

INSTALLATION AND MAINTENANCE INSTRUCTIONS FOR MODEL TC807E1011 ANALOGUE ADDRESSABLE IONISATION SENSORS

Before installing the sensor, please thoroughly read System Sensor's Guide to Intelligent Fire Systems. This manual includes detailed information on sensor spacing, placement, zoning, and special applications. Copies of this manual are available from Honeywell.

GENERAL DESCRIPTION

Model TC807E1011 analogue addressable ionisation sensors use state-of-the-art sensing chambers coupled with high standards of reliability to provide early warning of developing fires. These sensors are designed for open area protection and must only be connected to control panels that use a compatible proprietary analogue addressable communication protocol for monitoring and control.

Two LEDs on each sensor light to provide a local 360° visible sensor indication. The LEDs can be latched on by code command from the control panel for an alarm indication. The LEDs can also be unlatched to the normal condition by code command. Remote LED indicator capability is available as an optional accessory wired to the standard base terminals.

SPECIFICATIONS

Operating Voltage Range	15 to 32 VDC
Max. Standby Current (No communications)	200 µA @ 24 VDC (no communication)
Max. Average Standby Current	300 µA (one communication every 5 sec. with LED blink enabled)
Max. Alarm Current (LED on)	6.5 mA @ 24 VDC
Operating Humidity Range:	10% to 93% Relative Humidity, non-condensing
Operating Temperature Range:	-10°C to 60°C
NOTE: Do not install in locations where normal ambient temperature range extends beyond 0°C to 50°C	
Height:	43 mm installed in B501 Base
Diameter:	102 mm installed in B501 Base
Weight:	111 g

This detector has been independently tested and certified to EN54 part 7: 2000.

WIRING GUIDE

Refer to the installation instructions supplied with the plug-in sensor bases for wiring details. All bases are provided with terminals for power and an optional Remote Indicator.

NOTE: All wiring must conform to applicable local and national codes and regulations.

NOTE: Verify that all sensor bases are installed and that polarity of the wiring is correct at each base.

WARNING

Disconnect loop power before installing sensors.

SENSOR INSTALLATION

1. Set the sensor address (see Figure 3) by using a flat blade screwdriver to turn the two rotary switches, selecting the desired number between 01 and 99. Record the address on the label attached to the base.
2. Insert the sensor into the base and rotate it clockwise with gentle pressure until it drops into place.
3. Continue to rotate the sensor until it locks into the base.
4. After all sensors have been installed, apply power to the system.
5. Test the sensor as described under **TESTING**.
6. Reset the sensor by communication command from the panel.

Tamper-Resistance

Model TC807E1011 includes a feature that, when activated, prevents removal of the sensor without the use of tools. Refer to the installation instructions for details of how to use this feature.

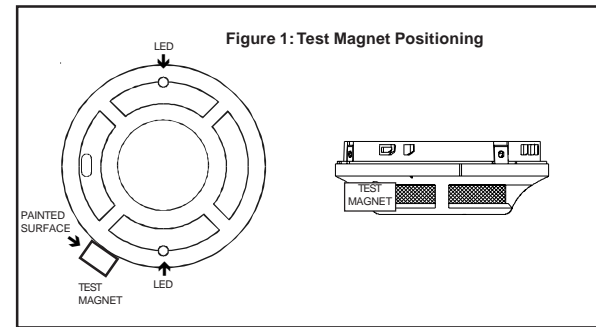
CAUTION

Dust covers help to protect units during shipment and when first installed. They are not intended to provide complete protection against contamination therefore sensors should be removed before beginning construction, major re-decoration or other dust producing activity. Dust covers must be removed before the system can be made operational.

MAINTENANCE

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

1. Remove the sensor to be cleaned from the system.
2. Remove the sensor cover. (Note: Regulations in some countries may prohibit this operation on ionisation type sensors). Use a small flat blade screwdriver to gently release each of the four cover removal tabs that hold the cover in place (see Figure 2).
3. Vacuum the outside of the screen carefully without removing it.
4. Remove the sensor screen. Pull the screen straight away from the sensing chamber until it snaps out of place. Replacement screens are available.
5. Use a vacuum cleaner and/or clean, compressed air to remove dust and debris from the sensing chamber.
6. Reinstall or replace the sensing chamber screen by sliding the edge without the tabs over the sensing chamber. Make sure that one of the screen contacts engages with the circuit board contact.



