SIEMENS

Installation Instructions
Model HI121 Thermal Detector

Figure 1 HI121 Thermal Detector

These instructions are written in accordance with the installation guidelines of NFPA 72, National Fire Alarm Code, and CAN/ULC-S524, The Installation of Fire Alarm Systems.

CAUTION
Detection Device Storage

DO NOT install this detection device until all construction is completed.

DO NOT store this detection device where it can be contaminated by dirt, dust, or humidity.

DETECTOR PLACEMENT

Locate the HI121 on the ceiling, at least 4 inches from the side walls. For an ideal, smooth ceiling condition, place the detectors at a maximum center spacing of 50 feet (2500 square feet), 25 feet from side walls or room partitions. For FM Approved installations this detector has an RTI rating of QUICK, which allows a maximum center spacing of 20 feet (400 square feet). Locate detectors 10 feet from side walls or room partitions.

Actual job conditions and sound engineering judgment should be used to determine detector spacing. Consider environmental factors including ambient temperature fluctuation, and the nature of the fire hazard. Room or area configuration and ceiling type (sloped or flat, smooth or beamed) also dictates placement.

Should questions arise regarding detector placement, follow the drawings provided and/or approved by Siemens Industry, Inc. or by its authorized distributors. This is extremely important! The detector placements shown on these drawings were chosen after a careful evaluation of the area being protected. Siemens Industry, Inc.'s extensive experience in design of the system assures the best detector placement by following these drawings.

SPECIFICATIONS

Environmental

Operating Temperature: 32°F (0°C) to 100°F (38°C)
Humidity: Up to 95% RH, non condensing
Air Pressure: No effect.
Alarm Temp: 135°F (57°C)

Electrical

Voltage:	16-27 VDC
Ripple:	3V peak-to-peak
Supervisory Current:	100µA max
Alarm Current:	30-50mA
Start-up Time:	30 seconds max

DETECTOR WIRING

The HI121 should be connected as shown in Figure 2 using the separate mounting base, Model DB-11. Follow the control panel wiring connection drawing installed on the inside face of each control panel cover. See DB-11 instruction, P/N 315-094193, for base mounting. Duplicate wiring information is also in the Installation, Operation, and Maintenance Manual provided with every control panel. **Note any limitations on the number of detectors and restrictions on the use of remote devices permitted for each circuit.**

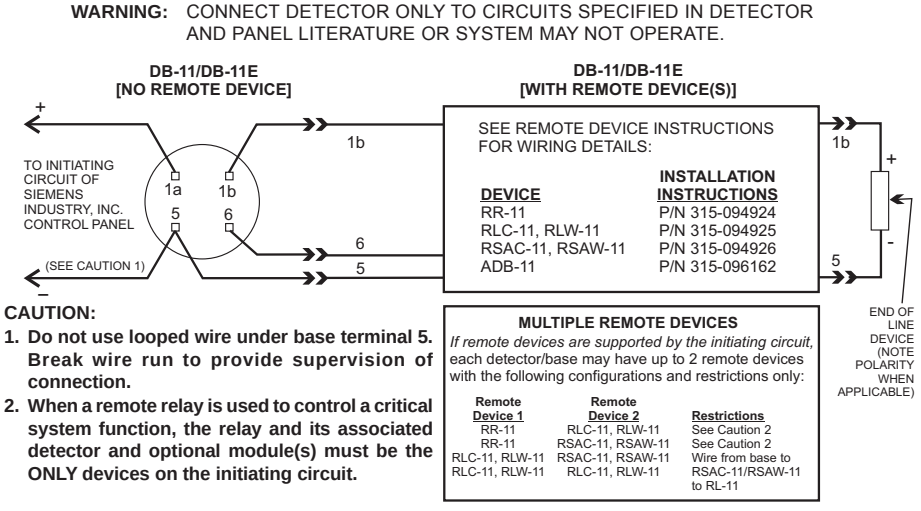

Figure 2 Installation and Wiring Diagram for HI121 Conventional Detector

Siemens Industry, Inc.
Building Technologies Division

INSTALLATION / REMOVAL OF DETECTOR

TO INSTALL:

- Rotate detector counterclockwise while gently pressing on it until the detector drops fully into base.
- Then rotate the detector clockwise until it stops and locks in place. Insert optional locking screw (Order Model LK-11).

TO REMOVE:

Loosen locking screw, if installed. Then rotate the detector counterclockwise until stop is reached. Pull detector out of base.

LED INDICATOR OPERATION

The HI121 contains an LED indicator capable of flashing either one of three distinct colors: green, yellow, or red. The microprocessor-based detector checks that its critical electronics are operating.

Based on the results of these checks, the LED indicator flashes as follows:

Flash Color	Condition	Flash Interval (Seconds)
Green	Normal supervisory operation.	10
Yellow	Detector is in trouble and needs replacement.	5
Red	Alarm	2½
No Flashes	Detector is not powered or replacement is needed.	-

TESTING AND MAINTENANCE

TEST

Testing requires no test equipment. A green flash of the detector LED about every 10 seconds indicates that the HI121 is operating properly. The minimum test schedule may be found in the current edition of NFPA 72, inspection, testing and maintenance chapter for installations in the U.S. and CAN/ULC-S537, The Verification of Fire Alarm Systems, for installations in Canada.

Figure 3 HI121 with TM121Test Magnet

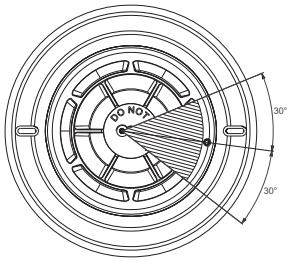

Figure 4 TM121 Test Magnet Placement

Detector and control panel functionality can also be tested using the TM121 test magnet as shown in Figure 3. Place the magnet in the specific area at the bottom of the detector that is shown in Figure 4 for at least 5 seconds with the colored side towards the centered LED. The detector will send an alarm to the panel.

WARNING: Testing with the magnet only tests the circuit, it does not test the detector's sensing ability.

WARNING: The TM121 test magnet is a strong magnet that can be harmful to pacemaker wearers and to those with medical implants. Keep the magnet away from magnetic media such as credit cards and memory disks/ chips.

CAUTION: UNDER NO CIRCUMSTANCES IS THE DETECTOR HEAD TO BE DISASSEMBLED. NO REPAIRS SHOULD BE ATTEMPTED.

DO NOT PAINT

The detector/base plastic is marked **DO NOT PAINT.** This is intended to prohibit painting during routine maintenance of the occupancy which can affect proper operation of the detector.

COMPATIBLE CONTROL EQUIPMENT

Equipment Compatibility Identifier	Installation/Wiring Instructions
SZM (FS-250C System)	P/N 315-034850C-4
SXL-EX	P/N 315-095997-8

The detector model number is the compatibility identifier.

Siemens Industry, Inc.
Building Technologies Division
Florham Park, NJ

Siemens Canada Limited
Building Technologies Division
2 Kenview Boulevard
Brampton, Ontario L6T 5E4 Canada