



A Bosch Company

- 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
- Independent and integrated intelligent alarm signal decision making
- 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 touch screen LCD display
- Live camera stream from up to 6 IP colour cameras
- Fault finding video feature

## Cirrus HYBRID

EN54-20 / AS7240-20 / CCC - China



### 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* 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.



Active Fire Innovation Product of the Year



Gold Medal of the Poznan International Fair Securex For Innovation and Superior Technology



ADDRESSING SAFETY SYSTEMS WITH INTELLIGENCE

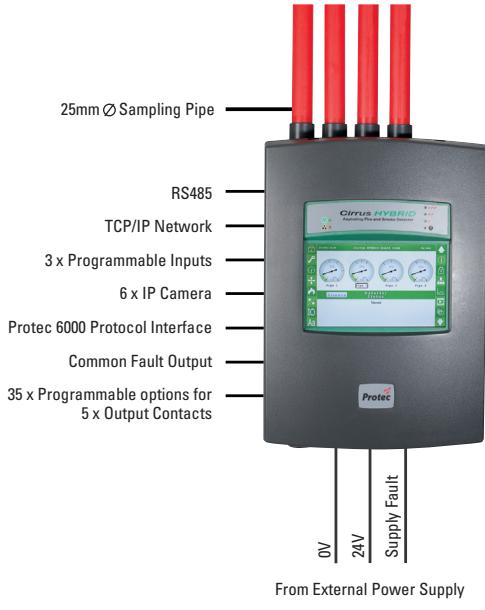
# Technical Specification



<b>Supply Voltage</b>	20 - 29VDC
<b>Power Consumption</b>	16.8 watts quiescent (24VDC 100% Fan Speed)
<b>Current Consumption</b>	500mA with blower @ 30% 700mA with blower @ 100%
<b>Operating Conditions</b>	
<b>Detector Ambient</b>	0°C to 38°C (32°F to 100°F)
<b>Tested to</b>	0°C to 55°C (32°F to 131°F)
<b>Sampled Air</b>	-20°C to 60°C (-4°F to 140°F)
<b>Humidity</b>	10 - 95%RH, non-condensing
<b>IP Rating</b>	IP30
<b>Sampling Network</b>	Up to four inlet ports. Maximum pipe lengths specific to each individual design. All designs to be verified by 'ProFlow' sampling pipe calculation program. Maximum transport time 120 seconds.
<b>Pipe ID</b>	19mm to 25mm (preferred OD 25mm)
<b>Alarm Indications</b>	Pre-alarm, Fire 1, Fire 2, Fire 3
<b>Other Indications</b>	Supply Healthy, General Fault
<b>Sensitivity Range</b>	10,000 PCC to 10 million PCC, 0-1000CFS (Combined Fire & Smoke scale)

<b>Programmable Inputs</b>	3 monitored inputs that may be configured for Isolate, Reset, Silence, Day/Night, Battery Fault and Mains Fault
<b>Programmable Output Relays</b>	5 Relays rated 1A @ 30VDC (Volt-free change over contacts)
<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>Variable Sensitivity Settings</b>	7 day programmable settings with 2 time zones per day. Day-time/Night-time setting
<b>EN54 &amp; AS7240 Approved Sensitivity Settings</b>	Class A - 34 holes @ 200CFS (non-scanner) Class B - 44 holes @ 400CFS (non-scanner) Class C - 44 holes @ 600CFS (non-scanner)  Class A - 11 holes per pipe @ 200CFS (scanner) Class B - 22 holes per pipe @ 400CFS (scanner) Class C - 44 holes per pipe @ 600CFS (scanner)
<b>Airflow Monitoring</b>	'High Airflow' and 'Low Airflow' fault monitoring.
<b>Weight</b>	3.5kg (7.7lbs)
<b>Dimensions (mm)</b>	380(H) x 250(W) x 137(D)
<b>Relevant Standard</b>	EN54 Part 17 & 20, AS 7240 Part 20

## 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.

## Product Codes

HYBRID 1 Pipe	61-986-H1	HYBRID 2 Pipe	61-986-H2	HYBRID 2 Pipe Scanner	61-986-H2S
HYBRID 3 Pipe	61-986-H3	HYBRID 3 Pipe Scanner	61-986-H3S		
HYBRID 4 Pipe	61-986-H4	HYBRID 4 Pipe Scanner	61-986-H4S		

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.