

SIEMENS

Installation/Wiring Instructions Models PE-11/PE-11T

These instructions are written in accordance with the installation guidelines of NFPA No. 72, National Fire Alarm Code, and CAN/ULC-S524, The Installation of Fire Alarm Systems.

DETECTOR PLACEMENT

For a clear air, 0 to 4000 ft/min velocity application, use 30 foot center spacing (900 sq ft) from NFPA Standard 72 Chapter 5 and CAN/ULC-S524 as a starting point for a detector installation layout. This spacing, however, is based on ideal conditions – smooth ceiling, no air movement, and no physical obstructions. In some applications, considerably less area is protected adequately by each smoke detector. In all installations, place the detector on the ceiling, a minimum of 6 inches from a side wall, or on a wall, 6 inches from the ceiling.

Follow the drawings provided or approved by Siemens Industry, Inc. or by its authorized distributors. See NFPA 72, National Fire Alarm Code, Chapter 5 for additional guidance on special issues such as beamed construction and high stockpiling.

TO AVOID NUISANCE ALARMS:

DO NOT locate the PE-11/PE-11T detector where excessive smoke concentrations exist under normal conditions, or in areas of prolonged high relative humidity where condensation occurs.

DO NOT locate the PE-11/PE-11T detector next to an oil burner, kitchen, or garage where exhaust fumes can trigger an alarm. Other causes of false alarms are dust accumulation, heavy concentrations of steam, heavy pipe or cigar smoke, and certain aerosol sprays.

AIR CURRENTS

Before a detector can sense a fire, the products of combustion or smoke must travel from the fire to the detector. Since their travel is especially influenced by air currents, consider the movement of air in the design of the system.

While combustion products tend to rise, drafts from hallways, air diffusers, fans, etc., may help or hinder the travel of combustion products to the detector. When positioning a detector at a particular location, give consideration to windows and doors, both open and closed, and to influencing air movement. Never install a detector in the air stream of a room air supply diffuser. It is better to position a detector closer to an air return.

SPECIFICATIONS

Environmental

Temperature: 32°F (0°C) to 100°F (38°C).
Humidity: Up to 93% RH, non condensing
Air Pressure: No effect.
Thermal Alarm Temp.: 135°F (57°C)

Electrical

Voltage: 16-27 VDC
Ripple: 3V peak-to-peak
Supervisory Current: 110µA max
Alarm Current: 33-50mA
Start-up Time: 50 seconds max

DETECTOR WIRING

The PE-11/PE-11T should be connected as shown in Figure 1 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.**

INSTALLATION / REMOVAL OF DETECTOR TO INSTALL:

- Align LED in detector with LED symbol on base and insert detector into base.
- Rotate detector counterclockwise while gently pressing on it until the detector drops fully into base.

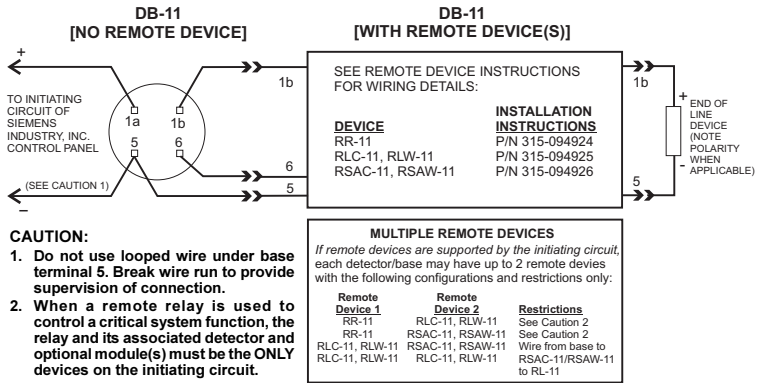


Figure 1 Installation And Wiring Diagram for PE-11/PE-11T Conventional Detector

- 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 counter clockwise until stop is reached.
- Pull detector out of base.

LED INDICATOR OPERATION

The PE-11/PE-11T contains an LED indicator capable of flashing either one of three distinct colors: green, yellow, or red. Every seven seconds, the microprocessor based detector checks the following:

- for smoke in its sensing chamber
- that its smoke sensitivity is within the range indicated on the nameplate label
- that its critical smoke sensing 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. Smoke sensitivity is within rated limits.	7
Yellow	Detector requires service (cleaning or repair) or is operating beyond its environmental specifications.	7-30
Red	Alarm	2½
No Flashes	Detector is not powered, or requires repair.	-

TESTING AND MAINTENANCE

To assure proper operation of the detector and control panel, it is required that both the Sensitivity test and the Functional test be conducted.

