VESDA-E VEA

The VESDA-E VEA series of detectors combine VESDA reliability and early warning smoke detection with pinpoint addressability and a variety of annunciation options that truly surpass traditional spot detectors.

They use patented air sampling points and multichannel microbore air-sampling with three alarm sensitivity settings for the sampling points. As a multi-channel, addressable system, the VEA detector is able to divide a protected space into sampling locations, enabling the localization of potential sources of fire for faster incident response. The detectors are suitable for protection of areas where pinpoint location of fire events is essential, thus providing ideal fire detection solutions for healthcare, offices, education, retail, prisons and electrical cabinets. A wide range of features provide flexibility, field programmability, enhanced connectivity and reduced total cost of ownership.

INSTALLATION, COMMISSIONING AND MAINTENANCE

The VEA detector features a robust IP40-rated enclosure and is equipped with a powerful pump that provides up to 100 m (330 ft) microbore tube length. It is fully supported by the Xtralis VSC software which facilitates ease of system commissioning and maintenance. During commissioning, the normalization process establishes the flow performance parameters. Local smoke test ports are used during servicing to verify that the system is fully operational. Field replaceable filter, smoke sensor module, pump and rotary valve components result in less down time and ease of maintenance.

COLOUR LCD DISPLAY

The VEA-040-A10 detector features a 3.5" colour LCD display which provides a range of status information including alarm and fault conditions as well as smoke level. Screens for each type of information are available using a simple navigation system.

VESDAnet™

VESDA detectors and 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.

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FEATURES AND BENEFITS

- Pinpoint addressability
- Local host-mode USB port
- Easy cable termination access
- 40 addressable microbore tubes with individual sampling points
- Assured detection with end to end system integrity monitoring
- WiFi, 802.11 b/g/n

- Automatic sampling point cleaning at set intervals
- Three sensitivity settings for the sampling points
- Variable length capillary tubes, up to 100 m (330 ft)
- Laser-based absolute smoke detection
- Coarse particle filtering and clean air barrier for optics protection

- 3.5" colour touch screen for status review
- Two GPIs, monitored and unmonitored
- Xtralis VSC and VSM4 PC software support
- iVESDA application for system monitoring on mobile devices
- Interruption-free business operation with centralised testing and maintenance

- IP 40 enclosure (not UL tested)
- Easy mounting with steel support bracket
- Field replaceable filter, smoke sensor module, pump and rotary valve
- VESDAnet networking
- Ethernet 100BASE-T
- Single sampling point or single tube blockage detection at set intervals

- Event Log (20.000 events)
- Reliable linear pump technology
- LEDs for alarm and fault signalling
- Automatic sampling point presence and tube breakage detection at set intervals
- Seven programmable relays

HOW IT WORKS

The VEA detector draws a combined air sample from a network of microbore flexible tubing from all sampling points in the protected area, then filters and analyzes the sample in laser detection chambers in the smoke sensor module. When smoke particles are detected and the smoke level reaches set alarm thresholds, the system will raise appropriate alarm conditions. After a Fire 1 alarm is raised, the system will sequentially scan the sampling locations via the rotary valve to identify one or more sampling locations with the fire alarm event. To assist in investigation of the source of a fire, if the system is in Pre-Alarm, the user can initiate a smoke scan of all sampling locations.

The VEA uses a vacuum pump which provides superior detection times for long tube lengths. The system monitors the airflow within the installation, allowing detection of breakages or blockages of individual sampling points and sampling tubes, with faults indicated on the display and to the monitoring equipment.

Alarms and fire location can be signaled via Relays and VESDAnet. Ethernet and WiFi can be used for configuration and secondary monitoring, and a USB interface is provided for field installation and maintenance. The optional Relay StaX module can be used to identify and signal fire source locations on a fire panel loop.

A series of LEDs display Alarm, Trouble, Disable and detector power on status. A button allows the user to Reset or Disable the detector. Additionally, the VEA-A10 features a 3.5" LCD display which shows detector status.

Expansion to 60, 80, 100 or 120 sampling points can be achieved by installing additional Expansion StaX modules.

VESDA-E VEA Technical Specification

SPECIFICATIONS

Supply Voltage	18-30 VDC	
Power Consumption @ 24vdc	VEA-040-A00	VEA-040-A10
Quiescent	27 W	27 W
Alarm Average	27 W	27 W
Peak Current (Scan Mode)	3.5A	
Aspirator	Linear Vacuum Pump	
Dimensions (Whd)	352 mm x 336 mm x 135.5 mm (13.9 in x 13.2 in x 5.33 in)	
Weight	9.9 kg (21.8 lbs)	10 kg (22.2 lbs)
Operating Conditions	Ambient: 0°C to 39°C (32°F to 102°F) Sampled Air: 0°C to 50°C (32°F to 122°F) Tested to: • EN 54-20: -10°C to +55°C (+14°F to +131°F)* • UL: 0°C to +49°C (+32°F to +120°F) Humidity: 10% to 95% RH, non-condensing	
Microbore Tube Size	Normal Diameter: OD 6 mm, ID 4 mm Reduced Diameter: OD 4 mm, ID 2.5 mm	
Microbore Tube Length	Normal Diameter: Up to 100m (328 ft) per tube Reduced Diameter: Up to 15 m (49ft) per tube	
Flow Monitoring	Single sampling point and single tube blockage and breakage detection at set intervals	
Relays	7 programmable relays (latch or non-latch states) Contacts rated 2 A @ 30 VDC (Resistive)	
IP Rating	IP40	
Cable Access	4 x 25 mm (1") cable entries	
Cable Termination	Screw Terminal blocks 0.2–2.5 sq mm (24 - 14 AWG)	
Pre-Alarms	Alert and Action - two pre alarm levels	
Fire-1 Alarm Thresholds at The Sampling Hole	High: 1.6 %/m (0.5 %/ft) Enhanced: 4.0 %/m (1.3 %/ft) Standard: 8.0 %/m (2.5 %/ft)	
Communication Interfaces	USB 2.0, Ethernet (RJ45), WiFi (802.11 b/g/n)	
Software Features	Event log: Up to 20,000 events. Smoke level, user actions, alarms and faults with time and date stamp	

* Product UL Listed between 0°C to 49°C (32°F to 102°F).

PART NUMBERS

DESCRIPTION	ORDER CODE
VESDA-E VEA-40 Aspirating Smoke Detector with LEDs	VEA-040-A00
VESDA-E VEA-40 Aspirating Smoke Detector with 3.5" Display	VEA-040-A10
VESDA-E VEA 40-Relay Local StaX	VER-A40-40-STX

SPARE PARTS	
VESDA-E VEA-40 Mounting Bracket	VSP-970
VESDA-E VEA-40 Smoke Sensor Module	VSP-971
VESDA-E VEA Filter	VSP-972
VESDA-E VEA Pump	VSP-973
VESDA-E VEA Rotary Valve	VSP-974
VESDA-E VEA-040-A00 Fascia with LEDs	VSP-975
VESDA-E VEA-040-A10 Fascia with 3.5" Display	VSP-976

Refer to VEA Sampling Points data sheet (document # 29730) for more information regarding the sampling points.

LISTINGS / APPROVALS **

UL
ULC
EN 54-20, ISO 7240-20: Class A, B and C
Other major agency approvals pending

These Listings/Approvals are owned by Xtralis, a Honeywell company. They are for the products covered in this document.

APPROVAL COMPLIANCE

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

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

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