

VESDA Customer Success Story

Kamppi –The Helsinki Underground Bus Terminal

VESDA smoke detectors protect Europe's largest underground bus terminal – protecting thousands of commuters on a daily basis.



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— Mr. Jari Salminen
Siemens Building Technologie

The Challenge

The Kamppi Bus Terminal is located in the heart of Finland's capital Helsinki and opened in June 2005. It is a marvel in terms of scale, design and the traffic which it accomodates. The terminal cost 100 million Euro to complete and took 3 years to design and build. Today, the bus terminal, which covers 25,000 square meters, is the busiest bus terminal in Finland. Every day, the terminal has around 700 bus departures, transporting some 170,000 passengers. The Kamppi Bus Terminal needed a fire system to protect passengers, staff, property and the terminal itself.

A team from Siemens Building Technologies, led by Mr. Jari Salminen was in charge of the system design and installation. “Our goal was to adhere to the code of practice and at the same time invest the money spent on detection where it could do the most good, namely to identify fire at a very early stage” comments Mr. Jari Salminen. “We looked at a range of options and technologies to find a solution which will work perfectly under very difficult circumstances of the bus terminal.” Circumstances in the terminal may be very difficult at winter time thanks to cold Finnish winter and heavy winds carrying humid air from the sea.

Kamppi Bus Terminal

Europe's largest underground bus terminal with 100,000 daily commuters

Location:

Helsinki, Finland

<http://www.kampinkeskus.fi>

Industry:

Transport

Solutions:

VESDA by Xtralis VLP

VESDA[®]
by **xtralis**[™]

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The Solution

The team discovered that traditional fire systems would not be sensitive enough to detect smoke unless the fire was already very advanced, creating sufficient heat and smoke. Instead of using a traditional solution, the fire engineering team developed a system which takes advantage of natural air movement, recognising that smoke naturally travels away from people in the general terminal area and out through air ventilation systems in the building (Smoke Extraction System).

The solution is based on a combination of VESDA VLP aspirating smoke detectors and Siemens FibroLaser® linear heat detectors. The VESDA aspirating pipe network has been strategically placed in front of the smoke extraction system, constantly monitoring smoke levels through aspirating smoke detection, whilst the FibroLaser® technology is strategically placed to detect heat at up to 3 meters distance. Mr. Jari Salminen commented “The main reason for choosing VESDA is the reliability of product itself and its ability to give early warning which can save a lot of lives in emergency situations”.



The Results

The alarm levels in a VESDA Smoke Detection unit can be set at different levels and thus adhere to the original performance-based design guidelines and fire codes on an ongoing basis. The terminals' fire engineering management team maintains the system, oversees alterations to it, and monitors any change of smoke levels.

“The Kamppi Bus Terminal is the most prominent project in Finland to adopt this performance based design approach,” Alpo Mäkinen, Project Manager at Kamppi Terminal says. “Owing to the unique nature of the building, the VESDA smoke detection system is ideal for this application because it is easy to maintain and not susceptible to nuisance alarms”.

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