

Features

Provides communications between Simplex fire alarm control units (FACUs) and VESDA air aspiration smoke detection systems.

Allows mission critical/high value applications to be advised of very low level smoke activity, facilitating early response.

VESDA system communications include:

- Smoke obscuration threshold levels
- Sample pipe network airflow status
- Detector head status
- Sensitivity settings

Fire detection unit features include:

- You can program unit operation to recognize and categorize up to three smoke levels
- You can gather information from up to 30 VESDA smoke detectors on one communications input
- Can perform Reset, Enable, and Disable of each individual VESDA smoke detector
- UL listed to Standard 864

Compatible with:

- Simplex 4100ES, 4010ES, 4100U, and 4100/4100+ fire alarm control units
- VESDA-E series models - VEU, VEP, and VES
- VESDA models LaserPLUS (VLP), LaserSCANNER (VLS), LaserCOMPACT (VLC), and LaserFOCUS (VLF), Laser Industrial (VLI) air aspiration smoke detection systems
- 4100/4100+ units require software version 8 or higher

Introduction

Simplex/VESDA High Level Interface (HLI)

Allows Simplex addressable fire detection units to gather and process status information from VESDA high sensitivity air aspiration smoke detection systems. Hardware requirements include an Intelligent Interface Module installed in the fire alarm control unit, and an HLI Module and associated VESDA equipment installed in a separate enclosure.

Early warning

The combination of VESDA smoke detection and the extensive features of the Simplex addressable unit allows mission critical and high value facilities to be equipped with a low level smoke detection system that can provide very early warning of the presence of incipient fire conditions.

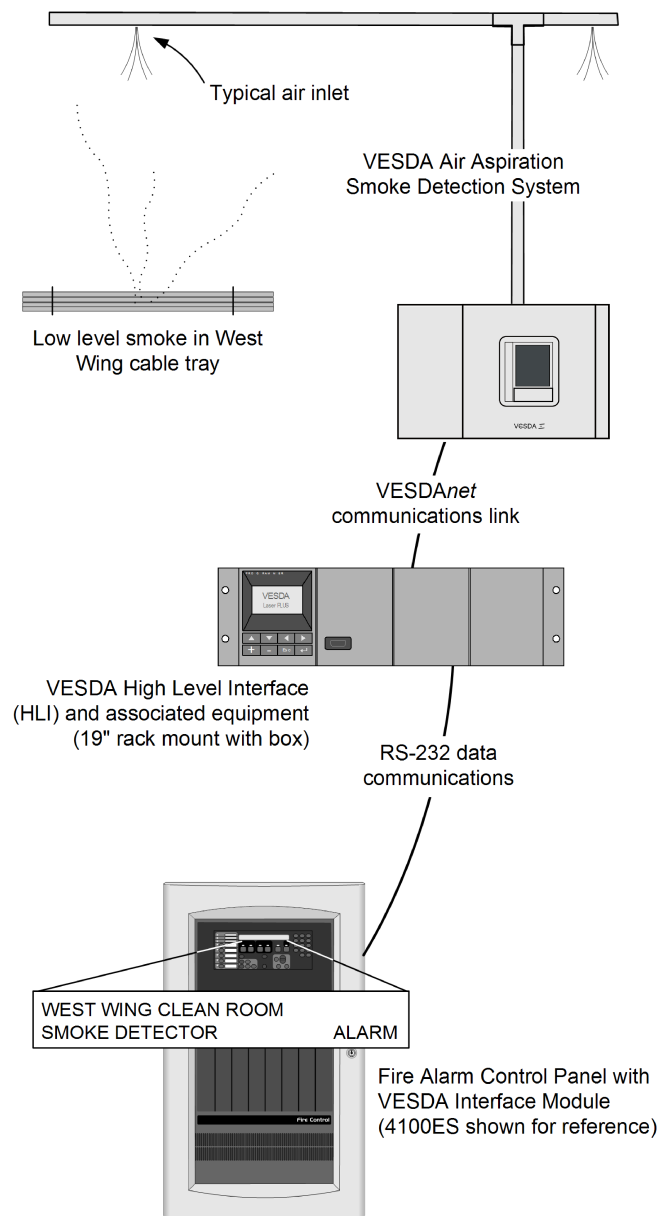


Figure 1: Simplex control unit communicates with VESDA smoke detection equipment through HLI

