

SMART ZONE™

Electronic Control Damper Specifications

APPLICATION:

The model SE-CD is a rectangular commercial zone control damper assembly that includes a damper, floating point actuator, duct temperature sensor, and actuator control board. The SE-CD damper is used with a S-T, P+I zone thermostat.

AVAILABLE SIZES:

Side mount models are sized width (A) by height (B) with actuator on the (B) dimension. Bottom mount models are sized width (A) by height (B) with actuator on the (A) dimension. (A) and (B) dimensions are undercut 1/4". Standard sizes ranges from 8" x8" up to 36" x24" in 2" increments.

CONSTRUCTION:

Frame:	1/16" extruded aluminum
Blades:	1/16" extruded aluminum (parallel design)
Flange:	1/16" aluminum
Shaft:	1/2" aluminum
Bushings:	Nylon

AIR FLOW & PRESSURE:

Max static pressure:	2 inches w.c.
Max velocity:	2,000 fpm
CFM:	0-4,000 cfm

DAMPER ACUATOR:

24 vac. 2va. 3-wire floating point actuator

OPERATION:

Continually regulates supply air volume in response to S-T thermostat control

COMPONENTS:

Damper, actuator, PC board and duct air sensor

AIR HANDLER:

Space thermostat/ Discharge air controller

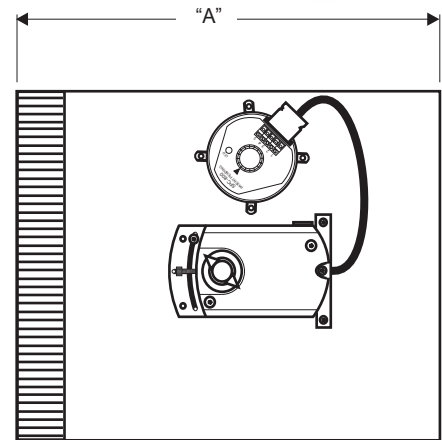
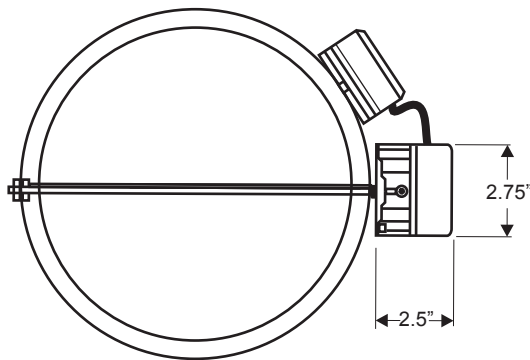
WARRANTY:

5 years



EB-XX ROUND, ELECTRONIC BYPASS DAMPERS

DAMPER SIZE	"A" DIMENSION
12"	13"
14"	14"
16"	14"
18"	14"
20"	14"



SPECIFICATIONS

DIMENSIONS:

Damper models EB-XX are available in standard sizes from 12" to 20"

APPLICATION:

Compatible for zone control and other HVAC applications in maintaining system static pressure from 0.08" to 0.80" W.C.

CONSTRUCTION:

- 18 gauge spiral steel shell
- 18 gauge steel blade
- 1/2" aluminum shaft
- Nylon bushings
- Air tight blade seals
- Minimum position adjustment

FACTORY MOUNTED STATIC PRESSURE CONTROL:

- 1/4" I.D. flex hose connection
- Tubing and plastic pressure probe included
- Solid state control design
- Built-in LED for damper direction
- 0.08" to 0.80" W.C. pressure range
- 40" W.C. maximum pressure
- 1 Amp switching current at 24 VAC

ELECTRICAL:

- 24 Volt, 2 VA, floating point
- 90 second timing
- 44 lb.-in.

Drawings are intended to show general, overall product dimensions and provide guidance for installation clearance. Drawings are not to scale.



