# VESDA-E VEU-GW-VN

## Gamewell-FCI Intelligent VESDA-E VEU SLC with VESDAnet Detectors

## For UL 268 7th Edition Applications

### GENERAL

The Gamewell-FCI Intelligent VESDA-E VEU SLC with VESDAnet detectors, VEU-A00-GW-VN and VEU-A10-GW-VN (referred to as 2nd Generation detectors) have an integrated Signaling Line Circuit (SLC) module to communicate with Gamewell-FCI Fire Alarm Control Panels (FACP) directly over the SLC loop. The 2nd Generation detectors are variants of the conventional VESDAE VEU detectors with built-in SLC interface module.




The SLC connectivity and SLC address occupancy on the 2nd Generation detectors is backward compatible with the 1st Generation detectors which are the VEU-A00-GW and VEU-A10-GW. The 2nd Generation detectors have new features which are mainly VESDAnet communication and UL 268 7th Edition compliance, hence the addition of the "-VN" suffix to the model number, where the "VN" stands for VESDAnet communication.

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.

### FLAIR DETECTION TECHNOLOGY

Flair is the revolutionary new detection chamber that forms the core of the Intelligent VESDA-E VEU Series, providing better detection, fewer nuisance alarms, higher stability, increased longevity and particle characterization. Direct imaging of the sampled particles using a CMOS imager combined with multiple photo-diodes allow vastly more data about the observed particles. The Intelligent VESDA-E VEU Series features a robust IP40-rated enclosure and is equipped with a powerful aspirator that provides a total pipe length of 2,001 ft (610 m).

Two models are available, a VEU-A00-GW-VN Intelligent aspiration smoke detector with LEDs and a VEU-A10-GW-VN Intelligent aspiration smoke detector with a LED and LCD display. They provide standard detection coverage to protect up to 69,965 sq.ft (6,500 sq.m) subject to system design and local regulatory requirements.

These detectors are compatibly listed for use with the E3 and S3 Series FACPs. They operate in Velociti® mode only.

An Intelligent VESDA-E VEU 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. 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 VEU Series detector into service mode, or reset airflow baselines.

Intelligent VEU Series detectors support multiple sensitivity modes with four alarm levels. Day/Night/Weekend mode enables technicians to configure alarm thresholds based on routine changes in the environment.

## FEATURES AND BENEFITS

- Flair detection technology delivers reliable very early warning in a wide range of environments with minimal nuisance alarms.
- Multi stage filtration and optical protection with clean air barriers ensure lifetime detection performance.
- Four alarm levels and an ultra-wide sensitivity range deliver optimum protection for the widest range of applications.
- Intuitive LCD icon display provides instant status information.
- Flow fault thresholds accommodate varying airflow conditions.
- Smart on-board filter retains dust count and remaining filter life for predictable maintenance.
- Extensive event log (20,000 events) for event analysis and system diagnostics.
- AutoLearn™ smoke for reliable and rapid commissioning.
- Referencing to accommodate external environmental conditions to minimize nuisance alarms.
- Backward compatible with VLP.
- Ethernet for connectivity with Xtralis software for configuration, secondary monitoring and maintenance.
- USB for PC configuration, and firmware upgrade using a memory stick.
- Field replaceable sub-assemblies enable faster service and maximum uptime.
- Providing both SLC and VESDAnet connectivity.
- Supporting three modes of operation (SLC mode, VESDA-E Conventional Mode and VESDA-E Mimic Mode).

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## CONNECTIVITY AND CONFIGURATION

VESDA-E detectors offer connectivity to corporate networks via Ethernet, allowing for devices installed with Xtralis monitoring and configuration software to connect to the detector.

## MODES OF OPERATION

**1. VESDA-E SLC Mode:**

Under this mode, the 2nd Generation detector uses SLC communication for primary reporting. Furthermore, VESDAnet is available for centralized configuration and monitoring. The configuration and command parameters under FACP control are not available on Xtralis VSC.

**2. VESDA-E Conventional Mode:**

Under this mode, the 2nd Generation detector behaves the same as the conventional VEU detector. The primary reporting is done through relays and monitor modules. The SLC communication is disabled which means that all the controls from the SLC interface are revoked.

**3. VESDA-E Mimic Mode:**

Under this mode, the 2nd Generation detector behaves the same as a conventional VLP detector. The primary reporting is done through relays and monitor modules. The SLC communication is disabled which means that all the controls from the SLC interface are revoked. This mode is provided for legacy VESDA-L replacement (VLP / VLC / VLS).

## VELOCITI CAPABILITIES

- The Intelligent VESDA-E VEU Series connects to the SLC loop of E3 and S3 panels.
- Uses one detector SLC address. Sensitivity for all event thresholds are programmed with the VSC or VSM applications.
- Detector trouble reporting at panel.
- Supports setting one device as an Aspiration Reference for other Intelligent VESDA-E VEP or VEU Series detectors on the same SLC loop.

