HOCHIKI
america corporation

INSTALLATION INSTRUCTIONS FOR THE DUCT SMOKE DETECTOR

These are Installation Instructions (DWG.# HA-06-105)
for the DH-98-ASA/DH-98-ASC Duct Housing customized as follows:

DH-98-ASC	Duct Housing with the Conventional Photoelectric Smoke Detector (SLR-AS)
Nominal Sensitivity	8.0% Obs./m @0.7Pa minimum
DH-98-ASA	Duct Housing with the Analog Photoelectric Smoke Sensor (ALG-AS)
Nominal Sensitivity	8.0% Obs./m @0.8Pa minimum

I. LOCATION REQUIREMENTS

Duct Smoke Detector Location Requirements: To prevent false alarms the detectors should not be mounted in areas of extreme high or low temperatures, in areas where high humidity exist, or in areas where duct air may contain gases or excess dust. The duct detector should, when possible, be located a minimum of six duct widths downstream from a source of turbulence (bends, inlets, or deflection plates). At these locations, air flow is less turbulent and the air/smoke mixture should be more homogenous. Refer to Australian Standards.

Exception: Where it is physically impossible to locate the duct detector accordingly, the duct detector can be positioned closer than six duct widths, but as far as possible from inlets, bends, or deflection plates.

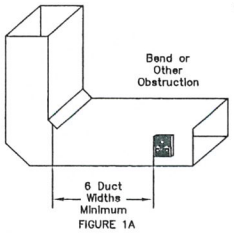

FIGURE 1A

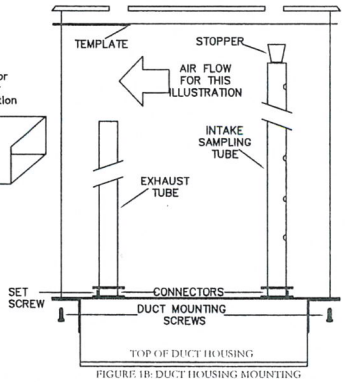

FIGURE 1B: DUCT HOUSING MOUNTING

II. MOUNTING THE DETECTOR

A. DUCT PREPARATION

1. These duct units are suitable for use with duct widths of between .76m to 3.04m.
2. Remove paper backing from mounting template AP 121 (packaged in installation kit) and affix to duct at desired location.
3. Using template as a guide, drill 4 mounting holes (2.4mm diameter) for duct mounting screws (305 x 12.7 mm sheet metal screws packaged in installation kit). Drill or punch holes for sampling tubes in air ducts (35 mm diameter), using template as a guide. Clean all holes.

B. VERIFY AIR FLOW AND DIRECTION

The Duct Detectors are designed for use in ducts where the air velocities are from 91 to 1219 meters per minute. Verify this by checking specifications of installation and if necessary, use an Alnor Model 6000P velocity meter (orequivalent) to check the air velocity. See Figure 2 for sampling tube orientation to air flow direction.

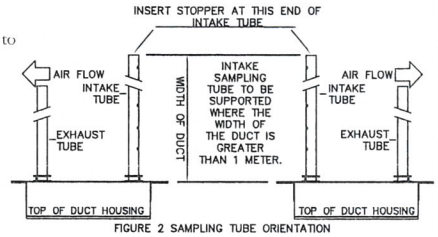

FIGURE 2 SAMPLING TUBE ORIENTATION

C. SAMPLING TUBE ASSEMBLY (See Figure 2)

The sampling tubes are supplied in one standard lengths and cut per requirements.
NOTE: The length of the exhaust sampling tube is to be cut to 70% of the length of the inlet sampling tube. The intake sampling tube consists of a piece of steel piping with a series of holes drilled the entire length of the tube and should extend the entire width of the duct. The holes must be facing into the air flow (see Figure 2).

INTAKE SAMPLING TUBES STANDARD LENGTHS:

1. Cut the intake sampling tube to the desired length.
2. Firmly insert the stopper in the end of the INTAKE sampling tube.

