

### Features

#### UL Listed to Standard 268

#### Functional chamber enclosure:

- Louvered design enhances smoke capture by directing flow to chamber
- Entrance areas are minimally visible when ceiling mounted

#### Alarm indicator LED:

- Pulses to indicate power-on
- On steady to indicate alarm

#### Functional diagnostic tests:

- Magnetic test initiates alarm and verifies system operation
- Service connections are available for sensitivity verification testing

#### Available base options:

- Bases for 2-wire or 4-wire operation
- Auxiliary alarm relay output
- Remote alarm indicating LED output

#### Optional remote alarm LED indicator

#### Designed for EMI compatibility

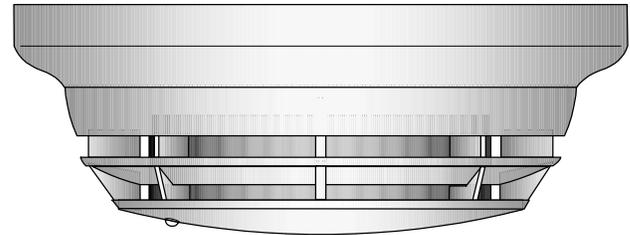
### Description

For applications requiring ionization detection, the 4098-9603 detector provides conventional dual-chamber detection in an attractive housing. Bases are available for 2-wire or 4-wire operation.

A built-in magnetic test feature allows service personnel to conveniently initiate a test alarm condition.

Options include relay outputs and remote LED alarm status indicators.

\* This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7271-0026:229 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. This product was not approved by MEA (NYC) as of document revision date. Additional listings may be applicable: contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Safety Products Westminster.



4098-9603 Ionization Detector Mounted in Base

### Application Reference

**Detector Locations.** Locations should be determined only after careful consideration of the physical layout and contents of the area to be protected. Refer to NFPA 72, the *National Fire Alarm Code*. On smooth ceilings, smoke detector spacing of 30 ft (9.1 m) may be used as a guide.

For further detailed installation information, refer to Simplex® publication 574-709, *4098 Detectors, Sensors, and Bases Application Manual*.

### Specifications

Voltage	8.5 to 33 VDC, from fire alarm control panel Initiating Device Circuit (IDC)
Standby Current	80 $\mu$ A @ 24 VDC
Alarm Current, 2-Wire Operation	Up to 86 mA maximum, exact current is determined by alarm current limiting of connected IDC
Alarm Current, 4-Wire Operation	24 mA typical @ 24 VDC
Sensitivity Level	0.61 to 1.46%/ft
Radioactive Source	0.9 Microcurie AM-241
Air Velocity Range	0-200 ft/min (0-61 m/min)
Altitude	Up to 8000 ft (2438 m)
UL Listed Temperature Range	32° F to 100° F (0° C to 38° C)
Operating Temperature Range	32° F to 122° F (0° C to 50° C)
Humidity Range	10% to 95% RH from 32° F to 122° F (0° C to 50° C)
Color	Frost White
Dimensions	Refer to diagram on page 2

## Product Selection

Model	Description	Compatibility
4098-9603	Ionization Smoke Detector	Compatible with detector bases: 4098-9788, 4098-9682, and 4098-9683

## Detector Bases

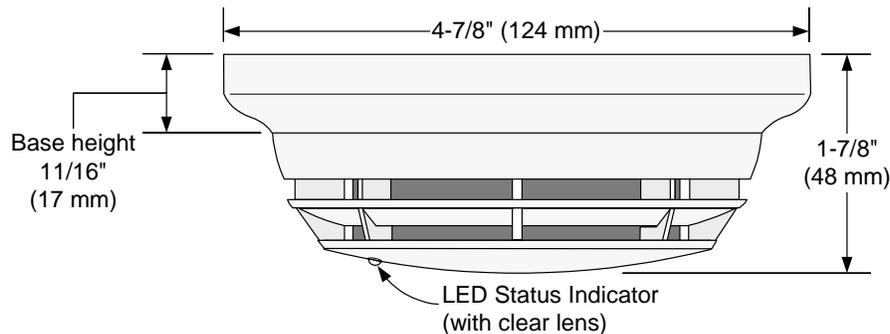
Model	Description	Details
4098-9788	<b>2-Wire Base</b> with connections for Remote Alarm LED Indicator	IDC and LED connections are screw terminals for in/out wiring, 18 to 14 AWG*
4098-9682	<b>4-Wire Base</b> with Auxiliary Alarm Relay Contacts and connections for Remote LED Alarm Indicator <b>NOTE:</b> Requires external 24 VDC for operation	<b>Relay Ratings, Single Form "C", For Suppressed Loads:</b> Power limited, 3 A @ 28 VDC; Non-power limited, 3 A @ 120 VAC <b>Wiring Connections (In/Out where required):</b> Relay contacts and IDC wiring, color coded 18 AWG leads; LED wiring, screw terminals for 18 to 14 AWG*
4098-9683	<b>2-Wire Base with Auxiliary Alarm Relay</b> & connections for Remote LED Indicator <b>NOTE:</b> Must be connected as the only device on the IDC to ensure relay operation.	<b>Relay Ratings, Dual Form "C", For Suppressed Loads:</b> Power limited, 1 A @ 28 VDC; Non-power limited, 1/2 A @ 120 VAC <b>Wiring Connections (In/Out where required):</b> Relay contacts and IDC (-), color coded 18 AWG leads; IDC (+) and LED wiring, screw terminals for 18 to 14 AWG*

