# VESDA VLF

#### **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
- Multiple Event Logging in separate logs
- ▶ Event log up to 18000 events
- ▶ Offline/online configuration capability
- ▶ Up to 500m<sup>2</sup> (5000sq. ft.) coverage\*

- Field Service Access Door
- Instant Recognition Display
- ▶ Instant Fault Finder™
- ► AutoLearn<sup>™</sup> Smoke
- ► AutoLearn<sup>™</sup> Flow



Your Safety, Our Technology



### Listings / Approvals



The VESDA VLF-250 detector is a very early warning smoke detector designed to protect small, business-critical environments of less than  $250m^2$  (2500sq. 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<sup>™</sup> 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



#### Display

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

When the field service access door is open, the user has access to the RESET  $(J, DISABLE \square, Fire Test )$ , AutoLearn () and Instant Fault Finder functions.

When the Instant Fault Finder function is activated, the Smoke DialTM converts to a fault indicator, with the dial segment numbers corresponding to the faults listed below.

#### Legend of fault indicators

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

#### Legend of fault indicators

0		1	GPI	
ă	1	2	GPI	
ŏ	f	3	Display TX	
ŏ	f	4	Display RX	
õ	Ħ	5	Display Common Grou	und
$\overline{\otimes}$	Ħ	6	Display Power -	
00000000000000000000000000000000000000	$\Box$	7	Display Power +	
$\otimes$	I	8	Power Return 0 VDC	From power supply unit
$\otimes$	□	9	Power In 24 VDC	
$\otimes$		10	Power Return 0 VDC	To next detector (if more than 1
$\odot$	口	11	Power Out 24 VDC	detector per Power Supply Unit)
$\odot$	Ī	12	NC	
$\odot$	□	13	Common	Fault relay
$\otimes$	□	14	NO	
$\otimes$		15	NC	
$\otimes$	$\Box$	16	Common	Fire 1 relay
$\otimes$	Ŀ	17	NO	
Ø	밀	18	NC	
$\otimes$	클	19	Common	Action relay
$\odot$		20	NO	

### NOCHIKI 🗹 in 🔊 🛅



### VESDA VLF VLF-250

Specification			
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)	256mm x 183mm x 92mm (10 $^{1}/_{16}$ " x 7 $^{1}/_{5}$ " x 3 $^{2}/_{3}$ ")		
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 25m (80ft) (Max. 12 holes) -10°C to 55°C (14°F to 131°F) 2 x 15m (50ft) 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: 25mm (1.05") American Pipe: IPS 21mm ( <sup>3</sup> / <sub>4</sub> ".)		
Area Coverage	Up to 250m <sup>2</sup> (2500sq. 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 25mm (1.05") cable entries (1 rear entry, 2 top entry)		
Cable Termination	Screw Terminals 0.2-2.5mm <sup>2</sup> (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	<ul> <li>A Alarm State Indicators</li> <li>Smoke Level Indicator</li> <li>Reset, Disable and Test Controls</li> <li>Smoke and Flow AutoLearn Controls</li> </ul>		
Event Log	Up to 18000 events, time and date stamped in separate, non-volatile, logs for: Smoke Level, Flow Level, Detector Status and Faults		





## VESDA VLF

AutoLearn Smoke & Flow	<ul> <li>Automatically set acceptable alarm thresholds for both smoke and flow levels</li> <li>Minimum 15 minutes, maximum 15 days (default 14 days)</li> <li>During AutoLearn thresholds are NOT changed from pre-set values</li> </ul>
Warranty Period	2 years

#### **Ordering Information**

#### Product Part Number VLF-500-00 VESDA VLF European language set. English display labels European language set. International display labels VLF-500-01 VESDA VLF English + Asian language set. International display labels VLF-500-02 VESDA VLF English + Russian language set. International display labels VLF-500-04 VESDA VLF English + Eastern Euro language set. International display labels VLF-500-05 VESDA VLF **VESDAnet Interface Card** VIC-010 Multifunction Control Card (MCC) VIC-020 Multifunction Control Card (MCC) with Monitored Powered Output (MPO) VIC-030 Filter Cartridge, VSP-722 Aspirator for VESDA VLF-250 VSP-005

#### B HOCHIKI I in a Yuu Hochiki Europe (UK) Ld. . Athough very effort has warranted or represented

For further information visit www.hochikieurope.com/vesda Hochiki Europe (UK) Ltd. reserves the right to alter the specification of its products from time to time without notice. Although every effort has been made to ensure the accuracy of the information contained in this document it is not warranted or represented by Hochiki Europe (UK) Ltd. to be a complete and up-to-date description.