SERIES 300
Multi Criteria Photoelectric Smoke / Thermal Detector
Model 2351TEM

SYSTEM SENSOR®

Product Overview

Features

- Low profile design

- Low current draw

- Backward compatible with Series 100 detector range of bases

- Wide operating voltage 8 to 30V

- Bi-colour LED detector status indicator

- Automatic drift compensation

- Programmable sensitivity

- Addressable feature

- Advanced maintenance features via remote hand-held test unit

- Range of detector bases available

- Approved to EN54 – 7: 2000 (Amendment 1) EN54 – 5:2000 Class A1R; (Amendment 1) CEA4021

LPCB
LOSS PREVENTION CERTIFICATION BOARD
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VdS
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CE
0832-CPD-0060

Description

The 2351TEM photoelectric smoke/thermal detector forms part of the Series 300 range of conventional detectors. This range of detectors has been produced using the latest in manufacturing and design techniques, pushing out the boundaries of existing conventional detector technology. With its multitude of innovative features, the Series 300 is a detector which 'acts conventionally, thinks intelligently'.

The 2351TEM photoelectric smoke/thermal detector incorporates an optical chamber and a thermal element, which in turn are continually monitored by an on board processor by using algorithms developed specifically for the unit. An alarm signal is only enabled in the detector once the processor is satisfied that an incipient fire has been detected. By using a combination of inputs, the incidence of nuisance alarms is reduced while at the same time, the response time to an actual fire is also improved.

The 2351TEM and other detectors in the Series 300 range are backward compatible with the Series 100 detector bases, thus providing the capability to upgrade, extend and maintain existing Series 100 installations. The 2351TEM detector incorporates a bi-colour LED indicator. The integral LED changes colour according to the detector's status - Green = Normal, Red = Alarm. This benefits the user by providing clear, instant visual indication of the detector's condition. The Green LED can be programmed for blink/no blink operation.

'Drift compensation' algorithms are one of the key features of the 2351TEM detector. These algorithms ensure a consistent alarm sensitivity threshold for periods between service intervals. This provides the user with both a reduction in the frequency of nuisance alarms and maintenance savings by extending the period before cleaning of the detector chamber is required.

The sensitivity of a smoke detector is critical to its overall performance, this is reflected in both its ability to detect real fire conditions and its resilience to non-fire stimuli. The 2351TEM's performance can be optimised for it's application by selecting from one of three preset alarm thresholds - Low, Medium and High, offering greater stability and optimum performance within the environment in which it has been installed. The selection is easily achieved through the use of a remote hand-held tool.

The remote hand-held programming unit can also be used in conjunction with the Series 300 range of detectors to gain access to other advanced features. The features available include: read/write last maintenance date, read chamber contamination level, read value of thermal element and perform an alarm test.

Architect/Engineer Specifications

2351TEM Photoelectric Smoke / Thermal Detector

Each unit can be given a unique address that will be displayed on the S300ZDU whenever the detector is in alarm.
All the features via the hand-held programming unit are achieved effectively and effortlessly without the need to remove the detector or having to gain direct physical access (other than by the use of 'No Climb Products' or similar servicing tool), saving valuable commissioning/maintenance time.

They provide the end user with the confidence to know that his system is being regularly serviced and that it is operating at it's optimum level, with minimum disruption to his own business activities.

In addition to the comprehensive programming tool, a simple laser based alarm test unit is also available. The coded signal transmitted by this device can instruct the detector to generate a full alarm condition at a range of up to 5 metres from the detector, and is an ideal tool for initial commissioning and routine system testing.

A variety of detector bases can be used with the 2351TEM detector, providing application flexibility and compatibility with a wide range of Fire Alarm Control Panels. All bases are fitted with a shorting spring to permit circuit testing prior to fitting the detector and have a tamper resistant feature, which when activated prevents removal of the detector without the use of a tool.

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

Electrical Specifications

Operating Voltage Range	Typical Standby Current @ 25ÞC	Maximum Permissible Alarm Current (LED On)
8 to 30VDC (Nominal 12/24VDC)	65µA @ 24VDC (LED no blink)	80mA @ 24VDC (Limited by panel)

Environmental Specifications

Operating Temperature Range	Humidity 5 to 95% Relative Humidity (non condensing)	
-30ÞC to +70ÞC		

Mechanical Information

Height	Diameter	Weight
38mm (plus 9mm for B401 base)	102mm	105g (plus 60g for B401 base)
Wire Gauge for Terminals	**Colour**	**Material**
0.75mm^2 to 2.5mm^2	Pantone, warm grey 1C	Bayblend FR110

Product Range

Bases (see notes)

B401 Standard Base	B401SD Standard base with schotty diode
B401R Resistor base with 470 ohm resistor	B401RSD Standard base with 470 ohm resistor and Shottky diode
B401RM Standard recess base with 470 ohm resistor	B401DG Deep base
B401DGR Deep base with 470 ohm resistor	B401DGSD Deep base with Shottky diode
B312NL 12V non-latching relay base	B312RL 12V latching relay base
B324RL 24V latching relay base	

Accessories

S300RPTU Remote Programming and Test Unit	S300RTU Remote Test Unit
S300SAT Remote Programming Interface Unit	S300ZDU Zonal Display Unit

Other Detectors

2351E, 4351E, 5351E, 535ITE

Notes

Bases with other resistor values are available to suit the requirements of most Fire Alarm Control Panels.

DS2351TEM-02