

Aspirating smoke detection system - VESDA VEP-A00-1P

SAFEVENT ApS

Mads Clausens Vej 6 9800 Hjoerring Denmark

TEL: +45 88 63 89 00 MAIL: sales@safevent.dk URL: www.safevent.dk/en





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1. HOW THE VESDA VEP 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 a flow sensor and then a sample of the air is drawn into the Flair 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 FlairTM detection chamber uses CMOS imaging, multi-directional light scattering and sophisticated algorithms for smoke detection and particle type characterization. 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 zone. Alarms can be signaled via Relays and VESDAnet. Ethernet and Wi-Fi 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 display shows the detector status, including smoke level and a smoke level bar graph, alarm thresholds, trouble status, % airflow level, normalization status and filter life used.





The VESDA VEP series of aspirating smoke detectors extend the reach of the VESDA platform to a wide range of applications. VEP sensitivity range is from 0.005-20%/m (0.0016-6.25%/ft) and provides up to 40 Class A holes. VEP is equipped with a powerful aspirator that provides a total of 130 m (427 ft) in the one pipe model and 560 m (1,837 ft) in the four-pipe model. VEP also provides StaX support together with Ethernet, Wi-Fi, USB and VESDAnet capabilities.

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2. FIVE REASONS TO CHOOSE VESDA VEP

VESTA SMOKE+

VESDA Smoke+ capitalizes on the patented Flair Detection Technology centered in the VESDA detection chamber. The Flair Detection Technology offers increased sensitivity – up to 15 times greater than VESDA VLP, at least three times better dust rejection, up to twice the longevity while maintaining consistent sensitivity over time.



VESDA FLEX

VESDA Flex provides future-proof expandability for maximum flexibility using:

• StaX Hardware expansion modules integrate with the VESDA VEP detectors provide additional capabilities including integrated Power Supply, and Auto Pipe Clean



VESDA SECTOR
ADDRESSABILITY

Enables a single fire zone to be divided into four separate sectors (areas)

- Allows users to locate the source of smoke more quickly (smaller search area)
- Provides real time detection by Sector to monitor fire growth
- Provides four individually configurable alarm levels (Alert, Action, Fire 1 and Fire 2) for each sector allowing flexible application in different environments
- More cost effective than "4 detector" approach for both installation and maintenance



VESDA CONNECT

VESDA Connect provides flexible networking and programming capabilities that reduce installation, commissioning, monitoring and maintenance costs through extensive connectivity options and remote diagnostics tools including Ethernet, Wi-Fi, USB, VESDAnet and Relays.



VESDA TCO

VESDA improves CapEx value through higher sensitivity and longer pipe runs resulting in greater coverage area for VEP detectors



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3. StaX POWER SUPPLY (PSU) UNIT EXPANSION MODULE

The PSU StaX is an integrated power supply providing operating power including battery backup for the VESDA detectors. It provides 24 volt operating power as well as a battery charger function that supervises and maintains the standby batteries.



4. CONNECTIVITY

A key feature of the VESDA-VEP is its availability to be accessed by other electronic devices such as computers and smartphones.

4.1 WI-FI

Enables connectivity with hand-held iOS and Android devices for unprecedented ease of maintenance and monitoring.

4.2 USB

The USB port allows direct connection to a PC for configuration and maintenance. Being in host-mode, it also allows firmware upgrade by inserting a USB key and pushing the relevant button on the detector.

4.3 VESDAnet & RELAYS

Connect up to 200 VESDA devices on a single loop. Each VESDA detector provides up to 7 relays.

- VESDAnet provides primary reporting, centralized configuration, control, maintenance and monitoring
- Relays allow connection to Fire Alarm Control Panels (FACP) and Building Management Systems (BMS) and other security systems

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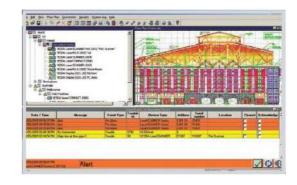


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5. SOFTWARE

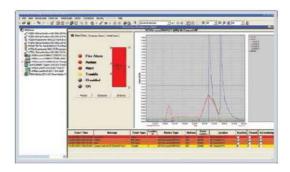
5.1 VSM

A software package that allows the user to monitor, configure and control a VESDA system from a central location via a VESDAnet communication loop, Ethernet or Wi-Fi.



5.2 **VSC**

A software package that can be used to configure, install, commission and maintain the entire range of VESDA ASDs. The software provides highlevel programming flexibility through its on-line and off-line configuration capabilities.



5.3 ASPIRE

A Windows®-based application that aids the specification and design of pipe networks for VESDA air sampling smoke detectors. It provides the designer with tools to speed the design process and ensure optimum network performance and installation quality. ASPIRE also makes implementation of the design easy. With automatic generation of lists of all the components required for the project and an Installation Data Pack, the installer will have all the information they need at their fingertips.



5.3 iVESDA

iVESDA is a downloadable application that can be installed on Android and iOS handheld devices to monitor and maintain VESDA systems with unprecedented ease. iVESDA is also compatible with existing VESDA detectors residing on the same VESDAnet as VESDA. iVESDA provides detailed alarm, fault and other status information such as smoke trends, airflow, filter life, as well as viewing of important configuration parameters such as pipes in use and smoke alarm thresholds.



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6. PRODUCT FEATURE OVERVIEW

FEATURE		
WORLDWIDE APPROVALS	UL, ULC, FM, ActiveFire, RCM, VdS, CE, AFNOR, CSFM, EN 54-20	
HAZARDOUS AREA APPROVAL FM CLASS 1, DIV 2, GROUPS A, B, C, D)	Yes	
MIN FIRE 1 THRESHOLD	0.01% obs/m (0.0031% obs/ft)	
DETECTION RANGE	0.005-20% obs/m (0.0016%-6.25% obs/ft)	
NO. OF INLETS	l pipe	
TWO STAGE FILTRATION	Yes	
AREA COVERAGE	1,000 m2 (10,760 sq. ft)	
PIPE LENGTH (LINEAR)	100 m (328 ft)	
PIPE LENGTH (BRANCHED)	130 m (427 ft)	
ADDRESSABILITY	No	
TOTAL NUMBER OF ALARM THRESHOLDS	4 (Day/Night)	
RELAY OUTPUTS	7	
ON-BOARD MEMORY (MAX. EVENTS)	20,000	
FLOW SENSING PER INLET	Yes	
IP RATING	IP40	
AUTOLEARN™ (SMOKE/FLOW)	AutoLearn Smoke™	
	AutoLearn Flow™	
EN54-20 MAX. NO OF HOLES (CLASS A / B / C)	30 / 40 / 45	
BAR GRAPH/ INDICATOR LED	LEDs	
PROGRAMMING TOOLS	USB / Ethernet/ Wi-Fi connection to	
- ON-BOARD PROGRAMMING MODULE	PC using VSC/VSM4	
- HANDHELD PROGRAMMER		
- PC SOFTWARE (VSC, VSM)		
StaX EXPANDABILITY	PSU StaX	