



VESDA VLF VLF-250

Features

- Out-of-the-Box Installation and Commissioning
- Ultrasonic Airflow Sensing
- Laser-Based Absolute Smoke Detection
- Pre-engineered pipe network designs
- Programmable Alarm Thresholds
- Clean air barrier optics protection
- Instant Recognition Display
- Instant Fault Finder™
- AutoLearn™ Smoke
- AutoLearn™ Flow
- Field Service Access Door
- Multiple Event Logging in separate logs
- Event log – up to 18000 events
- Offline/online configuration capability
- Up to 250 m2 (2500 sq. ft.) coverage*

Listings/Approvals

- UL
- ULC
- FM
- CFE
- LPCB
- VdS
- VNIPO
- AFNOR
- ActivFire
- CE - EMC and CPD
- EN 54-20

Class A (12 holes / 0.12% obs/m)
Class B (12 holes / 0.35% obs/m)
Class C (12 holes / 0.80% obs/m)
Classification of any configuration is determined using ASPIRE2.

Regional approvals listings and regulatory compliance vary between VESDA product models. Refer to <http://icswww.com> for the latest product approvals matrix.



The VESDA VLF-250 detector is a very early warning smoke detector designed to protect small, business-critical environments of less than 250 m² (2500 sq. ft.). The detector works by continually drawing air into sampling holes in a pipe network. The air is filtered and passed into a detection chamber where light scattering technology detects the presence of very small amounts of smoke. Detector status information is communicated on the detector display and via relays or optional interface cards.

Out-of-the-box operation

The VLF can be installed and commissioned out-of-the-box without the need for a special interface or software programming tools.

In operation, the unique Smoke Dial display provides the user with an instant understanding of a smoke event, even from a distance. Should a fault occur, the user simply opens the field service door and activates the Instant Fault Finder feature to determine the specific fault condition. This information can then be passed onto their fire service company, ensuring that service technicians arrive onsite fully prepared.

Ultrasonic Flow Sensing

The patent-pending Ultrasonic Flow Sensing used in the VLF provides a direct reading of the sampling pipe flow rate. The system is immune to air temperature and pressure changes and is unaffected by contamination. The VLF is the first air sampling smoke detector to use ultrasonic flow sensing.

VESDA VLF

Specifications

Input Power

Voltage: 24V DC Nominal (18-30 V DC)
Current @ 24 VDC: 220 mA nominal, 295 mA in alarm

Dimensions (W x H x D)

255 mm x 185 mm x 90 mm (9⁷/₈ in x 7¹/₈ in x 3¹/₂ in)

Weight Approx. 2 kg (4.4 lbs)

IP Rating IP30

Mounting Upright, inverted or horizontal

Operating Conditions*

Ambient: 0°C to 39°C (32°F to 103°F) *
Tested to: -10°C to 55°C (14°F to 131°F) *
Sampled Air: -20°C to 60°C (-4°F to 140°F) *
Humidity: 5% to 95% RH, non-condensing

Sampling Network

Maximum pipe lengths:
1 x 25 m (80 ft) (Max. 12 holes)
2 x 15 m (50 ft) per branch (Max. 6 holes per branch)
Sampling Hole Options: Pre-Engineered Option or Maximum Pipe length in accordance with Pipe Modelling Design Tool (ASPIRE2™)

Air Inlet Pipe

Accepts both metric and American standard pipe sizes.
Metric: 25 mm (1.05 in.) American Pipe: IPS 21 mm (¾ in.)

Area Coverage

Up to 250 m² (2500 sq. ft.) depending on local codes and standards

Relay Outputs

3 changeover relays (Fire 1, Action, Fault), Contacts rated 2A @ 30 VDC (max). NO/NC Contacts

Cable Access

3 x 25 mm (1.05 in.) cable entries (1 rear entry, 2 top entry)

Cable Termination

Screw Terminals 0.2-2.5 mm² (30-12 AWG)

Interfaces

Shown in Terminal Block Connections diagram, to right, plus an RS232 Programming Port.
General Purpose Input (GPI) interface offers: Reset, Disable, Standby, Alarm set 1, Alarm set 2 and External Input functions.

