Protec

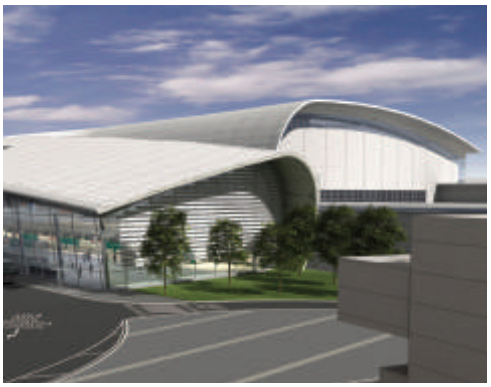
Protec Fire Detection (Export) Ltd

Global Fire Solutions

Aspirating Fire & Smoke Detection

FOGTEC® FIRE PROTECTION

ADDRESSING SAFETY SYSTEMS WITH INTELLIGENCE



Protec Fire Detection plc

Protec Fire Detection Plc, is the UKs largest privately owned fire detection company and was formed from our shareholders partnership company Protec Fire Alarms dating back to September 1968. With over six decades of experience in our industry, we have a reputation for providing innovative products and superior services that meet with our clients ever more demanding expectations.

We continually invest a very significant portion of our revenue into our Research and Design Centre, where we employ Physicists, Electronic Hardware and Software engineers. Our unique products are then produced in our own quality controlled manufacturing unit equipped with the latest automated processes.

Products & Services Offered

- Fire Detection
- Aspirating Fire Detection
- Emergency Lighting
- Public Address / Voice Evacuation
- Disabled Refuge & Fire Telephone
- Intruder Detection, CCTV & Access Control
- Fixed Fire Suppression & Portable Fire Extinguishers
- Sprinklers & Water Mist

Applications of Aspiration Detection

- Airports
- Hospitals
- Hotels
- Commercial Towers
- Shopping Centres
- Power Stations

Major References Aspiration Detection

- Manchester Airport
- Meadowhall Shopping Centre
- Dublin Airport New Terminal (T2)
- Media City, BBC Headquarters
- London 2012 - Olympic Stadium
- Bloomberg HQ - London
- Spanish Parliament Building
- American Museum of Natural History

PROTEC ASPIRATING DETECTION SYSTEM SOLUTIONS

Overview

Aspirating detection is now a recognised solution for so many different fire detection applications. Protec Fire Detection have the most extensive range of aspirating detector technologies and options available on the global market. From low cost single pipe aspirating smoke detectors to multi-pipe, multi-technology aspirating Fire & Smoke detectors.

Cirrus Pro Aspirating Fire Detectors

Cirrus Pro Cloud Chamber Fire detection

Cirrus Pro detectors are the only cloud chamber based aspirating detectors on the global market. The cloud chamber detection principle ensures this aspirating detector CANNOT false alarm from dust and other pollutants, unlike standard optical aspirating detectors. Sampling from environments with high airflow, high humidity levels and extreme temperatures also have no false alarm effects on the detector operation. Therefore the use of Cirrus Pro detectors in industrial application is very common.

***ProPointPlus* Aspirating Smoke Detectors**

ProPointPlus Optical Smoke and Smoke/CO detection

ProPointPlus contains up to four separate detectors within a common aspirator enclosure. This provides four separately identifiable areas from a single aspirating unit. ProPointPlus utilises LED optics for verification of smoke levels and can be configured without the need for a laptop connection. Detector set-up for Class A, Class B and Class C settings are achieved through very simple multi-function, multi-lingual menu functions.

***Cirrus HYBRID* Aspirating Fire & Smoke Detectors**

Cirrus HYBRID Cloud Chamber Fire & Optical smoke detection

Cirrus HYBRID detectors are the next generation of aspirating detectors and are unique in the aspirating world. By utilising the best forms of aspirating system technologies; Cloud Chamber Detection (CCD) and Early Warning Smoke Detection (EWSD) in one detector, we have created a single detector able to detect fire & smoke over the largest range of fire types. The result of this synergy of technologies is a device that can verify true alarm conditions and are resistant to unwanted or false alarms.

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Cirrus Pro 200 - EN54 Part 20

Features & Benefits

- Cloud Chamber Detection Principle
- Up to 200 mtrs Sampling Pipe
- Programmable Pre-Alarm warning condition
- 3 Programmable Fire warning conditions
- Vast Sensitivity Range (incipient to conflagrating)
- Latching / non latching alarm contacts
- Fault Diagnostic feature
- Immune to dust, humidity & temperature changes
- Approved to EN54 Part 20

Overview

The sensitivity range is the key feature that makes the Cirrus Pro Series Fire Detector the worlds most versatile fire detection device.

