SIEMENS

Cerberus Division

PE-11 and PE-11T

Photoelectric Smoke Detector

ENGINEER AND ARCHITECT SPECIFICATIONS

- Advanced Field Cleanable Chamber Design
- Self Diagnostic
- Multi-Color LED for Normal, Trouble or Alarm Indication
- Low-Profile Design
- Easy Twist-In Base Design
- Designed and Manufactured in USA at ISO 9001 Facility
- (UL) Listed, ULC Listed, CSFM NYMEA, FM Approved

PE-11
(shown with DB-11 Base)

PE-11T

Introduction

The Cerberus Pyrotronics PE-11 Series Photoelectric Smoke Detector, with its microprocessor controlled self-diagnostic circuitry, eliminates cumbersome sensitivity test equipment. It is the most advanced detector in its class. This detector employs a simple twist-in base for ease of maintenance and has a field cleanable/replaceable labyrinth and bug screen. This detector is highly immune to false alarm caused by deceptive phenomena such as dust or RF. The PE-11 has a full range of accessories available, including remote alarm indicator, remote sensitivity and alarm indicator, relay, audible base and a base adapter that allows use in older Cerberus Pyrotronics DB-3S Series bases.

Description

The PE-11 is a two-wire, plug-in type photoelectric smoke detector which is compatible with Cerberus Pyrotronics PXL, SXL, and System 3 conventional systems and conventional loops of MXL Series, IXL and XL3 analog-addressable systems.

The PE-11 contains an infra-red light emitting diode (LED) and a light sensing photodiode arranged so that under normal conditions, light from the LED does not reach the photodiode. When smoke enters the photo chamber, light emitted from the IR LED is scattered by the smoke particles and is received by the photodiode. The electrical signal produced by the photodiode is compared to a factory set alarm threshold, and if sufficient to indicate an alarm, latches the detector alarm. The PE-11 is reset at the control panel.

The PE-11 has UL/ULC listed self-testing circuitry which tests the detector for defective operation or contamination every 7-8 seconds. If a problem is detected, the multi-color LED indicator will flash amber until the problem is corrected. The detector flashes green in normal operation. In the alarm mode, the detector will flash red every 2-3 seconds, and latch into alarm, alerting the control panel to the alarm condition. This microprocessor-controlled self-diagnostic system eliminates the need for external test meters or other equipment for detector testing and also alerts users to trouble conditions prior to periodic system checks.

CATALOG NUMBER **6173**

Replaces Catalog Sheet 6169

The detector is field cleanable by twisting the detector out of the base, unsnapping the chamber from the outer cover and cleaning or replacing the removable chamber labyrinth and bug screen.

An optional 135°F (57°C) Thermal Sensor is available with the model PE-11T. When the optional thermal sensor is utilized, an alarm condition will be initiated when the temperature in the proximity or the sensor reaches 135°F. At this point the detector locks into alarm.

The PE-11 utilizes the low-profile DB-11 surface mounting base which may be used with a 4 inch square or octagonal box, as well as a single-gang electrical box. The DB-11 has screw clamp terminals for easy wiring. The base has an optional concealed locking device to prevent unauthorized detector removal.

The PE-11 is capable of operating both a remote lamp and a relay or audible base when used with a PXL or MXL Series control panel, other panels will allow one accessory per detector. The RSA-11 Remote Sensitivity and Alarm indicator duplicates the multi-color LED of the detector at a remote location to indicate normal operation (green), trouble or out of sensitivity (amber), or alarm (red) for detectors located in out of the way places such as duct detectors, under computer room floors, or above suspended ceilings. The RL-11 is simply a remote red LED to indicate an alarm condition of a detector. Due to the advanced circuitry required for multi-color remote lamps, all remote lamps require 3 wires.

The RR-11 is a relay module that may be added to the DB-11 base for use as a relay base. The RR-11 incorporates a single pole double throw relay to allow detector control of dampers, doors, or other equipment where this control is required. The ADB-11 is an audible base for use where local annunciation from an individual detector is desired. This audible base is installer selectable for either steady or temporal tone.

For installations where the need to use a PE-11 in an existing Cerberus Pyrotronics DB-3S base is desired, a DB-ADPT adapter will allow for that installation. The DB-ADPT twists into the DB-3S and the PE-11 twists into the DB-ADPT just as it does into the DB-11 base.

The PE-11 and all of the above listed accessories are UL and ULC listed, and approved by CSFM and NYMEA, and other local boards where applicable.

Application Data

The PE-11 is fully compatible with other Cerberus Pyrotronics low voltage detectors and may be intermixed on the same conventional zone circuit. The PE-11 is applicable to the 30 foot spacing (900 sq. ft.) as referred to in the National Fire Protection Standard 72. This detector spacing, however, is based on ideal conditions and should be used only as a guide in planning detector layout. Do not mount detectors close to ventilation or air conditioning outlets that may move smoke away from the detector. Exposed joists or ceiling beams may also effect safe positioning of smoke detectors. It is mandatory that engineering judgement be applied regarding detector placement and spacing.

Architect and Engineer Specifications

The photoelectric smoke detector shall be a plug-in unit which mounts to a twist/in base and shall be UL listed.