SENSITIVITY TEST

The PE-11/PE-11T monitors its smoke sensitivity automatically and requires no test equipment. A green flash of the detector LED about every seven seconds indicates that the smoke sensitivity is within its listed limits.

FUNCTIONAL TEST

To test the detector and control panel for functional operation, use **SIEMENS** Test Gas, P/N 315-282747. Follow the instructions on the gas canister label.

CLEANING PROCEDURE

(See Figure 2)

- Notify the proper personnel that the fire alarm system is being serviced.
- Remove the detector to be cleaned from its base. (See removal section.)
- Using a small blade screwdriver, remove the cover from the rest of the detector by releasing the 2 cover tabs located on the outside of the cover. Separate the foam screen from the cover.
- PE-11:** Remove the labyrinth from the sensing chamber by squeezing the labyrinth sides along the release axis and pulling out.

PE-11T: Carefully remove the labyrinth/thermal holder assembly being sure not to damage or disconnect the thermal wires.

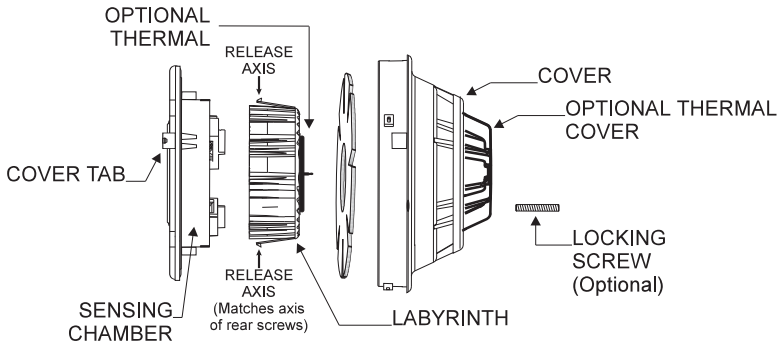


Figure 2 Disassembling of Photochamber

- Clean dust from the detector cover, foam screen, sensing chamber and labyrinth using a brush, or by blowing with compressed air.

CAUTION: Do not use a compressed air supply that may contain an oil residue.

WARNING: Do not remove or loosen the two screws on the rear of the detector, or calibration will be lost.

NOTE: The insect screen and labyrinth may be replaced with new parts, rather than be cleaned. Contact Siemens Industry, Inc.'s Product Service to order Detector Maintenance Kit, Model DMK-11.

NOTE: Do not disconnect the thermal wires from the detector.

- Reassemble the detector by reversing the steps used for disassembly, and reinstall in its base.
- Test the detector. (See Detector Testing section of this instruction.) Reset the control panel zone after each alarm.

NOTE: After applying or momentarily interrupting power to the detector, it is normal for it to take as long as 50 seconds for the LED to begin flashing to indicate its operating status.

- When all service has been completed, notify personnel (See Step 1) that system service has been completed.

CAUTION
NO FIELD REPAIRS OF THE DETECTORS SHOULD BE ATTEMPTED. THE DETECTORS ARE FACTORY REPAIRABLE ONLY.

COMPATIBLE CONTROL EQUIPMENT

Equipment Compatibility Identifier	Installation/Wiring Instructions
CP-2ER	P/N 315-093523-6
CP-35 (System 3)	P/N 315-084902-20
* CZM-1 (MXL, MXL-IQ)	P/N 315-090725-8
* CZM-1B6 (MXL, MXL-IQ)	P/N 315-095355-4
CZM-4 (MXL, MXL-IQ)	P/N 315-090726-8
PXL	P/N 315-094131-4
PZC-4D (PXL)	P/N 315-094164-2
PZE-4B (PXL)	P/N 315-094065-4
* SXL	P/N 315-092419-10
SXL-EX	P/N 315-095997-5
* SZE-4R (SXL)	P/N 315-092430-4
SZE-4X (SXL-EX)	P/N 315-096018-4
SZE-8AX (SXL-EX)	P/N 315-096022-4
ZU-35 (System 3)	P/N 315-083222-14

The detector model number is the compatibility identifier.

* Control equipment does not support remote accessories; e.g. lamps or relays.

Note: PE-11/11T is not for use with XL-3 ZNX modules.

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