

## Features

- Heat Detector compliant with UL 521
- Selectable Rate of Rise and/or Fixed Heat Detector
- Reliable detection technology
- Wide selectable smoke sensitivity range of 1.1 to 3.5%/foot
- Detector communicates sensitivity to control panel
- UL listed smoke calibration and sensitivity
- Ambient temperature listing of 32 ° F to 115 ° F
- Optional locking tab to prevent unwanted removal
- Simple DIP switch address setting, no programming tool required
- LED alarm indicator
- Magnetic test switch
- Product includes 5-year warranty
- UUKL Listed for Smoke Control



## Description

The PAD300-PHD is a listed Analog Addressable smoke detector and a rate of rise and/or fixed temperature heat detector compatible with fire alarm control panels that utilize the Potter Addressable Device (PAD) protocol. The PAD300-PHD is a low profile smoke/heat sensor with a wide sensitivity range. The heat sensing portion utilizes a proven thermistor for accurate and reliable heat detection. The detector and base are made of a durable plastic in an off-white color to blend in with the ceiling.

The PAD300-PHD is UL listed and has a sensitivity range of 1.1 to 3.5% per foot with a fix temperature alarm threshold of 135°F and can be used for rate of rise applications. See detector spacing limitations below. The PAD300-PHD features drift compensation and has built in dirty detector warning. The PAD300-PHD and the control panel communicate over a proven and robust digital communication path and the system analyzes the information at the particular device. The total polling speed is less than five (5) seconds, well under the UL requirements.

The detector is compatible with any of the PAD300 series detector bases and simply twists on. The PAD300-PHD is addressed using DIP switches in the rear of the detector and can be easily programmed in the field without special tools.

## Setting the Address

Each addressable device on the SLC loop must have a unique address from 1 to 127 to function properly. The address is set using DIP switches.

Before connecting a device to the SLC loop, take the following precautions to prevent potential damage to SLC or device. Verify the following:

1. Power to the device is removed.
2. Field wiring is correctly installed.
3. Field wiring has no open or short circuits.

## Technical Specifications

Operating Voltage	24 VDC
Detector Current Draw	300 $\mu$ A
Alarm indicator	1 LED
Alarm set-point range for Smoke	1.1 to 3.5%/ft (3.6 to 11%/m)
Alarm set-point for Heat	135°F
Rate of Rise Detection (Selectable Option)	15°F/min. (8.3°C/min.)
Installation temperature range	32°F to 115°F (0°C to 46°C)
Operating relative humidity range	0% to 93% (Non-condensing)
Start-up time	Max. 1 sec.
Maximum number of addresses per loop	127
Maximum number of lighted indicators in alarm per loop.	30
Color	Eggshell White
Weight (without base)	91 g (3.25 oz)
Dimensions (without base)	Height: 1.7 in (43 mm) Diameter 3.93 in (100 mm)

## Air Velocity Ratings

The PAD300-PHD has an Open Area of Protection air velocity rating of 0 to 300 feet per minute.

## Operation

The PAD300-PHD is an analog addressable detector that uses one address on the Signaling Line Circuit (SLC) of a compatible fire alarm control panel. The unit communicates with the control panel as it is polled. The LEDs flash every time the unit is polled and they will flash rapidly if the unit is in an active status. The polling LED can be turned off if desired for less conspicuous operation.

The system has a maximum of 30 LEDs that can be turned on simultaneously. If the system already has 30 LEDs on, the PAD300-PD will operate even though the LED may not illuminate.

The PAD300-PHD with the PAD300-4DB or PAD300-6DB has a low profile to blend into the surrounding environment. The detector includes an insect screen to prevent foreign objects from reaching the chamber and can be cleaned to restore operation of a dirty detector.

## Detector Sensitivity

The PAD300-PHD and the compatible control panel work in tandem to keep the sensitivity consistent. As the detector is installed over time, the detector compensates for the dirt in the unit until it is out of range. At that time, the panel will indicate a dirty detector. The detector will then have to be cleaned or replaced.

The PAD300-PHD can be programmed to provide a maintenance alert prior to reaching the dirty detector level which will allow for intervention prior to the detector going into trouble. This allows for detector replacement or cleaning prior to a nuisance trouble occurs.

**NOTE:** As required by NFPA, do not install the detectors until all construction is complete and the work area has been thoroughly cleaned. If the detectors have been installed in a construction environment, they should be cleaned or replaced before the system is placed into service.

## Spacing

The PAD300-PHD is UL listed with a recommended maximum spacing of 30 feet. Refer to NFPA 72 for specific information regarding detector spacing, placement and special applications.

## Compatible Bases

All bases will mount on a single gang, 3-1/2" octagon, 3-1/2" square, double gang, 4" octagon, 4" square, 50mm c/c, 60mm c/c and 70mm c/c boxes

Device	Description	Stock No.
PAD300-4DB	4" Detector Base	3992781
PAD300-6DB	6" Detector Base	3992782
PAD300-IB	6" base with an isolator module included	3992783
PAD300-RB	6" base with one Form-C relay contact. 2A @ 30VDC, 0.5A @ 125VAC	3992784
PAD300-SB	6" base with sounder module included. Sound pattern is provided from external source	3992785
PAD300-LFSB	6" base with 520Hz sounder module included. Sound pattern is provided from external source	3992786

## Ordering Information

Model	Description	Stock No.
PAD300-PHD	Photoelectric Smoke/Heat Detector	3992777