

FEATURES

- ✓ Wide sensitivity range
- ✓ Laser based smoke detection
- ✓ 4 configurable alarm levels
- ✓ Four inlet pipes
- ✓ Airflow supervisor per sampling pipe
- ✓ Dual stage air filter
- ✓ Easy to replace air filter
- ✓ 7 programmable relays
- ✓ VESDAnet™
- ✓ AutoLearn™
- ✓ Referencing
- ✓ Event log
- ✓ Up to 2000m² coverage



PRODUCT DESCRIPTION

The LaserPLUS detector is the central element of the VESDA smoke detection product range. Using unique detection principles, the LaserPLUS has an alarm sensitivity range of 0.005%–20% obscuration/m (0.0015%–6.25% obscuration/ft). The LaserPLUS is classed as a “Very Early Warning Smoke Detector” which means that it detects fire at the earliest possible stage and reliably measures very low to extremely high concentrations of smoke.

Air is drawn into the LaserPLUS through a network of air sampling pipes by a high efficiency aspirator. Each inlet pipe has an airflow sensor that monitors airflow changes in the pipes. Air is exhausted from the LaserPLUS and may be vented back into the protected zone. Inside the LaserPLUS, a sample of air is passed into the laser detection chamber via a dual-stage air filter. The first filtration stage removes dust and dirt from the air sample before entering the laser detection chamber for analysis. The second stage provides ultra fine air filtration to provide very clean air that is used to protect the optical surfaces inside the detector from contamination. The detection chamber uses a stable Class 1 laser light source and carefully positioned sensors to achieve the optimum response to a vast range of smoke types. The status of the detector, and all alarm, service and fault events, are transmitted to displays and external systems via VESDAnet.

VESDA detectors and devices communicate across VESDAnet, Xtralis’ fault-tolerant communications protocol. The VESDAnet loop provides a robust bi-directional communication network between devices, even allowing continued operation during single point wiring failures. It also allows for system programming from a single location and forms the basis of the modular nature of the VESDA system.

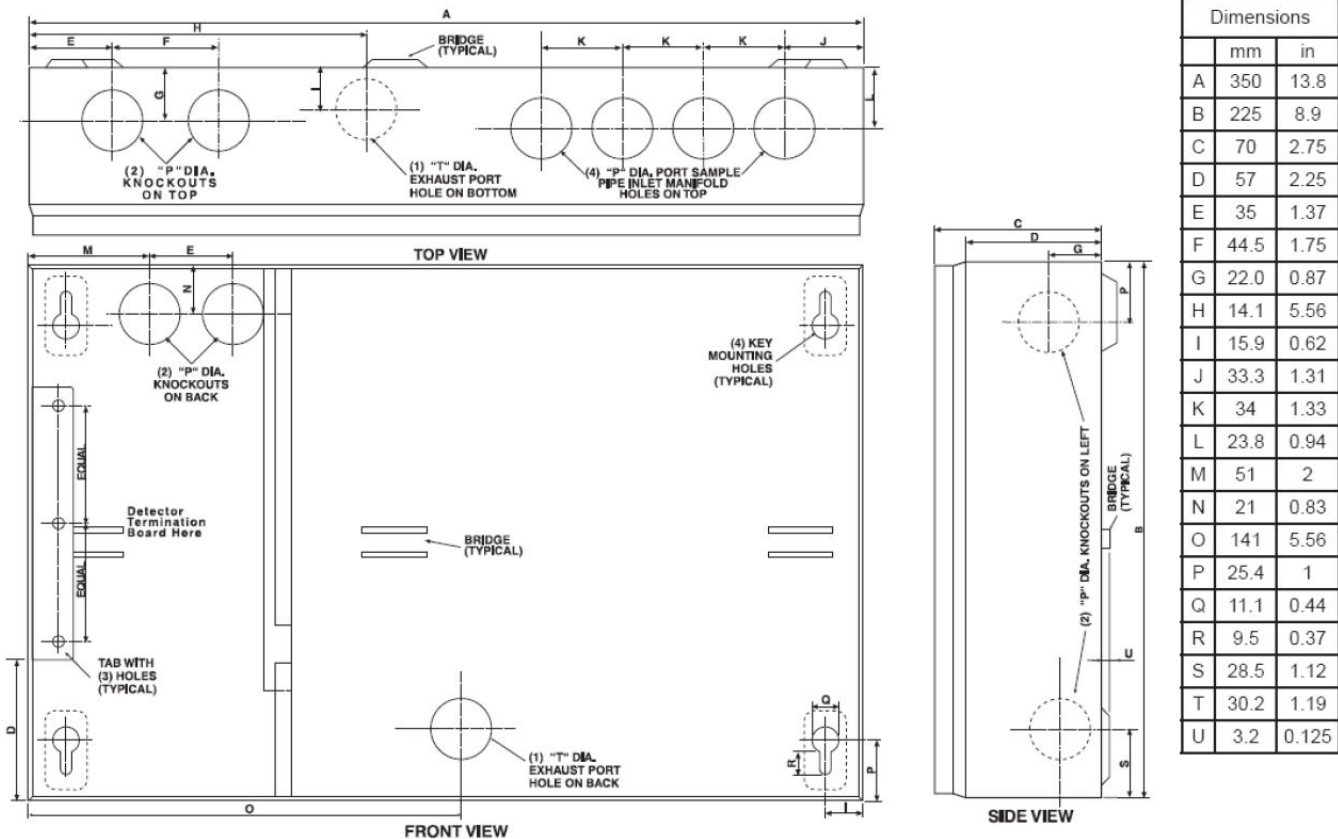
The LaserPLUS technology employs unique software tools to ensure optimum operation in many differing environments. AutoLearn monitors the ambient environment and sets the most appropriate alarm thresholds (Alert, Action, Fire1, Fire2) during the commissioning process to allow the earliest possible warning of a potential fire situation with no nuisance alarms.

