**UniVario Industrial Fire Detectors
Versatile in application**

*Cool down.
Fire Protection by*

minimax

THE ASSURANCE
of industrial production processes

UniVario industrial fire detectors are intelligent, platform-based and microprocessor controlled fire detectors. Thanks to their modular concept and advanced signal processing techniques, these detectors meet individual requirement profiles within an exceptionally wide range of applications. UniVario industrial fire detectors work indoors and outdoors; likewise in the direct vicinity of the equipment to be protected as well as from larger distances. They are deployable in both clean room areas and under harsh process conditions as well as in explosion-hazardous areas, thus providing solutions to all requirements.

Modular in design – Unlimited combinations
The combination of highly responsive sensors and intelligent evaluation algorithms ensures that UniVario industrial fire detectors always detect fires very fast with a very low risk of false alarms. Their ability to intelligently suppress disturbance variables, high and very accurate response temperatures and the option to use the detectors in explosion-hazardous areas offer a very broad range of applications for UniVario detectors.

Application-specific configuration of signal processing and modularity permit easy adaptation of changing operating conditions. The high level of operational dependability is ensured by micro-controller-based function monitoring and the sensor test, as well as by the high degree of protection (IP66, IP67), oil leak tightness and a high level of impact and vibration resistance. The number of worldwide approvals confirms the quality and wide field of application.

UNIVARIO
DETECTORS
at a glance

To achieve the best possible protection in each individual scenario, UniVario fire detectors of different designs and response sensitivity are used according to the requirements of each protected site. Even for off-shore applications stainless steel versions are available.

► **UniVario FMX5000 UV– a flame detector with spectral responsiveness in the ultraviolet range**
The flame detector FMX5000 UV reacts to optical radiation and analyzes specific wavelengths. It is installed wherever open flames are likely to develop quickly. Its perfect combination of early detection, high sensitivity, dependability and the lowest possible risk of false alarms caused by thunderstorms, hot surfaces, or strong solar radiation make the UniVario fire detector indispensable for preventing the rapid spread of fires.

► **UniVario FMX5000 IR – an extremely robust three-channel infrared flame detector with three-way optical test**
The UniVario FMX5000 IR detects flames very quickly. A special sensor combination and an intelligent evaluation blend out industrial interference, such as hot surfaces of machinery or welding work. At the same time, the detector safely detects even very small flames of a developing fire. The UniVario FMX5000 IR is particularly fail-safe due to its threefold optical test, which checks all three sensors as well as the optical screen of the detector.

► **UniVario WMX5000 – a heat detector with stainless steel heat sensor**
The WMX5000 is designed to detect open fires with temperatures increasing rapidly, such as highly combustible solids, liquids and gases. It responds instantaneously to any rapid rise in temperature or as soon as a pre-set maximum temperature is exceeded.

The quick release mounting attachment makes the WMX5000 well suited for installation on dryers or ventilation ducts.

UNIVARIO
DETECTORS

24-hour alert

► **UniVario WMX5000 FS – a high-temperature detector**
with a robust decoupled stainless steel heat sensor
The WMX5000 FS heat detector has been designed to
specifically work in areas with temperatures of up to 850 °C.
Its decoupled heat sensor ensures easy and extremely flexi-
ble mounting. Adjustable alarm temperatures and various
versions of the decoupled heat sensor offer a broad range of
applications.

► **UniVario stainless steel model Ex ST**
for harsh and explosion-hazardous areas
Several UniVario heat detectors and the UniVario flame detector IR are available in stainless steel
versions. For this version there are special mounting brackets MX5000 ST available. The stainless
steel versions EX ST are developed for the use in harsh industrial environment and in offshore
applications as well as for explosion-hazardous areas. This includes ex zones 0, 1, 2, 20, 21, 22
according to the ATEX categories 1,2,3, for gas and dust.

UNIVARIO

The right product for every explosion-hazardous areas

Use in explosion-hazardous areas
The industrial fire detectors of the UniVario series are available in a number of variants, suited for gas atmospheres as well as dusty areas:

► The standard UniVario variants are suitable for all applications without explosion hazards and can be easily converted to analogue addressable detectors.

► The 3GD series detectors are suitable for applications in zones 2 (gas) and 22 (dust) and can also be converted to ring analogue addressable detectors.

All detector variants can be used as analogue addressable detectors. An additional electronic safety barrier is uses for the UniVario Ex series detectors.