D. MOUNT SAMPLING TUBES (See Figure 2)

1. Sampling tube connectors are equipped with set screws, which allow the tubes to be mounted only in directions shown in Figure 2. Establish proper orientation considering airflow direction.
2. Insert intake and exhaust tubes into connectors, align set screw to set screw hole in tubes and tighten firmly.

E. MOUNT THE DUCT HOUSING (See Figure 1B & 2)

Move duct housing/sampling tube assembly to desired location. Use 4 mounting screws (305 x 12.7 mm sheet metal screws to secure the housing to the air duct.

F. VERIFY AIR SAMPLING (See Figure 3)

To verify proper sampling of air, use a Dwyer Model 4000 differential pressure gauge (or equivalent). See Figure 3 for gauge connections. The pressure differential between input sampling tube and exhaust tube should be greater than 2.491Pa of water and less than 298.9Pa of water.

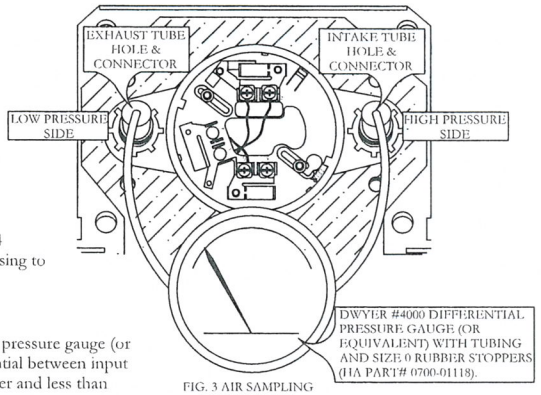

FIG. 3 AIR SAMPLING VERIFICATION

III. ELECTRICAL INSTALLATION

A. GENERAL INFORMATION

Wiring must conform to applicable local codes, ordinances and regulations covering these types of devices. Wire the detectors according to the engineering drawings for the particular job requirements. These detectors are not intended for open area protection, nor should they be used for open air protection. Refer to Australian Standards for general and additional information on Duct Smoke Detectors concerning operation and installation. Terminals are suitable for up to #14 gauge wire.

B. DETECTOR WIRING

1. With power source de-energized and the smoke detector not installed, wire all connections per engineering drawings. Refer to the applicable figures below depending on your duct housing model number.
2. With all wiring in place, install the detector head.
3. Energize the duct detector.

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Made in the USA

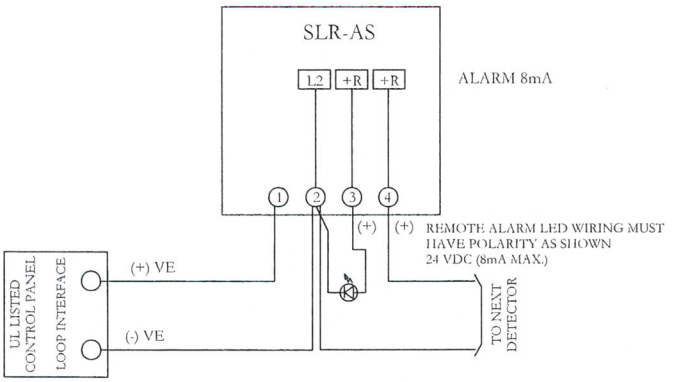
ISO 9001:2000 REGISTERED

Models DH-98-ASA

These duct sensors are analog addressable and can be calibrated by a Hochiki Compatible SSL Listed analog control panel.

Note: All duct detector models can be tested with actual smoke. Remove the duct detector cover. Test the detector head by lighting a piece of cotton clothesline, and placing it approximately 3 inches from the detector head. Blow across the lit end of the clothesline toward the detector. The LEDs on the detector should illuminate within one minute. After performing this test sequence, reinstall the duct detector cover.

D. WIRING DIAGRAMS - *DH-98-ASC*



D. WIRING DIAGRAMS, continued

DH-98-ASA WIRING DIAGRAM

The DH-98-ASA are not self-contained sensors. This product is compatible only with fire alarm control panels that utilize Hochiki's Digital Communications Protocol, DCP. For example the "Firenet" Panel.