## E3 AND S3 CAPABILITES

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

# AGENCY LISTINGS AND APPROVALS

The listings and approvals below apply to Intelligent VESDA-E VEU detectors. 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/ULC Listed:** S5198 vol 25

**CSFM:** 7259-1637:0513

**FM**

# STANDARDS AND CODES

These listings and approvals below apply to the VESDA-E VEU. 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**

**UL 268A 4th Edition**

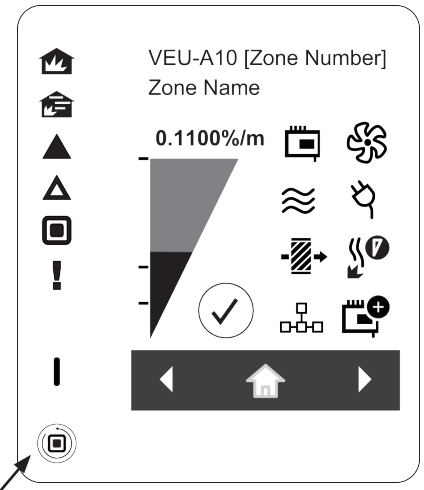
**ULC-S529 4th Edition**

# PRODUCT LINE INFORMATION

**VEU-A00-GW-VN:** Intelligent aspiration smoke detector with LED display, 4 pipes, covers up to 69,965 sq.ft. Velociti mode.

**VEU-A10-GW-VN:** Intelligent aspiration smoke detector with LED and LCD display, 4 pipes, covers up to 69,965 sq.ft. Velociti mode.

# USER INTERFACE DISPLAY




Acknowledge to stop the buzzer.

| 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 VEU-GW-VN TECHNICAL SPECIFICATIONS

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Supply Voltage Range | 18-30 VDC (24 V Nominal) | | | | | |
| | **VEU-A00-P-GW-VN** | | | **VEU-A10-P-GW-VN** | | |
| Maximum Power Consumption[1] | | | | | | |
| – Quiescent: | 0.84 A | | | 0.84 A | | |
| – In Alarm: | 0.88 A | | | 0.88 A | | |
| Nominal Power Consumption @ 24 VDC: | | | | | | |
| – Aspirator Setting | **1** | **5** | **10** | **1** | **5** | **10** |
| – Power (Quiescent) | 0.29 A | 0.38 A | 0.61 A | 0.32 A | 0.41 A | 0.64 A |
| – Power (In Alarm) | 0.32 A | 0.41 A | 0.64 A | 0.35 A | 0.44 A | 0.67 A |
| SLC Current Consumption | 0.005 A | | | | | |
| Dimensions (WxHxD) | 13.8 in x 8.9 in x 5.3 in (350 mm x 225 mm x 135 mm) | | | | | |
| Weight | 12.01 lbs (5.45kg) | | | 12.01 lbs (5.45kg) | | |
| Operating Conditions[2] | Ambient: 32°F to 100°F (0°C to 38°C)<br>Sampled Air: -4°F to 140°F (-20°C to 60°C)[3]<br>Humidity: 5% to 95% RH, non-condensing | | | | | |
| Storage Conditions (Non-operational) | Humidity: Dry (<95%)<br>Temperature: 0° to 85°C<br>Must not be exposed to sunlight or other radiation sources | | | | | |
| Relays | 7 programmable relays<br>Contacts rated 2 A @ 30 VDC (Resistive) | | | | | |
| GPIs | Unmonitored GPI: In the SLC mode of operation, the Unmonitored GPI is pre-configured to the Remote Reset function<br>Monitored GPI: In the SLC mode of operation, the Monitored GPI is pre-configured for the Mains OK Signal<br>In the other modes of operation, the GPIs are programmable | | | | | |
| Connection to the Fire Alarm Control Panel | Direct connection to the SLC loop through recommended wiring | | | | | |
| Cable termination | Screw terminal blocks (0.2-2.5 sq mm, 24-14 AWG)<br>SLC connection from IFC card terminal block (0.2-2.5 sq mm, 24-14 AWG) | | | | | |
| Measurement Range | 0.0000% to 11.09% obs/ft (0.000 to 32% obs/m) | | | | | |
| Sensitivity Range | 0.0003 to 6.575% obs/ft (0.001 to 20% obs/m) | | | | | |

[1] Maximum current measured is from the supply voltage that generates the highest current.

[2] Please consult your Gamewell-FCI representative for information on operation outside these parameters or where sampled air is continually above 0.015% obs/ft (0.05% obs/m) under normal operating conditions.

[3] 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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