


**BOSCH**

Invented for life

# FAP-325 Series Analog Smoke and Smoke/Heat Detectors



- ▶ Handles air velocity from 0 ft/min to 4000 ft/min (0 m/s to 20.32 m/s)
- ▶ Adjustable threshold smoke level (determined by FACP)
- ▶ 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 360° view showing polling and detector status
- ▶ Digital data communications and power over a two-wire circuit
- ▶ Advanced digital communications protocol (DCP)

The FAP-325 Series Analog Smoke and Smoke/Heat Detectors are addressable devices used in the analog polling circuit. They detect fast-flaming fires and dense smoke typically given off by plastic, foam, paper, wood, and other materials that tend to smolder.

The detection chamber design prevents external light from entering the chamber and uses a light-emitting diode (LED) and a photodiode which measures particulate levels in the detection chamber. These measurements are transmitted in digital form to the fire alarm control panel (FACP). The FACP can adjust the sensor threshold to compensate for contamination.

Along with the smoke sensor, the FLM-325-T contains a heat sensor that triggers at +135°F (+52.2°C). It can be used indoors for open area or duct applications.

## Functions

### Address Range

The FAP-325-V2F and FAP-325-T are compatible with 254 addresses; the other models with 127 addresses.

### Fire Panel Connections

The FAP-325 Series detectors are controlled by a microprocessor and communicate with the fire panel (both power and data) over a two-wire polling circuit. Removing an FAP-325 detector from the base for service initiates a trouble signal but does not interrupt the polling circuit.

### Contamination Testing

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

### Status Display

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

**Certifications and Approvals**

Region	Certification	
USA	UL	UROX: Smoke-automatic Fire Detectors (ANSI/UL 268) UQGS: Heat-automatic Fire Detectors (ANSI/UL 521) - T model only
	CSFM	FAP-325: 7272-1615:0236 PHOTOELECTRIC SMOKE DETECTOR

**Installation/Configuration Notes**

**Compatible Products**

The following products are compatible with the FAP-325 Series Analog Smoke Detectors:

Category	Product ID	Product Description
Fire Panels	FPA-1000-UL	Compact Fire Panel
Detector Bases	FAA-325-B4	4-inch Analog Sensor Base
	FAA-325-B6	6-inch Analog Detector Base
Programming Products	D5070	Analog Device Programmer

**Modular Construction**

The FAP-325 Series detectors are part of a two-piece modular design for detector assemblies. An FAP-325 Series detector attaches to an FAA-325-B4 4-inch Analog Detector Base or an FAA-325-B6 6-inch Analog Detector Base. 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 each FAP-325 Series detector 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 Series Analog Smoke Detector
1	Dust cover
1	Literature pack

**Technical Specifications**

**Electrical**

**Operating Voltage Range**

- FAP-325: 24 VDC to 40.7 VDC
- FAP-325-T: 24 VDC to 41 VDC
- FAP-325-V2F: 22.9 VDC to 39.5 VDC

**Current Consumption**

- FAP-325: Typical: 0.39A  
Maximum: 0.54 mA
- FAP-325-T: Typical: 0.45 mA  
Maximum: 0.54 mA
- FAP-325-V2F: Typical: 0.39 mA  
Maximum: 0.80 mA

**Mechanics**

Dimensions (diameter x D)

- FAP-325 and FAP-325-V2F: 3.94 in. x 1.5 in. (10 cm x 3.8 cm)
- FAP-325-T: 3.94 in. x 1.6 in. (10 cm x 4.1 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)

UL-listed Installation Temperature +32°F to +100°F (0°C to +37.8°C)

Relative Humidity 95%, non-condensing at +104°F (+40°C)

**Sensitivity Range**

**Air Velocity of 300 ft/min (1.5 m/s)**

- FAP-325 and FAP-325-T (open area): 0.88%/ft to 3.57%/ft (2.9%/m to 11.7%/m)
- FAP-325-T (duct): 0.88%/ft to 3.11%/ft (2.9%/m to 10.2%/m)
- FAP-325-V2F (open area): 0.5%/ft to 3.80%/ft (1.6%/m to 12.5%/m)

**Air Velocity of 2000 ft/min (10.2 m/s)**

- FAP-325 (open area) and FAP-325-T (duct): 0.88%/ft to 2.81%/ft (2.9%/m to 9.2%/m)
- FAP-325-V2F (open area): 0.5%/ft to 2.74%/ft (1.6%/m to 9.0%/m)

**Air Velocity of 4000 ft/min (20.32 m/s)**

- FAP-325 (open area) and FAP-325-T (duct): 0.88%/ft to 2.52%/ft (2.9%/m to 8.3%/m)
- FAP-325-V2F (open area): 0.5%/ft to 2.68%/ft (1.6%/m to 8.8%/m)

**Ordering Information****FAP-325 Analog Photoelectric Smoke Detector** **FAP-325**

Sensitivity range from ~0.88%/ft to 3.57%/ft (2.9%/m to 11.7%/m); compatible with 127 addresses

**FAP-325-T Analog Multisensor Detector** **FAP-325-T**

Combination smoke and heat sensors; suitable for open area or duct applications; compatible with 254 addresses

**FAP-325-V2F Analog Photoelectric Smoke Detector Flat** **FAP-325-V2F**

Sensitivity range from ~0.5%/ft to 3.80%/ft (1.6%/m to 12.5%/m); compatible with 254 addresses