

# Cirrus Hybrid™

## Very Early Warning Aspirating Fire Detector

### Data Sheet

#### Features

- The First and Only “Combined Fire & Smoke” Aspirating 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 aspirating 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
- Built-In Troubleshooting Videos



#### Part Numbers

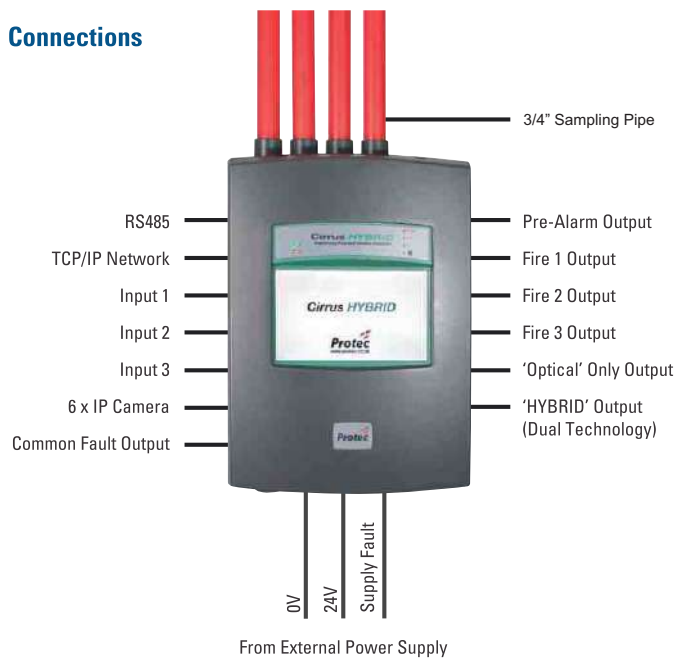
61-986-H4-FMUL1	Hybrid 1 Pipe
61-986-H4-FMUL4	Hybrid 4 Pipe
61-986-H4S-FMUL4	Hybrid 4 Pipe w/scanner

#### Description

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 utilizing 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 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 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.

## 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.

<b>Supply Voltage</b>	20 - 29VDC	<b>Other Indications</b>	Supply Healthy, General Fault
<b>Power Consumption</b>	16.8 watts quiescent (24VDC 100% Fan Speed)	<b>Sensitivity Range</b>	10,000 PCC to 10 million PCC 0 - 1000CFS (Combined Fire & Smoke scale)
<b>Current Consumption</b>	500mA with blower @ 30% 700mA with blower @ 100%	<b>Programmable Inputs</b>	3 monitored inputs that may be configured for Isolate, Reset, Silence, Day/Night, Battery Fault and Mains Fault
<b>Operating Conditions</b>		<b>Programmable Output Relays</b>	5 Relays rated 1A @ 30VDC (Volt-free change over contacts)
<b>Detector Ambient</b>	0°C to 38°C (32°F to 100°F)	<b>Camera Inputs</b>	6 x Protec specified IP cameras
<b>Tested to</b>	0°C to 55°C (32°F to 131°F)	<b>Event Log / Data Retention</b>	24,000 events stored on FIFO basis (alarms, actions, faults and data points) (Approx 30 day historical graph data)
<b>Sampled Air</b>	-20°C to 60°C (-4°F to 140°F)	<b>Variable Sensitivity Settings</b>	7 day programmable settings with 2 time zones per day. Day-time/Night-time setting
<b>Humidity</b>	10 - 95%RH, non-condensing	<b>EN54 &amp; AS7240 Approved Sensitivity Settings</b>	Class A - 36 holes @ 200CFS Class B - 44 holes @ 400CFS Class C - 44 holes @ 600CFS
<b>IP Rating</b>	IP30	<b>Airflow Monitoring</b>	'High Airflow' and 'Low Airflow' fault monitoring.
<b>Cable Access</b>	10 x 20mm knock outs	<b>Weight</b>	3.5kg (7.7lbs)
<b>Cable Termination</b>	Screw terminal blocks (0.2 - 2.5mm <sup>2</sup> , 30 - 12AWG)	<b>Dimensions (mm)</b>	380(H) x 250(W) x 137(D)
<b>Sampling Network</b>	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.	<b>Coverage</b>	Up to 57,600sq.ft.
<b>Pipe ID</b>	3/4" or 25mm		
<b>Alarm Indications</b>	Pre-alarm, Fire 1, Fire 2, Fire 3		
<b>Sample Points</b>	Up to 64 Holes		



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