Single Channel Aspiration Detector
Model A310E

Overview

Features

- Single channel aspiration smoke detection
- Integrated into the main fire detection system
- Compatible with addressable or conventional detectors
- Can be used with any address
- Suitable for “Double knock” or redundancy detection strategies
- Upto 1000m^2 coverage through a 100m pipe with 18 holes
- Integral display with local user programmable functions
- In-line air filter
- Local indication of airflow management status
- Adjustable airflow speed with visual monitor
- IP65 waterproof enclosure
- Design application for configuring the pipework

VdS

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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 A310 is designed for the instances where the high sensitivity that is normally inherent in Aspiration detectors is an unnecessary expense or nuisance due to false alarms. The A310E single channel aspiration detector becomes an integral part of the main fire detection system with direct communication from the panel to the installed detectors.

The units are supplied without bases or detectors, so they can be used in conjunction with any addressable or conventional System Sensor detector.

The aspiration detector uses one or two detectors. A second detector could 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. 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 1000m^2. Fault monitoring is through a common fault relay with visual indication

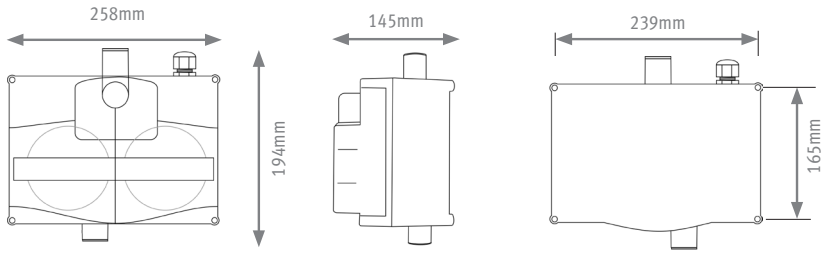
The A310E incorporates an in-line air filter housed in a removable cartridge to remove dust and particles from the air sample. It also provides closed loop sampling where the exhausted air can be completely returned to the sampled area if required.

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

SYSTEM SENSOR®

Architect/Engineer Specifications

ASD Single 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 (with LED blink enabled)
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	1670g

LED's

Power ON and Power Fault , General & Fan Fault, Mains Failure & Battery Low	
Hi, Low and OK indication 10 LED bar graph of airflow speed	
Relay Output	1 Fault Relay

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.