

ULC Listed

Ionisation Smoke Detectors  
2098 Series

## FEATURES:

- ULC Listed to Standard S529
- Dual-Chamber Design
- Two-Wire Operation
- LED Alarm Indicator
- Functional Test Feature
- Optional Remote Alarm LED
- 360° Smoke Entry for Optimum Smoke Response

## SPECIFICATIONS:

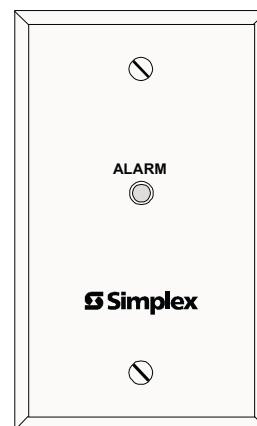
Voltage Range.....	15 to 32 VDC (24 VDC nominal)
Standby Current .....	100 µA max.
Alarm Current .....	47 mA @ 24 VDC
Temperature Range .....	32° F to 100° F (0° C to 38° C)
Humidity Range.....	10% to 93% RH
Air Velocity Limits .....	300 ft./min. max. Less than 1.0 Microcurie AM-241
Colour.....	Off-White

## OPERATION:

The 2098-9110 Smoke Detector has two chambers, an outer sampling chamber and an inner reference chamber. Smoke or invisible combustion gasses can freely penetrate the outer chamber, but the inner chamber is virtually closed to smoke entry. With both chambers ionised by a single radioactive source (Am-241), a very small current flows in the circuit. The combustion particles present act as recombination centres, which increase resistance across the chamber resulting in a reduced current flow. The reduced current flow is measured by the detector and when it falls below a pre-set level an alarm is transmitted to the fire alarm panel.



**Smoke Detector  
2098-9110**



**Remote Alarm Indicator  
2098-9808**

## MOUNTING:

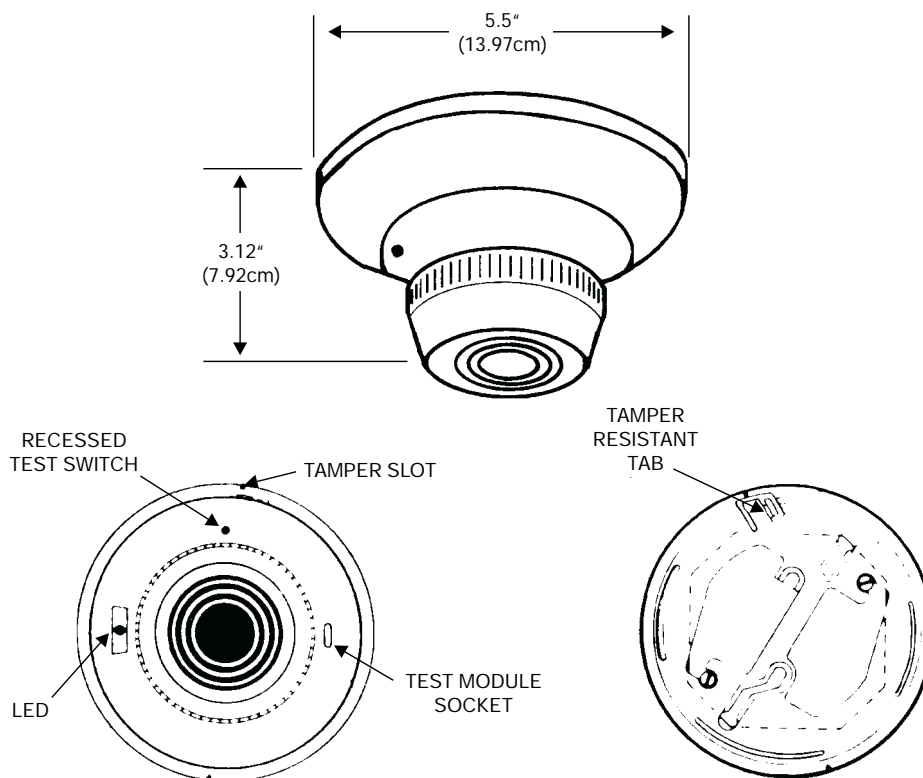
Each detector is supplied with a mounting trim ring that permits the detector to be used with several mounting techniques:

1. Units may be mounted directly to a 3 1/2" or 4" octagonal, 1 1/2" deep (No. 125 or equivalent) electrical box.
2. Units may be mounted to a 4" square electrical box by using a plaster ring (not included) with the supplied trim ring.
3. Units may be mounted directly to the ceiling or wall using the plastic screw anchors packed with the trim ring. For direct mounting, the trim ring is used as a template and 3/16" holes are drilled for the screw anchors. For this application reference local codes.

## APPLICATION:

Simplex smoke detectors are to be connected only to documented compatible Simplex control equipment. Smoke detectors should not be installed near outlets from supply air ducts. Avoid the use of smoke detectors where there is an inherent high-risk factor of instantaneous combustion, such as in kitchens, boiler rooms, incinerator rooms, or areas where welding or soldering is done.

Detector locations should be determined only after careful consideration is made of the physical layout and contents of the protected area. Refer to ULC Standard S529 for guidelines. On smooth ceilings spacing of 30 ft. (9.1m) may be used as a guide.



## NOTES:

1. Refer to wiring diagrams provided with system for proper panel connections (841-687).
2. Refer to wiring diagrams provided with system for proper end-of-line resistor value.
3. Typically, control unit two-wire detection circuits will load down appreciably upon activation of one or more alarm-indicating devices. This can prevent operation of other devices connected to the same alarm-initiating circuit.
4. Maximum quantity of detectors per initiating circuit is 18.