Alarm Threshold Setting Range

Alert, Action, 0.025 - 2.00% obs/m (0.008 - 0.625% obs/ft)
Fire 1, Fire 2 0.025 - 20.00% obs/m (0.008 - 6.25% obs/ft)
Individual Alarm Delays 0 - 60 seconds
Two Alarm Threshold Settings Either time or GPI based

Display

- 4 Alarm State Indicators
- Smoke Level Indicator
- Reset, Disable and Test Controls
- Fault and Disabled Indicators
- Instant Fault Finder
- Smoke and Flow AutoLearn Controls

Event Log

Up to 18000 events, time and date stamped in separate, non-volatile, logs for: Smoke Level, Flow Level, Detector Status and Faults

AutoLearn Smoke & Flow

- Automatically set acceptable alarm thresholds for both smoke and flow levels
- Minimum 15 minutes, maximum 15 days (default 14 days)
- During AutoLearn thresholds are NOT changed from pre-set values

Warranty Period

2 years

Ordering Information:

VLF-250-00 VESDA VLF. European language set. English display labels
VIC-010 VESDAnet Interface Card, VIC-020 Multifunction Control Card (MCC)
VIC-030 Multifunction Control Card (MCC) with Monitored Powered Output (MPO)
VSP-005 Filter Cartridge, VSP-722 Aspirator for VESDA VLF-250

VLF-250

Display:

The display provided to the user includes a Smoke Dial and alarm and status indicators.

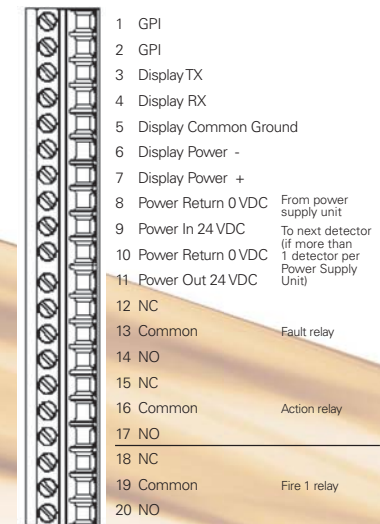


When the field service access door is open, the user has access to the RESET, DISABLE, Fire Test, AutoLearn and Instant Fault Finder functions. When the Instant Fault Finder function is activated, the Smoke Dial converts to a fault indicator, with the dial segment numbers corresponding to the faults listed below.

Legend of fault indicators:

- | | |
|-------------|-----------------------|
| 1 Filter | 6 External Device/PSU |
| 2 Aspirator | 7 Interface card |
| 3 High flow | 8 Field wiring |
| 4 Low flow | 9 AutoLearn Fail |
| 5 n/a | 10 Detector failure |

Terminal Block Connections:



Approvals/Compliance

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

* Product UL listed for use from 0°C to 38°C (32°F to 104°F)

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VESDA VLS

Features

- Individual pipe identification
- Adaptive Scan Threshold
- Wide sensitivity range
- Laser based smoke detection
- VESDAnet™ communication
- 4 alarm levels per sector
- High efficiency aspirator
- Clean air barrier optics protection
- Easy to replace air filter
- 7 or 12 programmable relays option
- AutoLearn™
- Referencing
- Event log
- Recessed mounting

Listings/Approvals

- UL
 - ULC
 - FM
 - LPCB
 - VdS
 - CFE
 - ActivFire
 - AFNOR
 - VNIPO
 - CE - EMC and CPD
 - EN 54-20
- Class A (40 holes / 0.08% obs/m)
Class B (40 holes / 0.23% obs/m)
Class C (60 holes / 0.65% obs/m)
Classification of any configuration is determined using ASPIRE2.

Regional approvals listings and regulatory compliance vary between VESDA product models. Refer to <http://icswww.com> for the latest product approvals matrix.