PERFORMANCE AIRE™

1985 Carroll Street, Clearwater, FL 33755 • PH: 727-431-6197 • FAX: 727-443-7167

www.smartdiffuser.com

General Instructions For SPC-800

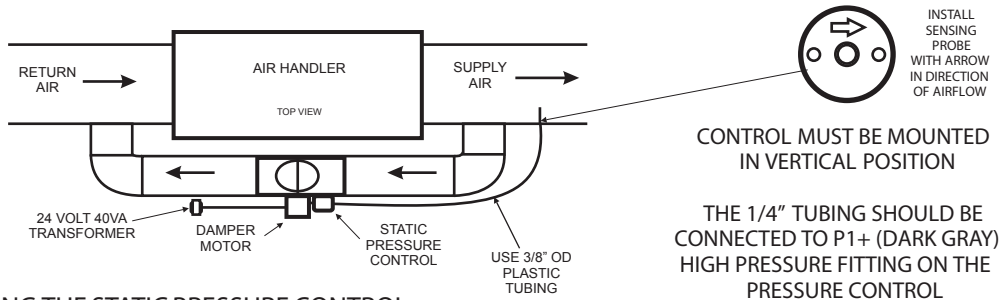
Static Pressure Control for use with Bypass Dampers

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 floating 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 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 (P1 +) of the static pressure control should be connected to the plastic sensing probe 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 probe is 2.5" (6.35cm) x 1/4" (6mm) O.D. and is connected to the pressure control with 1/4" O.D. plastic tubing. The sensing probe should be installed with the arrow in the direction of airflow. The sensing probe, 6' of plastic tubing, and mounting hardware are furnished with static pressure control.



ADJUSTING THE STATIC PRESSURE CONTROL

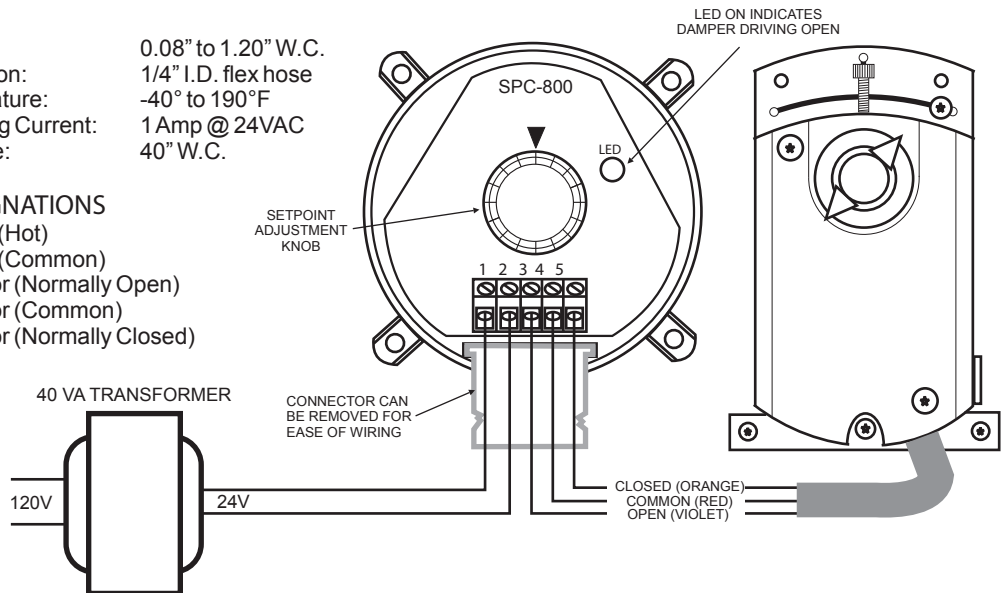
1. Confirm that the HVAC system has been properly balanced.
 2. Confirm that all zone dampers are in the open position.
 3. Confirm that the bypass damper is in the closed position.
 4. Confirm that the fan is running.
 5. Use the setpoint adjustment knob to set the static pressure by aligning with the arrow.
- THE STATIC PRESSURE CONTROL HAS BEEN FACTORY SET AT 0.40" W.C.

