D7050 MUX smoke and smoke/heat heads

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BOSCH
Invented for life

▶ Mounts in the D7050-B6 MUX base, 2-wire

▶ Superior dust immunity

▶ Exclusive Chamber Check self-diagnostics

▶ Automatic sensitivity test features

▶ Easy disassembly for cleaning

The D7050 MUX smoke head and D7050TH MUX smoke head w/ fixed heat (135°F) are UL Listed, open-area photoelectric detectors. They are designed for use with commercial fire protective signaling systems and household fire warning systems (see NFPA 72). They are compatible with the:

- FPD-7024 Family fire alarm control panels (addressable versions)
- D7024 Family fire alarm control panels (addressable versions)[1]
- DS7400Xi Series Addressable Control Panels
- G Series control panels (D9412G, D8412G, D7212G or later)[2]

[1] Legacy product no longer available through the BOSCH Group
[2] The D7212G models are not listed for commercial fire applications.

The symmetry of the optical chambers allows 360° uniform smoke entry, but minimizes external light entry. In the chamber, large smoke particles scatter infrared light from a pulsed source operating with a gated, high-speed, photodiode sensor.

The D7050TH has an added fixed-temperature sensor. Use in confined areas, such as furnace rooms and closets. Areas where a fire increases air temperature slowly but substantially before the fire breaks confinement.

Use the smoke detectors for detection circuits installed in areas where personnel are present.

Functions

Detector Head/Base System
The smoke and smoke/heat heads are part of a compound system of detector head and base. The detector base installs over a back box and contains all the wiring. The detector head attaches to the base by aligning the head with the base and turning it clockwise. No tools are required for installation other than the hex key used to tighten the tamper screw. Each detector head requires a D7050-B6 detector base.

Chamber Check Self-diagnostics
The detector meets NFPA guidelines for sensitivity testing. You can visually inspect the detector and check the flash rate of the LED. If the calibration is out of factory-listed range, the detector's LED double flashes once every 3 sec. to 8 sec.. The detector also sends a dirty chamber report to the control panel. Follow the instructions provided with the detector to clean it.

LED Operation
When operating normally, the detector's LED flashes once every 3 sec. to 8 sec.. In alarm, the detector flashes at least once per second.

Magnetic Test Feature
Test the detector's operation by placing a magnet next to the detector's LED for three consecutive flashes. This causes the detector to send an alarm.

Certifications and approvals

Region	Regulatory compliance/quality marks	
USA	UL	UL 268, Smoke Detectors for Fire Alarm Systems
	UL	D7050TH only: UL 521, Heat Detectors for Fire Protective Signaling Systems
	FM	D7050 Family
	CSFM	see www.boschsecurity.com (the Bosch website)
	FDNY-CoA	6173
Canada	ULC	CAN/ULC-S529, Smoke Detectors for Fire Alarm Systems
	ULC	D7050TH only: CAN/ULC-S530, Heat Actuated Fire Detectors for Fire Alarm Systems
Hong Kong	HKFSD	

Technical specifications

Electrical

Current (from MUX bus)	
• Alarm	0.56 mA maximum
• Standby	0.55 mA nominal
Power-up Time	22 sec. maximum
Voltage (minimum)	8 VDC peak from the multiplex bus

Environmental

Radio Frequency Interference (RFI) Immunity:	No alarm or setup on critical frequencies in the range of 26 MHz to 950 MHz for field strengths < 50 V/m
Temperature (normal operating):	+32°F to +100°F (0°C to +38°C)

Note: The environment where these detectors are installed must be within the specified normal operating temperature limits.

Mechanical

Color:	Off-white
Dimensions (diameter x D):	4 in. x 1.3 in. (10.2 cm x 3.3 cm)
Material:	High-impact, fire-retardant ABS plastic

Ordering information

D7050 Multiplex smoke head
The symmetry of the D7050's optical chamber allows 360° uniform smoke entry, but minimizes external light entry. Within the chamber, large smoke particles scatter infrared light which is detected by a gated, high-speed, photodiode sensor.
Order number **D7050**

D7050TH Multiplex detector head, fixed heat
The D7050TH has an optical smoke chamber and a 35°F (57°C) fixed-temperature sensor. Use it in confined areas where a fire increases air temperature slowly but substantially before the fire breaks confinement.
Order number **D7050TH**

Accessories

D7050-B6 Multiplex base, 2-wire
Required base for the D7050 and D7050TH MUX smoke heads
Order number **D7050-B6**

D8125MUX Expansion module, Multiplex
Controls two independent buses.
Order number **D8125MUX**

DRA-12/24 Remote indicator plate, 12/24V
Provides remote annunciation of alarms when connected to the D7050-B6 MUX base, 2-wire
Order number **DRA-12/24**

D1005 Test cable 3ft
Connects a digital voltmeter to the detector's calibration pin for verifying that the detector is within its calibration range
Order number **D1005**

DT-2 Detector removal/testing tool
Use the DT-2 to remove, replace, or test the detector head
Order number **DT-2**

TRUTEST801 Smoke detector sensitivity tester
Uses a precision closed-loop system to measure smoke obscuration. Then displays the sensitivity reading in %/ft. on a liquid crystal display (LCD) screen
Order number **TRUTEST801**