ANALOGUE - High Sensitivity Smoke Sensor
Model Pinnacle

Overview

Features

- Extremely high sensitivity 'laser' based smoke sensor
- Superior early warning performance
- Effective response to both fast flaming and slow smouldering fires
- Compatible with existing Series 200 plus protocol
- Automatic drift compensation
- Three levels of fault warning for contamination
- Stable communication with high noise immunity
- Nine sensitivity levels (0.07 - 6.56%/m)
- Twin LED indicators providing 360Þ visibility
- Rotary decade address switches
- Tamper resistant
- Built in test switch

LPCB 118h/01 VdS G202051 CE 0832-CPD-0192

Description

The Pinnacle high sensitivity 'laser' based intelligent smoke sensor is a unique offering from System Sensor that provides extremely high sensitivity to fire conditions, by detecting the earliest particles of combustion. This is achieved by combining a patented optical chamber with the latest in laser diode and precision optics technology, which enhances the sensitivity of the device. The chamber is also linked to sophisticated processing circuitry that incorporates smoothing filters to help eliminate transient environmental noise conditions, which can be the cause of unwanted alarms. The result is a very sensitive but stable sensor that can achieve sensitivities of 0.07% to 6.56% per metre obscuration and provides up to 100 times more sensitivity than a standard photoelectric smoke sensor. With its quick response and pinpoint accuracy, this unique sensor is ideally suited to environmental applications where there is substantial cost for downtime or a significant investment in installed equipment has been made (e.g. Electronics Manufacturer Clean Rooms, Telecommunication Rooms, Computer Rooms etc).

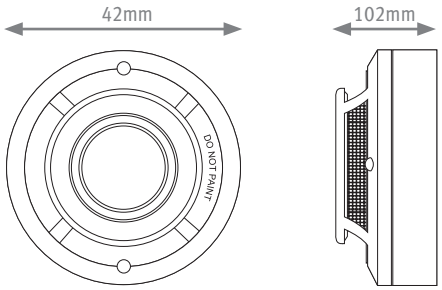
Historically, photoelectric smoke sensors have shown a quick response to slow smouldering fires, whilst ionisation smoke sensors have had a better response to fast flaming fires. However, the Pinnacle sensor provides good response to both types of fires by improving its signal-to-noise ratio. The laser diode improves the sensor's signal and increases the ability to detect small particles (usually associated with fast flaming fires), which are not as easily detected by a standard photoelectric smoke sensor. Meanwhile, the sensor's smoothing and filtering algorithms reduce noise and the possibility of false alarms.

The sensor's performance is improved even further by the inclusion of special drift compensation algorithms, which compensate for the build up of any contamination in the sensing chamber. There are three stages of drift compensation, 'low level alert', 'high level alert' and 'maintenance urgent'. The 'low and high level alert' signals are used to identify that the Pinnacle sensor has accumulated significant amounts of airborne particles and requires maintenance, whilst the 'maintenance urgent' signal indicates that the sensor has reached the end of its compensation range.

SYSTEM SENSOR®

Architect/Engineer Specifications

Pinnacle High Sensitivity Smoke Sensor



Electrical Specifications

Operating Voltage Range	15 to 32VDC
Maximum Standby Current	230µA at 24VDC (no communications)
Maximum Average Standby Current	330µA (one flash every 99 Communications)

Environmental Specifications

Application Temperature Range (see note)	-10°C to 55°C
Humidity	10% to 93% Relative Humidity (non-condensing)

Mechanical Information

Height	42mm
Diameter	104mm
Weight	120g
Max Wire Gauge for Terminals	2.5mm^2
Colour	Pantone Warm Grey 1C
Material	Bayblend FR110

Product Range

Compatible Bases	B501, B501DG, B524IEFT-1, B524RTE
Other Devices in Series 200 plus Range	Please refer to other Series 200 plus datasheets

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