* The High Level Interface has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7300-0026:237 for allowable values and/or conditions concerning material presented in this document. MEA (NYC) acceptance is not applicable for this product type. This product was not FM approved as of document revision date. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of SimplexGrinnell LP, Westminster.

Operation

With the Simplex/VESDA HLI communications link, individual VESDA smoke detectors connect to the FACU as remote addressable devices. This connection provides remote monitoring of the detector's locally displayed information and allows the unit to provide remote control for Reset, Enable, and Disable of the VESDA smoke detector.

VESDA interface applications

Mission critical/high value. All facilities containing people and material need to be adequately protected from smoke and fire. However, some facilities have missions that are extremely critical, as well as contents of inherently high value, and may benefit from integrating very early smoke detection into their facility fire detection unit.

Mission critical. Typical examples of mission critical facility applications would be telephone switching stations, semiconductor clean rooms, computer rooms, and research laboratories. With such facilities, loss of operation can result in significant economic impact.

High value. Other types of facilities such as libraries, archives, and museums may not be burdened by short periods of downtime, but their high value contents are priceless, irreplaceable objects that deserve extra protection.

At the earliest indication of a potential fire condition, these facilities need the ability to dispatch trained personnel to investigate and repair wiring problems or equipment malfunction. In some instances, saving a few seconds in response time may avoid extensive downtime or avoid smoke damage to delicate equipment or a priceless work of art.

