



STATIC PRESSURE CONTROL

Model SPC

As the zone dampers open and close, the system static pressure will rise and fall. In order to maintain a constant volume of air through the HVAC Unit, a modulating by-pass damper is used to control the air by-passed between the supply air, and return air ducts. The SPC is used to sense the supply air pressure and relieve excess air as the static pressure build-up.

INSTALLTION

The SPC must be installed with the diaphragm in the vertical position. This can be mounted wherever it is convenient to run the tubing to the duct probe tube and wire to a transformer and by-pass damper motor.

The duct probe must be located downstream of the by-pass damper and before any zone dampers.

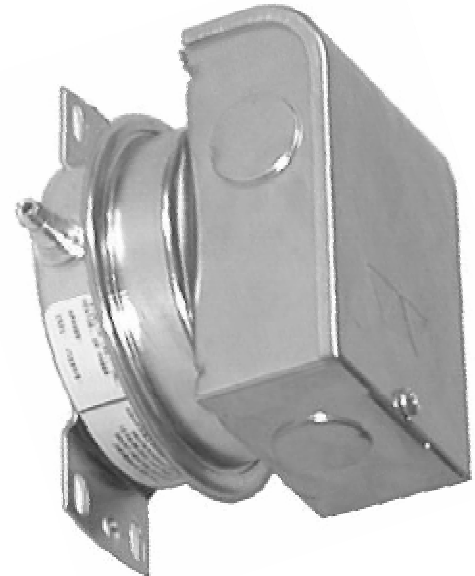
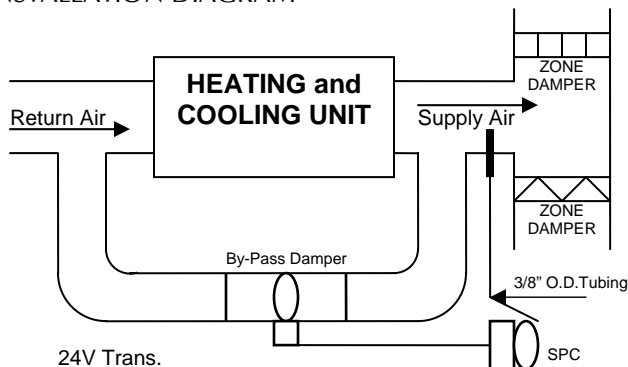
Adjusting the SPC

1. Satisfy all zones thermostats and place each zone thermostat's fan switch to ON. This will turn on the Fan in all zones and open all zone dampers.
2. Check to make sure the by-pass damper is CLOSED.
3. Turn the SPC adjusting screw slowly counter clockwise, until the Green LED lights. Then turn the adjusting screw clockwise so the LED goes out. The SPC is now set.

Turning the adjusting screw counter-clockwise will bring on the green LED and open the by-pass damper, which will lower the static pressure.

Turning the adjusting screw clockwise will turn off the Green LED and close the by-pass damper, which will raise the static pressure. There is a 10 second delay after the Green LED goes out before the damper starts to move. When turning the screw counter-clockwise, STOP when the screw becomes difficult to turn.

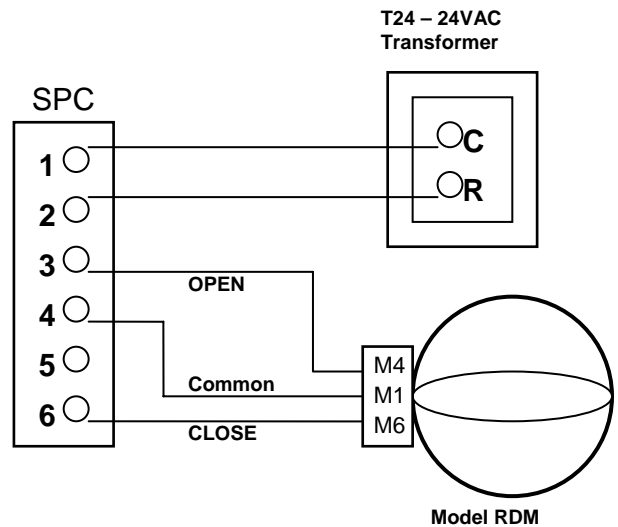
INSTALLATION DIAGRAM



SPECIFICATIONS

Pressure Range:	0.2" to 2.0" W.C.
Pressure Connection:	1/4" I.D. flex tubing
Operating Temperature:	-40°F to 190°F
Max. Switching Current	1 Amp @ 24VAC
Maximum Pressure	0.5PSI