► The UniVario Ex series detectors are suitable for zones 1 (gas) and 20, 21 (dust).

► The UniVario stainless steel version Ex ST is developed for explosion-hazardous areas zones 0, 1, 2, (gas), as well as zones 20, 21, 22 (dust).

Detector variant Type of detector	Standard	3GD (Zone 2/22)	Ex (Zone 1/2/20/21/22)	Ex (Zone 0/1/2/20/21/22)
Ultraviolet flame detector	FMX5000 UV	FMX5000 UV 3GD		
3-channel infrared flame detector	FMX5000 IR	FMX5000 IR 3GD	FMX5000 IR Ex	FMX5000 IR Ex ST
Standard heat detector (single hole mounting)	WMX5000	WMX5000 3GD	WMX5000 Ex	WMX5000 Ex ST
High-temperature heat detector (also with flexible sensor rod - FS flex)	WMX5000 FS	WMX5000 FS 3GD	WMX5000 FS Ex	WMX5000 FS Ex ST

the communicative detector in the loop

By using communication modules, UniVario industrial fire detectors can be converted to full-blown analogue addressable detectors. As a result, and unlike most other available industrial fire detectors, these detectors can be integrated into the fire detection systems as full-scale detectors with a protocol merely by plugging in a module. Reported events can be assigned precisely to a detector, and the fire alarm and extinguishing control panel can initiate the required steps. UniVario detectors are the first industrial fire detectors where this option is available even for explosion-hazardous areas.

Communication modules
The KMX5000 AP and KMX5000 AP Ex module allow to operate the UniVario industrial fire detectors as complete loop participants on fire detection control panels with Loop AP protocol – without required specific loop couplers.

