1. Grasp the Filtrex 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 Filtrex 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 Filtrex into Base

1. Align the detector at a right angle to the base, with the five wires and connector 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: Filtrex will only operate with 14507371-008/B524FTXE Mounting Base.

SPECIAL NOTE REGARDING SMOKE DETECTOR GUARDS

Smoke detectors are not to be used with detector guards unless the combination has been evaluated and found suitable for that purpose.

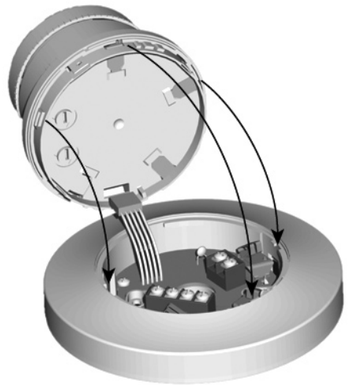
CE

0845-CPD.232.1427

SYSTEM SENSOR
3825 OHIO AVENUE, ST. CHARLES
IL, 60174 8021 U.S.A.

EN54-7
Model TC844A1015
Filtrex Point Optical Smoke Sensor for Harsh Areas

Figure 5: Installing Filtrex detector into base:



Please refer to insert for the Limitations of Fire Alarm Systems

FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

Honeywell

I56-1982-004R

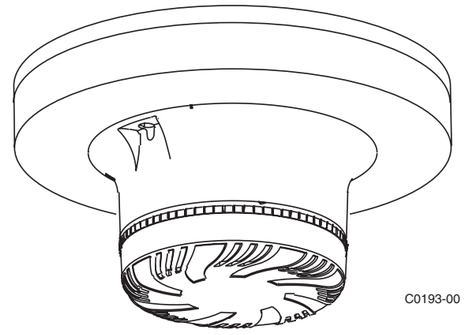
Model TC844A1015 Filtrex Intelligent Photoelectronic Sensor with FlashScan Technology

Installation Instructions

Before installing sensors, please thoroughly read the Guide for Proper Use of System Smoke Detectors, which provides detailed information on sensor spacing, placement, zoning, and special applications. Copies of this guide are available from Honeywell.

NOTICE: This manual should be left with the owner/user of this equipment.

IMPORTANT: This sensor must be tested and maintained regularly following NFPA 72 requirements. It should be cleaned at least once a year.



C0193-00

GENERAL DESCRIPTION

Filtrex® 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. FlashScan Technology is a new communication protocol that greatly enhances the speed of communication between analog intelligent devices. Rotary-decade switches are provided for setting the sensor's address. Two LEDs on the sensor are controlled by the panel to indicate sensor status.

The Filtrex 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. Filtrex provides a protective enclosure for a photoelectric smoke detector chamber and allows smoke detection in areas where heat detection was the only practical alternative for fire sensing.

Filtrex requires compatible addressable communications to function properly. Connect this detector to listed-compatible control panels only.

SPECIFICATIONS

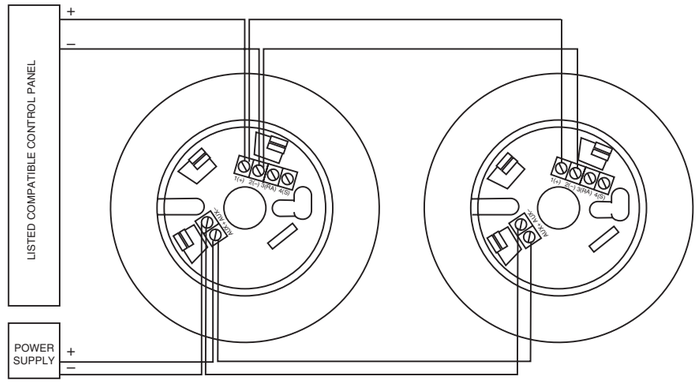
Operating Voltage Range:	15 to 32 VDC
Detector Current:	230 µA @ 24 VDC (without communication)
	285 µA @ 24 VDC (one communication every 5 sec. with LED enabled)
Auxiliary Power Supply Voltage:	15 to 30 VDC filtered; Ripple voltage may not drop below 15 volts.
Auxiliary Power Supply Current	
Peak:	123 mA max.
Average:	27 mA max.
Operating Humidity Range:	10% to 93% Relative Humidity, non-condensing
Operating Temperature Range:	0° to 50°C (32° to 122°F)
Height:	2.8 inches (43 mm)
Diameter:	6.1 inches (155 mm) installed in 14507371-008
	4.0 inches (102 mm) installed in B524FTXE
Weight:	7.3 oz. (207 g)
Mounting Base:	Requires 14507371-008 (U.S.), B524FTXE (Europe)

⚠WARNING

Filtrex is not designed to operate in explosive environments.

