

High Sensitivity smoke detector

HSSD

Stratos-HSSD embodies many unique features to maximize performance and increase reliability compared to other aspirating detection systems. Stratos-HSSD is recognized as being easily the most sensitive laser based system available, but coupled to the unique ClassiFire -3D® Artificial Intelligence (AI) process, this need not mean a high rate of nuisance alarms. Stratos-HSSD is the only optical high sensitivity system which is routinely applied to the protection of very dirty and dusty environments. This is achieved by combining Laser Dust Discrimination (LDD™) with a patented dust management bypass and separation system. At the other extreme, Stratos-HSSD is capable of providing the very highest levels of sensitivity in environments such as computer areas and clean rooms. In these applications it is able to give warning to the very slightest trace of smoke. Stratos-HSSD is fully capable of reacting to true INCIPIENT fire situations, thereby preventing damage. Stratos-HSSD provides the EARLIEST warning.

ClassiFire Software

In common with all AirSense Technology detection products, Stratos-Micra employs our sophisticated and Queen's Award winning Artificial Intelligence system; ClassiFire. This system controls all aspects of the detector

sensitivity setting and automatic day/night switching. ClassiFire not only makes commissioning supremely simple and effective, it also allows the system to 'condition' itself to suit the environment in which it is applied on a day-by-day basis, providing unwavering protection.

Applications:

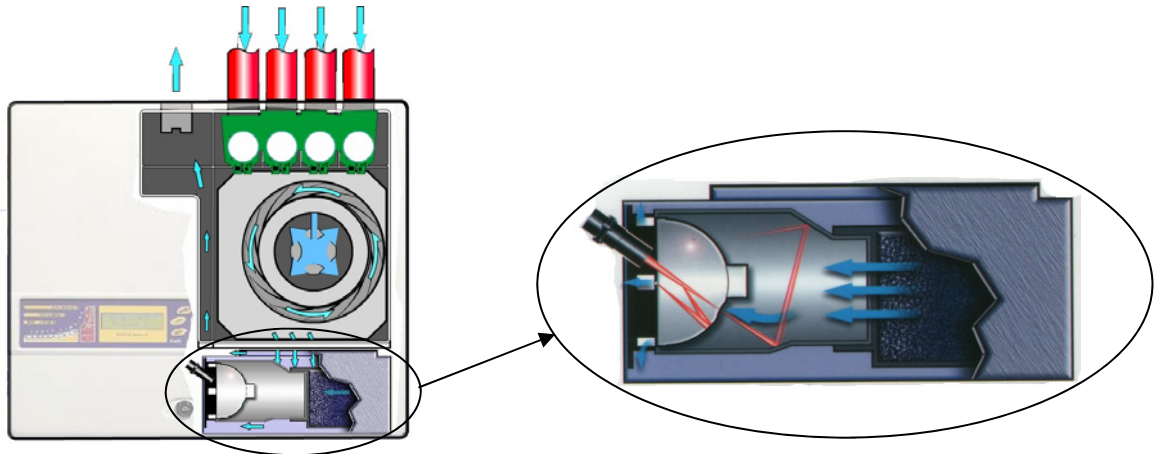
- Data storage units
- Prison cells
- Plant rooms
- Air conditioning units
- Equipment racks
- Air duct protection
- Heritage property protection
- Critical equipment
- Anti-smoking enforcement
- Motor rooms