The VESDA VLS is similar to the standard VESDA VLP detector, but also includes a valve mechanism in the inlet manifold and software to control the airflow from the four sectors (pipes). This configuration enables a single VESDA zone to be divided into four separate sectors, for example, distinguishing between separate voids within a room.

How It Works

The VLS draws air from all sectors in use. If the smoke level reaches the Adaptive Scan Threshold, the VLS quickly scans each pipe to identify which pipe is carrying smoke. If more than one pipe is transporting smoke, the sector with the highest smoke concentration is designated as the First Alarm Sector (FAS).

Once Fast Scan is completed and the FAS identified, the VLS continues to closely monitor all four sectors (pipes) to monitor fire growth and maintain full protection of the area.

There are four alarm levels (Alert, Action, Fire 1 and Fire 2) for each sector (pipe) and the sensitivity for each alarm level can be set to ensure the optimum alarm thresholds are applied for each sector.

The VLS Display

The VLS display has a bar graph to indicate the overall smoke level, alarm threshold and fault indication. The bar graph displays the individual sector smoke levels during the scanning sequence. There is an extra LED to indicate that a First Alarm Sector (FAS) has been identified and an extra function to the Silence Button to allow for Manual Scan to be initiated.

The VLS display module can be mounted into the VLS front cover or remotely into a 19in subrack or a remote box.

Relay Options

The VLS detector can be fitted with a programmable 7 or 12 relay Termination card. Relays may be mounted in a remote box or in a 19in subrack.

VESDAnet™

The status of the detector, and all alarm, service and fault events, are transmitted to displays and external systems via VESDAnet, VESDA's 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 provides system programming from a single location and forms the basis of the modular nature of the VESDA system.

AutoLearn™ and Referencing

The VLS has both the AutoLearn™ and Referencing software functions to ensure optimum operation in different environments and to eliminate the occurrence of nuisance alarms.

AutoLearn monitors the ambient environment and sets the most appropriate alarm thresholds (Alert, Action, Fire 1, Fire 2) during the commissioning process. Referencing ensures external pollution to a protected environment does not interfere with the true smoke level being detected.

VESDA VLS

VLS Specifications

Supply Voltage: 18–30 VDC

Power Consumption @ 24 VDC:

No Display or Programmer

	Aspirator @ 3000 rpm		Aspirator @ 4200 rpm	
	Quiescent	With Alarm	Quiescent	With Alarm
Power	5.8 W	6.24 W	6.72 W	7.2 W
Current	240 mA	260 mA	280 mA	300 mA

Dimensions (WHD):

350 mm x 225 mm x 125 mm (13.8 in x 8.9 in x 4.9 in)

Weight:

4.0 kg (9 lbs) including Display and Programmer modules

Operating Conditions:

Tested to: -10°C to 55°C (14°F to 131°F)

Detector Ambient: 0°C–39°C (32°–103°F) (Recommended)

Sampled Air: -20°–60°C (-4°–140°F)

Humidity: 10%–95% RH, non-condensing

Please consult your local representative office for operation outside these parameters or where sampled air is continually above 0.05% obs/m (0.015% obs/ft) under normal operating conditions.

Sampling Network:

Aggregate pipe length: 200 m (650 ft)

Pipe Modelling Design Tool: ASPIRE2™

Area Coverage

Up to 2000 m² (21500 sq. ft.) depending on local codes and standards

Pipe Size:

Minimum flow per pipe 15 liters/min.

External Diameter 25 mm (1 in)

Internal Diameter 15–21 mm (5/16 in–7/8 in)

Programmable Relays:

7 or 12 Relays option

Contacts rated 2 A @ 30 VDC

Default: 7 Relays: NO/NC contacts Alert, Action, Fire 1, Fire 2, Maintenance, Urgent Fault & Isolate

Default: 12 Relays: 10 x NO, 2 x NO/NC contacts Alert, Action, Fire 1, Fire 2, Maintenance, Urgent Fault & Isolate, First Alarm Sector 1 to 4 and Scan

IP Rating: IP30

Cable Access: 8 x 25 mm (1 in)

knockouts in various positions

Cable Termination:

