on the inside barb fitting on the ASPC, not the barb labeled LOW.
3. Locate the ASPC pressure switch and air tube on the supply duct between the bypass and 1st supply damper take-offs. See Fig. 2
4. The ASPC switch is not to be installed outside of building conditioned air space.
5. Drill a 5/16" hole in the supply duct for the air tube, with the ASPC in the vertical position.
6. Remove the wire terminal cover and connect wires to **COM** (constant 24 volts hot), **NC** (RC damper close) and **NO** (RO damper open) on the micro switch terminals. See Fig 3
7. Set up control wiring to the ASPC COM terminal so that, when the system blower is off, the bypass damper is de-energized. This allows the bypass damper to stay partially open when the blower shuts off, to reduce air noise when the blower starts up from stop.



* Insert the tube into the side of the duct, approximately 3". Make sure the tube is perpendicular to the air flow.

Fig. 2

STATIC PRESSURE SWITCH CALIBRATION

1. Run all supply dampers to full open position and system blower in high speed.
2. De-energize the bypass damper by disconnecting COM at the pressure switch.
3. Manually close the bypass damper by using the release lever on the motor side of the actuator. With the release lever pressed, rotate the damper actuator collar to close the damper and release the lever to lock the damper closed. NOTE: Do not install the bypass damper with the motor in the 6:00 position. This will cause the release mechanism to lock up.
4. Remove the wire connected to the switch terminal NO, and set meter to continuity.
5. When the blower is running full speed and all supply dampers open, place meter probes on the ASPC COM and NC terminals.
6. Carefully rotate the adjustment screw CW until the meter just makes continuity.
7. Reconnect the wires to the switch, and verify bypass damper control system is energized from the dedicated transformer.
8. Calibration is complete; proceed to the bypass checkout procedures

BYPASS CHECKOUT FOR STATIC PRESSURE CONTROLLER

1. Do not use voltmeter readings to verify bypass actuator operation, as a signal will be measured on both RO and RC at the same time.
2. Make a cool call at the zone thermostat of the smallest (damper size) zone.
3. Verify all zone dampers are closed except for calling zone.
4. Verify noise at zone register is not excessive. Adjust static pressure controller CCW to lower noise (airflow) or CW to increase airflow until too noisy.

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