VESDA VLP

The VESDA VLP detector is the central element of the VESDA ASD product range. Using unique detection principles, the VLP has an alarm sensitivity range of 0.005%–20% obscuration/m (0.0015%–6.25% obscuration/ft). The VLP 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.

How It Works

Air is drawn into the VLP 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 VLP and may be vented back into the protected zone.

Inside the VLP, a sample of air is passed into the laser detection chamber. Ultra-fine air filtration provides very clean air 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.

VESDAnet™

VESDA detectors and devices communicate across VESDAnet, the VESDA 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.

AutoLearn™

The VLP 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 reduced nuisance alarms.

Referencing

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 the VLP 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 such nuisance alarms.

Features

- Wide sensitivity range
- Laser based smoke detection
- 4 configurable alarm levels
- High efficiency aspirator
- Four inlet pipes
- Airflow supervisor per sampling pipe
- Clean air barrier optics protection
- Easy to replace air filter
- 7 programmable relays
- VESDAnet™
- AutoLearn™
- Referencing
- Event log
- Modular design
- Recessed mounting option

Listings/Approvals

- UL
- ULC
- FM
- LPCB
- VdS
- CFE
- ActivFire
- NF-SSI (www.marque-nf.com)
- VNIIPO
- CE
- EN 54-20
  - Class A (30 holes / 0.05% obs/m)
  - Class B (60 holes / 0.06% obs/m)
  - Class C (100 holes / 0.08% obs/m)

Classification of any configuration is determined using ASPIRE.

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

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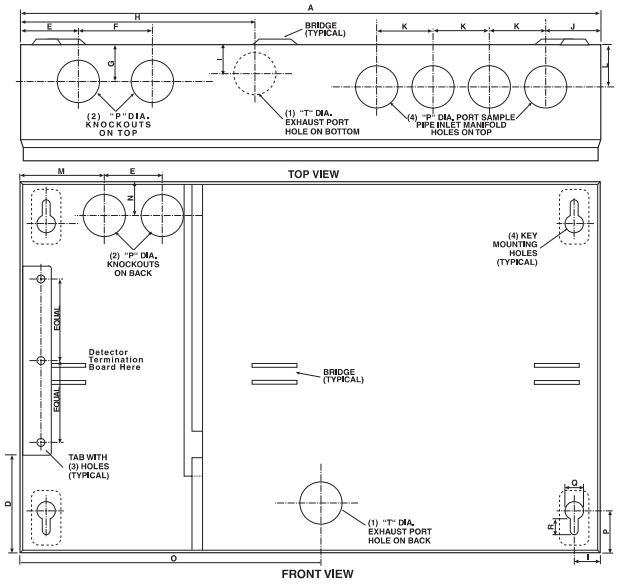
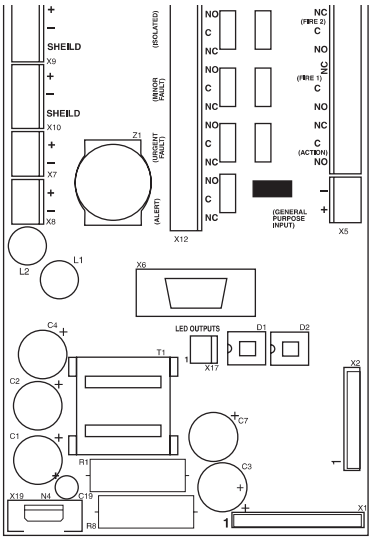
VESDA VLP

Detector Mounting Box



Dimensions		
	mm	in
A	350	13.8
B	225	8.9
C	70	2.75
D	57	2.25
E	35	1.37
F	44.5	1.75
G	22.0	0.87
H	141	5.56
I	15.9	0.62
J	33.3	1.31
K	34	1.33
L	23.8	0.94
M	51	2
N	21	0.83
O	141	5.56
P	25.4	1
Q	11.1	0.44
R	9.5	0.37
S	28.5	1.12
T	30.2	1.19
U	3.2	0.125

Detector Termination Card



Detectors

VLP detector with two blank plates and a standard display module	VLP-002
VLP detector with a centrally mounted LCD programmer module and a standard display module	VLP-012
VLP detector with FOK	VLP-400

Spare Parts

VLP Display Module	VSP-002
Filter Cartridge	VSP-005
VESDA VLP Detector Chassis Assembly, includes manifold	VSP-006
Recessed Mounting Kit (optional)	VSP-011
7 Relay Head Termination Card (HTC7)	VSP-014
Aspirator for VESDA VLP	VSP-015
VLP Screw Cover - Pack of 2	VSP-020
Filter Cartridge - Pack of 20	VSP-025
VESDA VLP Mounting Bracket	VSP-028
Exhaust Deflector - Black	VSP-540

Accessories

VESDA VLP display with a remote termination card, 7 relays	VRT-200
VESDA VLP display with a remote termination card, no relays	VRT-600
Includes blank plate with a remote mounting box. 7 relays version for VLP	VRT-500
Remote Programmer	VRT-100
Hand-held Programmer	VHH-100
IP66 enclosure (RAL 7035 powder coated)	020-050
Stainless Steel Grade 316L IP66 enclosure for marine applications or similar environments	020-050-SS
19 in Sub Rack Configuration	Contact Xtralis

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	6.96 W	8.16 W	9.36 W
Current	240 mA	290 mA	340 mA	390 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

IP Rating: IP30

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

Please consult your Xtralis 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.

