VESDA-E VEA-GW-UL

Gamewell-FCI Intelligent VESDA-E VEA SLC Detectors

For UL 268 7th Edition Applications

GENERAL

The Gamewell-FCI Intelligent VESDA-E VEA detectors, VEA-040-A00-GW-UL and VEA-040-A10-GW-UL, provide point-addressable early warning smoke detection with pinpoint addressability. These detectors use microbore air-sampling tubes and patented air sampling points with three alarm sensitivity settings for the sampling points. Intelligent VEA supports 40 sampling points on a single central detector. With a wide range of features the Intelligent VEA provides flexibility, field programmability, enhanced connectivity and reduced Total Cost of Ownership (TOC).

The Intelligent VEA detector features a robust IP40-rated enclosure and is equipped with a powerful pump that provides individual microbore tube lengths up to 328 ft (100 m). It is fully supported by the Xtralis VSC/VSM4 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.



Intelligent VESDA-E VEA-040-A10-GW-UL

The UL 268 7th Edition introduces a new level of performance for smoke detectors aiming to improve the life safety of the building occupants and reduce nuisance alarms.

Two models are available, 40-point VEA with LED only (VEA-040-A00-GW-UL) or LED and LCD display (VEA-040-A10-GW-UL). They provide standard detection coverage to protect up to 36,000 sq. ft. (3,345 sq. m) subject to system design and local regulatory requirements.

The LCD display 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.

These detectors are compatibly listed for use with the E3 and S3 Fire Alarm Control Panels (FACPs) and operate in Velociti mode only.

FEATURES AND BENEFITS

- Pinpoint addressability with end-to-end system integrity monitoring.
- 40 addressable microbore tubes with individual sampling points.
- Interruption-free business operation with centralized testing and maintenance.
- Single sampling point or single tube blockage detection at set intervals.
- Automatic tube breakage and sampling point presence detection and sampling point cleaning at set intervals.
- Detector configurations: Open Area, Special Application
- Three sensitivity settings for the sampling points.
- Variable length microbore tubes, up to 328 ft (100 m).
- Laser-based absolute smoke detection.
- Coarse particle filtering and clean air barrier for optics protection.
- Reliable linear pump technology.
- LEDs for alarm and fault signaling.
- 3.5" color touchscreen for status review.
- Seven programmable relays.
- Two GPIs (monitored/unmonitored).
- Xtralis VSC and VSM4 PC software support.
- Easy mounting with steel support bracket.
- Field replaceable filter, smoke sensor module, pump and rotary valve.
- VESDAnet networking
- Ethernet 100BASE-T.
- Local host-mode USB port.
- Easy cable termination access.
- Event Log (20,000 events).

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HOW IT WORKS

The VEA detector draws a combined air sample from a network of up to 40 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 Alarm (Fire 1) 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 vacuum pump 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 FACP. Alarms and fire location are signaled to the fire panel via the Signaling Line Circuit (SLC) loop. Ethernet can be used for configuration and secondary monitoring, and a USB interface is provided for field installation and maintenance.

An Intelligent VESDA-E VEA Series detector connects to the SLC loop of compatible intelligent FACPs using Velociti protocol to communicate up to five levels of events for display and use in control-by-event system programming. It also provides individual sampling point events directly on the FACP. Using the SLC connection, the system operator can also review real-time status information, such as alarms and faults. The system operator can also put an Intelligent VEA Series detector into service mode, or reset airflow baselines.

CONNECTIVITY AND CONFIGURATION

VESDA-E detectors offer connectivity to corporate networks via Ethernet, allowing for devices installed with Xtralis monitoring and configuration software (VSC/ VSM4) to connect to the detector. VSC is used for configuration and VSM4 is used for both configuration and monitoring.

VELOCITI CAPABILITIES

- VEA-040-A00-GW-UL and VEA-040-A10-GW-UL connect to the SLC loop of the E3 and S3.
- Uses 41 detector SLC addresses. Sensitivity setting for all event thresholds are programmed with the VSC or VSM4 applications.
- Detector trouble reporting at panel.

E3 AND S3 CAPABILITIES

- Displays the real-time read status of percent of alarm.
- Put Intelligent VESDA-E VEA Series detectors into Service Mode, shutting the device down for maintenance.
- Reset airflow baselines for an Intelligent VESDA-E VEA Series detector.

