BOSCH
Invented for life

FAP-325 Analog Photoelectric Smoke Detector

▸ **Smoke density range of 0.05 %/ft to 4 %/ft (0.16%/m to 13.12%/m)**

▸ **Adjustable threshold temperature (determined by panel)**

▸ **Provides automatic compensation values in case of detector contamination**

▸ **Mounts on FAA-325-B4 Analog Detector Base and the FAA-325-B6S Analog Sounder Base**

▸ **Easy detector removal for cleaning and servicing**

▸ **EEPROM addressing with the D5070 Analog Device Programmer**

▸ **Two LEDs for 360º view showing polling and detector status**

▸ **Digital data communications and power over a two-wire circuit**

▸ **Advanced digital communications protocol (DCP)**

The FAP-325 Analog Photoelectric Smoke Detector is an addressable device used in the analog polling circuit. It detects fast-flaming fires and dense smoke typically given off by plastic, foam, paper, wood, and other materials that tend to smolder. It uses two LEDs and photodiode to measure particulate levels in its detection chamber. These measurements are transmitted in digital form to the fire panel. The system allows for adjusting sensitivity levels by the detector over a range of 0.05 %/ft to 4 %/ft (0.16%/m to 13.12%/m) smoke obscuration. Sensitivity levels can be modified on a daily schedule by the FN-2127-220V Fire Panel.

The unique detection chamber design prevents external light from affecting the photodiode.

Contamination Testing

The FN-2127-220V Fire Panel and the FPA-1000-UL Compact Fire Panel are UL listed to monitor the contamination level of the FAP-325. The fire panel monitors the contamination level of the detector as part of its normal polling activity. Based on the provided compensation values by the detector the electrical test determines if the device is within its UL listed calibration range. The fire panel automatically compensates for contamination of the detector and indicates when the device requires cleaning.

Status Display

The FAP-325 has two LEDs that flash every time the device is polled and can be switched on steady when the module goes into active condition.

Functions

Fire Panel Connections

The FAP-325 is controlled by a microprocessor and communicates with the fire panel (both power and data) over a two-wire polling circuit.

Removing the FAP-325 detector from the base for service initiates a trouble signal but does not interrupt the polling circuit.

Certifications and Approvals

Region	Certification	
USA	UL	UROX: Smoke-automatic Fire Detectors (ANSI/UL 268)

Installation/Configuration Notes

Compatible Products

The following products are compatible with the FAP-325 Analog Photoelectric Smoke Detector:

Category	Product ID	Product Description
Fire Panels	FN-2127-220V	Analog Addressable Fire Panel
	FPA-1000-UL	Compact Fire Panel
Detector Bases	FAA-325-B4	Analog Sensor Base
	FAA-325-B6S	Analog Sounder Base
Programming Products	D5070	Analog Device Programmer

Modular Construction

The FAP-325 is part of a two-piece modular design for detector assemblies. The FAP-325 attaches to an FAA-325-B4 4-inch Analog Detector Base, an FAA-325-B6 6-inch Analog Detector Base, or an FAA-325-B6S Analog Sounder Base by inserting the detector into a groove on the base and turning the detector clockwise.

The base's security locking tab prevents any unauthorized detector removal from the base.

Mounting

Smoke detectors are typically mounted on the ceiling. However, if smoke detectors are mounted on a wall, they must be at least 4 in. (10.2 cm), but no more than 12 in. (30.5 cm), below the ceiling.

For UL Listing requirements, the spacing between detectors should be no more than 30 ft.

Programming

The address of the FAP-325 is set by programming an EEPROM microchip located in the detector. The D5070 Analog Device Programmer is required for address setting.

Parts Included

Quant.	Component
1	FAP-325 Analog Photoelectric Smoke Detector
1	Dust cover
1	Literature pack

Technical Specifications

Electrical

Operating voltage	17 VDC to 41 VDC range
Current consumption	
• Active (LEDs on)	8 mA
• Polling (Average)	2 mA
• Standby	0.39 mA

Mechanics

Dimensions (Ø x D)	4 in. x 1.5 in. (10.2 cm x 3.8 cm)
Weight	3.4 oz (96.4 g)
Material	ABS Blend
Color	Ivory

Environmental Conditions

Operating Temperature	+14°F to +122°F (-10°C to +50°C)
Installation Temperature	+32°F to +100°F (0°C to +37.8°C)
Relative Humidity	95%, non-condensing at +104°F (+40°C)

Ordering Information

FAP-325 Analog Photoelectric Smoke Detector Used to detect fast-flaming fires and dense smoke that tend to smolder	**FAP-325**