Storage Conditions (non-operational):
Battery life: Up to 2 years
Humidity: Dry (<95%)
Temperature: 0° to 85° C
Must not exposed to sunlight or other radiation sources

Sampling Network:
Aggregate pipe length: 200 m (656 ft)
Maximum Single Length: 100 m (328 ft)
Minimum flow per pipe: 15 liters/min.
Pipe Modelling Design Tool: ASPIRE™

These pipe lengths represent best practice for systems with single pipe runs on each port (no branching). For longer and/or more complex pipe arrangements, predictions of EN 54-20 compliance are determined using ASPIRE.

Area Coverage:
Typically up to 2000 m^2 (21520 sq. ft.), depending on local codes and standards

Pipe Size:
External Diameter 25 mm (1 in)
Internal Diameter 15–21 mm ($^{9}/_{16}$ in–$^{7}/_{8}$ in)

Programmable Relays:
7 Relays, Contacts rated 2 A @ 30 VDC NO/NC Contacts

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)

Alarm Sensitivity Range:
0.005%–20% obs/m (0.0016%–6.25% obs/ft)

Alarm Threshold Setting Range:
Alert: 0.005%–1.990% obs/m (0.0016%–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 (0.0063%–6.25% obs/ft)*
**Limited to 12% obs/m (4% obs/ft) 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.

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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Doc. no. 09364_21 Part: 18252

VESDA VLF

VLF-250

The VESDA VLF-250 Air Sampling Smoke Detector provides very early warning smoke detection performance for the protection of small, business-critical environments of 2500 sq. ft. or less.

The air sampling detection concept works by continually drawing ambient air through sampling holes in a pipe network. Upon entering the unit the sampled air is filtered and passed into the detection chamber where light scattering technology detects the presence of very small amounts of smoke. As the amount of detected smoke increases the revolutionary circular Smoke Dial™ provides the user with an instant understanding of a smoke event, even from a significant distance. Detector status information is communicated externally via relays or optional interface cards.

Swift-Start™

The unrivalled “Swift-Start” concept provides straight-forward installation and commissioning right out of the box using proven pre-engineered sampling pipe network designs and powerful AutoLearn routines without the need for a special interface or software programming tools. The AutoLearn™ function automatically sets acceptable alarm thresholds for both smoke and flow levels without the need for a PC or separate programming device. Custom sampling pipe network designs are supported via the ASPIRE2 calculation program.

In operation, the unique circular Smoke Dial™ provides instant understanding of a smoke event and system status. Should a fault occur the System Fault LED is illuminated. To troubleshoot the condition 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 provider, ensuring service technicians arrive onsite fully prepared.

SonicFlow™ Feature

The Ultrasonic Flow Sensing (patent pending) used in the VLF provides a direct reading of the sampling pipe airflow rate. The SonicFlow™ concept 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

- Swift-Start™ Operation
- SonicFlow™ (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 18,000 events
- Offline/online configuration capability
- Up to 2500 sq. ft. (250 m^2) coverage

Listings/Approvals

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

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

VESDA® by xtralis™

VESDA VLF

VLF-250

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) 256 mm x 183 mm x 92 mm ($10^{1}/_{16}$in x $7^{1}/_{5}$ in x $3^{2}/_{3}$ in)

Weight Approx. 4.4 lbs (2 kg)
IP Rating IP30
Mounting Upright, inverted or horizontal

Operating Conditions

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

Sampling Network
Maximum area of coverage: 2,500 sq. ft depending on local codes and standards.
Maximum Pipe length in accordance with pre-engineered designs or for custom networks use Pipe Modelling Design Tool (ASPIRE2™) and NFPA standards.

Air Inlet Pipe
Accepts both metric and American standard pipe sizes.
American Pipe: ¾ inch I.D Metric: 25 mm O.D.

Relay Outputs
3 Form C relays (Fire 1, Action, Fault), Contacts rated 2A @ 30 VDC (max).

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

Cable Termination
Screw Terminals 30-12AWG (0.2-2.5 mm^2)

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.

Sensitivity Range: 0.008 - 6.25 % obs/ft (0.025 - 20.00 % obs/m)

Alarm Threshold Setting Range

Alert, Action	0.008 - 0.625 % obs/ft (0.025 - 2.00 % obs/m)
Fire 1, Fire 2	0.008 - 6.25 % obs/ft (0.025 - 20.00 % obs/m)
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 18,000 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

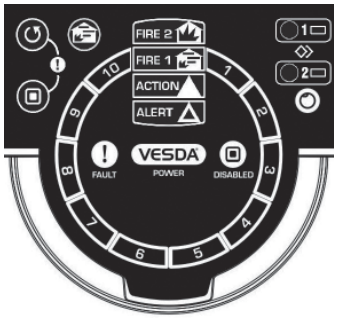
Warranty Period
2 years

Ordering Information:

• VLF-250-00	VESDA VLF-250
• VSP-005	Filter Cartridge
• VIC-010	VESDAnet Interface Card
• VIC-020	Multifunction Control Card (MCC)
• VIC-030	Multifunction Control Card (MCC) c/w Monitored Power Output (MPO)
• VSP-722	Aspirator for VESDA VLF-250

Display

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

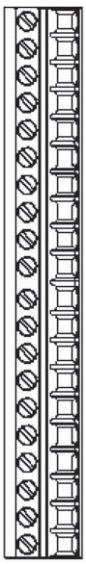


When the field service access door is open, the user has access to the RESET ↺, DISABLE ⊡, Fire Test 🖷, AutoLearn ◇» and Instant Fault Finder functions.
When the Instant Fault Finder function is activated, the Smoke Dial™ converts to a fault indicator, with the dial segment numbers corresponding to the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



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 32°F to 104°F (0°C to 38°C)

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Doc. no. 07844_15 Part: 20489

VESDA® by xtralis™

VESDA VLC

VLC-500 and VLC-505

Introduction

The VESDA VLC detector has been specifically designed to provide all the benefits of aspirating smoke detection, including very early warning, in single environment small areas and where space is a premium.

