

Standard Installation

Smoke Damper Models: S1(SS), S2(SS)

APPLICATION

These dynamically rated stainless steel smoke dampers are intended to restrict the passage of smoke. This smoke damper may be mounted in the vertical or horizontal position with the damper blades running horizontally. Airflow can be from either direction. When mounted in the vertical position, the damper may be mounted right side up or upside down. It can be mounted within the plane of a smoke barrier, but can also be mounted out of the plane of a smoke barrier. When mounted out of the plane of the smoke barrier, it is to be installed within 24" of the barrier and before any duct inlets or outlets.

MULTIPLE PANEL SIZE LIMITATIONS

		Actuation	Electric			
		Orientation	Horizontal & Vertical			
		Assembly	Max Panel 250°	Max Panel 350°	Max Assy 250°	Max Assy 350°
Model	S1(SS)	36"Wx36"H	not available	108"Wx36"H	not available	not available
	S2(SS)	36"Wx36"H	36"Wx36"H	108"Wx36"H	108"Wx36"H	108"Wx36"H

		Actuation	Pneumatic			
		Orientation	Horizontal & Vertical			
		Assembly	Max Panel 250°	Max Panel 350°	Max Assy 250°	Max Assy 350°
Model	S1(SS)	36"Wx36"H	not available	108"Wx36"H	not available	not available
	S2(SS)	36"Wx36"H	36"Wx36"H	108"Wx36"H	108"Wx36"H	108"Wx36"H

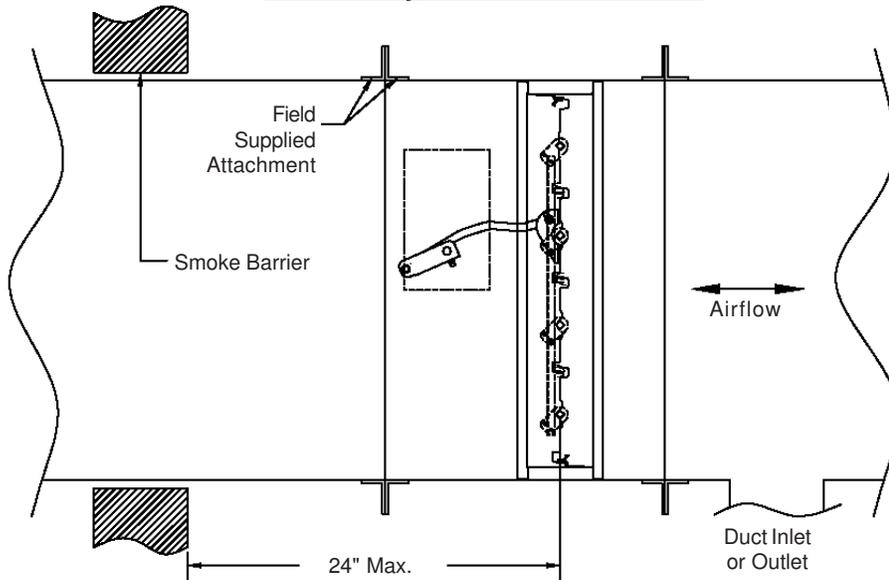
SUPPLEMENTAL INSTALLATION INSTRUCTIONS / SUBMITTAL DATA

- Sleeve Extension
- Integral Duct Access Door
- Integral Dual Position Indication (SD-IDPI)
- Flow-Rated Smoke Detector (SM-501)
- Transitions (SD-TRFS)
- Sleeves (SD-SLVS)