The smoke detector shall operate on a two-wire circuit and shall contain a multi-color LED indicator indicating the detector is operational by flashing green, trouble by flashing amber, and alarm by flashing red. The detector shall be continually self testing with visual operation indication and not require additional hardware or contact with the detector for testing purposes.

The detector shall allow for easy cleaning or replacement of screens and/or chamber components without affecting calibration.

The base assembly into which the detector is installed shall be a twist/in design with screw clamp terminals. A security lock shall be installed in those areas where tamper resistant installation is required as indicated in the drawings.

The detector or group of detectors shall require a two-wire circuit of #18 AWG thermoplastic fixture wire enclosed in conduit, or #18 AWG limited energy shielded cable without conduit, if permitted by local building codes. All wiring shall be approved for fire alarm use and in compliance with national and local codes.

When required, the smoke detector shall contain a 135°F fixed temperature self restoring heat sensor. Actuation of this device shall lock the detector alarm circuit.

The detector shall be Cerberus Pyrotronics Model PE-11 or Model PE-11T with a DB-11 surface mounting base.

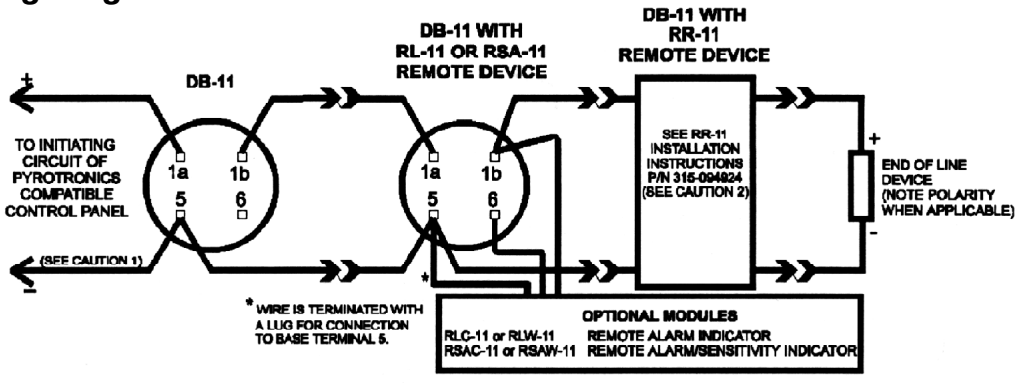
Technical Specifications

Current Requirements:	Normal - 110uA peak Alarm - 40mA
Voltage Range:	16 - 26.6 VDC
Operating Temperature:	0 - 39°C
Humidity:	93% non-condensing

Ordering Information

Model	Description	Part Number
PE-11	Conventional Photoelectric Smoke Detector	500-094150
PE-11T	Photoelectric Smoke Detector with 135°F Thermal Sensor	500-095110
DB-11	Low-Profile Surface Mount Base	500-094151
RLC-11	Remote Red LED, Ceiling Mount	500-694625
RLW-11	Remote Red LED, Wall Mount	500-694626
RSAC-11	Remote Multi-Color LED, Ceiling Mount	500-694935
RSAW-11	Remote Multi-Color LED, Wall Mount	500-695101
RR-11	Relay Module	500-694922
DB-ADPT	Adapter for PE-11 to DB-3 Base	500-094187
LK-11	PE-11 Detector Locking Kit	500-695350
DMK-11	Detector Maintenance Kit	500-695338
AD-11P	Air Duct Housing	500-095984
AD-11PR	Air Duct Housing with Relay	500-095657
AD-11UK	Upgrade Kit for Use in Older AD Series Duct Housing	500-695967
In Canada, Please Order:		
PE-11C	Conventional Photoelectric Smoke Detector	500-095630
PE-11TC	Photoelectric Smoke Detector with 135°F Thermal Sensor	500-095982
DB-11C	Low-Profile Surface Mount Base	500-095687

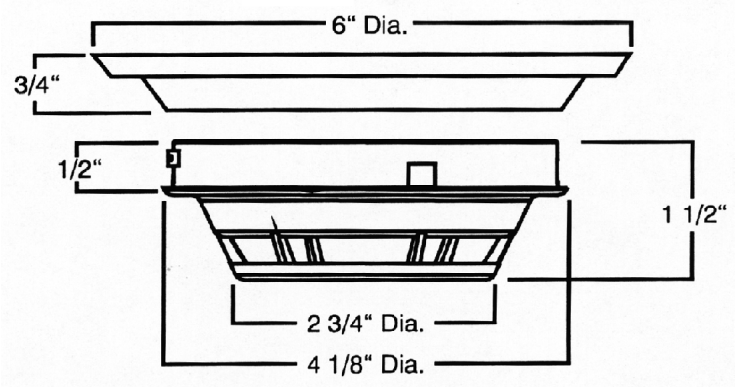
Wiring Diagram



CAUTION:

1. Do not use looped wire under base terminal 5. Break wire run to provide supervision of connection
2. When a remote relay is used to control a critical system function, the relay and its associated detector and optional module(s) must be the *ONLY* devices on the initiating circuit.

PE-11 Detector Mounted in DB-11 Base



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