Screw terminals 0.2–2.5 sq mm (30–12 AWG)

Sensitivity Range:

0.005%–20% obs/m (0.0015%–6% obs/ft)

Alarm Threshold Setting Range:

Alert: 0.005%–1.990% obs/m (0.0015%–0.6218% obs/ft)

Action: 0.010%–1.995% obs/m (0.0031%–0.6234% obs/ft)

Fire 1: 0.015%–2.00% obs/m (0.0046%–0.625% obs/ft)

Fire 2: 0.020%–20.00% obs/m (0.0062%–6.25% obs/ft)*

* Limited to 12% obs/m (4% obs/ft) in UL mode

Software Features:

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.

Referencing: Compensation for external ambient conditions.

Four Alarm Levels (per sector pipe): Alert, Action, Fire 1 & Fire 2.

Two Fault Warning Levels: Maintenance and Major fault.

Software Programmable Relays: 7 or 12.

Maintenance Aids: Filter & Flow monitoring.

Event reporting via VESDAnet or Event Log.

Adaptive Scan Threshold: Detector selects the appropriate scan threshold automatically.

Ordering Information:

Scanner Configuration

VLS-XXX XX

- 2 = 7 Relay Version
- 3 = 12 Relay Version
- 6 = 7 Relay w/FOK LED
- 7 = 12 Relay w/FOK LED

0 = Blank Blate
1 = Programmer
4 = Scanner Display

0 = Standard Product
1 = Custom (consult factory)

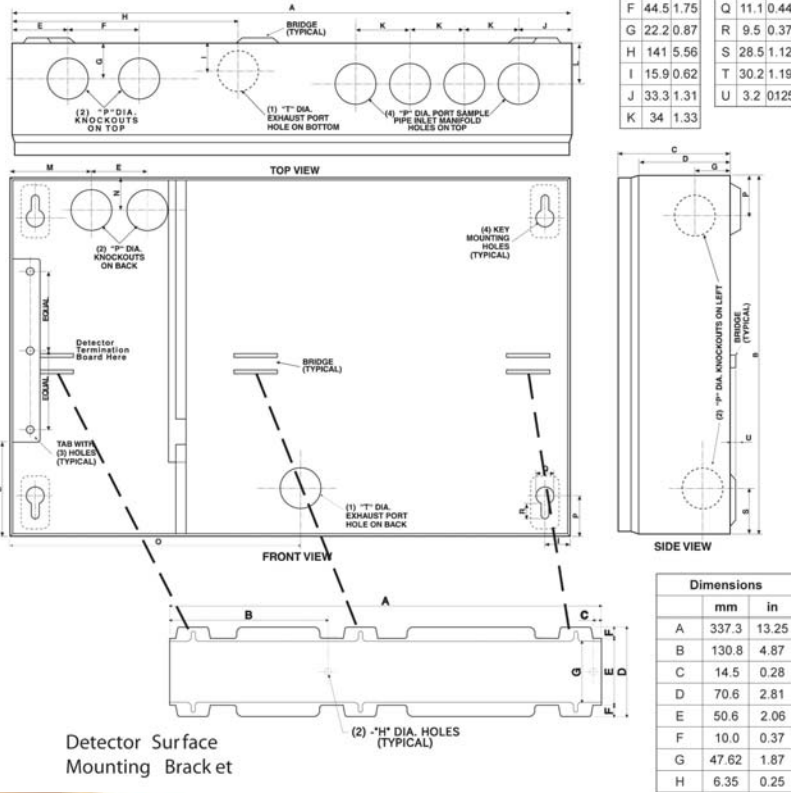
0 = Standard Detector Orientation
1 = Inverted Detector Orientation

