

Application and Operation

Nailor model DSD-NF duct smoke detector (no-flow) can be utilized with Nailor UL555S Classified smoke or combination fire/smoke dampers to detect the presence of smoke within HVAC ductwork, whether or not there is airflow, and close the damper to prevent the smoke from spreading. As most fatalities resulting from fires can be attributed to the effects of toxic smoke, detecting and controlling the smoke from spreading within the HVAC system is vital to preventing injury as well as limiting property damage, including damage to the HVAC system itself. Refer to NFPA Standards 72, 90A and 92A to determine when and where duct smoke detectors are required.

The DSD-NF detector features a low-profile design for optimum pressure drop and will operate with airflow in either direction. It can be factory installed to top of sleeve (side mounting optional) on Nailor Model Series 1210, 1260, 1280, 1220 and 1270.

Upon detection of smoke, the smoke detector causes the damper to close by cutting off power to the actuator. The actuator return spring forces the damper closed. The detector can be reset only by a momentary power interruption. The standard model DSD-NF detector and smoke damper combination is designed simply to close the damper upon detection of smoke. For applications requiring the detector to be wired into a fire fighters' smoke-control station (FSCS), contact Nailor.

DSD-NF STANDARD SPECIFICATION:

Model: System Sensor 2151 Low-Profile.

Sensor Type: Photoelectronic.

Dimensions: 6" (155) dia. flanged base.

Weight: 3.6 oz. (104 g).

Airflow Velocity Range: 0 to 3000 fpm (0 to 15.24 m/s).

Operating Temperature Range: 32°F to 120°F (0°C to 49°C).

Humidity Range: 10% to 93% Relative Humidity non-condensing.

Sensitivity: 3% ± .7%/ft

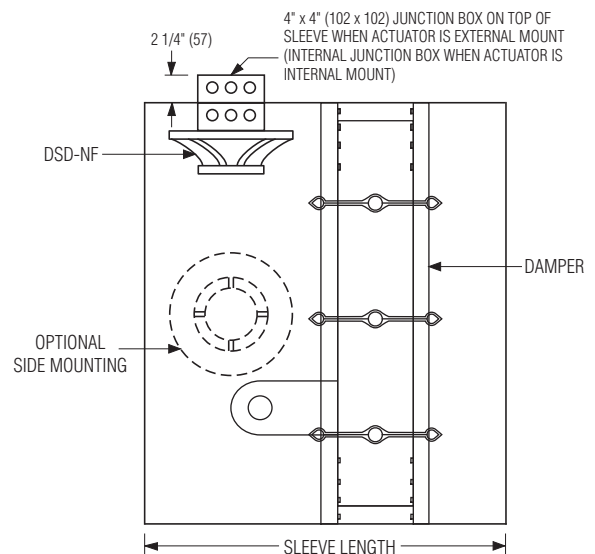
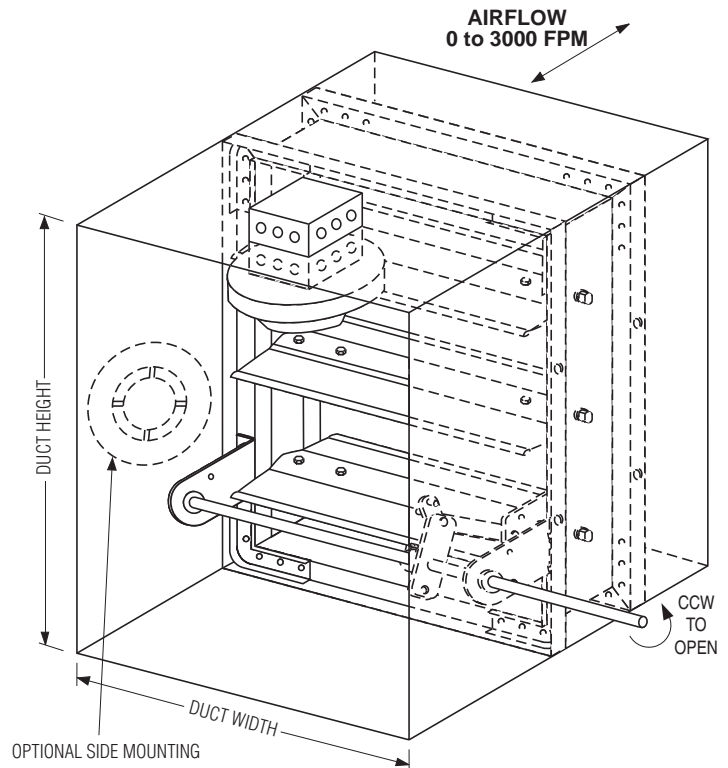
Voltage: 120 VAC, 24 VAC

