NOTIFIER®

Division of Pittway Corporation

INSTALLATION AND MAINTENANCE INSTRUCTIONS FOR INTELLIGENT PLUG-IN MODELS FDX-551R AND FDX-551RA RATE-OF-RISE TEMPERATURE SENSORS WITH FIXED TEMPERATURE ALARM

Before installing sensors, please thoroughly read the system wiring and installation manual, which provides detailed information on sensor spacing, placement, zoning, and special applications. Copies of these manuals are available from Notifier®. NFPA standard 72 should also be referenced. For installation in Canada, use Model FDX-551RA and refer to CAN/ULC-S524 and CEC Part 1, Sec. 32.

GENERAL DESCRIPTION

Models FDX-551R and FDX-551RA are intelligent sensors that use a state-of-the-art dual-thermistor sensing circuit for fast response. These sensors are designed to provide open area protection with 50 foot spacing capability and are intended for use with compatible control panels only.

Two LEDs on each sensor light to provide 360° visibility of the sensor indication. The LEDs can be latched on by code command from the panel for an alarm indication. The LEDs can also be unlatched to the normal condition by code command. Remote LED annunciator capability is available as an optional accessory (Part No. RA400Z).

SPECIFICATIONS

Diameter:	6.1 inches (155 mm) installed in BX-501B
	4.1 inches (104 mm) installed in B501
Height:	1.6 inches (41 mm)
Weight:	5 ounces (150 gm)
Installation Temperatures:	32° to 100°F (0° to 38°C)
Operating Humidity Range:	10% to 93% Relative Humidity Noncondensing
Mounting:	BX-501 flanged base
	B501 flangeless base
	B501 with RMK400 recessed mounting kit
Voltage Range:	15 to 28 Volts DC Peak
Standby Current:	150 μA @ 24 VDC
LED Current:	7 mA @ 24 VDC
Fixed Temperature Rating	135°F (57°F)
Rate-of-Rise Detection	Greater than 15°F per minute

WIRING GUIDE

Refer to the installation instructions for the plug-in base being used. Bases are equipped with screw terminals for power, ground, and remote annunciator connections. See Figure 1. Bases BX-501 (shown in Figure 1) and B501 are electrically identical.

WARNING

Some versions of Notifier® control panels have an adjustable sensitivity feature. Correct operation of the FDX-551R and FDX-551RA is achieved only on the MEDIUM sensitivity setting. Settings of HIGH or LOW may cause an alarm earlier or later than desired.

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

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

WARNING: Disconnect the power from the loop before installing sensors.

1. Install Sensors:
   a. Verify that the sensor type matches the type written on the label in the base.
   b. Set the sensor to the desired address and record that address on the label on the base.
   c. Place the sensor into the sensor base.
   d. Turn the sensor clockwise until it drops into place.
   e. Continue turning the sensor clockwise to lock it in place.

2. Tamper Resistance
This detector includes a tamper-resistant feature that prevents removal of the detector without the use of a tool. To make the detector tamper-resistant, break off the smaller tab at the scribed line on the tamper resistant tab, on the detector mounting bracket, and install the detector. To remove the detector from the bracket once it has been made tamper resistant, use a small screwdriver to depress the tamper-resistant tab located in the slot on the mounting bracket and turn the detector counterclockwise for removal.

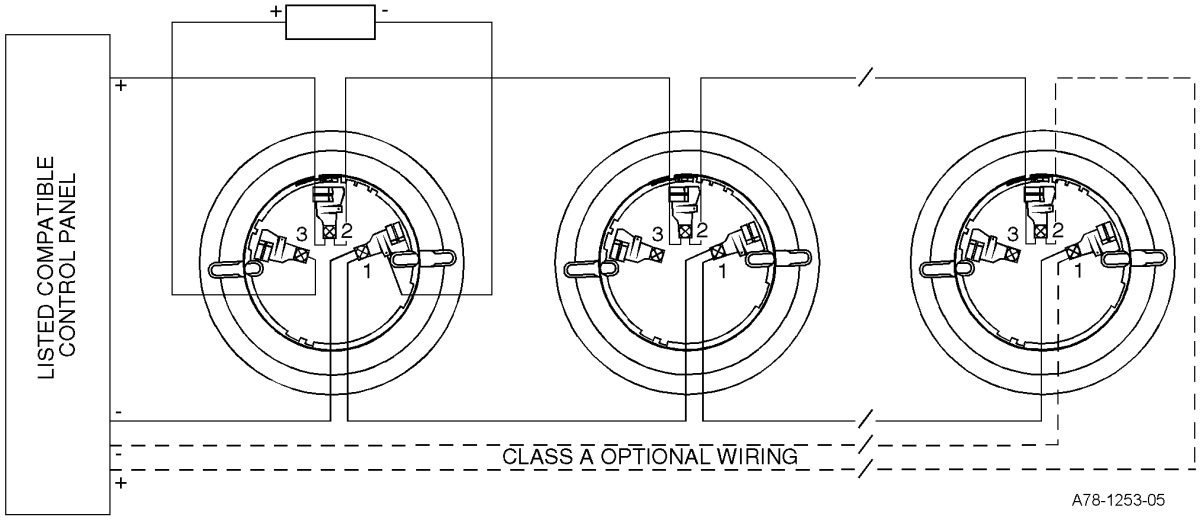

Figure 1

3. After all sensors have been installed, apply power to the control unit.

4. Test the sensor by placing a small magnet against the sensor plastic directly opposite the test meter socket (Figure 2). The alarm level should be recognized at the panel and the LED controlled by communication command from the panel.

