

# Intelligent Plug-In Model 5251RP Rate-of-Rise Temperature Sensor with Fixed Temperature Alarm



A Division of Pittway  
3825 Ohio Avenue, St. Charles, Illinois 60174  
1-800-SENSOR2, FAX: 630-377-6495

Before installing sensors, refer to NFPA 72, and 101 (Life Safety Code) for information on sensor spacing, placement, zoning, and special applications.

## GENERAL DESCRIPTION

Model 5251RP is an intelligent sensor that utilizes a state-of-the-art thermistor sensing circuit for fast response. This sensor is designed to provide open area protection with 50 foot spacing capability and is 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 B210LP 4.1 inches (104 mm) installed in B501
Height:	2.0 inches (51 mm)
Weight:	5 ounces (150 gm)
Installation Temperatures:	-4°F to 100°F (-20°C to 38°C)
Operating Humidity Range:	10% to 93% Relative Humidity Non-condensing
Mounting:	B210LP flanged base B501 flangeless base B501 with RMK400 recessed mounting kit
Voltage Range:	15 to 32 Volts DC Peak
Standby Current:	300 $\mu$ A @ 24 VDC (one communication every 5 seconds with LED blink enabled)
LED Current:	6.5 mA @ 24 VDC
Fixed Temperature Rating:	135°F (57°C)
Rate-of-Rise Detection:	Responds to greater than 15°F/min.

## WIRING GUIDE

Refer to the installation instructions for the particular plug-in base being used: 1) for the B210LP base (D250-01-00); 2) for the B501 base (D550-02-00); 3) for the RMK400 used with the B501 base (D450-07-00). Bases are provided with screw terminals for power, ground, and remote annunciator connections. See Figure 1.

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 a desired address and then write the 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.

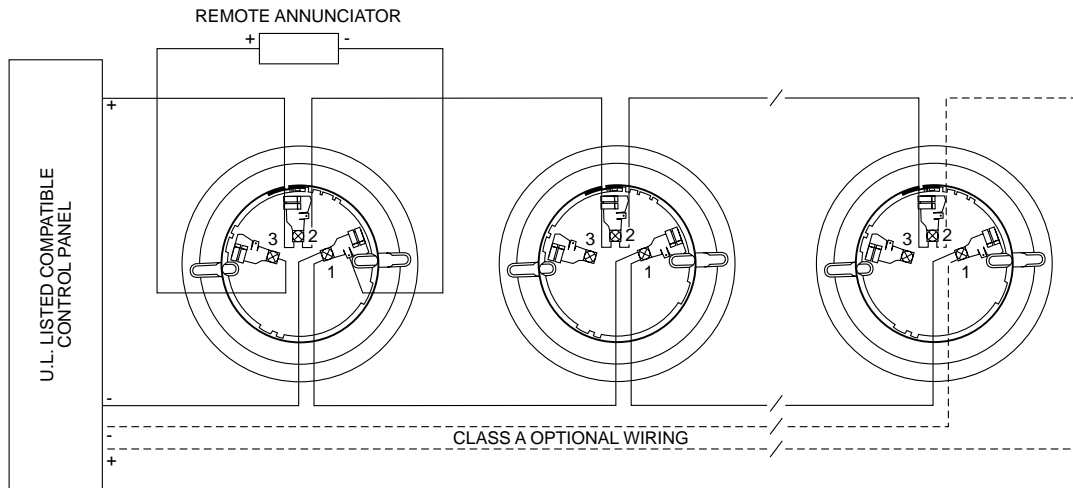


Figure 1

A78-1253-01

2. Tamper Resistance:

The sensor bases have a tamper-resistant capability. When this capability is enabled, sensors cannot be removed from the base without the use of a small screwdriver or other similar tool. Refer to the sensor base installation instruction manual for details in using this capability.

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, as shown in Figure 2. The alarm level should be recognized in 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

