1. Grasp the housing with one hand and the cover with the other. Turn the cover counterclockwise fully (approx. 30 degrees) and remove cover by pulling it away from detector unit (see Figure 4).
2. Replace with new filter and cover assembly. The cover is keyed so it fits in place only one way. Turn the cover clockwise until it stops.

NOTE: The base is equipped with an optional tamperproof feature which can be used to prevent unintentional removal of the unit while replacing the filter.

If a clogged filter was the cause of the trouble condition, normal detector operation should resume automatically within five minutes. If the trouble condition persists, the detector must be returned for repair or replacement.

Installing Detector Into Base
1. Align the detector at a right angle to the base, with the five wires and connectors adjacent to the connector receptacle as shown in Figure 5.
2. Plug the wired connector into the receptacle.
3. Rotate the detector into the base, making sure detector and base keyed fit is lined up. Turn the detector clockwise until it snaps into place.

IMPORTANT: FSH-751 will only operate with B710HD/ BS24FTXE Mounting Base.

Figure 5: Installing detector into base:

FSH-751 Intelligent Photoelectronic Smoke Detector

Installation and Maintenance Instructions

Specifications

- Operating Voltage Range: 15 to 32 VDC
- Detector Current: 300 µA @ 24 VDC (one communication every 5 sec. with LED enabled)
- Auxiliary Power Supply Voltage: 15 to 30 VDC filtered; Ripple voltage may not drop below 15 volts.
- Auxiliary Power Supply Current – Peak: 123 mA max. Average: 27mA max.
- Operating Humidity Range: 10% to 90% Relative Humidity, noncondensing
- Operating Temperature Range: 0° to 50°C (32° to 122°F)
- Height: 2.8 inches (69 mm)
- Diameter: 6.1 inches (155 mm) installed in B710HD
- Weight: 7.3 oz. (207 g)
- Compatibility: Backwards compatible with 700 and 500 series products protocol
- Base: Requires B710HD (U.S.), BS24FTXE (Europe)

Before Installing

This detector must be installed in compliance with the control panel system installation manual. The installation must meet the requirements of the Authority Having Jurisdiction (AHJ). Detectors offer maximum performance when installed in compliance with the National Fire Protection Association (NFPA), see NFPA 72.

General Description

The FSH-751 Smoke Detector uses a small air intake fan and a high density replaceable filter. Air and smoke are drawn into a photoelectric sensing chamber while airborne particulate and water mist are removed. The addressable-analog detector transmits an analog representation of smoke density over a communication line to a control panel. Rotary decade switches are provided for setting the sensor’s address.

Two LEDs on each sensor light to provide a local, visible sensor indication. Remote LED annunciator capability is available as an optional accessory (Part No. RA4002Z).

Notifier panels offer different features sets across different models. As a result, certain features of the FSH-751 may be available on some control panels, but not on others. The possible features available in the FSH-751, if supported by the control unit are:

1. The panel controls the LED operation on the sensor.
2. Operational modes are RED blink, RED continuous, GREEN blink, GREEN continuous, and off.
3. The remote output may be synchronized to the LED operation or controlled independent of the LEDs.

Please refer to the operation manual for the UL listed control unit of specific operation of the FSH-751.

FSH-751 is listed for use in ducts. See Duct Applications Guide A05-1004 for details on pendant mount applications.

The FSH-751 smoke detector is intended for use in normal environmental conditions, where dust and other airborne particulate are present at elevated levels. These elevated levels tend to cause false alarms and high maintenance in standard detectors. FSH-751 provides a protective enclosure for a photoelectric smoke detector chamber and allows smoke detection in areas that tended to use exclusively heat detection. FSH-751 requires compatible addressable communications to function properly. Connect this detector to listed-compatible control panels only.

Spacing

Notifier recommends spacing detectors in compliance with NFPA 72. In low air flow applications with smooth ceilings, space detectors 30 feet apart. For specific information regarding sensor spacing, placement, and special applications, refer to NFPA 72 or the System Smoke Detector Application Guide available from Notifier.

Duct Applications

FSH-751 is listed for use in ducts. See Duct Applications Guide A05-1004 for details on pendant mount applications.
Wiring Diagram

Figure 1. Wiring diagram:

FSH-751 is not designed to operate in explosive environments.

Wiring Instructions

All wiring must be installed in compliance with the National Electrical Code, applicable local codes, and any special requirements of the Authority Having Jurisdiction. Proper wire gauges should be used. The installation wires should be color-coded to limit wiring mistakes and ease system troubleshooting. Improper connections will prevent a system from responding properly in the event of a fire.

Remove power from the communication line before installing detectors.

All wiring must conform to applicable local codes, ordinances, and regulations.

1. Wire the sensor base per the wiring diagram, please see Figure 1.
2. Set the desired address on the sensor address switches. NOTE: Some panels support extended addressing. In order to set the sensor above address 99 on compatible systems, carefully remove the stop on the upper rotary switch with thumb as shown in Figure 2.
3. Insert 5-wire connector on mounting base into 5-pin connector on the unit. Install the detector into the sensor base. Push the detector into the base while turning it clockwise to secure it in place. (Please see Figure 5 and INSTALLING DETECTOR INTO BASE on page 4 for specific directions).
4. After all detectors have been installed, turn on the auxiliary power supply, then apply power to the control unit and activate the communications.
5. Test the detector(s) as described in the TESTING section of this manual.