The VLC combines the well-proven VESDA VLP detection technology with a modified aspirator design, and incorporates them into a compact enclosure with a simplified display.

Two variants and a remote display option

The VLC is available in two versions, one that interfaces via relays only (RO) and one that interfaces via relays and VESDAnet (VN).

The VN version is compatible with the remote Display Module, which allows the current status of the detector to be reported in the most convenient location. The remote Display Module has 7 remote relays to support any combination of signalling that may be demanded by the application. The VN version allows several detectors to be linked together on VESDAnet thereby allowing one to act as a reference detector for other VESDA detectors.

Description

The VLC is made up of two parts: the main enclosure and the front cover.

The main enclosure houses all the key components of the detector. All non-serviceable items like the main processor board and detector chamber are mounted away from the general access area, protecting them during the installation and service process.

The front cover includes:

- 5 LEDs: Fire, Pre-Alarm/Alert, Fault, OK, Reset/Isolate
- Reset/Isolate Push Button (press to reset, press and hold to isolate)

Features

- Absolute smoke detection
- Wide sensitivity range
- Single pipe inlet
- Five (5) status LEDs
- Referencing
- VESDAnet communication (VN)
- Clean air barrier optics protection
- Three (3) Alarm Levels
- Three (3) Programmable Relays
- Air flow monitoring
- Optional remote display and relay capability
- Simple mounting design
- AutoLearn™

Approvals/Listings*

- UL
- ULC
- FM
- CCC
- ActivFire
- CE
- LPCB
- VdS
- NF
- VNIIPO
- EN 54-20
  - Class A (30 holes / 0.05% obs/m)
  - Class B (36 holes / 0.09% obs/m)
  - Class C (40 holes / 0.165% 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.

*Special versions of the products are available which carry Marine Approvals. Please refer to separate data sheet (doc. no. 11655).

VESDA® by xtralis®

VESDA VLC

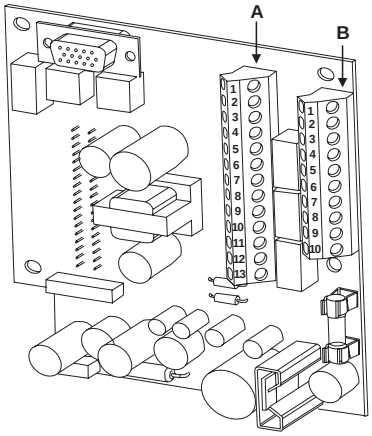
VLC-500 and VLC-505

How it works

Air is continually drawn through a simple pipe network to a central detector by a high efficiency aspirator. Air entering the unit passes a flow sensor before a sample is passed through a dual-stage dust filter (the majority of air is exhausted from the detector and back-vented to the protected area). The first stage removes dust and dirt from the air sample before it enters the chamber for smoke detection. The second, ultra-fine stage provides a clean air supply to be used inside the detection chamber to form clean air barriers, which protect the optical surfaces from contamination.

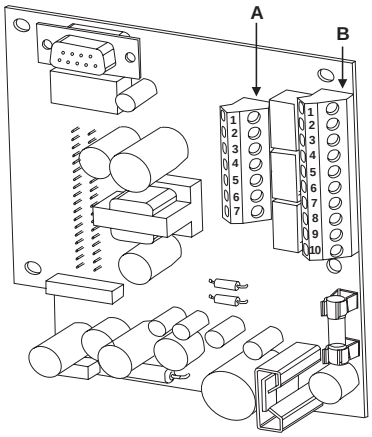
The detection chamber uses a stable, highly efficient laser light source and unique sensor configuration to achieve the optimum response to a wide range of smoke types. When smoke passes through the detection chamber it creates light scatter which is detected by the very sensitive sensor circuitry.

The status of the detector, all alarms, service and fault events, are monitored and logged with time and date stamps. Status reporting can be transmitted via simple relay connections or across the advanced VESDAnet communications network (VN version only).



VLC Termination Card (VN)

Terminal A		Terminal B	
1	Bias (-) (GND)	1	Shield
2	Reset (-)	2	VESDAnet-A (-)
3	Reset (+)	3	VESDAnet-A (+)
4	Bias (+)	4	Shield
5	LED (-) (GND)	5	VESDAnet-B (-)
6	LED (+)	6	VESDAnet-B (+)
7	FIRE (NO)	7	Power (-)
8	FIRE (C)	8	Power (+)
9	PRE-ALARM (NO)	9	Power (-)
10	PRE-ALARM (C)	10	Power (+)
11	FAULT (NO)		
12	FAULT (C)		
13	FAULT (NC)		



VLC Termination Card (RO)

Terminal A		Terminal B	
1	FIRE (NO)	1	Bias (-) (GND)
2	FIRE (C)	2	Reset (-)
3	PRE-ALARM (NO)	3	Reset (+)
4	PRE-ALARM (C)	4	Bias (+)
5	FAULT (NO)	5	LED (-) (GND)
6	FAULT (C)	6	LED (+)
7	FAULT (NC)	7	Power (-)
		8	Power (+)
		9	Power (-)
		10	Power (+)

Ordering Information

Product	Part number
VESDA VLC – VESDAnet	VLC-505
VESDA VLC – Relays Only	VLC-500
Remote Display (relays)	VRT-J00
Remote Display (no relays)	VRT-K00
Remote Relays (no display)	VRT-500

Approvals Compliance

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

Specifications

Supply voltage:
18 to 30 VDC

Power consumption:
5.4 W quiescent, 5.9 W with alarm

Current consumption:
225 mA quiescent, 245 mA with alarm

Fuse rating:
1.6 A

Dimensions (WHD):
225 mm x 225 mm x 85 mm (8 7/8" x 8 7/8"x 3 3/8")

Weight:
1.9 kg (4.2 lbs.)

