



VESDA®



Is your data safe from fire?

Well its time to take a closer look...

Two smoke detector technologies used in server rooms worldwide and compliant with international standards are put to the test. The results will surprise...



Detector 1: Air-sampling (aspirating) smoke detector



Detector 2: Spot (Point) detector

The fire tests demonstrated:

- the time it took for the fire to be detected and the impact it could have on the facility and business.
- how factors such as high airflow from air-conditioning and ventilation systems affect the normal dispersion of smoke.
- that detecting smoke originating from within equipment cabinets may take time and if not detected, could result in electronics corrosion and equipment failure.
- were based on CSIRO test methods and conducted in the presence of representatives from the fire brigade, fire engineers, consultants, insurers, contractors and installers.

The following results show the average and range of activation times of the smoke detectors for tests performed across eight sessions.

The Test Results

Summary of test results for general area fire room tests:

Test Location	Detector which responded first	VESDA detectors that responded	Average VESDA Alert times and ranges (s)			Point detector response
			Ceiling	Return Air	Duct	
Worse-case location	Ceiling (VLP)	All	93s (74 - 122)	117s (99 - 154)	159s (96 - 217)	No Detection
Normal-case location	Cabinet (VLF)	All	117s (63 - 128)	99s (79 - 138)	98s (78 - 138)	No Detection
In front of return air grille	Duct (VLC)	Duct	Not Available	Not enough to count	21s (17 - 24)	No Detection
Normal-case location, large scale smoke test	Cabinet (VLF)	All	55s (37 - 94s)	43s (36 - 60)	45s (30 - 61)	(in some tests*)

* Reported above pre-alarm level in 3 out of 8 tests
Missed 2 out of 8 tests

Summary of test results for in-cabinet fire tests:

Test Location	VESDA detectors that responded	Average VESDA Alert times and ranges (s)		Point detector response
		Ceiling	Return Air Duct	
Cabinet 1 - Ventilated bottom to top	Cabinet, Return	53s (47 - 64)	76s (64 - 92)	No Detection
Cabinet 2 - Fully sealed	Cabinet	26s (22 - 28)	Not Available	Not Available
Cabinet 3 - Ventilated front to back	Cabinet, Return [#]	26s (24 - 28)	37s [#] (28 - 47)	No Detection

Reliable and very early fire detection is a vital requirement in IT/server rooms, enabling early intervention and preventing excessive damage to electronic equipment, operational downtime and the release of costly suppression agents.

The fire test demonstrations in the Xtralis IT/server room highlight the reliability and consistency of the VESDA system. Only VESDA detected fire incidents in their early developing (overheating) stage in every test scenario.

The Point (spot-type) detector proved incapable of providing very early warning or early warning detection.