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.
### VESDA VLF 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 (10 1/8" x 7 1/8" x 3 5/8"")

#### 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)
- 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 (1 1/8 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)

#### Display
- Two Alarm Threshold Settings: Either time or GPI based

#### Alarm Level
- • Low
- • Medium
- • High

#### Flow Level
- • Low
- • Medium
- • High

#### Detector Status & Faults
- • Low
- • Medium
- • High
- • Field Service

#### Event Log
- Up to 18000 events, time and date stamped in separate, non-volatile, logs for:
- Smoke Level
- Flow Level
- Detector Status
- 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 + Chinese language set. International display labels
- VLF-500-03 VESDA VLF. English + Russian language set. International display labels
- VLF-500-04 VESDA VLF. English + Eastern Euro language set. International display labels
- VIC-010 VESDA Net 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

### VLF-500 Display

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

#### Terminal Block Connections

#### Approvals Compliance

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

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

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**Contact Information**

- **UK and Europe** +44 1442 242 330
- **The Americas** +1 781 740 2223
- **Australia and New Zealand** +61 3 9936 7000
- **Middle East** +962 6 588 5622
- **Asia** +86 21 5240 0077

**Website**

www.xtralis.com

**Product Information**

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

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**Dimensions (W x H x D)**

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