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

Storage conditions (non-operational):
Humidity: Dry (<95%)
Temperature: 0° to 85° C (32°F to 185°F)
Must not be exposed to sunlight or other radiation sources

Sampling network:
Maximum area of coverage
- Code compliant: 800 m² (8000 sq.ft)
- Maximum (120sec transport time): 2,370 m² (25,500 sq.ft). Local code requirements shall take precedence

Maximum pipe lengths:
1 x 80 m (260ft), 2 x 50 m (164ft)

Computer design tool:
ASPIRE2™

Pipe:
Internal Diameter 15 mm–21 mm (9/16"–7/8")
External Diameter 25 mm (1")

Relays:
3 Relays rated 2 A @ 30 VDC
Fire (NO)
Pre-Alarm (NO)
Alert/Fault (Maintenance & Isolate) (NC/NO)
Configurable as latching or non-latching

IP rating:
IP30

Cable access:
4 x 25 mm (1") cable entries

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

Alarm sensitivity range:
0.005% to 20% obs/m (0.0015% to 6.25% obs/ft)

Threshold setting range:

Alert:	0.005%–1.990% obs/m (0.0015%–0.6218% obs/ft)
Pre-Alarm:	0.010%–1.995% obs/m (0.0031%–0.6234% obs/ft)
Fire:	0.015%–20.00% obs/m (0.0046%–6.25% obs/ft)*

*Limited to 4% obs/ft for UL

Software features:
Event log: Up to 12,000 events stored in FIFO format
Smoke level, user actions, alarms and faults with time and date stamp
AutoLearn: Minimum 15 minutes, maximum 15 days. Recommended minimum 14 days.
During AutoLearn thresholds are NOT changed from pre-set values.

Configurable general input (24 VDC):
Standby, Mains OK or Reset/Isolate

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

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Doc. no. 09362_22 Part: 18881

VESDA® by xtralis®

ICAM IFT

IFT-P

The ICAM IFT-P detector is an air-sampling system with an alarm sensitivity range from 0.001% to 20% obscuration/m (0.0003% to 6.10% obscuration/ft). This detector is classified as a Very Early Warning Smoke Detector that can reliably detect fire at an early stage, and low to high concentrations of smoke over an area of up to 2000 m^2 (21 500 ft^2).

The detector is configurable for a variety of environments, providing an ideal fire detection solution for telecommunications and IT facilities, and heavy industrial environments such as chemical plants, factories, warehouses and mining facilities.

How it works

The IFT-P detector draws air through sample holes in a pipe network, then filters and analyzes the sample in a laser detection chamber. Individually programmable alarm states (Alert, Action, Fire 1 and Fire 2) are shown on the display, which contains four alarm LEDs and an OK/Fault LED. Dedicated output relays also provide interfaces for each alarm state and device faults.

Product Features

Programming and Configuration
RS232, RS485 and TCP/IP communication interfaces are available to connect to Xtralis Configuration and Fire System Management software packages: Xtralis VSC and Xtralis VSM4. RS485 interfaces also allow connections to remote displays, and the TCP/IP Ethernet interface can provide access to an email messaging service.

Inputs and Outputs
The IFT-P detector supports a maximum of three optional modules, which provide the detector with additional programmable output relay interfaces, and 4 to 20 mA analog outputs.

Aspiration and Flow Sensing
The aspirator is a 2000 Pa high pressure and high volume fan, which provides superior detection times over long pipe lengths and reliable detection in high air flow environments. Airflow in each pipe is monitored by a dual element thermal sensing system, with airflow faults indicated on the display and to monitoring equipment.

Features

- Single zone
- Dual pipe air sampling
- 0.001% to 20% obscuration/m (0.0003% to 6.10% obs/ft)
- 4 Alarms - Alert, Action, Fire 1, Fire 2
- 2 x 100 m (2 x 328 ft) sampling pipe
- Enhanced performance aspirator
- Ethernet TCP/IP
- RS232 and RS485 Modbus
- 5 relay outputs and expandable
- Optional relay module and 4 to 20 mA analog output module
- Event Log
- Area coverage of up to:
  - 2000 m^2 (21,500 ft^2) for VdS installations
  - 1600 m^2 (17,200 ft^2) for NF installations
  - 850 m^2 (9,150 ft^2) for UL installations

Listings/Approvals

- UL
- ULC
- FM
- CCC
- CE
- VdS
- NF
- EN 54-20
  - Class A (12 holes / 0.04% obs/m)
  - Class B (36 holes / 0.04% obs/m)
  - Class C (36 holes / 0.1% obs/m)

Classification of any configuration is determined using ASPIRE2.

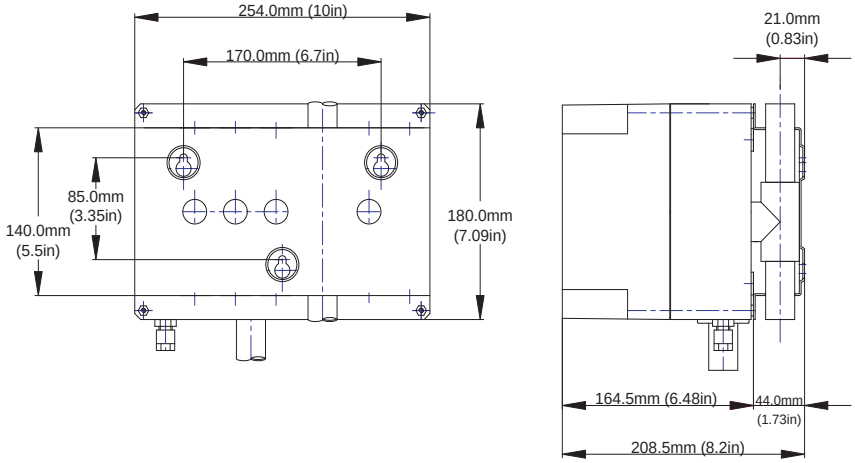
Regional approvals listings and regulatory compliance vary between ICAM models.

