

tailored fire and security



TFS/VFSD1

Video Flame and Smoke Detection

TFS/VFSD1 is a field-proven, intelligent Video Fire Detection system, which uses conventional video cameras to look for the early signs of fire and smoke. By spotting the signs early, protection can be offered to personnel, properties and fire-fighters.



Fire Detection



Smoke Detection



- Can be used with existing cameras
- Detects both **Smoke and Flames**
- Fast detection and early warning
- Fire location confirmation - pin points the source and location of smoke and flames
- Works under differing lighting conditions
- Strong resistance to false alarms

- Live view and configuration via standard internet browser
- Detection is unaffected by size of space, air current, smoke layering and dispersion
- Able to trigger the fire alarm system
- Provides pre-recorded video forensic evidence for fire investigations, in conjunction with Network Video Recorders.

Warehouses • Power Plants • Waste / Recycling Plants • Tunnels
Factories • Storage Facilities

TFS/VFSD1

About Video Fire Detection

TFS/VFSD1 is an intelligent, compact, single channel IP video encoder, used to analyse the video content of a camera input for the presence of fire.

Using sophisticated, reliable algorithms it can detect smoke or flame at the early stages of a potential incident, alerting the operator before serious damage occurs, saving money and even lives.

On activation, it alerts the operator with the use of volt- free contacts in conjunction with real time visual representation of what the camera is 'seeing'. This allows the user to make the correct decision on what course of action is to be taken.



Traditional smoke detectors work by detecting particles and are commonplace in domestic and industrial applications. They work well in small rooms or spaces where the particles can be generally relied upon to reach the detectors quickly.

However, in large open spaces, such as **warehouses, tunnels** or **outdoors**, more sophisticated solutions are required. Traditionally, these are more expensive laser or beam detectors but local airflow or building thermal characteristics may prevent particles from breaking the beam. Lack of airflow may lead to stratification of smoke such that it no longer rises, or indeed too much airflow may take the particles away from the detectors. Other aspiration systems, consisting of interconnected tubes, also rely on particle detection and are complicated to install.

A dedicated, embedded solution able to identify smoke or flame in seconds.

**Smoke & Flame Early Warning.
Where other detectors fall short.**

The **TFS/VFSD1** conforms to the latest British Standard: BS5839-1:2002 as described in section 2 article 21.1.3.

How it works

Camera Choice and Coverage Area

In a typical system, a conventional CCTV camera is arranged so as to cover an area of risk to fire. The camera could pre-exist or it could be newly installed for the purpose. Some consideration should be given to system design, so as to ensure that the area is covered to the desired extent.

The camera can be an analogue video type (PAL/NTSC) or a digital IP camera (please check with us for compatibility). Cameras can be connected directly to the Processing unit, or via a network.

Simply Configured

Configuration of the system is straightforward via a menu system delivered as a web page from inside the processing unit. Upon connection of a PC, the installer is able to configure detection areas, sensitivities, exclusion zones, alarm style and even video encoding options.

The Heart of the System

Once installed and configured, the video signal from the camera is input to the processing unit, **TFS/VFSD1**, where it is analyzed. State-of-the-art digital processing algorithms running in software on the powerful core within **TFS/VFSD1** look for the signs of fire millions of times per second. Once an event has been detected, the algorithms continue to look for the tell-tale build up signs and once validated, raise the alarm.

Alarm Options

The choice of notification is down to the operator. Simple dry contacts can be used for signalling to a fire panel or to sound an audible alarm. The video output can be monitored for visual highlighting of danger areas by an operator. Also, IP data can be sent via the network for remote monitoring, immediate response. The choice is yours.

Cascadable Detection

TFS/VFSD1 has two Ethernet connections, so individual units can be cascaded. This allows a simple IP signalling network to be created without the need of a router. It also allows detection events to be shared between units.



TFS/VFSD1 is available individually and in a 2U rack form of up to 16 channels.

TFS/VSFD1

Specification

Detection	Event	Smoke & Fire
	Speed	Seconds
Video	Input	1 x Analogue: PAL or NTSC 25-30 fps or 1 x MPEG via Ethernet input
	Compression	MPEG4, MPEG2, H264 + other codecs
	Streaming	RTP/RTSP
Alarm	Output	TCP/IP
	Setup	Sound alarm, Digital alarm (option), Relay contacts
I/O Interface	Video	1 x Video In - BNC 1 x Video Out - BNC
	Ethernet	2 x Ethernet - RK45
	Audio	1 x Audio In - 3.5mm jack 1 x Audio Out - 3.5mm jack
	RS-323	1 port for message box
	RS-485	1 half-duplex port
	Miscellaneous	Volt-free Relay Outputs x 3
Operation	Temperature	0 ~ 50°C
	Humidity	0 ~ 75% at 50°C
Power	Source	12Vdc nom. (9V - 16V DC range), 6.5W max.
	Consumption	5W max
Cabinet		Metal
Mounting		DIN rail or free standing
Dimensions		W78 x H43 x D123mm (free standing)

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