CAUTION

Dust cover must be removed before the detector can sense smoke.

Testing

Before testing, notify the proper authorities that the system is undergoing maintenance, and will temporarily be out of service. Disable the system to prevent unwanted alarms.

All detectors must be tested after installation and periodically thereafter. Testing methods must satisfy the Authority Having Jurisdiction (AHJ). Detectors offer maximum performance when tested and maintained in compliance with NFPA 72.

The sensor can be tested in the following ways:

A. Functional: Magnet Test (P/N M02-04-01 or M02-09-00)

This detector can be functionally tested with a test magnet. The test magnet electronically simulates smoke in the sensing chamber, testing the detector electronics and connections to the control panel.

1. Hold the test magnet in the magnet test area as shown in Figure 3.
2. The detector should alarm the panel. Two LEDs on the detector are transmitted from the panel, can cause the LEDs to blink, latch on, or latch off. Refer to the control panel technical documentation for detector LED status operation and expected delay to alarm.

B. Smoke Entry: Aerosol Generator

Aerosol generators for smoke entry testing are available from a number of third party manufacturers (e.g., Gemini Scientific). Following the manufacturer’s instructions, apply aerosol until the detector alarm is restored to the detector for 72 hours. After 72 hours, power is cut again and the detector will remain off-line until the filter is replaced.

Note: The unit has two filters. The replaceable filter is inside the cover. A permanent filter is mounted to the unit.

The unique design of the FSH-751 eliminates the need for typical detector cleaning. The only maintenance necessary is replacing the filter, which is signaled by a trouble condition at the panel (see below).

The FSH-751 smoke detector has been designed to maximize the amount of time before maintenance is required. The detector utilizes a replaceable filter that may become clogged over time. The detector monitors itself to insure that the filter has not become clogged. Because environmental conditions can vary significantly, the amount of time before maintenance could vary significantly as well. To fully understand the maintenance requirements of the FSH-751 in its installed location, it is recommended that the following test program be conducted.

1. Install the FSH-751 detector in the desired location.
2. Connect the detector to the fire alarm control panel.
3. Maintain a record for at least 90 days of any maintenance performed on or required by the detector.
4. At the end of the test period, use the record to develop a schedule maintenance. The FSH-751 should be serviced at regular intervals to ensure that the fire alarm system provides continuous protection.

Replacing the Filter

IMPORTANT:

When the filter becomes too clogged to draw adequate air into the unit, power is automatically cut from the detector, sending a trouble signal to the fire control panel. After 5 minutes, power is restored to the detector for 72 hours. After 72 hours, power is cut again and the detector will remain off-line until the filter is replaced.

When testing is complete, restore the system to normal operation and notify the proper authorities that the system is back in operation.

Cleaning

The unique design of the FSH-751 eliminates the need for typical detector cleaning. The only maintenance necessary is replacing the filter, which is signaled by a trouble condition at the panel (see below).

The FSH-751 smoke detector has been designed to maximize the amount of time before maintenance is required. The detector utilizes a replaceable filter that may become clogged over time. The detector monitors itself to insure that the filter has not become clogged. Because environmental conditions can vary significantly, the amount of time before maintenance could vary significantly as well. To fully understand the maintenance requirements of the FSH-751 in its installed location, it is recommended that the following test program be conducted.

1. Install the FSH-751 detector in the desired location.
2. Connect the detector to the fire alarm control panel.
3. Maintain a record for at least 90 days of any maintenance performed on or required by the detector.
4. At the end of the test period, use the record to develop a schedule maintenance. The FSH-751 should be serviced at regular intervals to ensure that the fire alarm system provides continuous protection.

Replacing the Filter

IMPORTANT:

When the filter becomes too clogged to draw adequate air into the unit, power is automatically cut from the detector, sending a trouble signal to the fire control panel. After 5 minutes, power is restored to the detector for 72 hours. After 72 hours, power is cut again and the detector will remain off-line until the filter is replaced.

Note: The unit has two filters. The replaceable filter is inside the cover. A permanent filter is mounted to the unit.

Cleaning

The unique design of the FSH-751 eliminates the need for typical detector cleaning. The only maintenance necessary is replacing the filter, which is signaled by a trouble condition at the panel (see below).

The FSH-751 smoke detector has been designed to maximize the amount of time before maintenance is required. The detector utilizes a replaceable filter that may become clogged over time. The detector monitors itself to insure that the filter has not become clogged. Because environmental conditions can vary significantly, the amount of time before maintenance could vary significantly as well. To fully understand the maintenance requirements of the FSH-751 in its installed location, it is recommended that the following test program be conducted.

1. Install the FSH-751 detector in the desired location.
2. Connect the detector to the fire alarm control panel.
3. Maintain a record for at least 90 days of any maintenance performed on or required by the detector.
4. At the end of the test period, use the record to develop a schedule maintenance. The FSH-751 should be serviced at regular intervals to ensure that the fire alarm system provides continuous protection.

Replacing the Filter

IMPORTANT:

When the filter becomes too clogged to draw adequate air into the unit, power is automatically cut from the detector, sending a trouble signal to the fire control panel. After 5 minutes, power is restored to the detector for 72 hours. After 72 hours, power is cut again and the detector will remain off-line until the filter is replaced.

Note: The unit has two filters. The replaceable filter is inside the cover. A permanent filter is mounted to the unit.