Honeywell, 1985 Douglas Drive North, Golden Valley, MN 55422

Figure 1. Wiring diagram:



CAUTION: Do not loop wire under terminal 1 or 2. Break wire run to provide supervision of connections.

C0121-00

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.

NOTE: Although the TC844A1015 is an intelligent sensor, a separate pair of wires is required for power. This power must be provided from a listed fire alarm power supply.

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, please see Figure 2.
   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 Filtrex 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 FILTREX INTO BASE on page 4 for specific directions.
4. After all detectors have been installed, turn on the detector power supply, then apply power to the control unit and activate the communication line.
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.

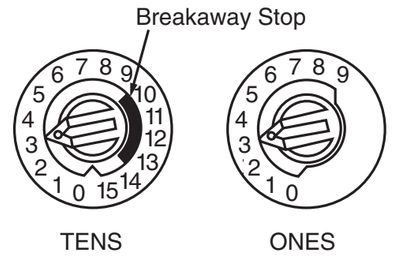
All detectors must be tested after installation and periodically thereafter. Testing methods must satisfy the Authority Having Jurisdiction (AHJ). Detectors offer maximum performance when tested and maintained in compliance with NFPA 72.

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 controlled by the panel to indicate sensor status. Coded signals, 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.

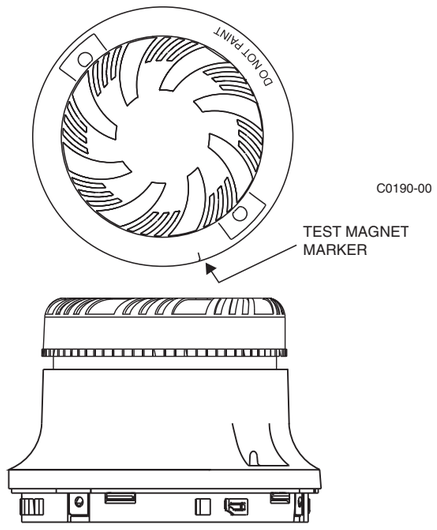
B. Smoke Entry: Aerosol Generator
Aerosol generators for smoke entry testing are available from a number of third party manufacturers (e.g., Gemini Scientific). Following the manufacturer's instructions, apply aerosol until the panel alarms.

Figure 2. Rotary decade address switches:



C0162-00

Figure 3. Test magnet position:



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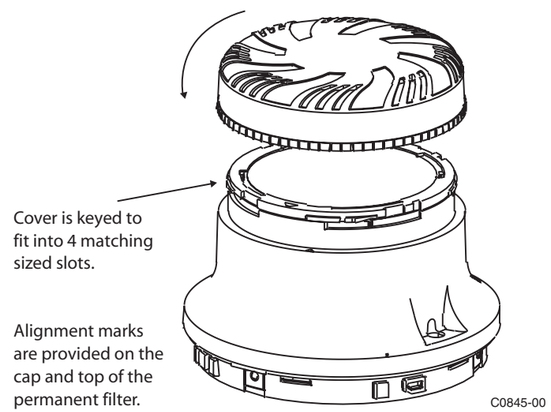
C0191-00

Figure 4. Replacing the filter cover:



C0845-00

A detector that fails any of these tests should be retested. If the detector still fails any test, have its filter replaced (see instructions below) and retested. Finally, if the detector continues to fail after replacing the filter, it must be returned for repair or replacement.

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

TESTING

The unique design of Filtrex 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).

Filtrex has been designed to maximize the amount of time before maintenance is required. Filtrex utilizes a replaceable filter that may become clogged over time. Filtrex 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 maintenance requirements of Filtrex in its installed location, it is recommended that the following test program be conducted.

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

REPLACING THE FILTER

IMPORTANT: When the filter becomes too clogged to draw adequate air into Filtrex, 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.