

## FastSense 25™ / FastSense 100™ A High Sensitivity Detector

### Description

**FastSense 25™** and **FastSense 100™** adopts the latest in laser based technology making it extremely sensitive, thus providing the earliest warning to slight traces of smoke.

Key features of the **FastSense 25™** and **FastSense 100™** systems include:

- Advanced laser technology
- **ClassiFire™** Artificial Intelligence software
- **FireFinder™** Fire Alarm Control Panel interface (APIC) (PDS230-0041)
- PC based remote software
- **SenseNET** graphical display and control
- **PipeCalculator** design software
- Extensive range of fittings

While the **FastSense 25™** has a single port for the sampling pipe network, the **FastSense 100™** has two (2). A Ø25mm sampling pipe fits the ports of both detectors. The **FastSense 25™** accommodates a sampling pipe with a maximum length of 25m and two (2) pipes of 50m for **FastSense 100™**.

These detectors are based on an aspirating system, incorporating patented artificial intelligence known as **ClassiFire™**.

**ClassiFire™** continually monitors the environment and internal contamination, and then adjusts the sensitivity of the detector for optimum performance. The sensitivity is adjusted automatically for day/night modes or operational/non-operational levels with no need for external input. Upon power up, the FastLearn feature automatically sets detector sensitivity.

An Apollo Protocol Interface Card (APIC) allows seamless connectivity between the detector and an Ampac **FireFinder™** Fire Alarm Control Panel. This saves time and reduces cost of material, while promoting flexibility in system design.

Both the **FastSense 25™** and **FastSense 100™** detectors have 'Fire', 'Fault' and 'OK' visual indicators.

A computer, with the **FastSense** PC based software installed, may be connected to the detector. Once operational the software will allow the PC user to configure and control the detector. The user will

also be able to interrogate the bar graph and histograms generated by **ClassiFire™**.

When detectors are networked, it would be necessary to control, monitor and program from the one location. To achieve this, a **FastSense PLUS™** detector with a 'Command Module' or **SenseNET** graphic system is required. (Refer to PDS230-0011)

The **SenseNET** is the Windows based program that provides graphical central management and monitoring of up to 126 detectors. In a highly complex system design the **SenseNET** makes easy work of identifying the source of smoke, through its ability to produce site maps, warning sounds and spoken messages unique to each detector. There is also real-time **ClassiFire™** graphical display for each detector.

With the aid of the **PipeCalculator** design software a **FastSense** high sensitivity detection system can be easily designed. **PipeCalculator** models in 3-dimension the size of the risk, location of detector etc. The software calculates the number and length of pipes, as well as the spacing and size of the sampling holes along the pipe. The goal of the software is to ensure that the transport time at the furthest sampling hole is not greater than 90 seconds.

The **PipeCalculator** summarises the products that are required to ensure that the design specification is met by giving length of pipes and number of sampling points etc. Ampac offers a range of fittings to ensure that the system is installed to meet the design requirements.

**FastSense 25™** and **FastSense 100™** are suitable for the following applications:

- Return air ducts
- Large area/volume offices, warehouses
- Telephone exchanges
- Clean rooms
- Cold stores
- Computer rooms
- Document storage facilities

## FastSense 25™ / FastSense 100™

A High Sensitivity Detector

### Technical

The **FastSense 25™** and **FastSense 100™** operate on a secondary 24 volt d.c. source i.e. a Fire Alarm Control Panel or a dedicated power supply unit.

A patented 'forward light scattering' detection principle has been adopted by both detectors. If combustion particles exist in the detection chamber a cone of light will scatter against a specially designed reflector, and be focused onto a photo sensitive receiver. This technique has an inherent immunity to dust/dirt build-up, high signal to noise level and resistance to problems caused by vibration and high humidity.

The information is processed by the one of the most sophisticated 'artificial intelligence' software for fire detection systems called **ClassiFire™**.

These detectors can be applied to very dirty and dusty environments. This is achieved through the use of Laser Dust Discrimination (LDD) in-conjunction with a patented dust management and separator system. A 'wastegate' system bypasses the majority of sampled air, maximising service life and permitting operation in diverse environments.

Airflow is monitored and a fault signal will be generated if an obstruction in the pipe is enough to affect the performance of the detector.

A maximum number of 126 **FastSense** detectors may sit on the 'Detector Data Bus' (also termed **SenseNET** data-bus). Other peripheral devices that can sit on this data-bus include:

- **SenseNET** a PC based detector monitoring system
- **FastSense PLUS** with Command Module

The Apollo Protocol Interface Card (APIC) provides a seamless link between **FastSense 25/100** detectors and the Ampac **FireFinder™** Fire Alarm Control Panel. The APIC sits on both the Apollo detector loop of the **FireFinder™** FACP and **FastSense** detector. Each APIC will be set a unique address on the detector loop. The status of up to 126 **FastSense 25/100** detectors can be displayed on the **FireFinder™** FACP.

### Specification

	25	100
<b>Supply Voltage</b>	24 VDC	
<b>Quiescent current</b>	250 mA	400 mA
<b>Size (mm)</b>	215h x 140w x 85d	220h x 300w x 90d
<b>Operating Temperature</b>	-10 to +60 deg centigrade	
<b>Operating Humidity</b>	0 to 90% Non-condensing	
<b>Sensitivity Range</b>	Min=25%, Max=0.03% FSD	
<b>Sensitivity Resolution</b>	0.0015% obs/m	
<b>Sampling Pipe (Ø25mm)</b>	25 m max	2 x 50 m max
<b>Sampling Pipe Inlets</b>	1	2
<b>Alarm Levels</b>	Fire 2, Fire 1, Pre-Alarm, Aux	
<b>Relay Outputs</b>		
Fire	Normally Closed – 1Amp	
Fault	Normally Closed – 1Amp	
<b>Chamber Service</b>	> 8 years*	
<b>Dust Separator Service</b>	> 5 Year*	
<b>Laser Life (MTTF)</b>	> 1000 years	
<b>Programming</b>	Computer via built-in port	
<b>Data bus (SenseNET)</b>	RS485 – 2 core screened	
<b>Data bus length</b>	1.2 km	
<b>IP rating</b>	IP 50	
<b>Weight (inc docking station)</b>	1.7 kg	3.8 kg
<b>Approvals</b>	C-Tick, SSL	
<b>Order Code</b>		
230-0001	<b>FastSense 25™</b> Detector	
230-0002	<b>FastSense 100™</b> Detector	
230-0003	<b>FastSense 25™</b> docking station – open exhaust	
230-0004	<b>FastSense 25™</b> docking station – piped exhaust	
230-0005	<b>FastSense 100™</b> docking station – open exhaust	
230-0006	<b>FastSense 100™</b> docking station – piped exhaust	
230-0041	<b>FastSense</b> Apollo Protocol Interface Card	
230-0046	<b>FastSense</b> Notebook Cable	
216-0065	<b>FastSense</b> 2A PSU excluding batteries	
216-0066	<b>FastSense</b> 6A PSU excluding batteries	

\*Depending on environment



**FastSense 100™** (Shown with piped exhaust docking station)