## Detector Accessories

Model	Description	Details
4098-9832	Adapter Plate	Required for mounting to surface mounted boxes and 4" square, flush mounted box May be used when retrofitting existing bases Compatible with 4098-9788, -9682, & -9683 detector bases
4098-9830	Remote LED Indicator	Mounted on single gang stainless steel plate
2098-9739	Encapsulated 24 VDC End-of-Line Relay	Required for 4-wire circuits using 4098-9682 base, one per circuit, select mounting type as required
2098-9735	Plate Mounted 24 VDC End-of-Line Relay	

\* Metric wire equivalents: 18 AWG = 0.82 mm<sup>2</sup>; 14 AWG = 2.08 mm<sup>2</sup>

## Detector and Base Dimension Reference



**Electrical Box Requirements:**

**Without relay** (base 4098-9788):

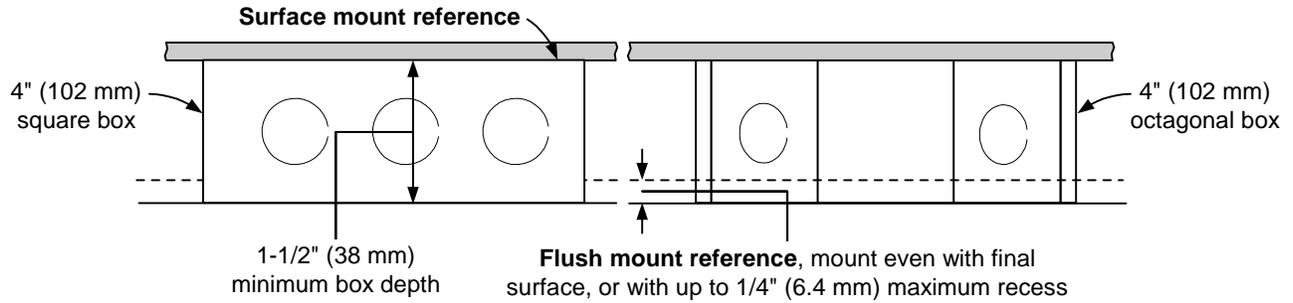
4" octagonal or 4" square, 1-1/2" deep

Single gang, 2" deep

**With relay** (bases 4098-9682 and 4098-9683):

4" octagonal, 1-1/2" deep, with 1-1/2" extension ring

4" square, 1-1/2" deep, with 1-1/2" extension ring

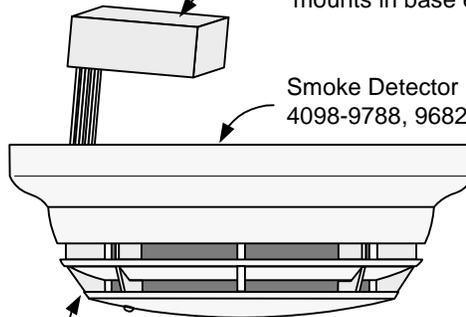


4098-9832 Adapter Plate, required for mounting to surface mounted boxes and to 4" square flush mount boxes



4098-9682 and 4098-9683 include a relay module that mounts in base electrical box

Smoke Detector Bases 4098-9788, 9682, & -9683



4098-9603 Smoke Detector

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