Clean environment



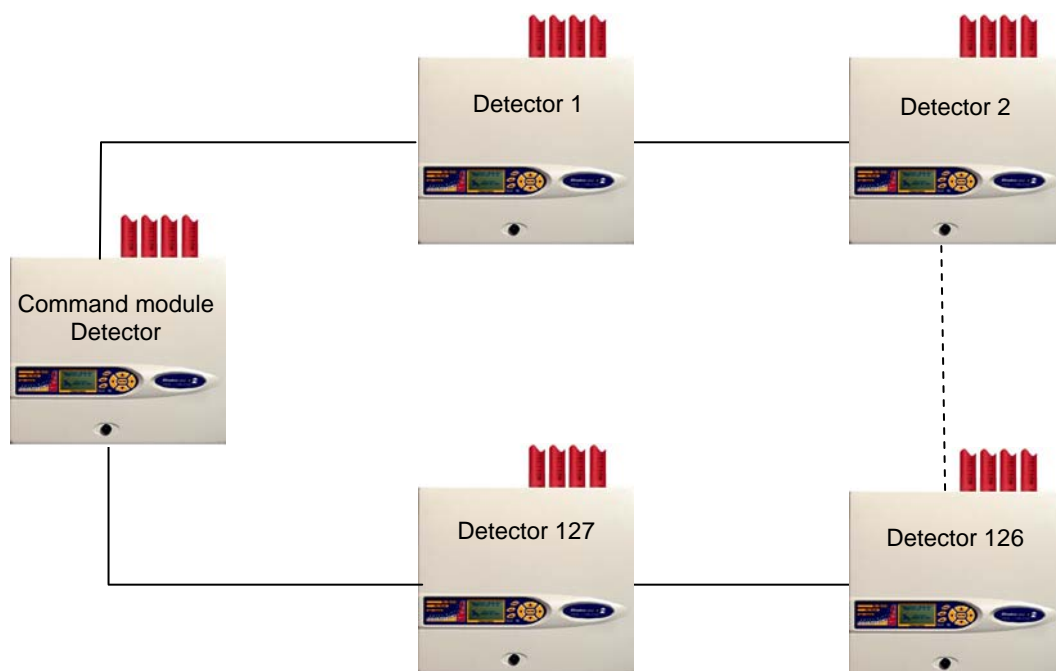
Principe



The detection principle used in the Stratos-HSSD-2 system is a patented 'laser forward scatter' system. A powerful semiconductor laser is directed through an aperture in a specially designed reflector. Any combustion products present in the moving air sample will scatter a

cone of light onto the reflector and from there it is focused onto a single photo-receiver. This system has several advantages, including; inherent immunity to dust/dirt build-up, high signal to noise level and resistance to problems caused by vibration and high humidity.

The signal from the detection transducer is processed by the unique ClassiFire-3D® Artificial Intelligence system. The system uses a patented 'wastage' system which bypasses the majority of sampled air, maximizing service life and permitting operation in



Specifications

Supply Voltage	21.6V - 26.4V DC
Size	427W x 372H x 95D
Weight	5.2kg
Operating temperature range	-10 to +60°C
Operating humidity range	0 - 90% non-condensing
Sensitivity range (%Obs/m)	Min = 25% Max = 0.03% FSD
Maximum sensitivity resolution	0.0015% obscuration per meter
Detection principle	Laser light scattering mass detection and particle evaluation
Particle sensitivity range	0.003 μ to 10 μ
Dust discrimination principle	3D Laser Dust Discrimination
Current consumption	400mA @ 24V DC
Maximum sampling pipe length	250m @ 80 sampling holes—200m @ 100 sampling holes
Sampling pipe inlets	4 on top and 4 at rear
Sampling pipe outlets	1 on top and 1 at rear
Sampling pipe internal diameter	15-25mm
Alarm levels	4 (Fire 2, Fire 1, PreAlarm and Aux)
Baragraph sensitivity range	0.0015—25% obs/m
Baragraph segments	26
Chamber service intervals	Greater than 8 years (dependant on environment)
Dust separator replacement intervals	Dependant on environment
Laser lifetime (MTTF)	greater than 1000 years
Aspirator Lifetime	Greater than 10 years
Programming	Front panel or PC via RS232/RS485
Data loop cable	RS485 data cable
Data loop maximum length	1.2 Km in 1.2 Km out
IP rating	IP50
Supported languages on internal programmer	Czech, Dutch, English, Finnish, French, German, Hungarian, Italian, Norwegian, Swedish



Order information

Name	Part Number
HSSD2 standard detector	AIR 30621
HSSD2 detector fitted with Command Module	AIR 30620
HSSD control unit with power supply	AIR 30623
HSSD control unit without power supply	AIR 30624
Relay Card	30431
Relay - Input Card	30436