Latching Alarm: Reset by momentary power interruption.

Contact Nailor for minimum damper size and sleeve length for your specific application.

Refer to Smoke Detector Installation Instructions and Nailor Smoke Detector Supplement for Dampers with Factory Mounted Duct Smoke Detectors.

Label 1: Label applied to dampers with factory mounted smoke detectors.



120 VAC DSD-NF WIRING SCHEMATICS

Figure 1: Smoke damper with smoke detector.

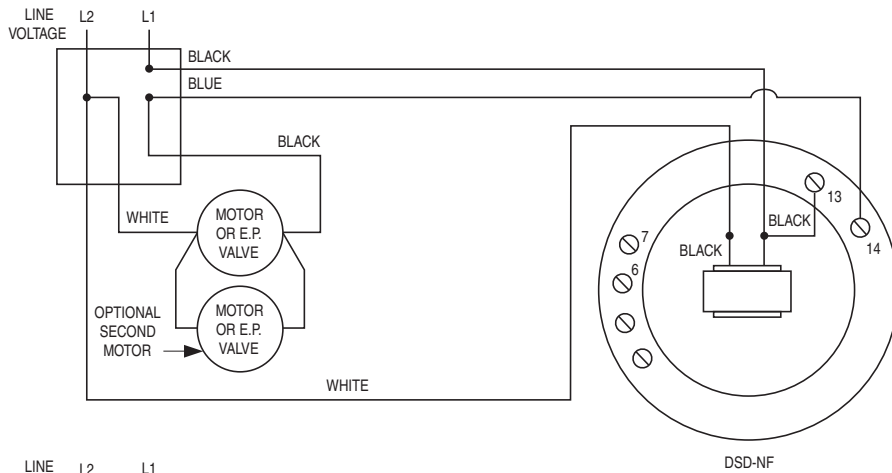


Figure 2: Combination Fire/Smoke damper with smoke detector.

