

Cirrus Hybrid™

Early Warning Air Sampling Fire Detector

Data Sheet

Part Number: 61986H4S

Features

- The First and Only “Combined Fire & Smoke” Air Sampling Detector
- Unique “Cloud Chamber Detection” (CCD) - Primary Detection Technology
- Optical “Scattering Chamber Detectors” (SCD) - Secondary Detection Technology
- Independent and integrated intelligent alarm signal decision making
- The largest sensitivity range of any Air Sampling detector 0%obs/m - 20%obs/m
- HYBRID “Smart Signal” to verify alarms and discriminate false alarms
- 7” full color multi-function touchscreen LCD Display
- Live Camera Stream from up to 6 IP color cameras
- On-Board animated fault diagnosis feature.

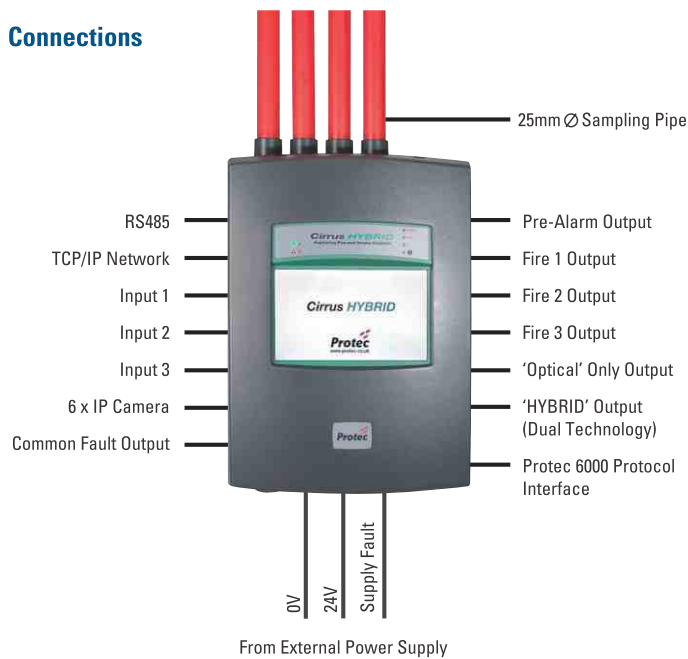


Description

History tells us that in reality there are really only two types of Air Sampling detector technology. These technologies are ‘Cloud Chamber’ Air Sampling detection identifying optically invisible fire particulate, and laser or LED ‘Optical’ Air Sampling detection identifying small amounts of visible smoke. Cirrus HYBRID is the only Air Sampling detector available to identify the optically invisible fire particulate by utilizing the unique ‘Cloud Chamber Detection’ (CCD) technology. Depending on the materials burning, particularly in the many modern applications for Air Sampling detection systems, some fires burn with only a small amount of visible smoke, whereas others burn with greater volumes of visible smoke. Cirrus HYBRID detects these wide-ranging ‘smokier’ fire types too. 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 Air Sampling 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 Air Sampling 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 Air Sampling detectors.

Connections



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.

Note: Non-scanning detectors (standard detectors) - can have up to four sampling pipes which share a common Cloud Chamber to provide fire particle detection. Each pipe inlet is provided with an individual Scatter Chamber Detector to provide optical smoke particle detection. This does not provide individual pipe identification of the Combined Fire & Smoke signals.

Scanning detectors - can have up to four sampling pipes. The air entering each pipe inlet is direct through the Cloud Chamber to provide fire particle detection and an individual Scatter Chamber Detector to provide optical smoke particle detection. This provides individual pipe identification of the Combined Fire & Smoke signals.

Supply Voltage	20 - 29VDC	Other Indications	Supply Healthy, General Fault
Power Consumption	16.8 watts quiescent (24VDC 100% Fan Speed)	Sensitivity Range	10,000 PCC to 10 million PCC 0 - 1000CFS (Combined Fire & Smoke scale)
Current Consumption	500mA with blower @ 30% 700mA with blower @ 100%	Programmable Inputs	3 monitored inputs that may be configured for Isolate, Reset, Silence, Day/Night, Battery Fault and Mains Fault
Operating Conditions		Programmable Output Relays	5 Relays rated 1A @ 30VDC (Volt-free change over contacts)
Detector Ambient Tested to	0°C to 38°C (32°F to 100°F)	Camera Inputs	6 x Protec specified IP cameras
Sampled Air	0°C to 55°C (32°F to 131°F)	Event Log / Data Retention	24,000 events stored on FIFO basis (alarms, actions, faults and data points) (Approx 30 day historical graph data)
Humidity	-20°C to 60°C (-4°F to 140°F)	Variable Sensitivity Settings	7 day programmable settings with 2 time zones per day. Day-time/Night-time setting
IP Rating	10 - 95%RH, non-condensing	EN54 & AS7240 Approved Sensitivity Settings	Class A - 36 holes @ 200CFS Class B - 44 holes @ 400CFS Class C - 44 holes @ 600CFS
Cable Access	10 x 20mm knock outs	Airflow Monitoring	'High Airflow' and 'Low Airflow' fault monitoring.
Cable Termination	Screw terminal blocks (0.2 - 2.5mm ² , 30 - 12AWG)	Weight	3.5kg (7.7lbs)
Sampling Network	Four inlet ports with combined sampling pipe length up to 630m (2,066ft) subject to 'ProFlow' sampling pipe calculation program. Maximum transport time = 120 seconds.	Dimensions (mm)	380(H) x 250(W) x 137(D)
Pipe ID	19mm to 25mm (preferred OD 25mm)	Product Approval	CoCP No: 0359-CPR-00475 DoP No: PFD-CPR-0108 Relevant Standard: EN54 Part 17 & 20 AS7240 Part 20
Alarm Indications	Pre-alarm, Fire 1, Fire 2, Fire 3		



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