For over 20 years Cloud Chamber detectors have been known as the most sensitive fire detection device, able to detect at the true incipient stage of a developing fire.

The New Cirrus Pro Series Detectors have a vast sensitivity range capable of being even more sensitive than previous versions. In addition, the detector may now be configured to be installed in heavily contaminated environments, such as polluted production and warehousing facilities.

Almost Unlimited Applications

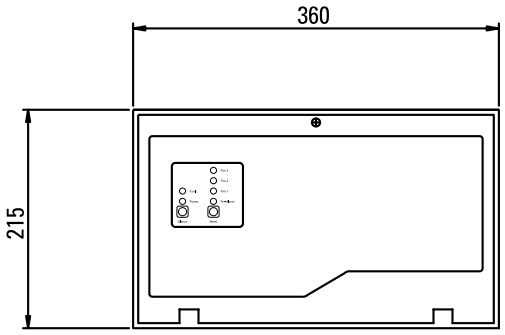
Class A - High Sensitivity Applications include:- Computer Rooms, Clean Rooms, Control Rooms, Data Centres, Valve Halls, Archive Storage, Anechoic Chambers, EDP areas.

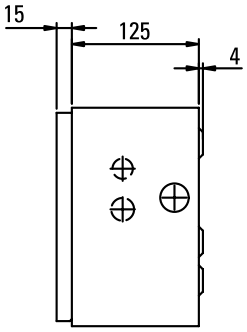
Class B - General Sensitivity Applications include:- Historic Buildings, Museums, Hospitals, Cathedrals, Theatres, Art Galleries, Clean Warehouses, Atria, Indoor Stadiums.

Class C - Harsh Environment Applications include:- Cold Storage Facilities, Specialist Production Facilities, Food Industry Facilities, Paper Production Facilities, Transportation Terminals, Flight Simulators, Aircraft Hangers, Prisons, Inaccessible Voids, Dirty Warehouses.

Technical Details

Dimensions (mm)





Independently tested
Intertek
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For Technical Data - See Table 11, Page 51

Additional Product

Cirrus Pro Locator

The Cirrus Pro Locator is the industries first handheld portable air sampling detector that can help guide you to an impending fire threat.

Cirrus Pro Locator is part of the Cirrus Pro Series range of aspirating fire detectors which utilise the unique cloud chamber detection principle.

Features & Benefits

- 1 - 4 Individual detectors per aspirator (providing up to 4 separately identifiable areas)
- High performance optical Scatter Chamber Detectors (SCD) and enhanced CO detection
- Multiple language, multi-function LCD display
- Simple install and commission process without the need for a laptop connection
- Simple Class A, Class B, Class C and Prison sensitivity configuration set up
- Inbuilt algorithm to avoid unwanted alarms
- Approved to EN54 Part 20

Overview

ProPointPlus Optical Smoke and Smoke/CO detection

Aspirating detection is now a recognised solution for many different fire detection applications. ProPointPlus provides up to four separate detectors within a common aspirator enclosure and therefore, provides four individually identifiable areas of detection per aspirator.

Each of the four plug-in Scatter Chamber Detectors (SCD) modules can be either optical only or combined optical/enhanced CO detectors for small single room applications. Independent and integrated alarm decision making through the use of complex algorithms extend the range of particle detection, confirm genuine alarms and reduce unwanted alarms.

Installation, configuration and commissioning of the ProPointPlus detector is very simple and installer friendly. Configuration to either Class A, Class B or Class C sensitivity options is achieved through a multi-language and multi-function LCD display without the need for a laptop connection.

Detector set up allows the installer to configure the detector sensitivity to exactly the same equivalent as a known number of point type smoke detectors for each Class A, Class B and Class C system. This ensures the system specifier, designer, installer and commissioning engineer configure the ProPointPlus SCDs to the correct sensitivity for the particular application.

Aspirator fan speed and airflow configuration is a also a very simple process allowing ProPointPlus aspirating detectors to be installed in a variety of applications with short and relatively long pipe runs.