AGENCY LISTINGS AND APPROVALS

The listings and approvals below apply to Intelligent VESDA-E VEA components. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

UL 268 7th Edition

ULC

CSFM

FM

FDA

FCC

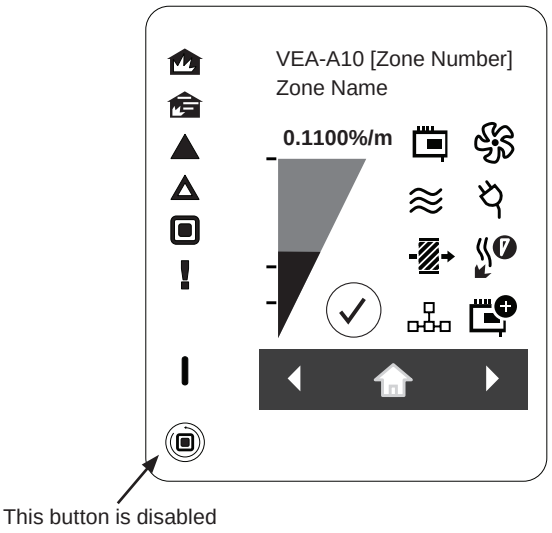
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PRODUCT LINE INFORMATION

VEA-A40-A00-GW-UL: Intelligent aspiration with LED display, 40 point-addressable detection points, UL. Covers 36,000 square feet, Velociti.

VEA-A40-A10-GW-UL: Intelligent aspiration with LED and LCD display, 40 point-addressable detection points, UL. Covers 36,000 square feet, Velociti.

USER INTERFACE DISPLAY



Symbol	LED
	Fire 2
	Fire 1
	Action
	Alert
	Disabled
	Fault
	Power
	Smoke and Alarm Threshold Levels
	Detector OK
	Detector Fault
	Aspirator Fault
	Airflow Fault
	Power Fault
	Filter Fault
	Smoke Chamber Fault
	Communication Fault
	StaX Module Fault

VESDA-E VEA-GW-UL TECHNICAL SPECIFICATIONS

The following specifications apply to all Intelligent VESDA-E VEA Series Detectors:

Supply Voltage Range	18-30 VDC (24 V Nominal)	
	VEA-040-A00-GW-UL	**VEA-040-A10-GW-UL**
Current Consumption @ 24VDC		
- Normal Operation	1.0A	1.6 A
- In Alarm	1.0A	1.6 A
Peak current (scan mode)	3.5A	3.5A
SLC Current Consumption		
- Normal Operation	0.008A	0.008A
- In Alarm	0.03A	0.03A
Aspirator	Linear Vacuum Pump	
Dimensions (WxHxD)	13.9 in x 13.2 in x 5.33 in (352 mm x 336 mm x 135.5 mm)	
Weight	21.8 lbs (9.9 kg)	22.2 lbs (10 kg)
Operating Conditions	Ambient: 32°F to 100°F (0°C to 38°C) Sampled Air: 32°F to 122°F (0°C to 50°C) [1] Humidity: 5% to 95% RH, non-condensing	
Microbore Tube Size	Normal Diameter: OD 0.24 in (6 mm), ID 0.16 in (4 mm) Reduced Diameter: OD 0.16 in (4 mm), ID 0.098 in (2.5 mm)	
Microbore Tube Length	Normal Diameter: Up to 328 ft (100 m) per tube Open Area Application: 164 ft (50 m) (Sensitivity: Standard) Special Application: 98.4 ft - 328 ft (30 m - 100 m) (Sensitivity: Enhanced and High)	
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 Point	High: 0.5 % obs/ft (1.6 % obs/m) Enhanced: 1.23 % obs/ft (4.0 % obs/m) Standard: 2.5 % obs/ft (8.0 % obs/m)	
Communication Interfaces	USB 2.0, Ethernet (RJ45)	
Software Features	Event log: Up to 20,000 events. Smoke level, user actions, alarms and faults with time and date stamp.	

[1] Sampled air temperature shall reach detector ambient temperature upon entry into detector. Refer to Xtralis Design Guides and Application Notes for sampled air preconditioning.

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This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.

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