HLI interconnection information

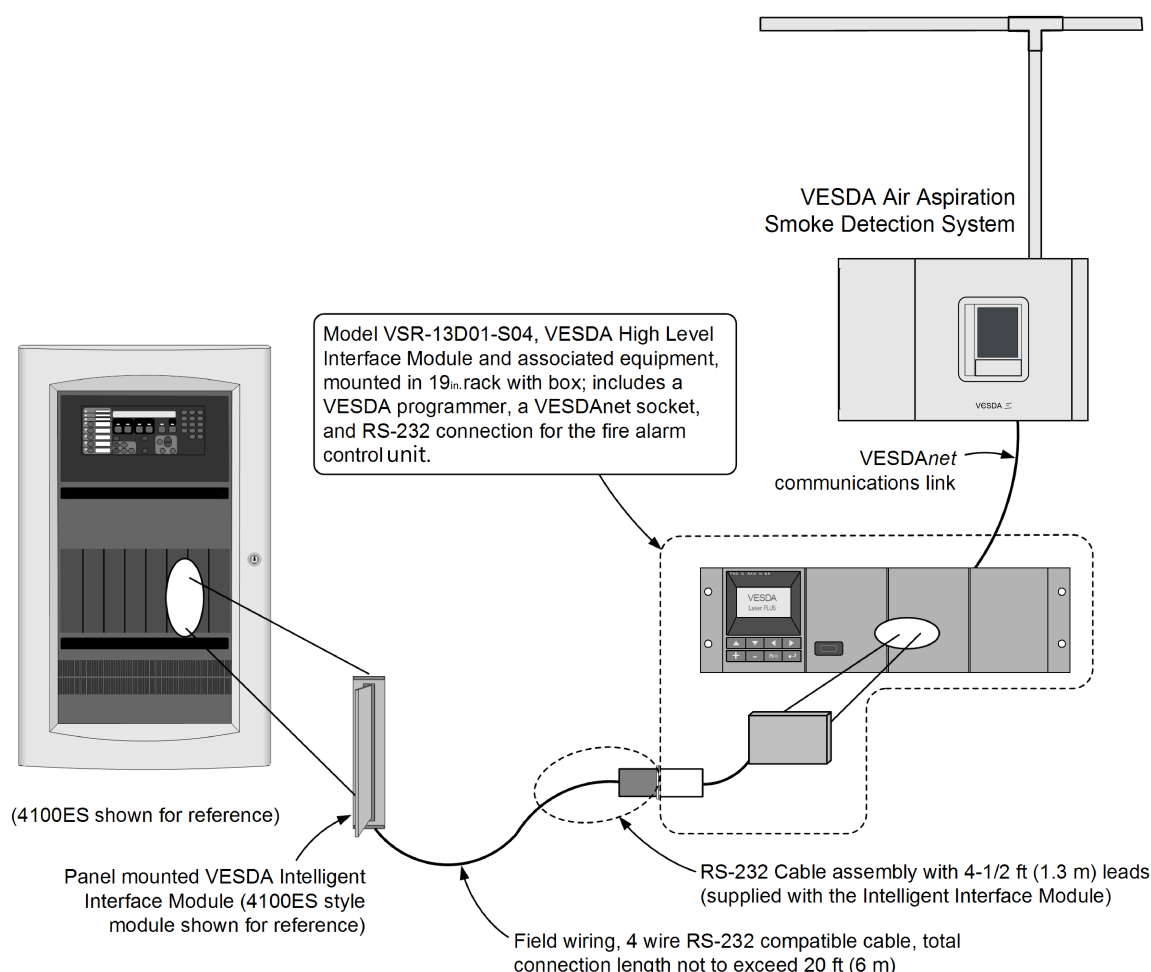


Figure 2: HLI interconnection information

VESDA smoke detection summary

The VESDA air aspiration family of smoke detectors uses sophisticated combinations of air intake, air filtering, high intensity laser photoelectric sensing, and unique microprocessor applications to provide extremely early warning of incipient fire conditions. By linking the analog output of a VESDA smoke detection system to a compatible Simplex fire detection unit, it is possible to identify those conditions well before they become a problem. A complete description of the extensive features available with VESDA systems is beyond the scope of this document. Refer to the specific VESDA product literature for further details.

Product selection and reference

Table 1: FACU reference

FACU model Series	SKU number	Description
4100ES and 4100U	4100-6048	Intelligent Interface Module, mounted in FACU Note: Each Intelligent Interface Module reduces the addressable communications channel capacity by one, for IDNet or MAPNET II communications
4010ES	4010-9901	
4100	4100-0154	

Table 2: Xtralis VESDA smoke detector equipment reference

Model	Description
VSR-13D01-S04	Includes VESDA High Level Interface board, a VESDA programmer, and a VESDAnet socket, all mounted in a 19 in. equipment rack within a mounting box
Additional VESDA equipment reference	Order processing note: To order additional Xtralis products in Job Design, AOP query, use OPVIS or select vendor Xtralis. Refer to documentation supplied with the specific VESDA Smoke Detector Equipment for additional specifications and information. VESDA smoke detection systems are supplied by Xtralis: www.xtralis.com/VESDA

Specifications

Table 3: Simplex control unit mounted intelligent interface module

Specification	Rating
Voltage	18 VDC to 32 VDC, from control unit
Current	132 mA
Communications	RS-232, 9600 baud, maximum distance is 20 ft (6 m)
Space requirement	Pluggable module, requires 2 in. internal rack width (51 mm)
UL listed temperature range	32°F to 120°F 0°C to 49°C
Humidity range	Up to 95% RH, non-condensing

Table 4: High Level Interface Module VSR-13D01-S04, mounted in VESDA sub rack

Specification	Rating
Voltage	20.4 VDC to 32 VDC, from the VESDA smoke detector equipment
Current	70 mA

Table 5: Installation instruction reference

FACU model series	Document number
4100ES/4100U/4100 series, models 4100-6048 and 4100-0154	574-050
4010ES series, model 4010-9901	579-963