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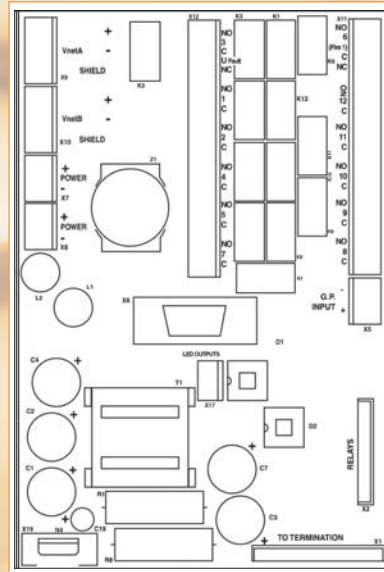
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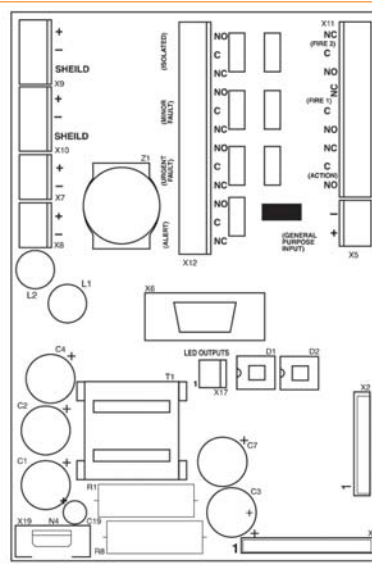
Detector Mounting Box



Detector Termination Card 12 Relay Version



Detector Termination Card 7 Relay Version



Remote Programmer VRT-100

Recessed Mounting Kit (Optional) VSP-011

Hand-held Programmer VHH-100

19 in Sub Rack Configuration contact Xtralis



The VESDA VLF-500 detector is a very early warning smoke detector designed to protect small, business-critical environments of less than 500 m² (5000 sq. ft.)

The detector works by continually drawing air into sampling holes in a pipe network. The air is filtered and passed into a detection chamber where light scattering technology detects the presence of very small amounts of smoke. Detector status information is communicated on the detector display and via relays or optional interface cards.

Out-of-the-box operation

The VLF can be installed and commissioned out-of-the-box without the need for a special interface or software programming tools.

In operation, the unique Smoke Dial™ display provides the user with an instant understanding of a smoke event, even from a distance. Should a fault occur, the user simply opens the field service door and activates the Instant Fault Finder feature to determine the specific fault condition. This information can then be passed onto their fire service company, ensuring that service technicians arrive onsite fully prepared.

Ultrasonic Flow Sensing

The patent-pending Ultrasonic Flow Sensing used in the VLF provides a direct reading of the sampling pipe flow rate. The system is immune to air temperature and pressure changes and is unaffected by contamination. The VLF is the first air sampling smoke detector to use ultrasonic flow sensing.

Features

- Out-of-the-Box Installation and Commissioning
- Ultrasonic Airflow Sensing
- Laser-Based Absolute Smoke Detection
- Pre-engineered pipe network designs
- Programmable Alarm Thresholds
- Clean air barrier optics protection
- Instant Recognition Display
- Instant Fault Finder™
- AutoLearn™ Smoke
- AutoLearn™ Flow
- Field Service Access Door
- Multiple Event Logging in separate logs
- Event log – up to 18000 events
- Offline/online configuration capability
- Up to 500 m² (5000 sq. ft.) coverage*

Listings/Approvals

- UL
- ULC
- FM
- CFE
- LPCB
- VdS
- VNIPO
- AFNOR
- ActivFire
- CE - EMC and CPD
- EN 54-20
 - Class A (30 holes / 0.05% obs/m)
 - Class B (30 holes / 0.15% obs/m)
 - Class C (30 holes / 0.32% obs/m)

Classification of any configuration is determined using ASPIRE2.