Technical Details

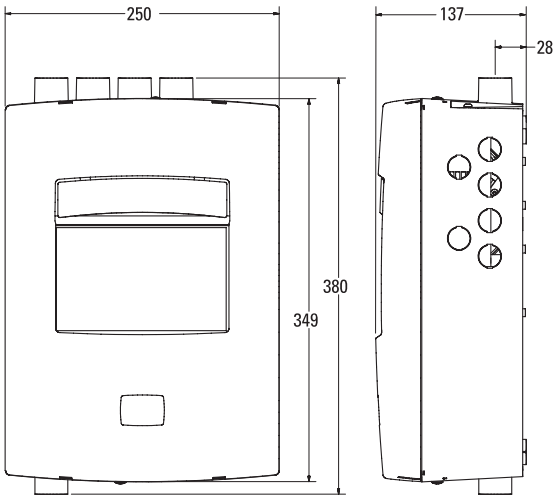
Application Guide

Class A - High Sensitivity Applications include:- Small Computer Rooms, Cleanrooms, Data Centres, Control Rooms, Archive Storage & EDP areas

Class B - Enhanced Sensitivity Applications include:- Small Historic Buildings, Museums, Theatres, Galleries, High Ceiling Areas, Small Clean Warehouses & Small Atria Areas

Class C - Normal Sensitivity and Harsh Environment Applications include:- Lift/Elevator Shafts, Small Cold Storage Facilities, Clean Warehouses, Atria, Inaccessible Voids & Up to 4 x separately identifiable Prison Cells per aspirator.

Dimensions (mm)



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FOGTEC® FIRE PROTECTION

Cirrus HYBRID

Features & Benefits

- The first and only Combined Fire & Smoke Aspirating Detector
- Unique Cloud Chamber Detection (CCD) - primary detection technology
- Optical Scatter Chamber Detectors (SCD) - secondary detection technology
- The largest sensitivity range aspirating detector Zero% obs/m to 20% obs/m
- HYBRID Smart Signal to verify alarms and discriminate false alarms
- 7 full colour multi-function touchscreen LCD display
- Live camera stream from up to 6 IP colour cameras
- Approved to EN54 Part 20

Overview

Combined Cloud Chamber Fire and optical Smoke detection

History tells us that in reality there are really only two types of aspirating detector technology. These technologies are Cloud Chamber aspirating detection identifying optically invisible fire particulate, and laser or LED Optical aspirating detection identifying small amounts of visible smoke.

Cirrus *HYBRID* is the only aspirating detector available to identify the optically invisible fire particulate by utilising the unique Cloud Chamber Detection (CCD) technology.

Depending on the materials burning, particularly in the many modern applications for aspirating detection systems, some fires burn with only a small amount of visible smoke, whereas others burn with greater volumes of visible smoke. Cirrus *HYBRID* is able to detect those fires with greater volumes of smoke. Early Warning Smoke Detection (EWSD) is provided using high performance optical Scatter Chamber Detectors (SCD) that identify both small and larger smoke particles entering the detector.
By utilising the two most effective methods of aspirating system technologies (CCD and EWSD) in a single detector the Cirrus *HYBRID* detector provides a device able to detect fire and smoke over the largest range of fire types.

However, what makes this totally new and genuinely unique concept in aspirating fire and smoke detection technology so different is that these two technologies work both independently from each other, and through the use of complex algorithms also interact together, to provide true intelligent alarm decision making. The result of this synergy of technologies is a device that can verify true alarm conditions across the largest range of fire types. A further and equally as important result of this synergy of technologies, is the discrimination of unwanted or false alarms which have historically and still continue to plague so many optical only aspirating detectors.

Technical Details

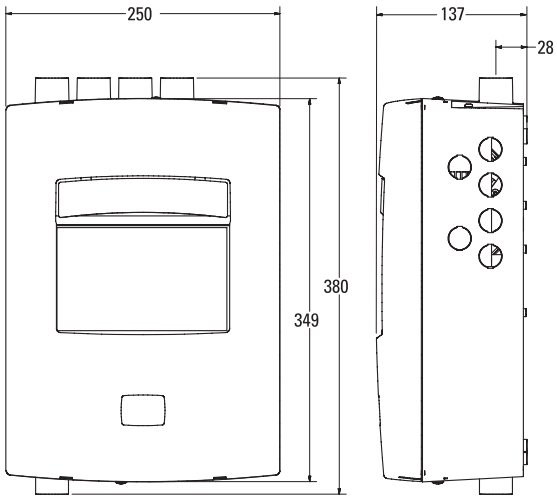
Application Guide

Class A - High Sensitivity Applications include:- Computer rooms, Cleanrooms, Data Centres, Control Rooms, Valve Halls, Archive Storage, Anechoic Chambers & EDP areas.