Environments that employ air handling systems may be affected by pollution external to the controlled environment when “fresh air make up” is added. Referencing by VESDA ensures that external pollution does not interfere with the true smoke level being detected in the protected environment. The system can safely compensate for this transient state and allow continued operation free from nuisance alarms.

TECHNICAL SPECIFICATIONS

Supply Voltage	18 to 30Vdc				
Power Consumption @ 24VDC No Display or Programmer		Aspirator @ 3000rpm		Aspirator @ 4200rpm	
		Quiescent	With Alarm	Quiescent	With Alarm
	Power	5.8W	6.96W	9.6W	10.8W
	Current	240mA	290mA	400mA	450mA
Dimensions	350mm x 225mm x 125mm				
Weight	4.0kg (9 lbs) including Display and Programmer modules				
IP Rating	IP30				
Operating Conditions	Tested to: -10°C–55°C Detector Ambient: 0°C–39°C (Recommended) Sampled Air: -20°–60°C Humidity: 10%–95% RH, non-condensing <i>Please consult FireSense for operation outside these parameters or where sampled air is continually above 0.05% obs/m under normal operating conditions.</i>				
Sampling Network	Aggregate pipe length: 200m Maximum Single Length: 100m Pipe Modelling Design Tool: ASPIRE2™				
Pipe Size	External Diameter 25mm Internal Diameter 15–21mm				
Programmable Relays	7 Relays, Contacts rated 2A @ 30Vdc NO/NC Contacts				
Cable Access	8 x 25mm knockouts in various positions				
Cable Termination	Screw terminals 0.2–2.5 sq mm (30–12 AWG)				
Alarm Sensitivity Range	0.005%–20% obs/m				
Alarm Threshold Setting Range	Alert: 0.005%–1.990% obs/m Action: 0.010%–1.995% obs/m Fire 1: 0.015%–2.00% obs/m Fire 2: 0.020%–20.00% obs/m* *Limited to 12% obs/m in UL mode				
Event Log	Up to 18,000 events stored on FIFO basis.				
AutoLearn	Minimum 15 minutes, maximum 15 days. Recommended minimum period 1 day. During AutoLearn thresholds are NOT changed from pre-set values.				
Software Features	Referencing: Compensation for external ambient conditions Four Alarm Levels: Alert, Action, Fire 1 & Fire 2 Two Fault Warning Levels: Maintenance and Major fault Software Programmable Relays: 7 Maintenance Aids: Filter & Flow monitoring. Event reporting via VESDAnet or Event Log.				

DIMENSIONS



APPROVALS

- ✓ UL
- ✓ ULC
- ✓ FM
- ✓ LPCB
- ✓ VdS
- ✓ CFE
- ✓ AFNOR
- ✓ ActivFire certified – Listing No. afp-1083

DIAGRAM