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

VESDA VLF

VLF-500

Specifications

Input Power

Voltage: 24V DC Nominal (18-30 V DC)
 Current @ 24 VDC: 410 mA nominal, 490 mA in alarm

Dimensions (W x H x D)

256 mm x 183 mm x 92 mm (10¹/₁₆ in x 7¹/₅ in x 3²/₃ in)

Weight

Approx. 2 kg (4.4 lbs)

IP Rating

IP30

Mounting

Upright, inverted or horizontal

Operating Conditions†

Ambient: 0°C to 39°C (32°F to 103°F) *
 Tested to: -10°C to 55°C (14°F to 131°F)
 Sampled Air: -20°C to 60°C (-4°F to 140°F)
 Humidity: 5% to 95% RH, non-condensing

Sampling Network

Maximum pipe lengths: 1 x 50 m (150 ft) (Max. 24 holes)
 2 x 30 m (90 ft) per branch (Max. 12 holes per branch)
 Sampling Hole Options: Pre-Engineered Option or Maximum Pipe length in accordance with Pipe Modelling Design Tool (ASPIRE2™)

Air Inlet Pipe

Accepts both metric and American standard pipe sizes
 Metric: 25 mm (1.05 in.) American Pipe: IPS 21 mm (¾ in.)

Area Coverage

Up to 500 m² (5000 sq. ft.) depending on local codes and standards

Relay Outputs

3 changeover relays (Fire 1, Action, Fault), Contacts rated 2A @ 30 VDC (max). NO/NC Contacts

Cable Access

3 x 25 mm (1¹/₁₆ in.) cable entries (1 rear entry, 2 top entry)

Cable Termination

Screw Terminals 0.2-2.5 mm² (30-12 AWG)

Interfaces

Shown in Terminal Block Connections diagram, to right, plus an RS232 Programming Port.
 General Purpose Input (GPI) interface offers: Reset, Disable, Standby, Alarm set 1, Alarm set 2 and External Input functions.

Alarm Threshold Setting Range

Alert, Action 0.025 - 2.00% obs/m (0.008 - 0.625% obs/ft)
 Fire 1, Fire 2 0.025 - 20.00% obs/m (0.008 - 6.25% obs/ft)
 Individual Alarm Delays 0 – 60 seconds
 Two Alarm Threshold Settings Either time or GPI based

Display

• 4 Alarm State Indicators • Fault and Disabled Indicators
 • Smoke Level Indicator • Instant Fault Finder
 • Reset, Disable and Test Controls • Smoke and Flow AutoLearn Controls

Event Log

Up to 18000 events, time and date stamped in separate, non-volatile, logs for:
 Smoke Level, Flow Level, Detector Status and Faults

AutoLearn Smoke & Flow

• Automatically set acceptable alarm thresholds for both smoke and flow levels
 • Minimum 15 minutes, maximum 15 days (default 14 days)
 • During AutoLearn, thresholds are NOT changed from pre-set values

Warranty Period

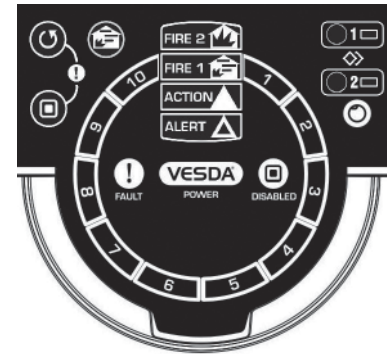
2 years

Ordering Information:

VLF-500-00 VESDA VLF. European language set. English display labels
 VLF-500-01 VESDA VLF. European language set. International display labels
 VLF-500-02 VESDA VLF. English + Asian language set. International display labels
 VLF-500-04 VESDA VLF. English + Russian language set. International display labels
 VLF-500-05 VESDA VLF. English + Eastern Euro language set. International display labels
 VIC-010 VESDAnet Interface Card
 VIC-020 Multifunction Control Card (MCC)
 VIC-030 Multifunction Control Card (MCC) with Monitored Powered Output (MPO)
 VSP-005 Filter Cartridge, VSP-715 Aspirator for VESDA VLF-500

Display

The display provided to the user includes a Smoke Dial™ and alarm and status indicators.



When the field service access door is open, the user has access to the RESET, DISABLE, Fire Test, AutoLearn and Instant Fault Finder functions. When the Instant Fault Finder function is activated, the Smoke Dial™ converts to a fault indicator, with the dial segment numbers corresponding to the faults listed below.