ICAM™ by xtralis®

ICAM IFT

IFT-P

Dimensions



Specifications

Supply Voltage:
Nominal 24 VDC

Supply Current:
500 mA (min) to 1.2 A (max)

Capacitive Loading:
Nominal 5,000 uF

Aspirator:
2000 Pa Centrifugal air pump

Dimensions (WHD):
254 mm x 180 mm x 165 mm
(10.0 in. x 7.1 in. x 6.5 in.)

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

Sampling Pipe Size:
Outer Diameter:
25 mm, or;
1.05 in (3/4" pipe) with adaptor

Sampling Network:
Zones: 1 Fire detection zone
Pipe Length: 2 x 100 m (2 x 328 ft.)

Alarm Sensitivity Range:
0.001% to 20% obs/m
(0.0003% to 6.10% obs/ft)

Alarm Settings:
Alarm levels: Alert, Action, Fire 1 and Fire 2
Alarm delays: 0 to 60 seconds

Individually programmable for each level

IP Rating:
IP65

Filtration:
Field exchangeable dual stage filter

Flow Monitoring:
Twin thermal element

Relay Outputs:
4 alarm relays, 1 fault relay, 1 Amp changeover
Rating 1A @ 30 VDC, NO/NC

Communication:
RS232, RS485 Modbus
Ethernet TCP/IP

Event Log:
Up to 20,000 events stored

Ordering Information

IFT-P 24 VDC with TCP/IP	IFT-PT
4 Channel Relay module[1]	01-E606-02
8 Channel Analog Output module (4 to 20 mA)[1]	01-E624-01
IFT-1 Remote Display Module	01-E921-01

Notes:

1. Please contact your nearest Xtralis office for approvals status.

* UL Listed Detector Installed Ambient conditions
0°C to 38°C (32°F to 100°F)

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Doc. no. 16304_09 Part no. 29319

ICAM™ by xtralis®

VESDA® VLI by Xtralis®

VLI-880, VLI-885

The VESDA VLI by Xtralis is an industry first early warning aspirating smoke detection (ASD) system, designed to protect industrial applications and harsh environments of up to 2000 m^2 (21,520 sq. ft.).

Long life, intelligent, fail-safe technology

The VLI detector combines a fail-safe Intelligent Filter (patent pending) with an advanced clean-air barrier for optics protection allowing the use of absolute detection and a long detection chamber life without the need for re-calibration.

The Intelligent Filter:

- reduces the level of pollution in the air sample before it enters the detection chamber, which dramatically extends the operational life of the detector in harsh and polluted environments.
- is fully monitored, providing consistent sensitivity over the entire operational life of the detector.

Installation, Commissioning and Operation

The VLI detector features a robust IP66-rated enclosure which provides complete protection against dust ingress and strong water jets from all directions. In the majority of industrial applications, specifically in very harsh environments, this eliminates the need to use expensive external IP enclosures, thus simplifying and reducing the cost of installation.

The VLI detector is equipped with a powerful aspirator that provides a total pipe length of 360 m (1181 ft). It is fully supported by the Xtralis ASPIRE, VSC and VSM4 software applications which facilitate ease of pipe network design, system commissioning and maintenance together with compatibility with existing VESDA installations.

The AutoLearn™ commissioning assistant reduces setup time and ensures optimum alarm and flow thresholds in a range of environments.

The VLI detector is inherently less prone to nuisance alarms due to the intelligent filter, lint trap, sub-sampling probe and secondary filter. Coupled with its modular design, VLI offers a lower total cost of ownership over the life of the product.

Features

- Suitable for Class 1 Division 2 applications - Groups A,B,C & D
- Up to 2000 m^2 (21,520 sq. ft.) coverage
- Up to 4 inlet pipes
- Total pipe length up to 360 m (1181 ft)
- Five (5) high intensity status LEDs for greater visibility
- Robust absolute smoke detection
- Intelligent Filter (patent pending)
- Lint Trap to capture fibrous particulates
- Sub-sampling Probe (inertial separator)
- Secondary Filter
- Clean air barrier for optics protection
- Referencing
- AutoLearn™ Smoke and Flow
- Clean Air Zero™
- Air-path monitoring
- Five (5) relays (Fire, Fault and 3 configurable)
- Relays configurable as latching or non-latching
- Expandable GPI and relays
- Ultrasonic flow sensing
- Xtralis VSC, Xtralis VSM4 and ASPIRE software support
- IP66 Enclosure
- Easy mounting with steel support bracket
- Modular field replaceable parts for ease of servicing
- Local USB configuration port
- Easy cable termination access
- Imperial and metric pipe ports
- Rubberized finish to external housing

Listings / Approvals

- UL
- ULC
- FM
- ActivFire
- CE
- LPCB
- NF
- SIL 2 as per IEC 61508
- EN 54-20
  - Class A (24 holes / Alert = 0.06% obs/m)
  - Class B (28 holes / Fire-1 = 0.15% obs/m)
  - Class C (60 holes / Fire-1 = 0.15% obs/m)

  Classification of any configuration is determined using ASPIRE.

