

Series 60



Conventional Fire Detectors
Ionisation Smoke Detectors
Photo-optical Smoke Detectors
Resettable Thermal Detectors



SERIES 60 IONISATION SMOKE DETECTOR

The Series 60 ionisation smoke detector has a wider, more compact profile and plugs into a new design of base (see below). With its elegant shape and pure white finish, it will blend unobtrusively into all types of architectural design.

The sensing part of the detector consists of two chambers – an open, outer chamber and a semi-sealed reference chamber within.

Mounted in the reference chamber is a low activity radioactive foil of Americium 241 which enables current to flow between the inner and outer chambers when the detector is powered up.

As smoke enters the detector, it causes a reduction of the current flow in the outer chamber and hence an increase in the voltage measured at the junction between the two chambers. The voltage increase is monitored by the electronic circuitry which triggers the detector into the alarm state at a preset threshold. An externally visible LED will light up when the detector changes to alarm state.

Part no. 55000-240



SERIES 60 PHOTO-OPTICAL SMOKE DETECTOR

Photo-optical smoke detectors incorporate a pulsing LED located in a labyrinth within the housing of the detector. The labyrinth is designed to exclude light from any external source. At an angle to the LED is a photo-diode which normally does not register the column of light emitted by the LED.

In the event of smoke from a fire entering the labyrinth the light pulse from the LED will be scattered and hence registered by the photo-diode. If the photo-diode "sees" smoke on the two following pulses, the detector changes to the alarm state when the indicator LED will light up. The detector housing is identical to that of the ionisation smoke detector. It is distinguished from this type by having an indicator LED which is clear in quiescent state but produces a red light in alarm.

Part no. 55000-310

SERIES 60 THERMAL DETECTOR

The Series 60 thermal detectors are resettable and operate by using a matched pair of thermistors to sense heat. One thermistor is exposed to the ambient temperature, the other is sealed. In normal conditions the two thermistors register similar temperatures, but, on the development of a fire, the temperature recorded by the exposed thermistor will increase rapidly, resulting in an imbalance of the thermistors and causing the detector to change to the alarm state.

Rate of rise detectors are designed to detect a fire as the temperature increases, but they also have a fixed upper limit at which the detector will go into alarm if the rate of temperature increase has been too slow to trigger the detector earlier.

Fixed thermal detectors only change to the alarm state at a preset temperature.

Externally, the thermal detectors are distinguishable from smoke detectors by having wide openings to the surrounding atmosphere to allow good movement of air around the external thermistor.

**Part nos. 55000-105 Type A
55000-106 Type B**

**Part nos. 55000-107 Type C
55000-108 Type D**



SERIES 60 STANDARD BASE

The base has been designed to enable detectors to be plugged in without any need for force – particularly useful when fitting to suspended ceilings. To make it even easier the base has a "one way only" fit. All Series 60 bases are lockable.

The large diameter base makes it possible for Series 60 to be approved to UL standards as well as European standard EN54 and SSL.

The detectors are polarity insensitive and bases are easy to wire with an earth connector.

As with other Apollo detector bases, the Series 60 base contains no electronic parts that could be damaged during installation.

Part no. 45681-200



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Apollo Fire Detectors Ltd recommends the use of heat and smoke detector testers, which have been designed and manufactured in conjunction with No Climb Products.