5. The reset of the sensor LED is controlled by communication command from the panel.

TESTING SENSITIVITY

Sensors must be tested after installation and periodic maintenance. The sensitivity may be tested in the following ways.

A. Test Magnet (Model No. M02-04 - optional)
   1. Place the optional test magnet against the cover opposite the test module socket, as shown in Figure 2, to activate the test feature.
   2. The LEDs should latch on within 10 seconds, indicating alarm and annunciating the panel.
   3. Reset the detector at the system control panel.

B. Test sensitivity from the control panel.

C. Direct Heat Method (Hair dryer of 1000 – 1500 watts)

1. From the side of the detector, direct the heat toward the sensor. Hold the heat source about 6 inches (15 cm) away to prevent damage to the cover during testing.
2. The LEDs on the detector should light when the temperature at the detector reaches 135°F (57°C). If the LEDs fail to light, check the power to the detector and the wiring in the detector base.
3. Reset the detector at the system control panel.

Detectors that fail these tests should be cleaned as described in **MAINTENANCE** and retested. If the detectors still fail these tests they should be returned for repair.

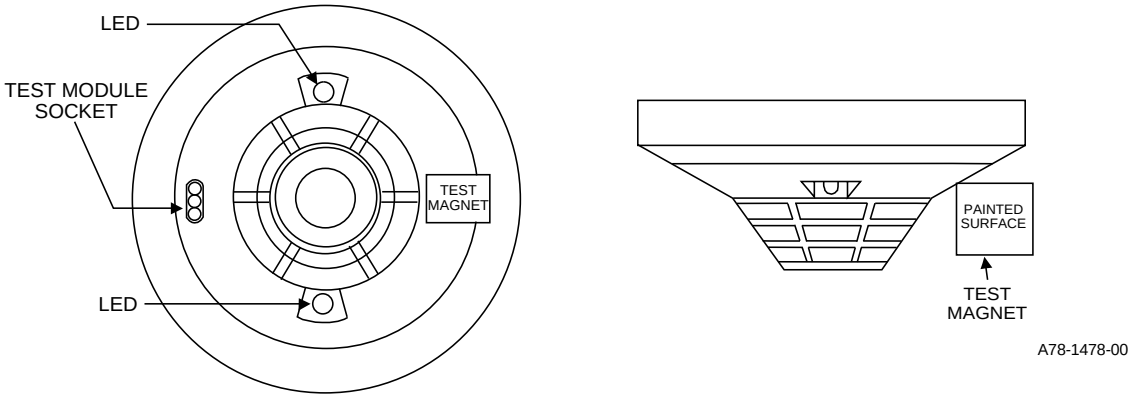

Figure 2. Views showing position of test magnet.

MAINTENANCE

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

It is recommended that the sensor be removed from its mounting base for easier cleaning and that sensors be cleaned at least once a year. Use a vacuum cleaner to remove dust from the sensing chamber. See Figure 3.

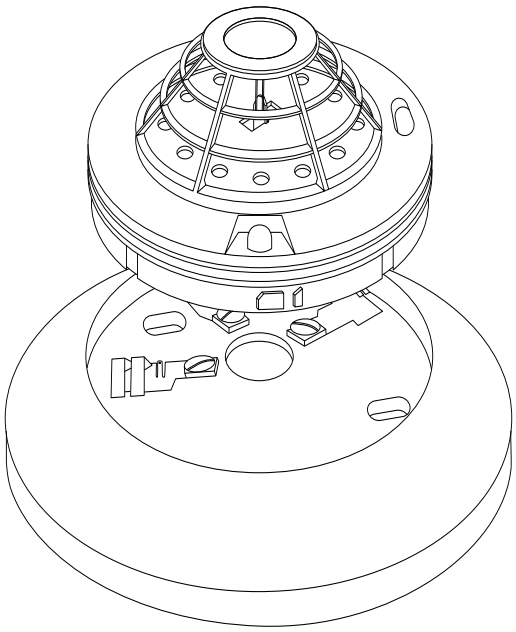

Figure 3

WARNING
THE LIMITATIONS OF PROPERTY PROTECTION HEAT SENSORS

Heat sensors are designed to protect property, not life. They do not provide early warning of fire and cannot detect smoke, gas, combustion particles, or flame. They alarm when temperatures at the heat sensor reach 57°C (135°F) or when a change in temperature of more than 15°F per minute occurs. Given the rapid growth of certain types of fires, heat sensors cannot be expected to provide adequate warning of fires resulting from smoking in bed, inadequate fire protection practices, violent explosions, escaping gas, improper storage of flammable liquids like cleaning solvents, other safety hazards, or arson.

Heat sensors do not always detect fires because the fire may be a slow smoldering low heat type (producing smoke) or because they may not be near where the fire occurs or because the heat of the fire may bypass them. Heat sensors will not detect smoke, gas, flames, or combustion particles.

Heat sensors are components in professionally installed fire alarm systems. **They will not function if they have been improperly wired into the fire alarm system or if power to them is cut off for any reason.**

Heat sensors cannot last forever. They should be tested and maintained following the instructions in this manual. To be safe, they should be replaced after they have been installed for 15 years.

Refer to NFPA standard 72, National Fire Alarm Code, for application.