



Trusted above all.



## UniVario Industrial Fire Detectors

Intelligent, responsive and versatile







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 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 – either as conventional detectors or as analogue addressable 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 microcontroller-based function monitoring and the sensor test, as well as by the high degree of protection (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 FMX5000 IR



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 works. 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 FMX5000 UV



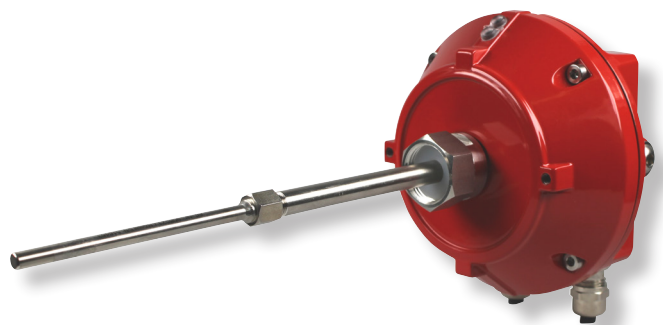
The FMX5000 UV flame detector responds to optical radiation and analyses specific fire spectra. The flame detector monitors areas where a rapid development of open flames can be expected in case of a fire. The perfect interaction between early detection, high sensitivity, dependability and low risk of false alarms caused by disturbance variables make UniVario fire detectors indispensable for the prevention of the rapid spreading of a fire.

### UniVario WMX5000



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. It offers a number of different installation options, making it suitable for monitoring rooms as well as processes.

### UniVario WMX5000 FS



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 flexible mounting. Adjustable alarm temperatures and various versions of the decoupled heat sensor offer a broad range of applications.



**YMX5000 (control unit)**



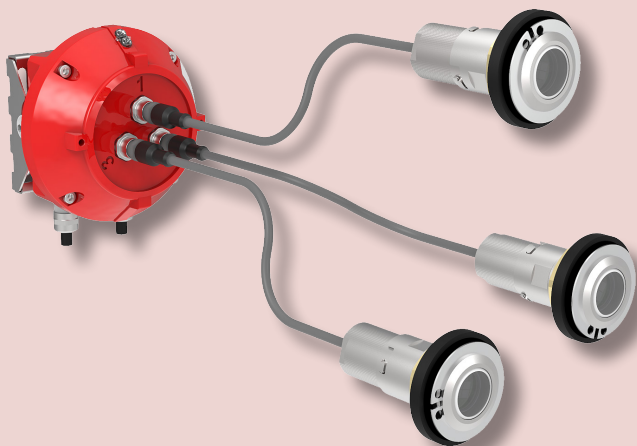
**YMX5000 3GD (control unit)**



**YMX5000 FMX (rapid flame sensor)**



**YMX5000 AF (Installation kit)**



The new UniVario YMX5000 industrial fire detector consists of a control unit and up to three remote sensor units for fast flame detection. The YMX5000 FMX sensor units are connected to the control unit via cables, enabling application in confined spaces.

The sensor units are designed to detect open flames that can occur during the combustion of materials containing carbon, such as methane, oil products, plastics, and wood.

The sensor unit is also available in an EX version, suitable for use in explosion-hazardous zones 1, 2, 20, 21 and 22.




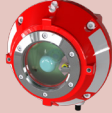

















# Use in explosion-risk areas

## Use in explosion-risk areas

UniVario industrial fire detectors are available in special variants for use in areas prone to gas and dust explosions in industrial environments.

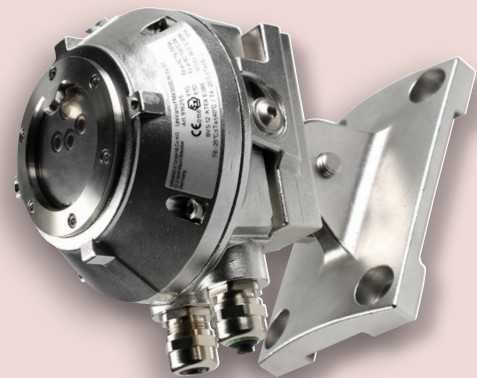
- Standard UniVario industrial fire detector variants are suitable for all applications without explosion hazards.
- 3GD series detectors are suitable for applications in zones 2 (gas) and 22 (dust).
- UniVario Ex series industrial fire detectors are suitable for zones 1,2 (gas) and 20, 21, 22 (dust), being "intrinsically safe".

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

| Variant of detector  | Standard   | 3GD<br>(Zone 2/22)  | Ex<br>(Zone 1/2/20/21/22)   | Ex<br>(Zone 0/1/2/20/21/22)  |
|--|--|---|---|--|
| Type of detector   |  |   |   |  |
| Ultraviolet flame detectors  | FMX5000 UV<br>  | FMX5000 UV 3GD<br> |   |  |
| Three-channel infrared flame detectors                             | FMX5000 IR<br>  | FMX5000 IR 3GD<br> | FMX5000 IR Ex<br>  | FMX5000 IR Ex ST<br>  |
| Standard heat detectors (single hole)                              | WMX5000<br>     | WMX5000 3GD<br>    | WMX5000 Ex<br>     | WMX5000 Ex ST<br>     |
| High-temperature FS heat detectors (also as FLEX variant up to 9m) | WMX5000 FS<br> | WMX5000 FS 3GD<br> | WMX5000 FS Ex<br> | WMX5000 FS Ex ST<br> |
| 3-channel fast flame detectors control unit                        | YMX5000<br>   | YMX5000 3GD<br>  |   |  |
| 3-channel fast flame detectors sensor unit                         |               |                   |                  |  |