SPECIFICATIONS

Pressure Range: 0.08" to 1.20" W.C.
 Pressure Connection: 1/4" I.D. flex hose
 Operating Temperature: -40° to 190°F
 Maximum Switching Current: 1 Amp @ 24VAC
 Maximum Pressure: 40" W.C.

TERMINAL DESIGNATIONS

- 1 = 24 Volt (Hot)
- 2 = 24 Volt (Common)
- 3 = Actuator (Normally Open)
- 4 = Actuator (Common)
- 5 = Actuator (Normally Closed)

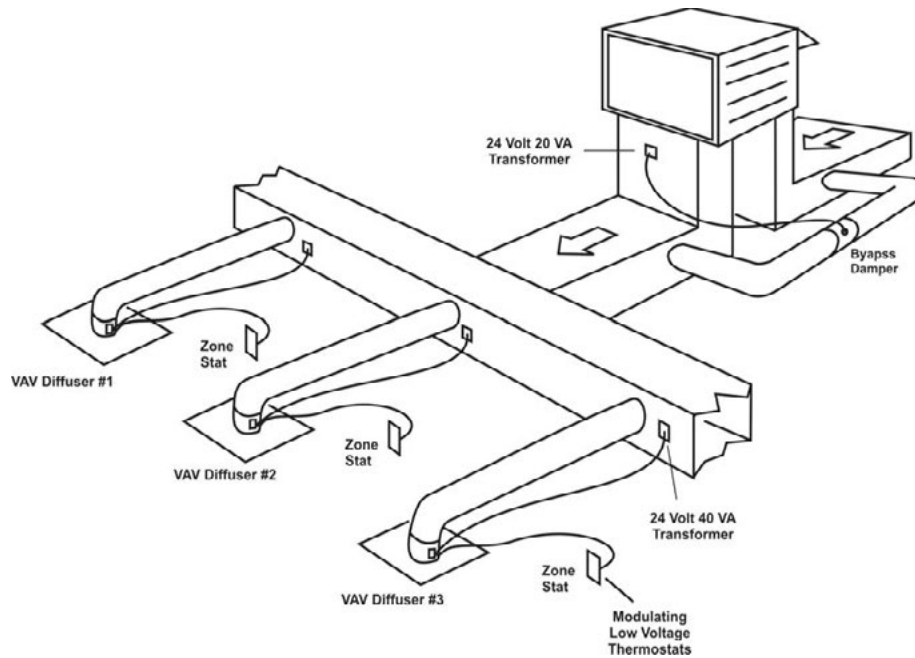


PA
PERFORMANCE AIRE™

1985 Carroll Street, Clearwater, FL 33755 • PH: 727-431-6197 • FAX: 727-443-7167
www.smartdiffuser.com

VAV Electronic Smart Zone Diffuser

Typical SE-HC systems application with electronic bypass (EB) damper and optional SPC-800 static pressure control



HOW IT WORKS:

The automatic changeover duct sensor located on the diffuser senses whether there is warm air or cool air in the branch supply duct. If the thermostat calls for cooling and the duct sensor determines there is cool air in the duct, the diffuser will open; otherwise it will remain closed. If the thermostat is calling for heat and the duct sensor determines there is warm air in the duct, the diffuser will open; otherwise it will remain closed.

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 floating 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 operation and improve reliability.

FEATURES:

- VAV diffuser neck sizes 6, 8, 10, 12, 14
- Auto changeover
- Minimum position adjustment
- LED status indication
- Controls are pre-wired from factory
- No control panel required

PA
PERFORMANCE AIRE™

1985 Carroll Street, Clearwater, FL 33755 • PH: 727-431-6197 • FAX: 727-443-7167
www.smartdiffuser.com