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

VESDA® by xtralis®

VESDA® VLI by Xtralis®

VLI-880, VLI-885

How it works

Air is continually drawn through the pipe network and into the VLI detector by a high efficiency aspirator. The air sample passes four (4) sets of ultrasonic flow sensors before being passed through the Intelligent Filter. The Intelligent Filter incorporates an innovative flow splitting arrangement where a smaller unfiltered portion is passed through another set of ultrasonic flow sensors and a larger portion of the sample passes through a HEPA filtration medium. This arrangement dramatically reduces the amount of contaminants entering the aspirator and the detection chamber, thus extending detector life.

Filter loading is constantly monitored which enables the detector to "intelligently" maintain the sensitivity, hence ensuring consistent and reliable operation over time. This is achieved by comparing the readings from the four (4) sets of ultrasonic flow sensors at the detector air inlets to the readings from that in the unfiltered path and measuring the split of the airflow ratio as the filter load changes.

The filtered and unfiltered portions are recombined as they exit the Intelligent Filter. A portion of the recombined air sample is then passed through the sub-sampling probe (inertial separator) and secondary filter. This ensures that larger dust particles are less likely to pass through the probe and filter arrangement, hence they are exhausted out of the detector. This configuration minimizes nuisance alarms caused by larger dust particles and extends detection chamber life. A third filter within the detection chamber assembly delivers a clean air barrier which protects the optical surfaces from contamination, further extending detector life and ensuring absolute calibration.

The detection chamber uses a stable, highly efficient laser light source and unique sensor configuration to achieve optimum response to a wide range of smoke types. The presence of smoke in the detection chamber creates light scattering which is detected by the very sensitive sensor circuitry and then converted to an alarm signal.

The status of the detector, all alarms, service and fault events, are monitored and logged with time and date stamps. Status reporting can be transmitted via relay outputs and across VESDAnet (VN version only).

Clean Air Zero

Clean Air Zero is a user-initiated VLI feature which compliments consistent absolute detection over time and also safeguards against nuisance alarms.

This is achieved by introducing clean air into the detection chamber and taking a reference reading of the chamber background. This reading is then offset against the actual environmental background to maintain consistent absolute smoke detection.

Ordering Information

VESDA VLI	VLI-880
VESDA VLI with VESDAnet[1]	VLI-885
VESDA VLI Remote Display 7 Relays	VRT-Q00
VESDA VLI Remote Display No Relays	VRT-T00

Notes:

1. Please contact your nearest Xtralis office for availability.

Spare Parts

VLI Intelligent Filter	VSP-030
VLI Secondary Foam Filter	VSP-031
VLI Aspirator	VSP-032
VLI Chamber Assembly	VSP-033
VLI VESDAnet Card	VSP-034
VLI Remote Display Module Spare	VSP-035
VLI Ultrasonic Flow Manifold Spare	VSP-036

Specification

Supply voltage:
18 to 30 VDC

Power consumption:
10 W quiescent, 10.5 W with alarm (max)

Current consumption:
415 mA quiescent, 440 mA with alarm (max)

Fuse rating:
1.6 A

Dimensions (WHD):
426.5 mm x 316.5 mm x 180 mm
(16.8 in x 12.5 in x 7.1 in)

Weight:
6.035 kg (13.3 lbs)

Operating conditions:
Tested to -10°C to 55°C (14°F to 131°F)
Recommended Detector Ambient: 0°C to 39°C
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 2000 m^2 (21,520 sq.ft)
Minimum total airflow: 40 l/m
Minimum airflow per pipe: 20 l/m

Maximum pipe lengths:
Total Pipe Length: 360 m (1181 ft)
Maximum Single Pipe Length: 120 m (394 ft)

Computer design tool:
ASPIRE

Pipe:
Internal Diameter 15 mm - 21 mm (9/16"–7/8")
External Diameter 25 mm (1")

Relays:
5 Relays rated 2 A @ 30 VDC
Fire (NO), Fault (NC), Configurable (NO)

IP rating:
IP66

Cable access:
4 x 25 mm (1") cable entries

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

Sensitivity Range:
0.005% - 20.0% obs/m (0.0015% - 6.25% obs/ft)

Threshold setting range:
Alert: 0.05%-1.990% obs/m (0.016%-0.6218% obs/ft)
Action: 0.1%-1.995% obs/m (0.031%-0.6234% obs/ft)
Fire1: 0.15 %-2.0% obs/m (0.047% - 0.625% obs/ft)
Fire2: 0.155 % - 20.0% obs/m (0.05% - 6.25% obs/ft)*
*Limited to 4% obs/ft for UL

Software features:
Event log: Up to 18,000 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 14 days.
While AutoLearn is in progress, thresholds are NOT changed from pre-set values.

Configurable general input (5 - 30 VDC):
External Reset, Mains OK, Standby, Isolate, Use Night-time Threshold, Reset + Isolate, Inverted Reset

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Doc. no. 17115_19 Part: 29414

VESDA® by xtralis®

VESDA-E VEP

VEP-A00-1P, VEP-A00-P
VEP-A10-P

The VESDA-E VEP series of smoke detectors bring the latest and most advanced detection technology to provide very early warning and the best nuisance alarm rejection to a wide range of applications. Built on the Flair detection technology and years of application experience, VEP detectors achieve consistent performance over their lifetime via absolute calibration. In addition, the VEP delivers a range of revolutionary features that provide user value.

Flair Detection Technology

Flair is the revolutionary new detection chamber that forms the core of VESDA-E VEP, providing better detection, fewer nuisance alarms, higher stability, increased longevity and particle characterisation. Direct imaging of the sampled particles using a CMOS imager combined with multiple photo-diodes allow vastly more data that can be used to derive actionable information about the observed particles using analytics.

