

OneU
Fire protection systems for 19" racks

*Cool down.
Fire Protection by*

mx BRANDBEVEILIGING

SMALL – BUT

Only 44 millimetres high

IT systems which once used to take up the whole area of a computer centre can now be combined into a single high-tech IT rack system. Cooling and power supply per rack, a compact and modular configuration and high availability are the features of these rack systems.

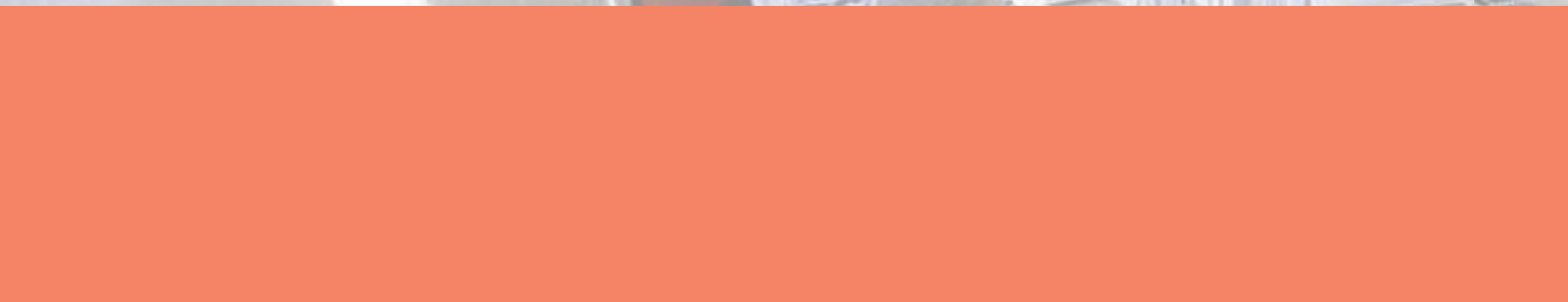
The OneU fire protection systems offer perfect fire protection, optimised for these IT areas. It stands out due to its fire detection and extinguishing per rack, its slimline 1 unit (1U) space advantages, its modular extensibility with slave systems and its high availability through redundant components, integrated battery buffering. All in all, it sets new standards for 19" extinguishing systems.

The OneU fire protection systems

They are designed for installation in closed 19" switch cabinet systems and present a small revolution in terms of space requirements and features.

They are unmatched in their compact form, which has been achieved without impairing function, quality or reliability. The slim installation height of 1U allows problem-free and space-saving installation. A power pack with integrated emergency power supply ensures interruption-free operation.

The OneU product family consists of the OneU active extinguishing system, OneU DD smoke aspiration system and the OneU ED extinguishing module. The devices provide highly effective fire protection in closed cabinets with electric and electronic appliances.



STRONG

The OneU product family

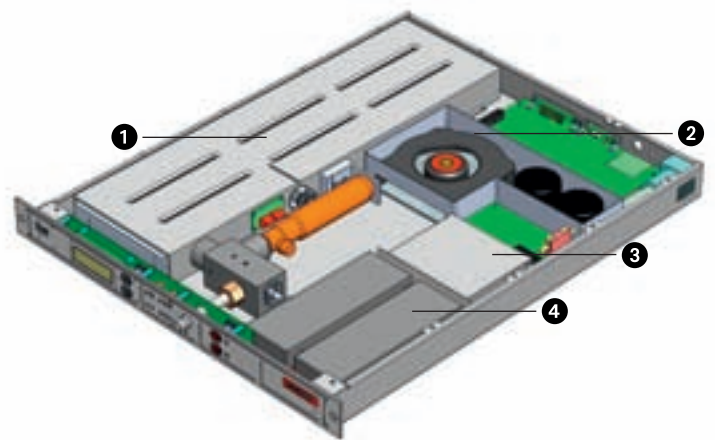
OneU active extinguishing system

The integrated smoke aspiration system continuously takes air samples from the entire switch cabinet that it is protecting through a sampling pipe with several openings, which is installed in the switch cabinet. The smoke aspiration system is usually equipped with high-sensitive and normal-sensitive smoke detectors. In this way, two different alarm thresholds are provided for the graduated combination of device shutdown and fire. The evaluation of measured values by an intelligent micro-controller enables OneU to detect fire with very low tolerance for error. Optionally, the OneU active extinguishing system may also be connected to an external manual fire alarm for manual activation.

The integrated extinguishing system consists mainly of a light metal container with the extinguishing agent Novec™ 1230, an release mechanism with valve and cartridge with propellant, loss monitoring for the extinguishing agent and the OneU discharge nozzle. During extinguishing, the cartridge with propellant is opened and the liquid agent flows to the OneU nozzle. The special geometry ensures that the agent is vaporised when exiting the nozzle and its full extinguishing effect is unfolded.

Uninterrupted operation of up to four hours is ensured using integrated battery buffering.

Interference of operation is notified by the extensive self-monitoring system of the OneU fire protection system. The two-line LCD display and additional LED lights for operation, alarm and failure inform the operator quickly about the operating status. There are dry contacts available for further notification of alarms and failures, e.g. central control technology or fire detection system installed in the building as well as device shutdown.



OneU active extinguishing system

- 1 Extinguishing agent container with release mechanism and discharge nozzle
- 2 Smoke aspiration system with two sensors
- 3 Power supply
- 4 Battery buffer

Up to five devices are cascable to be able to simultaneously control and protect inter-connected switch cabinets.