FMX5000 UV FMX5000 IR WMX5000 WMX5000 FS

Optical smoke detector OMX95

Manual call point DMX95

FMX5000 UV 3GD FMX5000 IR 3GD WMX5000 3GD WMX5000 FS 3GD

Zone 2

Module Ex-Barrier

FMX5000 IR Ex WMX5000 Ex WMX5000 FS Ex

Zone 1

Module Ex-Barrier

FMX5000 IR Ex ST WMX5000 Ex ST WMX5000 FS Ex ST

Zone 0
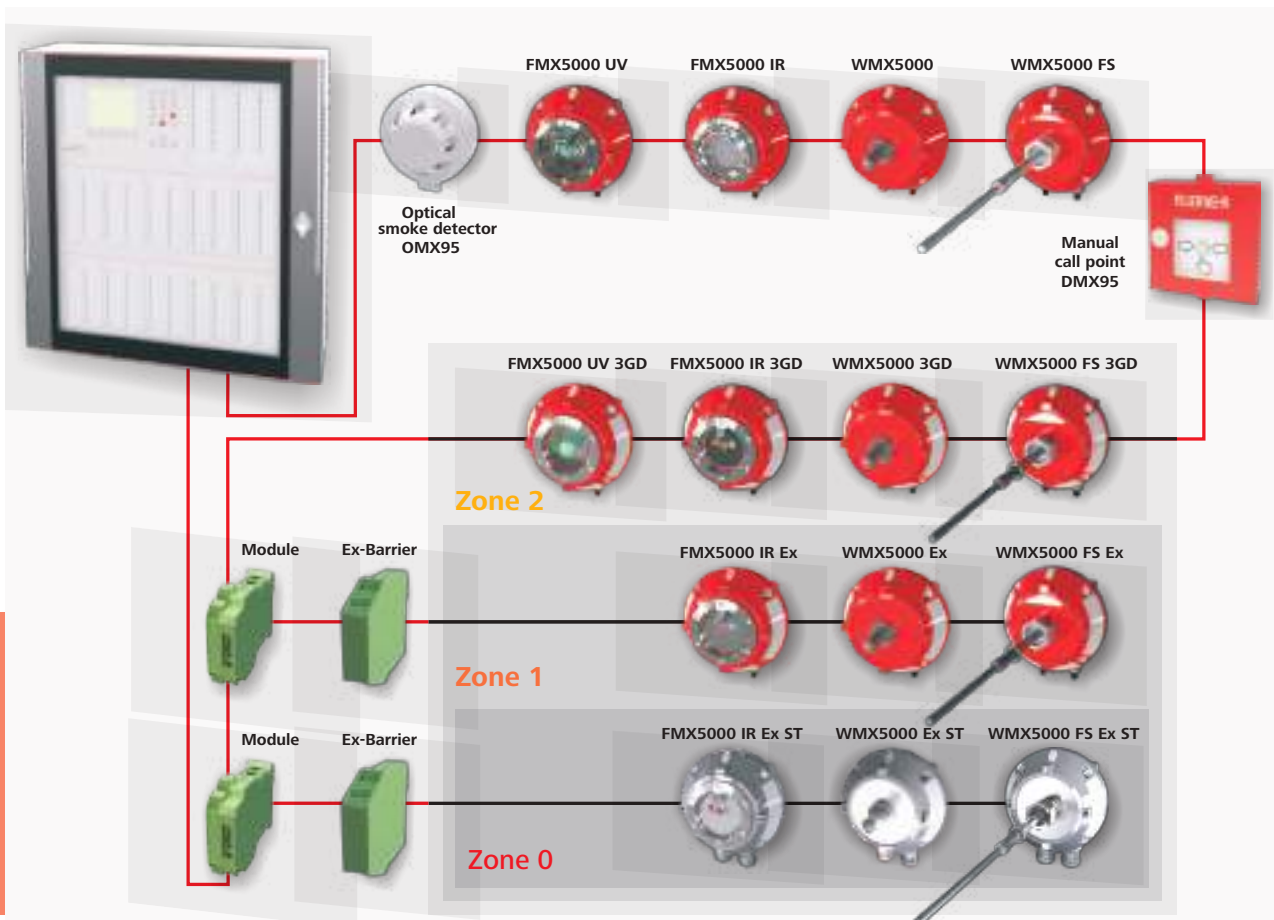
Versatile and almost boundless

Depending on the detector model, UniVario industrial fire detectors are FM-approved and tested and certified by VdS Schadenverhütung. In addition, other international certification bodies, for example CCC, conformity to Russian standards, MOE, CPD, CSFM, ATEX, IECEx and NEC have granted approvals.

Examples of use	FMX5000 IR	FMX5000 UV	WMX5000	WMX5000 FS
Exhaust gas ducts and ventilation ducts				●
Fuel storage/chemical storage	●			
Chemical production	●			●
Chip/semi-conductor production (silane)		●		●
Printing companies, printing machines	●	●	●	
Airplane and helicopter hangars	●	●		
Combined heat and power stations and coal-fired power plants	●			
Fiberboard presses (heat tunnels				●
Wood processing industry	●			
Fuel tanks		●	●	
Paint spraying installations			●	
Motor test beds	●			●
Waste recycling plants	●		●	
Offshore installations	●			
Pump stations	●			
Tank farms	●	●		
Transformers			●	
Dryers				●
Compressor station (natural gas)		●		
Machine tools			●	●
Machine tools (Mg/Al/Ti dry processing)		●		

ADVANTAGES
at a glance

▶ **Fast fire detection with very low risk of false alarm**
Highly responsive sensors, application-specific configuration of signal processing, protection against typical disturbance variables using intelligent evaluation algorithms, high electro-magnetic tolerance.

▶ **High level of operational safety**
High degree of protection (IP 67/NEMA 6), oil-tight, impact and vibration resistant, micro-controller monitors functionality, sensor test, optical test (FMX5000 IR and FMX5000 UV).

▶ **Broad field of application**
Disturbances such as cosmic radiation and lightning are masked (FMX5000 IR and FMX5000 UV), response temperatures of up to 850 °C (WMX5000 FS), response tempera-tures can be gradually adjusted (WMX5000 and WMX5000 FS), use in explosion-hazardous areas (detector variants 3GD, Ex, Ex ST).

▶ **Easy to adapt to changes in conditions**
Signal processing can be configured to suit the application, highly modular (single base for different detector types, different com-munication modules), optional temperature display.

▶ **Low power consumption – potential for cutting costs**
With their low power consumption, more detectors can be applied per group or loop. As a result, there is a potential for cutting costs when it comes to conventional line modules and loop modules and when setting up the power supply and emergency power supply.

▶ **Flexible connection technologies, simple installation**
Detector variants with conventional line technology, addressable ring bus or relay connection. Separate base for easy installation and commissioning.

▶ **Worldwide approvals**
Depending on detector variant and type, e.g. VdS, FM, CCC, conformity to Russian stan-dards, MOE, CPD, CSFM, ATEX, IECEx, NEC.

Subject to technical changes.

Detailed information can be found in the appropriate technical documentation.