

OneU® Active Extinguishing System

Overview

The OneU active extinguishing system is a compact and independent unit uniquely designed to detect and extinguish fires in modular and edge data centers.

With its height of only 1U (1.75") and width equal to a 19" rack, the OneU provides complete fire protection against shorts, overloads, overheating, and component failures without robbing valuable space from IT components and equipment.

A single OneU system can protect an individual enclosed server cabinet or an entire space housing multiple server cabinets when integrated with notification appliances and Viking Integrated Safety (VIS) extinguishing agent appropriately sized for the volume of space requiring protection.

OneU Features

- Sensitive aspirating smoke detection system with two independently monitored sensors
- Alarm and fault outputs for interface with external monitoring systems and control functions, such as external power shutdowns
- Releasing control panel with user friendly LCD display status LEDs and operating keys provides users with detailed information and control of the system
- Monitored inputs and outputs to drive external audible/visual notification appliances, release stations, extinguishment and agent level indicators
- Internal battery-buffered emergency power supply



Width 19" (483 mm) / Height 1.73" (44 mm) / 1U

OneU Operation

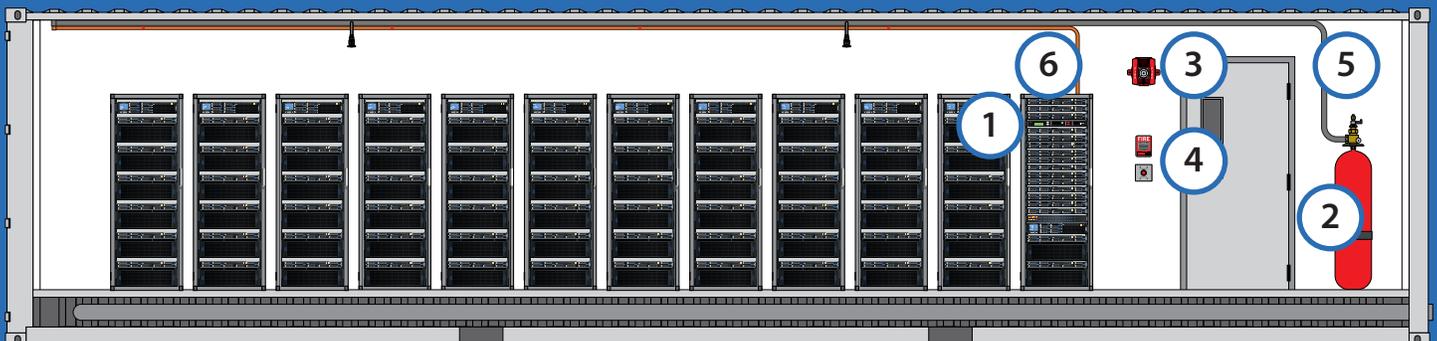
The OneU smoke aspirating system features two permanently monitored fire detectors that continuously take air samples from within the data center. When the OneU detects smoke it operates in two states:

1. When incipient fire conditions are present the first smoke detector raises a pre-alarm. Power circuits can be switched off simultaneously with this alarm threshold, isolating supporting electrical energy.
2. As the fire condition develops, when sufficient smoke is present, the second smoke detector raises a fire alarm, the extinguishing system is activated, and Viking VSH-1230 (Novec™ 1230) Fire Protection Fluid vaporizes at the nozzle and is distributed throughout the protected enclosure to rapidly extinguish the fire without leaving any agent residue.

VSH-1230 is a highly effective clean agent fire suppressant with low toxicity; atmospheric lifetime of five days; zero ozone depletion; and significantly lower global warming potential than other agents.

Modular / Edge Data Center Configuration

1. OneU System
2. Viking VSH-1230 extinguishment cylinder appropriately sized and filled with agent for volume of protected space
3. Horn and Strobe Combination
4. Pull Station, Abort, and Maintenance Lockout Station
5. Clean Agent Suppression System Pipe & Nozzles
6. Aspirating Smoke Detection Pipe Network



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Case Study: OneU Protects TAS Energy's Edge Data Centers

TAS is an industry leading off-site construction manufacturer that provides design, fabrication,



construction, manufacturing, installation, controls, and maintenance of specialized structures in a wide ranges of industries including data centers, telecommunications, health- care, government, education, power generation, manufacturing, and more.

TAS recently introduced an innovative Edge Data Center solution, recognizing the increasing need for computing to be closer to the edge, driven by applications like AI, machine learning, 5G, and much more. The TAS solution provides many impressive features, including:

- Redundant power N+1
- Configurable from 5–17 rack module
- Pre-configured and pre-wired
- Fluid management, filtration, & reclamation
- Optional power, rack, and cooling configurations to match environmental and cooling applications
- UL 2755 Rated, wind speed rating 150 MPH, Class C seismic
- Level 1-4 ballistic options available



TAS Partnered with Viking Integrated Safety for Reliable Fire Protection

Space is always at a premium in Edge and Modular Data Centers. The compact design of the OneU Active Extinguishing System ensured that all the features of a fire detection and extinguishment releasing system could be packed into a single 1U rack slot. The space saved by incorporating reliable fire protection into a rack allowed for additional computing resources in the same overall form factor.

Coupled with early warning aspirating smoke detection and Viking VSH-1230 as the extinguishing agent, the TAS solution has state-of-the art fire protection, complimenting its world-class features.

VIS Global Engineering Support Services Center

We assist consultants, architects, engineers, contractors and building owners with system design. Working with our local partners, we provide training processes, and support installation, commission, service, and maintenance operations. With our support, you're sure to find that pre-planning and good design achieve a successful and efficient project delivery. Contact us at DesignCenter@SupplyNet.com

Buying VIS Solutions

All VIS solutions are sold through Viking SupplyNet. Established in 1988, SupplyNet distributes the largest selection of integrated detection, alarm, and suppression systems to customers in over 70 countries. SupplyNet's state-of-the-art inventory system links all locations worldwide to ensure that every solution is available for timely delivery—to any job site, anywhere in the world. Find your local SupplyNet dealer at www.VikingGroupInc.com/locations

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