Installation, Commissioning and Operation

VESDA-E VEP is equipped with a powerful aspirator that enables use of a total of 130m (427ft) of sampling pipe in the one pipe model and 560m (1,837ft) of pipe in the four pipe model. Out of box operation is made possible with AutoConfig which allows airflow normalisation and AutoLearn Smoke and Flow to be initiated from within the detector. VEP is fully supported by the ASPIRE and Xtralis VSC software applications which facilitate ease of pipe network design, system commissioning and maintenance.

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 PC's installed with Xtralis monitoring and configuration software to connect wirelessly to the detector via the network.

Backward Compatibility

VESDA-E VEP is compatible with existing VESDA installations. The detector occupies the same mounting footprint, pipe, conduit and electrical connector positioning as VESDA VLP. VEP is also compatible with existing VESDAnet installations allowing monitoring of both VESDA-E and legacy detectors via the latest iVESDA application.

Features

- One and four pipe models for different applications
- Flair detection technology delivers reliable very early warning in a wide range of environments with minimal nuisance alarms
- Multi stage filtration and optical protection with clean air barriers ensures lifetime detection performance
- Four alarm levels and a wide sensitivity range deliver optimum protection for the widest range of applications
- Intuitive LCD icon display provides instant status information for immediate response
- Flow fault thresholds per port accommodate varying airflow conditions
- Smart on-board filter retains dust count and remaining filter life for predictable maintenance
- Extensive event log (20,000 events) for event analysis and system diagnostics
- AutoLearn™ smoke and flow for reliable and rapid commissioning
- Referencing to accommodate external environmental conditions to minimise nuisance alarms
- Fully backward compatible with VLP and VESDAnet
- Remote monitoring with iVESDA for system review and proactive maintenance
- Ethernet for connectivity with Xtralis software for configuration, secondary monitoring and maintenance
- Industry first. Aspirating detector secondary monitoring and maintenance via WiFi
- USB for PC configuration, and firmware upgrade using a memory stick
- Two programmable GPIs (1 monitored) for flexible remote control
- Field replaceable sub-assemblies enable faster service and maximum uptime

Listings / Approvals

- UL
- ULC
- FM
- ActivFire
- CE
- VdS
- EN 54-20, ISO 7240-20
  Four Pipe VEP
  - Class A (40 holes / Fire 1 = 0.028% obs/m)
  - Class B (80 holes / Fire 1 = 0.027% obs/m)
  - Class C (100 holes / Fire 1 = 0.056% obs/m)

  Classification of any configuration is determined using ASPIRE.

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

VESDA®E™

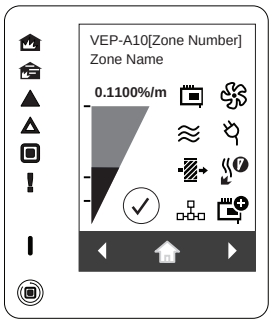
VESDA-E VEP

VEP-A00-1P, VEP-A00-P
VEP-A10-P

Specifications

	One Pipe VEP	Four Pipe VEP			
Supply voltage	18-30 VDC (24 V Nominal)				
Power consumption @ 24 VDC	**VEP-A00-1P**	**VEP-A00-P**		**VEP-A10-P**	
Aspirator Setting	Fixed	1	5	1	5
Power (Quiescent)	8.8 W	7.0 W	8.8 W	8.2 W	10.0 W
Power (In Alarm)	9.6 W	7.8 W	9.6 W	10.4 W	11.6 W
Dimensions (WHD):	350 mm x 225 mm x 135 mm (13.8 in x 8.9 in x 5.3 in)				
Weight	4.0 kg (8.8 lb)	4.0 kg (8.8 lb)		4.1 kg (9.0 lb)	
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) UL: -20°C to 50°C (-4°F to 122°F) Humidity: 10% to 95% RH, non-condensing				
Area Coverage	1,000 m^2 (10,760 sq. ft)	2,000 m^2 (21,520 sq. ft)			
Min. airflow per pipe	15 l/m				
Pipe Length (Linear)	100 m (328 ft)	280 m (919 ft)			
Pipe Length (Branched)	130 m (427 ft)	560 m (1,837 ft)			
Pipe lengths depending on number of pipes in use	1 Pipe	1 Pipe	2 Pipe	3 Pipe	4 Pipe
	100 m (328 ft)	110 m (361 ft)	100 m (328 ft)	80 m (262 ft)	70 m (230 ft)
Analytics	DieselTrace™, DustTrace™, WireTrace™				
StaX	PSU	PSU, Auto Pipe Clean			
No. of holes (A/B/C)	30/40/45	40/80/100			
Computer design tool	ASPIRE				
Pipe	Inlet: External diameter 25 mm or 1.05 in (3/4 in IPS) Exhaust: External diameter 25 mm or 1.05 in (3/4 in IPS) via adaptor				
Relays	7 programmable relays (latching or non-latching 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 (24–14 AWG)				
Dynamic Range	0.001% to 32% obs/m (0.0003% to 10% obs/ft)				
Sensitivity Range	0.005 to 20% obs/m (0.0016% to 6.25% obs/ft)				
Threshold setting range	Alert: 0.005% to 2.0% obs/m (0.0016% to 0.625% obs/ft) Action: 0.005% to 2.0% obs/m (0.0016% to 0.625% obs/ft) Fire1: 0.010% to 2.0% obs/m (0.0031% to 0.625% obs/ft) Fire2: 0.020% to 20.0% obs/m (0.0063% to 6.25% obs/ft)				
Software features	Event log: Up to 20,000 events Smoke level, user actions, alarms and faults with time and date stamp AutoLearn: Detector learns Alarm Thresholds and Flow Fault thresholds by monitoring the environment.				