WIRING DIAGRAM



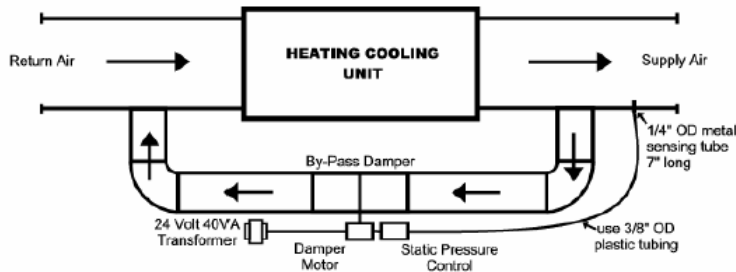
GENERAL INSTRUCTIONS FOR SPC-200 BYPASS DAMPER STATIC PRESSURE CONTROL

HOW THE BYPASS SYSTEM WORKS

As individual zone dampers open and close, the system static pressure will rise and fall. In order to maintain proper airflow and static pressure through the HVAC system, a bypass system incorporating a reversible type motorized damper and a static pressure control should be used. The static pressure control is equipped with solid state switching and timing circuit to enhance its operation and improve reliability.

INSTALLING THE BYPASS DAMPER AND STATIC PRESSURE CONTROL ASSEMBLY

The bypass damper should be installed with the bypass air being discharged into the return air plenum (or above the ceiling if this area is used as a common return). The static pressure control should be installed so that the diaphragm is in the vertical position. The high pressure side of the static pressure control should be connected to the metal sensing tube and inserted in the main supply plenum, downstream of the bypass damper and at least 3 feet from the air handling unit in a straight section of duct at the center line. The sensing tube furnished is a 7" (18cm) length of 1/4" (6mm) O.D. rigid tubing and is connected to the pressure control with 3/8" O.D. plastic tubing. The sensing tube should be inserted and sealed 6" (15cm) into the duct. The sensing tube, plastic tubing, and mounting fittings are furnished with static pressure control.



**CONTROL MUST BE MOUNTED
IN THE VERTICAL POSITION**

**THE STATIC PRESSURE
CONTROL HAS BEEN
FACTORY SET AT 0.4\"/>**

ADJUSTING THE STATIC PRESSURE CONTROL

1. Confirm that the HVAC system has been properly balanced.
2. Confirm that all zone dampers are in the open position.
3. Confirm that the bypass damper is in the closed position.
4. Confirm that the fan is running.
5. Turn the static pressure adjusting screw **SLOWLY** counter-clockwise until green light comes on, then turn the adjusting screw **SLOWLY** clockwise just enough so that the green light goes out. The pressure control is now set.

Turning the adjusting screw counter-clockwise will bring on the green light and start the bypass damper driving open, which will lower the static pressure.

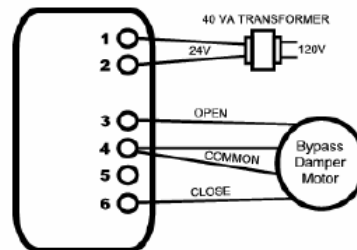
Turning the adjusting screw clockwise will turn off the green light and start the bypass damper driving closed, which will raise the system static pressure. There is a ten second time delay after the green light goes out and before the damper starts to move. When turning screw counter-clockwise, stop when screw becomes difficult to turn.

We recommend using a Dwyer #4001 pressure gauge when setting up the bypass control.

SPECIFICATIONS

Pressure Range:	0.2" to 2.0" W.C.
Pressure Connection:	1/4" I.D. flex hose
Operating Temperature:	-40 to 190 F
Maximum Switching Current:	1 Amp @ 24VAC
Maximum Pressure:	0.5 PSI

WIRING DIAGRAM



**SPC-200 PRESSURE
CONTROL MODULE**

12-15-2005