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

A. Test Magnet (Model No. M02-04)

1. Place the magnet against the cover in the magnet test area 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.

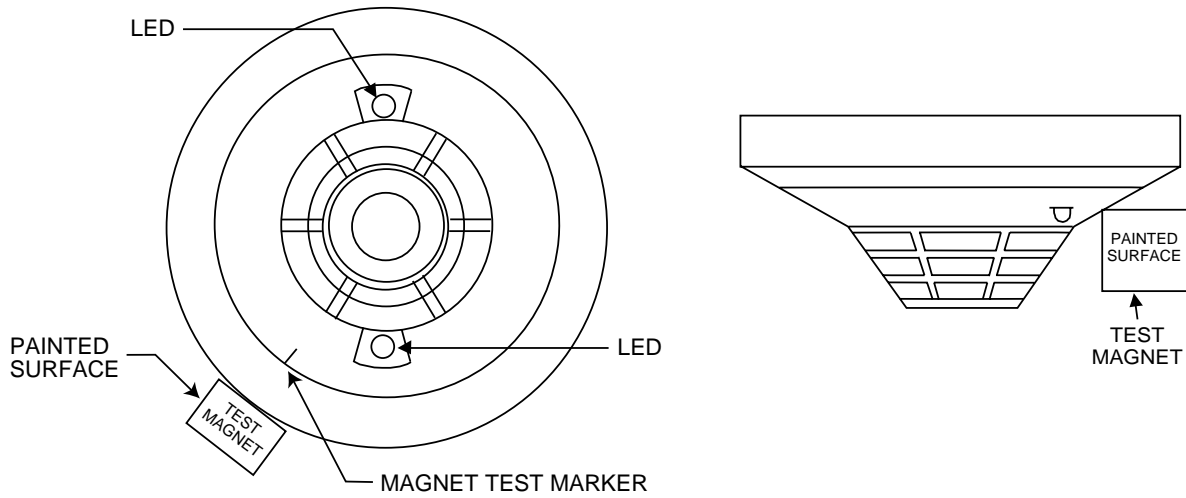
B. Test sensitivity from the control panel.

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 (15cm) 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 under MAINTENANCE and retested. If the detectors still fail these tests they should be returned for repair.



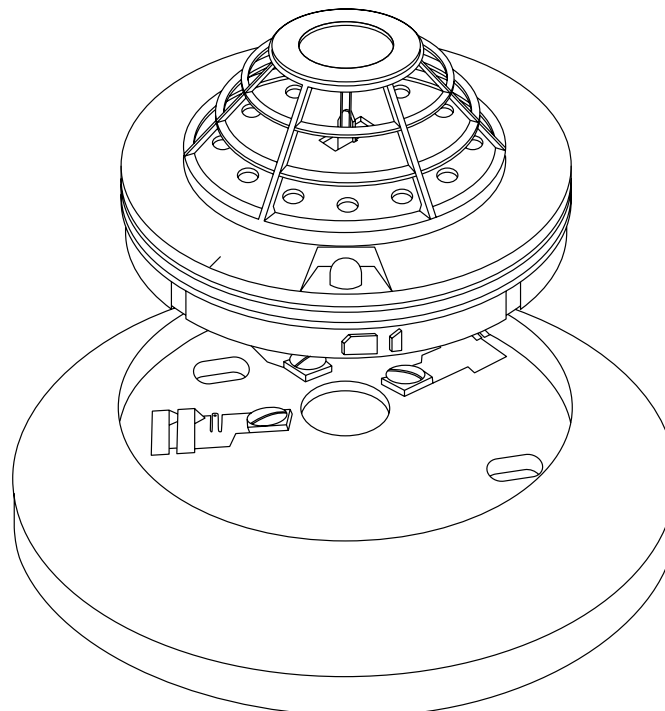
A78-1478-05

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 temporarily be 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.



A78-1944-01

Figure 3

## Please refer to insert for the Limitations of Fire Alarm Systems

### Three-Year Limited Warranty

System Sensor warrants its enclosed heat detector to be free from defects in materials and workmanship under normal use and service for a period of three years from date of manufacture. System Sensor makes no other express warranty for this heat detector. No agent, representative, dealer, or employee of the Company has the authority to increase or alter the obligations or limitations of this Warranty. The Company's obligation of this Warranty shall be limited to the repair or replacement of any part of the heat detector which is found to be defective in materials or workmanship under normal use and service during the three year period commencing with the date of manufacture. After phoning System Sensor's toll free number 800-SENSOR2 (736-7672) for a Return Authorization number, send defective units postage prepaid to: System Sensor, Repair Depart-

ment, RA # \_\_\_\_\_, 3825 Ohio Avenue, St. Charles, IL 60174. Please include a note describing the malfunction and suspected cause of failure. The Company shall not be obligated to repair or replace units which are found to be defective because of damage, unreasonable use, modifications, or alterations occurring after the date of manufacture. In no case shall the Company be liable for any consequential or incidental damages for breach of this or any other Warranty, expressed or implied whatsoever, even if the loss or damage is caused by the Company's negligence or fault. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

### 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.