

#### FEATURES

- ✓ Short wavelength laser based detection
- ✓ Inherent absolute calibration
- ✓ Advanced detection technology equivalent to hundreds of thousands of sensors
- ✓ Clean air barrier for optics protection
- ✓ Most robust contamination resistance
- ✓ Ultra-wide sensitivity range
- ✓ Flow fault thresholds configurable per port
- ✓ Long-life, easy to replace filter
- ✓ LEDs for alarm and fault signaling
- ✓ Advanced remote diagnostics
- ✓ Area coverage up to 2,000m<sup>2</sup>
- ✓ Up to four inlet pipes
- ✓ Total pipe length of 800m
- ✓ AutoLearn™ Smoke and Flow
- ✓ Seven programmable relays
- ✓ Two GPIs, monitored and unmonitored
- ✓ Ultrasonic flow sensing
- ✓ Xtralis VSC, VSM4 and ASPIRE PC software support
- ✓ IP40 enclosure (not UL tested)
- ✓ Easy mounting with optional steel support bracket
- ✓ Field replaceable aspirator, sampling module, filter and detection chamber
- ✓ VESDAnet networking
- ✓ Ethernet 100 base T
- ✓ WiFi, 802.11 b/g/n
- ✓ Local host-made USB port
- ✓ Easy cable termination access
- ✓ Event Log (20,000 events)



#### PRODUCT DESCRIPTION

The VEU series of aspirating smoke detectors are the premium detector of the VESDA-E range. An ultra-wide sensitivity range; 15 times greater than VESDA VLP, and provision for more sampling holes provide an increased coverage in high airflow applications by up to 40%. Considerably longer linear pipe runs and extended branched pipe network configurations cater perfectly to applications with higher ceilings providing an increased coverage by up to 80% whilst allowing convenient detector mounting for ease of service and maintenance. A range of revolutionary new features provide unsurpassed detection performance, flexibility, field programmability, connectivity and reduced total cost of ownership.

The VEU-A10 detector features a 3.5" colour touch screen display which provides a range of status information including smoke level as well as trouble conditions. A simple navigation system allows the user to view all the status information.

**VESDAnet™**

VESDA devices communicate on VESDAnet which provides a robust bi-directional communication network allowing continued redundant operation even during single point wiring failures. VESDAnet enables primary reporting, centralized configuration, control, maintenance and monitoring.

**Ethernet and WiFi Connectivity**

VESDA-E detectors offer Ethernet and WiFi connectivity as standard features. The detector can be added to a corporate network, allowing WiFi enabled tablet devices and laptops installed with Xtralis configuration software to connect wirelessly to the detector via the network.

VESDA-E detectors occupy the same mounting footprint, pipe, conduit and electrical connector positioning as VESDA VLP and VLS detectors hence providing complete backwards compatibility.

**Installation**

VEU features a robust IP40-rated enclosure and is equipped with a powerful aspirator that provides a total pipe length of 800m (2,624 ft). It is fully supported by the ASPIRE-E and Xtralis VSC software applications which facilitate ease of pipe network design, system commissioning and maintenance together with compatibility with existing VESDA installations.

**Operating Instructions**

Air is continually drawn from the protected area through the air sampling pipe network and into the detector by a high efficiency aspirator. The air sampling pipe network can contain up to four pipes.

The air from each sampling pipe passes through an airflow sensor and then a sample of air is drawn into the smoke detection chamber via the sampling module, after first passing through the filter. An additional filter provides clean air to protect the optical surfaces inside the detection chamber from contamination.

The Flair™ detection chamber uses the equivalent of 330,000 sensors and sophisticated algorithms for detection and particle classification. If the detected smoke is higher than the set alarm thresholds, it is reported as an Alert, Action, Fire1 or Fire2 alarm condition.

Air is exhausted from the detector and may be vented back into the protected area.

Alarms can be signaled via relays and VESDAnet. Ethernet and WiFi can be used for configuration and secondary monitoring, and a USB interface is provided for initial setup.

A series of LEDs display Alarm, Trouble, Disable and detector power on status. A button allows the user to Reset or Disable the detector. In addition, an optional 3.5" LCD displays detector status including smoke level and a smoke level bar graph, alarm thresholds, trouble status, % airflow level, normalization status and filter life used.

**TECHNICAL SPECIFICATIONS**

Supply voltage	18-30Vdc (24V Nominal)					
Power consumption @ 24Vdc	VEU-A00			VEU-A10		
Aspirator setting	1	5	10	1	5	10
Power (Quiescent)	7.0W	8.8W	14.7W	8.2W	10.0W	15.8W
	292mA	367mA	612mA	342mA	417mA	658mA
Power (In Alarm)	7.8W	9.6W	15.5W	10.4W	11.6W	16.6W
	325mA	400mA	646mA	433mA	483mA	692mA
Dimensions	350mm W x 225mm H x 135mm D					
Weight	4.83kg			4.9kg		
Operating Conditions	<b>Ambient:</b> 0°C to 39°C <b>Sampled Air:</b> -20°C to 60°C <b>Tested to:</b> -20°C to 55°C <b>Humidity:</b> 5% to 95% RH, non-condensing					
Maximum area of coverage	2,000m²					
Minimum airflow per pipe	15L/m					
Pipe lengths (depending on number of pipes in use)	1 Pipe	2 Pipes		3 Pipes		4 Pipes
	160m	150m		130m		100m
Maximum pipe lengths	<b>Total Pipe Length (with branches):</b> 800m					
No. of holes (A/B/C)	80/80/100					
Computer design tool	ASPIRE					
Pipe	<b>Inlet:</b> External diameter 25mm (3/4 in IPS) <b>Exhaust:</b> External diameter 25mm (3/4 in IPS) via adapter					
Relays	7 programmable relays (latch or non-latch states) Contacts rated 2A @ 30Vdc (Resistive)					
IP Rating	IP40					
Cable Access	4 x 26 mm cable entries					
Cable Termination	Screw Terminal blocks 0.2–2.5 sq mm (24–14 AWG)					
Dynamic Range	0.0002%/m to 20% obs/m					
Sensitivity Range	0.001% to 20% obs/m					
Threshold Setting Range	<b>Alert:</b> 0.001% to 2.0% obs/m <b>Action:</b> 0.001% to 2.0% obs/m <b>Fire1:</b> 0.001% to 2.0% obs/m <b>Fire2:</b> 0.001% to 20.0% obs/m					
Software Features	<b>Event log:</b> Up to 20,000 events Smoke level, user actions, alarms and faults with time and date stamp <b>AutoLearn:</b> Detector learns Alarm Thresholds and Flow Fault thresholds by monitoring the environment.					

**ORDERING INFORMATION**

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<b>VEU-A00</b>	VESDA-E VEU with LED's
<b>VEU-A10</b>	VESDA-E VEU with 3.5" Display
<b>VSP-960</b>	Mounting bracket (optional)

**SPARE PARTS**

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<b>VSP-962</b>	VESDA-E Filter
<b>VSP-962-20</b>	VESDA-E Filter - 20 pieces
<b>VSP-963</b>	VESDA-E Aspirator
<b>VSP-964</b>	VESDA-E Smoke Detection Chamber

**LISTINGS & APPROVALS**

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- ✓ UL
- ✓ ULC
- ✓ VdS
- ✓ CE
- ✓ ActivFire certified - Listing No. afp-2953
- ✓ EN 54-20, ISO 7240-20
  - Class A (80 holes / Fire 1 = 0.015% obs/m)
  - Class B (80 holes / Fire 1 = 0.026% obs/m)
  - Class C (100 holes / Fire 1 = 0.062% obs/m)