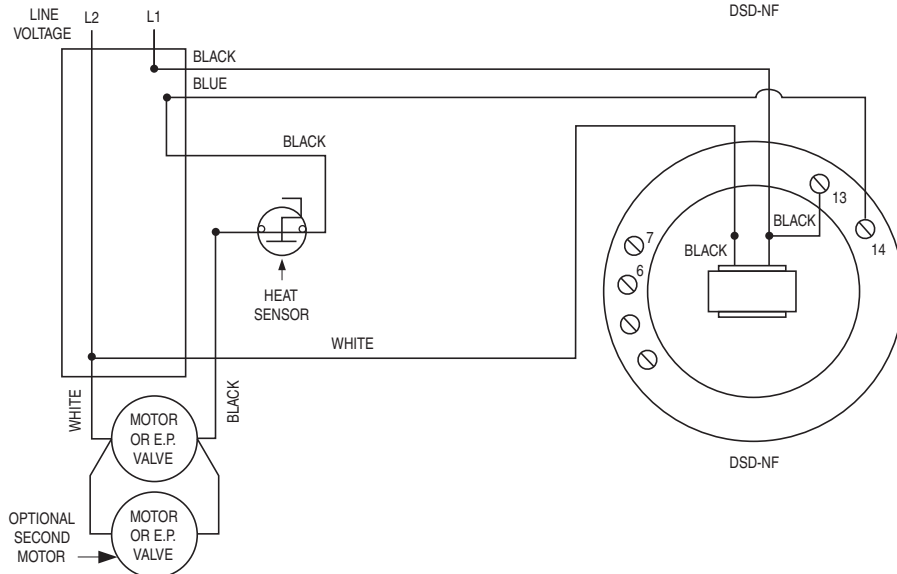
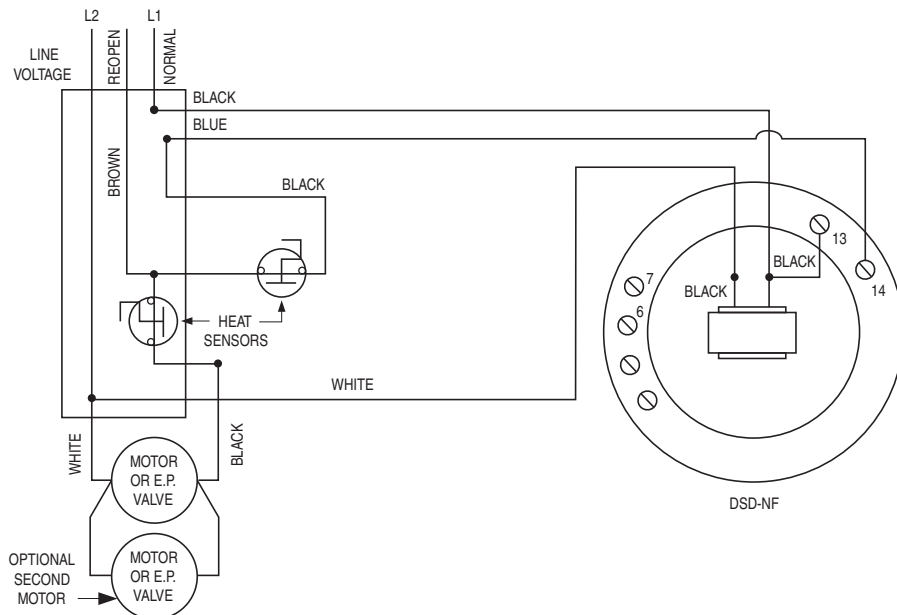


Figure 3: Combination Fire/Smoke damper with smoke detector and DTO (MLS-400) (includes MLS-300) (see IOM-MLS4 and IOM-MLS3H or IOM-MLS3N for wiring details).



24 VAC DSD-NF WIRING SCHEMATICS

Figure 4: Smoke damper with smoke detector.

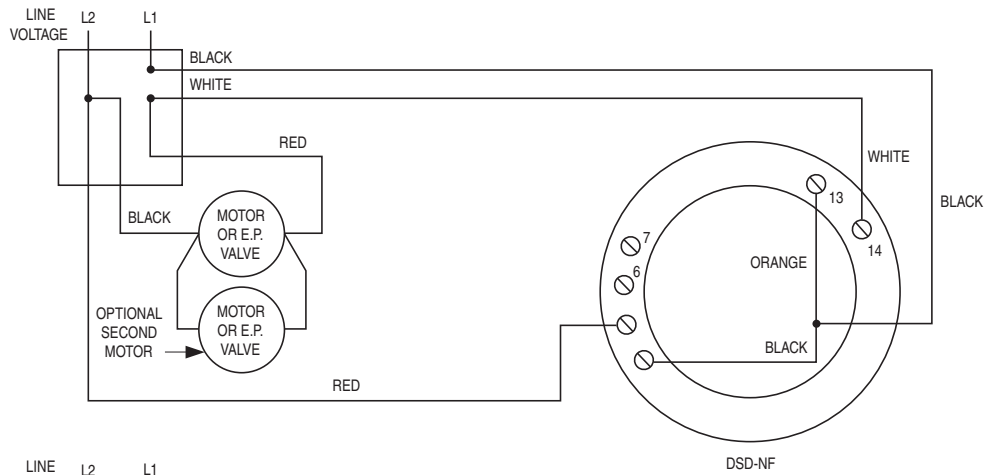


Figure 5: Combination Fire/Smoke damper with smoke detector.