7. Reinstall the sensor cover. Use the test module socket and LEDs to align the cover with the sensor. Snap the cover into place.
8. When all sensors have been cleaned, restore power to the loop and test the sensor(s) as described under **TESTING**.

TESTING

Sensors must be tested after installation and following periodic maintenance. However, before testing, notify the proper authorities that the smoke detector system is undergoing maintenance and the system will be temporarily out of service. Disable the zone or system undergoing maintenance to prevent unwanted alarms.

In addition, check to ensure that the LEDs blink (if this feature is operational under software command). If they do not, power has been lost to the sensor (check the wiring), if it is defective (return it for repair).

Test the sensors as follows:

Test Magnet (Model M02-24 - optional)

1. Test the sensor by positioning the test magnet against the sensor body approximately 2cm from LED1 in the direction of the metering socket, as shown in Figure 1.
2. Both LEDs should latch on within 30 seconds, indicating an alarm and activating the panel.

After completion of all tests notify the proper authorities that the system is operational.

Sensors that fail these tests should be cleaned as described under **MAINTENANCE** and retested. If the sensors still fail these tests they should be returned for repair.

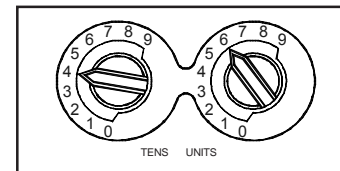
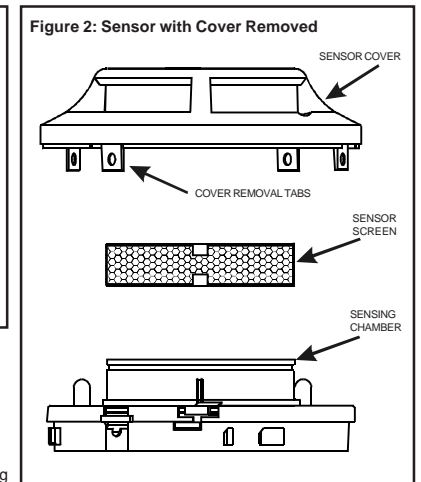


Figure 3: Rotary Decade Address Switches

WARNING

LIMITATIONS OF SMOKE DETECTORS

This smoke detector is designed to activate and initiate emergency action, but will do so only when used in conjunction with other equipment.

Smoke detectors will not work without power.

Smoke detectors will not sense fires which start where smoke does not reach the detectors. Smoke from fires in chimneys, in walls, on roofs, or on the other side of closed doors may not reach the smoke detector and trigger the unit.

A detector may not detect a fire developing on another level of a building. For this reason, detectors should be located on every level of a building.

Smoke detectors also have sensing limitations. Ionisation detectors offer broad range fire-sensing capability, but they are better at detecting fast, flaming fires than slow, smouldering fires. Photo-electronic detectors sense smouldering fires better than flaming fires. Because fires develop in different ways, and are often unpredictable in their growth, neither type of detector is necessarily better and a given detector may not always provide warning of a fire. In general, detectors can not be expected to provide warnings for fires resulting from inadequate fire protection practices, violent explosions, escaping gas, improper storage of flammable liquids like cleaning solvents, other safety hazards, or arson. Smoke detectors used in high air velocity conditions may fail to alarm due to dilution of smoke densities created by such frequent and rapid air exchanges. Additionally, high air velocity environments may create increased dust contamination, demanding more frequent maintenance.

Smoke detectors cannot last forever. Smoke detectors contain electronic parts. Even though detectors are made to last over 10 years, any of these parts could fail at any time. Therefore, test your smoke detector system at least semi-annually. Clean and take care of your smoke detectors regularly. Taking care of the fire detection system you have installed will significantly reduce your liability risks.