

VESDA-E VEU

VEU-A00, VEU-A10



The VEU series of aspirating smoke detectors are the premium detector of the new 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, event verification, connectivity and reduced total cost of ownership.

Installation, Commissioning and Operation

The VEU detector 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 ASPIRE2 and Xtralis VSC software applications which facilitate ease of pipe network design, system commissioning and maintenance together with compatibility with existing VESDA installations.

Color touch screen display

The VEU-A10 detector features a 3.5" colour touch screen display which provides a range of status information including alarm and fault conditions as well as smoke levels. Screens for each type of information are available using a simple navigation system.

VESDAnet™

VESDA detectors and 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.

Backward Compatibility

VESDA-E detectors occupy the same mounting footprint, pipe and conduit and relays positioning as VESDA VLP and VLS detectors.

Features

- Short wavelength laser based detection
- Inherent absolute calibration
- Advanced Imaging technology equivalent to 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
- Quiet operation
- LEDs for alarm and fault signalling
- 3.5" colour touch screen for status review
- Advanced remote diagnostics
- Area coverage up to 2,000m² (21,500ft²)
- Up to four inlet pipes
- Total pipe length of 800m (2624ft)
- Seven programmable relays
- Two GPIs, monitored and unmonitored
- Ultrasonic flow sensing
- Xtralis VSC, VSM4 and ASPIRE2 PC software support
- IP 40 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, IEEE488.11/b/g/n
- Local host-mode USB port
- Easy cable termination access
- Event Log (20,000 events)

Listings / Approvals

- UL
- ULC

Regional approvals listings and regulatory compliance vary between product models. Refer to www.xtralis.com for the latest product approvals matrix.

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Specifications

Supply voltage: 18 to 30 VDC
Power consumption @ 24VDC:

	VEU-A00			VEU-A10		
Aspirator Setting	1	5	10	1	5	10
Power (Quiescent)	7.0 W	8.8 W	14.7 W	8.2 W	10.0 W	15.8 W
Power (In Alarm)	7.8 W	9.6 W	15.5 W	10.4 W	11.6 W	16.6 W

Dimensions (WHD): 350 mm x 225 mm x 132 mm (13.8in x 8.9in x 5.2in)
Weight: 4.25 kg (9 lbs 4 oz)
Operating conditions: Ambient: 0°C to 39°C (32°F to 102°F)
Sampled Air: -20°C to 60°C (-4°F to 140°F)
Humidity: 10% to 95% RH, non-condensing
Sampling network: Maximum area of Coverage: 2,000 m² (21,500 sq.ft)
Minimum airflow per pipe: 15 l/m
Maximum pipe lengths: Total Pipe Length (with branches): 800 m (2624 ft)
Maximum length per pipe, when using four straight pipes: 100 m (328 ft)
Computer design tool: ASPIRE2™
Pipe: Inlet: External Diameter 25 mm or 1.05 in (3/4" pipe)
Exhaust: 25 mm (1.05 in)
Relays: 7 programmable relays (latch or non-latch states)
Contacts rated 2 A @ 30 VDC (Resistive)
IP rating: IP40
Cable access: 4 x 25 mm (1.05") cable entries
Cable termination: Screw Terminal blocks 0.2–2.5 sq mm (30–12 AWG)
Dynamic Range: 0.0002%/m (0.00006%/ft) to 20%/m (6.25%/ft)
Sensitivity Range: 0.001% - 20.0% obs/m (0.0003 to 6.25% obs/ft)
Threshold setting range: Alert: 0.001%-2.0% obs/m (0.0003%-0.625% obs/ft)
Action: 0.001%-2.0% obs/m (0.0003%-0.625% obs/ft)
Fire1: 0.001%-2.0% obs/m (0.0003%-0.625% obs/ft)
Fire2: 0.001%-20.0% obs/m (0.0003%-6.25% obs/ft)*
*Limited to 4% obs/ft for UL
Software features: Event log: Up to 20,000 events stored in FIFO format, smoke level, user actions, alarms and faults with time and date stamp

How it works

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 network can contain up to four pipes.

The air from each sampling pipe passes through an airflow sensor and then a sample of the 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 detection chamber uses a short wavelength laser light source in conjunction with photodiodes and advanced imaging technology, which is equivalent to thousands of sensors, to achieve optimum response to a wide range of smoke types.

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 zone.

Alarms can be signalled 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.

Ordering Information

VESDA-E VEU with 3.5" Display	VEU-A10
VESDA-E VEU	VEU-A00
Mounting bracket (optional)	VSP-960

Spare Parts

VEU Filter	VSP-962
VEU Aspirator	VSP-963
VEU Smoke Detection Chamber	VSP-964
VEU Sample Module	VSP-965

Approvals Compliance

Please refer to the Product Guide for details regarding compliant design, installation and commissioning.

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