PW-300P Series
Intelligent Photoelectronic Smoke Detector

Protectwell®
Fire Alarm Solution

General

PW-300P Series intelligent plug-in smoke detectors with integral communication provide features that surpass conventional detectors. Detector sensitivity can be programmed in the control panel software. Sensitivity is continuously monitored and reported to the panel. Point ID capability allows each detector's address to be set with rotary, decimal address switches, providing exact detector location for selective maintenance when chamber contamination reaches an unacceptable level. The PW-300P photoelectric detector's unique optical sensing chamber is engineered to sense smoke produced by a wide range of combustion sources. Dual electronic thermistors add 135°F (57°C) fixed temperature thermal sensing on the PW-300T. PW-300P series detectors are compatible with PROTECTWELL PTW-3300 and PTW-3300S Fire Alarm Control Panels (FACPs).

FlashScan® is a communication protocol that greatly increases the speed of communication between analog intelligent devices. Intelligent devices communicate in a grouped fashion. If one of the devices in the group has new information, the panel's CPU stops the group poll and concentrates on single points. The net effect is response speed greater than five times that of earlier designs.

Features

- Sleek, low-profile design.
- Addressable-analog communication.
- Stable communication technique with noise immunity.
- Low standby current.
- Two-wire SLC connection.
- Compatible with FlashScan® and CLIP protocol systems.
- Rotary, decimal addressing (1-99 on CLIP systems, 1-159 on FlashScan systems).
- Optional remote, single-gang LED accessory.
- Dual LED design provides 360° viewing angle.
- Visible bi-color LEDs blink green every time the detector is addressed, and illuminate steady red on alarm (FlashScan systems only).
- Remote test feature from the panel.
- Walk test with address display (an address on 121 will blink the detector LED: 12-[pause]-1(FlashScan systems only).
- Built-in functional test switch activated by external magnet.
- Built-in tamper-resistant feature.
- Sealed against back pressure.
- Constructed of off-white fire-resistant plastic, designed to commercial standards, and offers an attractive appearance.
- 94-5V plastic flammability rating.
- SEMS screws for wiring of the separate base.
- Optional isolator, and sounder bases.

Specifications

Sensitivity: 0.5% to 2.35% per foot obscuration

Size: 2.1" (5.3 cm) high; base determines diameter.

– B210LP: 6.1" (15.5 cm) diameter.

– B501: 4.1" (10.4 cm) diameter.

– B200S: 6.875" (17.46 cm) diameter.

– B200SR: 6.875" (17.46 cm) diameter.

– B224RB: 6.2" (15.748 cm) diameter.

– B224BI: 6.2" (15.748 cm) diameter.

– P301BH: 5.98" (15.2 cm) diameter.

– B501BH-3: 5.98" (15.2 cm) diameter.

– B500BH-3: 4.04" (10.3 cm) diameter.

Operating Temperature range: PW-300P, 0°C to 49°C (32°F to 120°F). PW-300PT, 0°C to 38°C (32°F to 100°F). Low temperature signal for PW-300PT at 45°F +/- 10°F (7.22°C +/- 5.54°C).

UL Listed Velocity Range: 0-4000 ft/min. (1219.2 m/min.), suitable for installation in ducts.

Relative Humidity: 10%-93% non-condensing.

Thermal Ratings: Fixed-temperature set-point 135°F (57°C).

ELECTRICAL SPECIFICATIONS

Voltage Range: 15-32 volts DC peak.

Standby Current (max. avg.): 300µA @ 24VDC (one communication every five seconds with LED enabled).

LED Current (max.): 6.5mA @ 24 VDC ("ON").

SE-190711-Z

UL · FM APPROVED · CCC

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Installation

PW-300P plug-in detectors use a separate base to simplify installation, service, and maintenance. A special tool allows maintenance personnel to plug in and remove detectors without using a ladder.
Mount base (all base types) on an electrical backbox which is at least 1.5" (3.81 cm) deep. For a chart of compatible junction boxes.

NOTE: 1) Because of inherent supervision provided by the SLC loop, end-of-line resistors are not required. Wiring "T-taps" or branches are permitted for Style 4 (Class "B") wiring. 2) When using relay or sounder bases, consult the PISO-3 installation sheet for device limitations between isolator modules and isolator bases.

Agency Listings and Approvals

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

UL Listed: S24710

FM Approved.

CCCF.

Product Line Information

PW-300P: Low-profile intelligent photoelectric sensor. Must be mounted to one of the bases listed below.

PW-300PT: Same as PW-300P but includes a built-in 135°F (57°C) fixed-temperature thermal device.

INTELLIGENT BASES

B501: Standard European flangeless mounting base.

B501BP: Bulk pack of B501; package contains 10.

B200S: Intelligent, programmable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone.

B200SR: Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Replaces B501BH series bases in retrofit applications.

B224BI: Plug-in System Sensor isolator detector base. Maximum 25 devices between isolator bases.

ACCESSORIES

PW-LED-01: Remote LED Indicator.

RA100Z: Remote LED annunciator. 3 – 32 VDC. Mounts to a U.S. single-gang electrical box.

SMB500: Surface mounting kit.

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