One unit contains

- ▶ A sensitive smoke aspiration system
- ▶ An extinguishing agent container with loss-monitoring and discharge nozzle
- ▶ A battery-buffered emergency power supply
- ▶ Evaluation and control electronics
- ▶ Connections for external alarm equipment and for switching off electrical circuits
- ▶ A clear, user-friendly control panel

Despite its compact design, the OneU active extinguishing system includes extinguishing agent for up to 3 m³ of protected volume. An innovative agent container and release mechanism design takes every advantage of the small dimensions and the extinguishing agent used (Novec™ 1230).

Flexibility of the OneU fire protection system

The OneU smoke aspiration system and OneU DD extinguishing module are available along with the OneU active extinguishing system. Varying operating conditions can be accommodated with flexibility.

OneU DD smoke aspiration system

Using the OneU DD smoke aspiration system, up to five switch cabinet systems can be monitored via a sampling pipe system. Up to four OneU ED extinguishing modules may be connected.

OneU ED extinguishing module

The OneU ED extinguishing module contains extinguishing agent for 3 m³ protected volume and it is prepared for connection to the OneU active extinguishing system or OneU DD smoke aspiration system. Four or five devices may be connected to and monitored by these superior units.



MANY

Function

The OneU active extinguishing system is a compact, independent unit for detecting and extinguishing fires in closed cabinet systems. A sensitive smoke aspiration system with two fire detectors permanently monitored for operational reliability continuously takes air samples from the whole volume in the cabinet. It detects fires as early as the start-up phase and then reacts in two stages:

- ▶ On a pre-alarm being given, simultaneously with the alarm signal power circuits can be switched off to cut off supporting energy to a starting fire.
- ▶ If the fire continues to develop, the fire alarm on the extinguishing system and if necessary the connected OneU DD extinguishing module, is activated. The Novec™ 1230 extinguishing agent vaporises at the nozzle and is distributed throughout the cabinet to produce an effective fire extinguishing effect. The fire is thus extinguished rapidly and without leaving any residue of extinguishing agent.

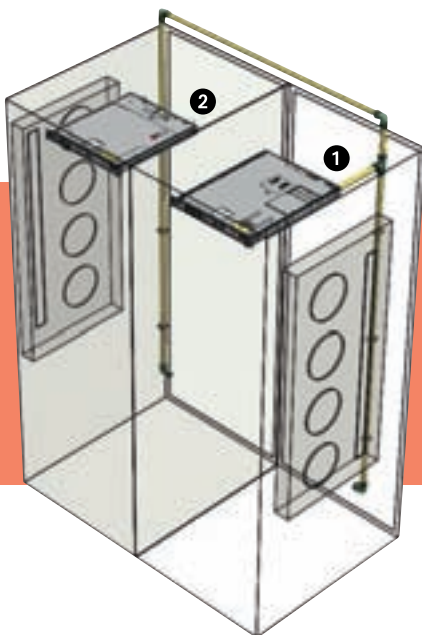
Alarm and fault statuses are shown on the display and if necessary routed to higher level systems. Optional acoustic and optical alarm installations can also be activated.

Areas of use

The OneU active extinguishing system should always be used where a high level of availability of technical installations is absolutely essential. Such installations include:

- ▶ **IT, server and network technology,** which ensures round-the-clock availability of essential company data
- ▶ **Production controls,** which control and monitor production processes
- ▶ **Telecommunications installations,** which ensure fault-free communication for the company
- ▶ **Power supply and control systems,** which ensure adequate power at the right time and in the right place in the company

Early fire detection combined with an automatic extinguishing system minimises potential downtime and damage resulting from a technical defect.



- 1 OneU active extinguishing system monitors another cabinet in which the connected OneU ED extinguishing module
- 2 is installed.

ADVANTAGES

Compact and flexible



Technical data			
	OneU active extinguishing system	OneU DD smoke aspiration system	OneU ED extinguishing module
Fitting dimensions (W x H x D) in mm incl. front plate	483 (≈ 19") x 44 (1 U) x 620	483 (≈ 19") x 44 (1 U) x 480	483 (≈ 19") x 44 (1 U) x 530
Weight	15 kg (including extinguishing agent and cartridge with propellant)	8 kg	17 kg (including extinguishing agent and cartridge with propellant)
Operating temperature	10–35 °C	10–35 °C	10–35 °C
Protection class	IP 20	IP 20	IP 20
Permitted protected volume	max. 3 m ³ (for tight cabinets)	–	max. 3 m ³ (for tight cabinets)
Number of connectable extinguishing modules	4	5	–
Number of controlled cabinets	max. 5	max. 5	–
Extinguishing agent	3.2 kg Novec™ 1230	–	2.9 kg Novec™ 1230
Sensors	2 different sensitive scattered light sensors for 2 alarm thresholds	2 different sensitive scattered light sensors for 2 alarm thresholds	–
Input manual actuation	Available	Available	–
Input extinguishing blocking	Door contacts	Door contacts	–
Outputs pre-alarm, fire, extinguish, collective fault max. contact load	24 V DC/0.5 A	24 V DC/0.5 A	–
Emergency power supply (accumulator)	2 x 12 V, 2.2 Ah approx. 4 hours	2 x 12 V, 2.2 Ah approx. 4 hours	–
Operating voltage	100/240 V AC, 50/60 Hz	100/240 V AC, 50/60 Hz	24 V DC

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