

Single Channel Laser Aspiration Detector Model A211E-LSR

Overview

Features

- Single channel high sensitivity aspiration smoke detection system
- Integrated into the main fire detection system
- Can be used in a stand alone mode with volt-free outputs for fire and fault alarms
- Uses Pinnacle laser detectors exclusively
- Configurable sensitivity from 0.03% - 3.33% OBS/M
- Upto 1000m² coverage through a 100m pipe with 18 holes
- Integral translator module makes the device appear as a Series 200*plus* photoelectric detector
- Compatible with System Sensor's Series 500 protocol
- Suitable for "Double knock" or redundancy detection strategies
- Integral display with user programmable functions
- In-line air filter
- Local indication of airflow management status
- Adjustable airflow speed with visual monitor
- waterproof enclosure
- Design application for configuring the pipework



0786-CPD-20584



G206067

Description

Aspiration systems are an effective way of providing very early warning protection for high value and enterprise critical areas; they are also an effective method of protecting large open areas or areas that are inaccessible or difficult to reach such as under-floor cable voids in computer rooms.

The single channel A211E-LSR high sensitivity aspiration detector becomes an integral part of the main fire detection system, or a stand-alone device with volt-free fire and fault relays.

The aspiration detector uses one or two Pinnacle laser optical detectors addressed via a translator module from the fire system loop. The translator module makes the laser detector appear as a normal Series 200 *plus* optical detector to the panel; it also provides the interface for the air management and fault monitoring of the aspiration unit. The second Pinnacle detector can be used to give double-knock detection, a mandatory requirement if the system has automatic initiation of sprinklers or gaseous extinguishing systems. The second detector can also be used to give automatic redundancy capability, a particular benefit for installations in remote, unattended buildings such as mobile communication base stations.

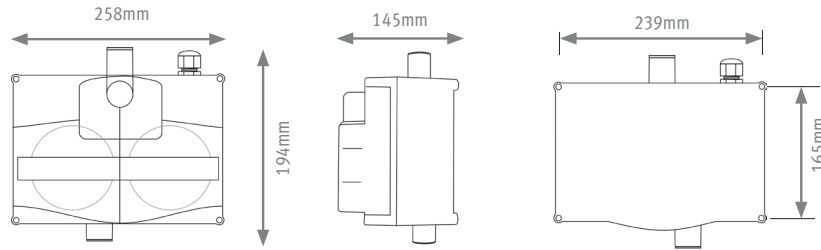
A single fan, mounted in the unit, is used to draw air through the input tube; in two channel systems, the fan is common across both tubes. High and low flow indicators are provided locally as a bar graph display in the unit. The pipework, typically 25mm in diameter, can be up to 100m in length, giving a theoretical coverage of up to 1000m².

The A211E-LSR incorporates an in-line air filter housed in a removable cartridge to remove dust and particles from the air sample. It also provides closed loop sampling where the exhausted air can be completely returned to the sampled area if required.

The aspiration detector is powered from an external 24VDC supply.

Architect/Engineer Specifications

ASD Dual Channel Aspiration Detector



Installation Recommendations

Installation should be undertaken in accordance with recognised national or international standards and codes of practice.

We would also recommend that simulated fire tests are conducted to ensure that the desired response time for a given installation are met.

Electrical Specifications

Operating Voltage Range	18 to 30Vdc
Maximum Standby Current	150µA (no communications)
Current Draw	80 to 500mA depending on pipe length and fan speed

Environmental Specifications

Application Temperature Range	-10°C to +55°C
Humidity	Humidity 10 to 93% (non condensing)
IP Rating	IP65

Fan Speed	Current /mA
10	330
9	260
8	200
7	160
6	125
5	100
4	75
3	60
2	50
1	50

Test performed with:
20m Pipe length
6mm End Hole

Mechanical Information

Maximum Pipe Length	100m
Pipe Diameter	Typical 20mm to 26.7mm (3/4" BSP)
Pipe Hole Diameter	3mm & 6mm at end of pipe
Pipe Hole Spacing	15m
Max Wire Gauge for Terminals	0.4mm ² to 2.0mm ²
Weight	1900g

LED's

Per Channel	Power ON and Power Fault , General & Fan Fault, Mains Failure & Battery Low Hi, Low and OK flow indication 10 LED bar graph of air speed or smoke level Alert, Alarm & Fire LEDs, Smoke Detector Fault
Relay Output	1 Fault Relay per channel

Product Range

A310E	Single Channel Aspiration Detector
A320E	Dual Channel Aspiration Detector
A211E-LSR	Single Channel Laser Aspiration Detector
A222E-LSR	Dual Channel Laser Aspiration Detector

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