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

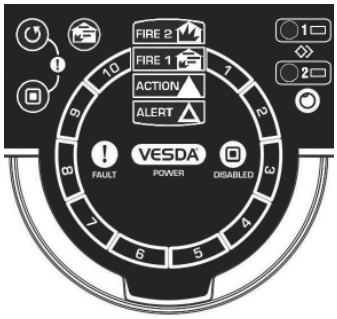
Warranty Period
2 years

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.

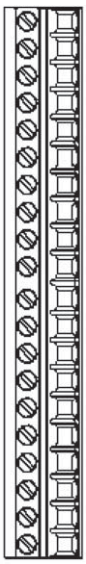


When the field service access door is open, the user has access to the RESET ↺, DISABLE ⊡, Fire Test 🖷, AutoLearn ◇» and Instant Fault Finder functions.
When the Instant Fault Finder function is activated, the Smoke Dial™ converts to a fault indicator, with the dial segment numbers corresponding to the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

www.xtralis.com

UK and Europe +44 1442 242 330 **D-A-CH** +49 4347 903 0 **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

Doc. no. 07844_15 Part: 20489

VESDA® by xtralis™