3.5” Display



Symbol	LED
	Fire 2
	Fire 1
	Action
	Alert
	Disabled
	Fault
	Power
	Smoke and Alarm Threshold Levels
	Detector OK
	Detector Fault
	Aspirator Fault
	Airflow Fault
	Power Fault
	Filter Fault
	Smoke Chamber Fault
	VESDAnet Fault
	StaX Module Fault

Ordering Information

VESDA-E VEP with LEDs, 1 pipe	VEP-A00-1P
VESDA-E VEP with LEDs, 4 pipe	VEP-A00-P
VESDA-E VEP with 3.5” Display, 4 pipe	VEP-A10-P
Mounting Bracket	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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Doc. no. 22063_09 Part: 30276

VESDA-E VEU

VEU-A00, VEU-A10

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 at least 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.

Flair Detection Technology

Flair is the revolutionary new detection chamber that forms the core of VESDA-E VEU, providing better detection, fewer nuisance alarms, higher stability, increased longevity and particle characterisation. Direct imaging of the sampled particles using a CMOS imager combined with multiple photo-diodes provides vastly more data that can be used to derive actionable information about the observed particles using analytics.

Installation, Commissioning and Operation

VESDA-E 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). Out of box operation is made possible with AutoConfig which allows airflow normalisation and AutoLearn Smoke and Flow to be initiated from within the detector. VEU is fully supported by the ASPIRE and Xtralis VSC software applications which facilitate ease of pipe network design, system commissioning and maintenance.

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 VEU is fully compatible with existing VESDA installations. The detector occupies the same mounting footprint, pipe, conduit and electrical connector positioning as VESDA VLP. VEU is also compatible with existing VESDAnet installations allowing monitoring of both VESDA-E and legacy detectors via the latest iVESDA application.

Features

- Flair detection technology delivers reliable very early warning in a wide range of environments with minimal nuisance alarms
- Multi stage filtration and optical protection with clean air barriers ensures lifetime detection performance
- Four alarm levels and an ultra wide sensitivity range deliver optimum protection for the widest range of applications
- Intuitive LCD icon display provides instant status information for immediate response
- Flow fault thresholds per port accommodate varying airflow conditions
- Smart on-board filter retains dust count and remaining filter life for predictable maintenance
- Extensive event log (20,000 events) for event analysis and system diagnostics
- AutoLearn™ smoke and flow for reliable and rapid commissioning
- Referencing to accommodate external environmental conditions to minimise nuisance alarms
- Fully backward compatible with VLP and VESDAnet
- Remote monitoring with iVESDA for system review and proactive maintenance
- Ethernet for connectivity with Xtralis software for configuration, secondary monitoring and maintenance
- Industry first. Aspirating detector secondary monitoring and maintenance via WiFi
- USB for PC configuration, and firmware upgrade using a memory stick
- Two programmable GPIs (1 monitored) for flexible remote control
- Field replaceable sub-assemblies enable faster service and maximum uptime

Listings / Approvals

- UL
- ULC
- VdS
- CE
- ActivFire
- 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)

Classification of any configuration is determined using ASPIRE.

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

VESDA®

VESDA-E VEU

VEU-A00, VEU-A10

Specifications

Supply voltage	18-30 VDC (24 V Nominal)					
Power consumption @ 24 VDC	**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 135 mm (13.8 in x 8.9 in x 5.3 in)					
Weight	VEU-A00 - 4.83 kg (10.6 lbs) VEU-A10 - 4.9 kg (10.8 lbs)					
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) UL: -20°C to 50°C (-4°F to 122°F) Humidity: 10% to 95% RH, non-condensing					
Maximum area of coverage	6,500 m² (69,965 sq.ft)*					
Minimum airflow per pipe	15 l/m					
Pipe lengths depending on number of pipes in use	1 Pipe	2 Pipes		3 Pipes		4 Pipes
	160 m (524 ft)	150 m (492 ft)		130 m (426 ft)		100 m (328 ft)
Maximum pipe lengths	Total Pipe Length (with branches): 800 m (2624 ft)					
Analytics	DieselTrace™, DustTrace™, WireTrace™					
StaX	PSU, Auto Pipe Clean					
No. of holes (A/B/C)	80/80/100					
Computer design tool	ASPIRE					
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 mm² (24–14 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 Smoke level, user actions, alarms and faults with time and date stamp AutoLearn: Detector learns Alarm Thresholds and Flow Fault thresholds by monitoring the environment.					

* System design and regulatory requirements may restrict the monitoring area to a lesser amount.

Ordering Information

VESDA-E VEU with LED's	VEU-A00
VESDA-E VEU with 3.5" Display	VEU-A10
Mounting Bracket	VSP-960

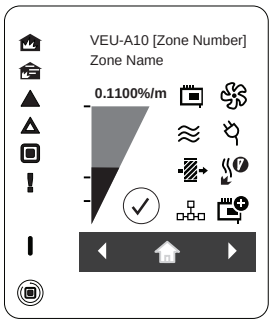
Approvals Compliance

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

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

3.5" Display



Symbol	LED
	Fire 2
	Fire 1
	Action
	Alert
	Disabled
	Fault
	Power
	Smoke and Alarm Threshold Levels
	Detector OK
	Detector Fault
	Aspirator Fault
	Airflow Fault
	Power Fault
	Filter Fault
	Smoke Chamber Fault
	VESDAnet Fault
	StaX Module Fault

www.xtralis.com
UK and Europe +44 1442 242 330 **D-A-CH** +49 431 23284 1 **The Americas** +1 781 740 2223
Middle East +962 6 588 5622 **Asia** +86 21 5240 0077 **Australia and New Zealand** +61 3 9936 7000

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