

SERIES 200 plus

Multi Criteria Photoelectric Smoke / Thermal Detector
Model 2251TEM

**Product Overview****Features**

- Compatible with existing System Sensor protocol
- Microprocessor controlled with internal algorithms
- Enhanced signal processing for improved stability
- High immunity to unwanted alarms
- 2 auto-learn sensitivity settings
- 3 fixed sensitivity photo-thermal settings
- Thermal-only mode for day/night applications
- Automatic drift compensation
- Twin LED indicators providing 360° visibility
- Extended temperature range
- Built in test switch
- Stable communication with high noise immunity
- Third party certified to CEA 4021, EN54 - 7:2000 (Amendment 1) and EN54 - 5: 2000 (Amendment 1)

**Description**

The 2251TEM Multi-Criteria Fire Sensor is a plug in fire detector combining optical smoke detection, heat detection and microprocessor control with Analogue Addressable communications.

For smoke detection, the 2251TEM incorporates an improved design of sensing chamber, linked to sophisticated processing circuitry incorporating smoothing filters to help eliminate transient environmental noise conditions, which can be the cause of unwanted alarms.

The detector's performance is further enhanced by the integration of special algorithms, which automatically compensate for contamination of the sensing chamber, hence providing consistent level of sensitivity and increased immunity to unwanted alarm conditions. Should the maximum compensation range be exceeded the detector will generate a unique signal to the fire alarm control panel indicating a requirement for maintenance.

The thermal detection function features single thermistor technology with a linear temperature response.

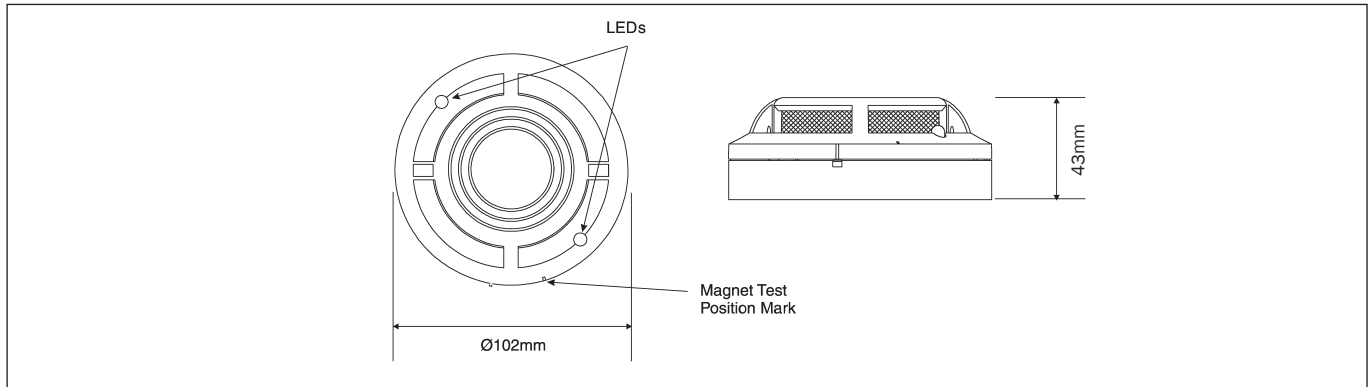
Special algorithms are used to process the inputs from both optical and thermal functions, before an alarm decision is made.

In addition to the standard fixed alarm thresholds, the detector can be programmed to operate using an "Auto-learn" feature. When operating in this mode the sensitivity of the detector will automatically adjust to short term changes in its environment, reducing the potential for unwanted alarms occurring through local activities with the protected space. In areas where the normal daytime activities are likely to create unwanted alarms, the detector can be programmed to operate in a "Heat only" mode, automatically reverting to optical-thermal operation during the unoccupied period. The 2251TEM is thus able to offer performance flexibility coupled with superior environmental stability.

The 2251TEM has two integral RED LEDs which provide local visual indication of the sensor status. These LED's provide a dual function. In the event on an alarm, they are switched ON continuously, and can also be programmed to either blink when polled by the panel or remain off during normal conditions. In addition to its integral LEDs, the 2251TEM can be connected to a Remote LED indicator (standard feature).

Architect/Engineer Specifications

2251TEM Photo-Thermal Detector



Each sensor base includes a tamper resistant option which, when activated, prevents the removal of the sensor from its base without the use of a tool. Full circuit functionality can be easily confirmed on site by use of the sensor test switch. Operation of this magnetic switch will generate an alarm response to the fire alarm control panel, making system testing both convenient and simple.

All System Sensor products are covered by our extended 3 year warranty.

Electrical Specifications

Operating Voltage Range

15 to 32VDC

Maximum Standby Current

250µA at 24VDC (no communications)

Maximum Average Standby Current

300µA (One Communication each 5 seconds with LED blink enabled)

Maximum Alarm Current (LED On)

7mA at 24VDC

Environmental Specifications

Application Temperature Range

-20PC to 60PC

Short duration & storage

-30PC to 80PC

Humidity

10 to 93% Relative Humidity (non-condensing)

Mechanical Information

Height

43mm installed in B501 base

Diameter

102mm installed in B501 base

Weight

111g

Max Wire Gauge for Terminals

2.5mm²

Colour

Pantone Warm Grey 1C

Material

Bayblend FR110

Sensitivity Settings

Alarm 1 - Photo-Thermal

High

Alarm 2 - Photo-Thermal

Medium to High - Auto Adjusting

Alarm 3 - Photo-Thermal

Medium

Alarm 4 - Photo-Thermal

Medium to Low - Auto Adjusting

Alarm 5 - Photo-Thermal

Low

Alarm 6 - Thermal Only

Class A1R (58PC)

Product Range

Compatible Bases

B500 Series (B501, B501DG, B524RTE, B524IEFT-1)

Other Devices in range

Please refer to other Series 200 plus datasheets

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