Legend of fault indicators

- | | |
|-------------|-----------------------|
| 1 Filter | 6 External Device/PSU |
| 2 Aspirator | 7 Interface card |
| 3 High flow | 8 Field wiring |
| 4 Low flow | 9 AutoLearn Fail |
| 5 n/a | 10 Detector failure |

Terminal Block Connections

1	GPI	
2	GPI	
3	Display TX	
4	Display RX	
5	Display Common Ground	
6	Display Power -	
7	Display Power +	
8	Power Return 0 VDC	From power supply unit
9	Power In 24 VDC	
10	Power Return 0 VDC	To next detector (if more than 1 detector per Power Supply Unit)
11	Power Out 24 VDC	
12	NC	
13	Common	Fault relay
14	NO	
15	NC	
16	Common	Action relay
17	NO	
18	NC	
19	Common	Fire 1 relay
20	NO	

Approvals Compliance

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

* Product UL listed for use from 0°C to 38°C (32°F to 104°F)

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*Depending upon local codes and standards †Operation outside these parameters will reduce detector life.



VESDA-E VEU

VEU-A00, VEU-A10



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
- Quiet operation
- LEDs for alarm and fault signalling
- 3.5" colour touch screen for status review
- Advanced remote diagnostics
- Area coverage up to 2,000 m² (21,500 ft²)
- Up to four inlet pipes
- Total pipe length of 800 m (2,624 ft)
- Referencing
- AutoLearn™ Smoke and Flow
- Seven programmable relays
- Two GPIs, monitored and unmonitored
- Ultrasonic flow sensing
- Xtralis VSC, VSM4 and ASPIRE-E 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, 802.11 b/g/n
- Local host-mode USB port
- Easy cable termination access
- Event Log (20,000 events)

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.

Installation, Commissioning and Operation

VEU features a robust IP40-rated enclosure and is equipped with a powerful aspirator that provides a total pipe length of 800 m (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.

Color touch screen display

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.

Backward Compatibility

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.

Listings / Approvals

- UL
- ULC
- VdS
- CE
- ActivFire
- EN 54-20, ISO 7240-20
 - Class C (100 holes / Fire 1 = 0.062% obs/m)
 - Class B (80 holes / Fire 1 = 0.026% obs/m)
 - Class A (80 holes / Fire 1 = 0.015% obs/m)

Classification of any configuration is determined using ASPIRE-E.

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

Specifications

Supply voltage: 18-30 VDC (24 V Nominal)

Power consumption @ 24VDC:

Aspirator Setting	VEU-A00			VEU-A10		
	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 135 mm (13.8 in x 8.9 in x 5.3 in)

Weight:
VEU-A00 - 4.800 kg (10 lbs 9 oz)
VEU-A10 - 4.835 kg (10 lbs 10 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)
Tested to: -20°C to 55°C (-4°F to 131°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: ASPIRE-E™

Pipe:
Inlet: External diameter 25 mm or 1.05 in (3/4 in IPS)
Exhaust: External diameter 25mm or 1.05 in (3/4 in IPS)
via adaptor

Relays:
7 programmable relays (latch or non-latch states)
Contacts rated 2 A @ 30 VDC (Resistive)

IP rating: IP40

Cable access: 4 x 26 mm (1.02 in) cable entries

Cable termination: Screw Terminal blocks 0.2–2.5 sq mm (30–12 AWG)

Dynamic Range: 0.0002%/m (0.00006% obs/ft) to 20% obs/m (6.25% obs/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)

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
AutoLearn: Min 15 minutes, Max 15 days.
Recommended minimum 1 day.
While AutoLearn is in progress, thresholds are NOT changed from pre-set values.

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

Spare Parts

VESDA-E Exhaust adaptor US	VSP-961
VESDA-E Filter	VSP-962
VESDA-E Filter - 20 pieces	VSP-962-20
VESDA-E Aspirator	VSP-963
VESDA-E Smoke Detection Chamber	VSP-964
VESDA-E Sampling Module	VSP-965

Approvals Compliance

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

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