INTELLIGENT AND ADVANCE - Photoelectric Smoke Detector
Model 2351EIA

Overview

Features

- Low profile design

- Low current draw

- Backward compatible with Series 100 detector range of bases

- Wide operating voltage 8 to 30VDC

- 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

- Tested and approved to EN54 – 7:2000 (Amendment 1)

LPCB

CE

199m/03   0832-CPD-0059

Description

The 2351EIA photoelectric smoke 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, This detector acts conventionally, thinks intelligently.

The 2351EIA photoelectric detector incorporates an Application Specific Integrated Circuit (ASIC). Combined with the latest state of the art optical chamber the detector provides efficient and accurate detection of fires with a high level of resilience to non-fire environmental influences.

The 2351EIA detector is backward compatible with the Series 100 detector bases, thus providing the capability to upgrade, extend and maintain existing Series 100 installations.

The 2351EIA 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 2351EIA 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 2351EIA'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 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.

System Sensor®

Architect/Engineer Specifications

2351EIA Photoelectric Smoke Detector

Each unit can be given a unique address that will be displayed on the digitally addressable fire alarm control panel 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 2351EIA 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	8 to 30VDC (Nominal 12/24VDC)
Typical Standby Current @ 25ÞC	50µA @ 24VDC (LED no blink)
Maximum Alarm Current (LED On)	80mA @ 24VDC (Limited by panel)

Environmental Specifications

Application Temperature Range	-30^0C to $+70^0$C
Humidity	5 to 95% Relative Humidity (non condensing)

Mechanical Information

Height	38mm (plus 9mm for B401 base)
Diameter	102mm
Weight	105g (plus 60g for B401 base)
Max Wire Gauge for Terminals	$0.75mm^2$ to $2.5mm^2$
Colour	Pantone Warm Grey 1C
Material	Bayblend FR110

Product Range

Compatible 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 Devices in range	2351TEM, 4351E, 5351E, 535ITE	

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

System Sensor India (Technical Services)

System Sensor and Devices

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Installation information: in order to ensure full functionality, refer to the installation instructions as supplied.