INSTALLATION

1. **General:** The installation of the damper shall conform to NFPA-90A and the SMACNA Fire, Smoke and Radiation Damper Installation Guide.
2. **Actuators:** Dampers must be supplied with factory mounted actuators and are intended to close automatically upon loss of electrical power or release of air pressure and is to be controlled by a smoke detector.
3. **Multiple Panel / Multiple Section Assembly:** Refer to page 3 for details.
4. **Sleeves:** Sleeve are not required as dampers can be installed into continuous ductwork. Dampers with factory mounted external actuators can be supplied without sleeves or sideplates. Dampers with factory mounted internal actuators can be supplied without sleeves or sideplates. Sleeves shall be the same gauge or heavier as the duct to which it is attached. Gauges shall conform to SMACNA or ASHRAE duct standards. A field supplied sleeve is attached to the damper frame with $\frac{3}{16}$ " diameter stainless steel rivets, $\frac{1}{4}$ " diameter stainless steel bolts, #10 stainless steel sheet metal screws, or $\frac{1}{2}$ " long welds. Fasteners shall be staggered on each side of the damper frame on 6" maximum centers and 3- $\frac{1}{2}$ " maximum from each corner. For Class I Smoke dampers, approved caulking (reference note 6) shall be applied along the perimeter between the sleeve and the damper on both sides. For Class II Smoke dampers, approved caulking (reference note 6) shall be applied along the perimeter between the sleeve and the damper on only one side.
5. **Attachment:** For dampers without sleeves, use metal shims, if required, between the damper frame and ductwork to prevent distortion. The damper is to be anchored to the ductwork along the perimeter on both sides of the hat channel frame.
6. **Caulking:** Caulk shall be one of the following: Dow Corning RTV732, Silco Sil-Bond RTV 4500, General Electric IS808, or Novagard RTV300. For Class I dampers, approved caulking shall be applied along the perimeter between the sleeve/ductwork and frame on both sides. For Class II dampers, approved caulking shall be applied along the perimeter between the sleeve/ductwork and frame on only one side.
7. **Maintenance:** Dampers shall be maintained at intervals as stated in NFPA 90A and 92A. Local codes or building conditions may require more frequent inspections and maintenance.

STANDARD MOUNTING DETAILS
Smoke Only, Vertical or Horizontal



MULTIPLE PANEL / MULTIPLE SECTION INSTALLATION DETAILS

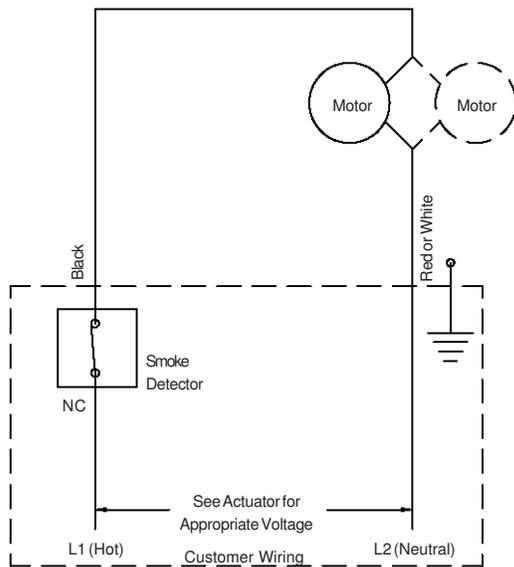
Smoke Dampers (Models S1(SS), S2(SS))

1. Damper assemblies ordered without factory mounted sleeves are limited in size, so that the entire assembly ships as a single section.
2. Multiple panel wide damper assemblies are mechanically and electrically/pneumatically linked.
3. Damper assembly sections that are mechanically and electrically/pneumatically linked share a single supply connection point. Multiple actuators within a linked section are factory wired/plumbed together.

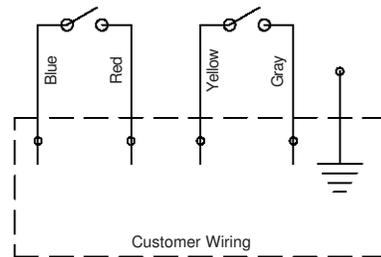
ELECTRIC WIRING SCHEMATICS

Notes

1. All wiring to be in accordance with N.E.C. (NFPA 70).
2. Refer to actuator label for appropriate voltage.
3. Connect incoming ground to the actuator assembly.



Integral Dual Position Indication (IDPI)



Integral Dual Position Indication (IDPI) Wiring Chart			
actuator mounting location	damper full open	damper full close	damper mid-stroke
	external left	red / blue	yellow / gray
external right	yellow / gray	red / blue	none
internal left	yellow / gray	red / blue	none
internal right	red / blue	yellow / gray	none

* This wiring is opposite if the actuator is rotated 90°, so that it is parallel to the duct.

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In the interest of product development, Air Balance reserves the right to make changes without notice.