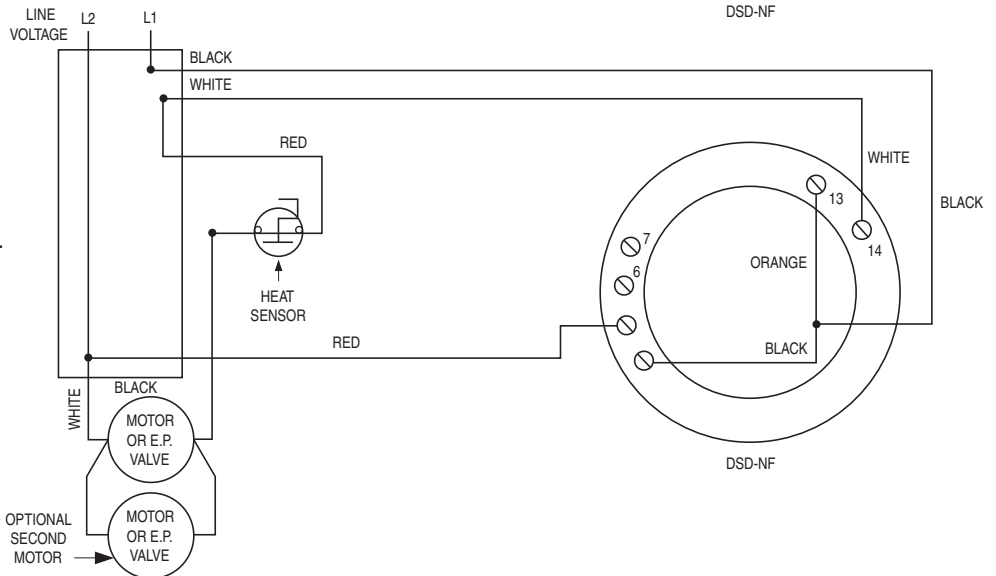
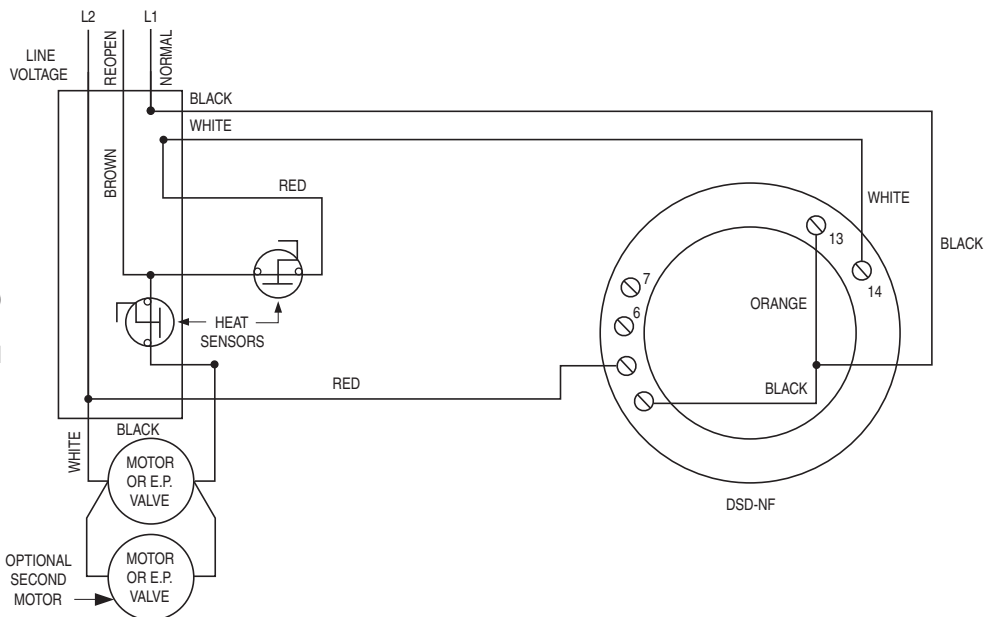


Figure 6: Combination Fire/Smoke damper with smoke detector and DTO (MLS-400) (includes MLS-300) (see IOM-MLS4 and IOM-MLS3H or IOM-MLS3N for wiring details).





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