Class B - Enhanced Sensitivity Applications include:- Historic Buildings, Museums, Hospitals, Airports, Cathedrals, Theatres, Art Galleries, Clean Warehouses, Atria & Indoor Stadiums.

Class C - Normal Sensitivity and Harsh Environment Applications include:- Cold Storage Facilities, Specialist Production Facilities, Food Processing Areas, Paper Production Facilities, Transportation Terminals, Inaccessible Voids & General Warehousing.

Dimensions (mm)



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FOGTEC® FIRE PROTECTION

Aspirating Fire Detectors

Table		Cirrus Pro 200	ProPointPlus	Cirrus HYBRID
Supply Voltage		20 - 29VDC		
Power Consumption		8.2 watts quiescent (24VDC 90% Fan Speed)	9.6 watts quiescent (24VDC 100% Fan Speed)	16.8 watts quiescent (24VDC 100% Fan Speed)
Current Consumption		340mA quiescent 500mA alarm (24VDC 90% Fan Speed)	300mA with blower @ 30% 400mA with blower @ 100%	500mA with blower @ 30% 700mA with blower @ 100%
Operating Conditions	Detector Ambient	0˚C to 38˚C (32˚F to 100˚F)		
	Tested To	0˚C to 55˚C (32˚F to 131˚F)		
	Sampled Air	-20˚C to 60˚C (-4˚F to 140˚F)		
	Humidity	10 - 95%RH, non-condensing		
IP Rating		IP30		
Cable Access		6 x 20mm knock outs	10 x 20mm knock outs	
Cable Termination		Screw terminal blocks (0.2 - 2.5mm², 30 - 12AWG)		
Sampling Network		Four inlet ports with combined sampling pipe length up to 200m (650ft.) Maximum Transport Time allowed up to 120 seconds	Four inlet ports with combined sampling pipe length up to 200m (750ft) subject toProFlow sampling pipe calculation program. Maximum transport time = 120 seconds	Four inlet ports with combined sampling pipe length up to 630m (2,066ft) subject toProFlow sampling pipe calculation program. Maximum transport time = 120 seconds
Pipe ID		19 to 25mm (preferred OD 25mm)		
Alarm Indications		Pre-alarm, Fire 1, Fire 2, Fire 3	Pre-alarm warning and Fire per pipe	Pre-alarm, Fire 1, Fire 2, Fire 3
Other Indications		Supply Healthy, General Fault		
Approvals		UL,ULC,EN-54	EN-54	EN-54
Sensitivity Range		20,000 particles per cc to 3 million particles per cc 10 programmable sensitivity ranges - 0.070 dB/m	0.12%/m to 11%/m	20,000 PCC to 7 million PCC 0.1%/m to 20%/m
Programmable Inputs		4 monitored inputs that may be configured for Isolate, Reset, Disable, Fault, Gain Set, Battery Fault and Mains Fault	3 monitored inputs that may be configured for Isolate, Reset, Disable, Fault, Gain Set, Battery Fault and Mains Fault	
Programmable Output Relays		5 Relays rated 1A @ 30VDC (Volt-free change over contacts)		
Camera Inputs		n/a	n/a	6 x Protec specified IP cameras
Event Log / Data Retention		128 events stored on FIFO basis (Approx 10 day historical graph)	24,000 events stored on FIFO basis (alarms, actions, faults and data points) (Approx 30 day historical graph data)	
Variable Sensitivity Settings		7 day programmable settings with 3 time zones per day	7 day programmable settings with 2 time zones per day. Day-time/Night-time mode setting	
EN54 Approved Sensitivity Setting		Class A/B/C - 36 holes per detector	Class A - 3 holes per detector (per pipe) Class B - 5 holes per detector (per pipe) Class C - 8 holes per detector (per pipe)	Class A - 36 holes @ 200CFS Class B - 44 holes @ 400CFS Class C - 44 holes @ 600CFS
Airflow Monitoring		High Airflow and Low Airflow fault monitoring		
Weight		5kg (11lbs)	3kg (6.6lbs)	3.5kg (7.7lbs)
Dimensions (mm)		360(W) x 215(H) x 144(D)	380(H) x 250(W) x 137(D)	

Global Fire Solutions

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