### UniVario FMX5000 IR Ex ST

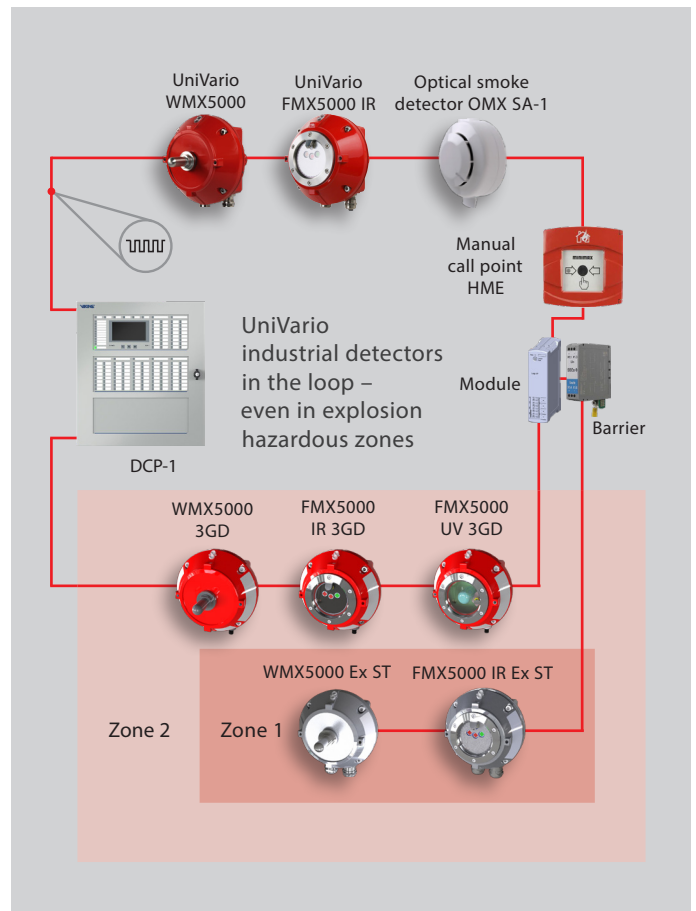
UniVario FMX5000 IR industrial fire detectors are used in areas where open flames are expected to occur at the outset of a fire. The special model FMX5000 IR Ex is designed to monitor areas with particularly harsh process conditions in industrial environments. This stainless steel model is suitable for use in potentially explosive atmospheres of zones 0, 1, 2, 20, 21, 22. As these detectors are seawater-resistant, they are even suitable for offshore installations.





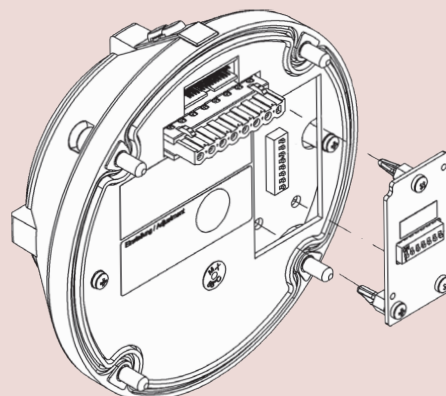
## Used as detector in loop

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.

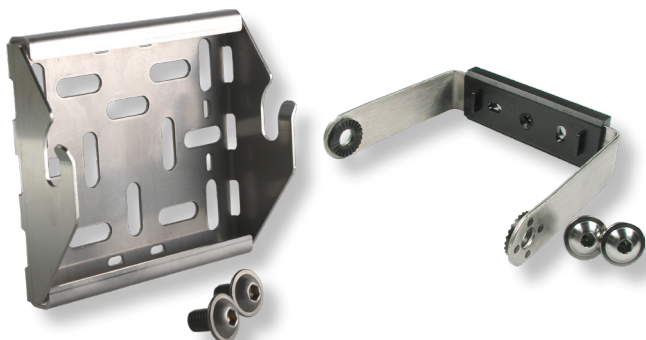


## Communication modules

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.

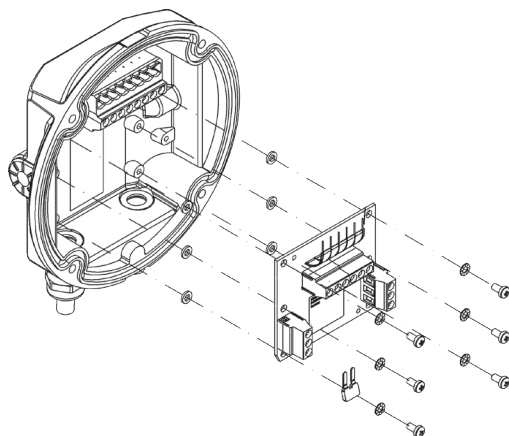


### Mounting



With the universal mounting brackets, the UniVario detectors can be mounted and aligned in any required position. The perfectly matched brackets complement the Univario family perfectly.

### Relay module KMX5000 RK



The relay module UniVario KMX5000 RK makes it possible to operate UniVario industrial fire detectors as stand-alone devices or in any hazard detection and PLC control devices.

### Socket UniVario MX5000 LCD



The UniVario MX5000 LCD socket serves to indicate status and message texts of all fire detectors of the UniVario model series. The LCD display is controlled by the connected detectors.

### Air shield MX5000



The air flushing device for UniVario flame detectors serves to prevent dirt on the optics and reflectors of the detectors. The flushing device is intended for use in dry, dusty and powder-filled areas.

### Air flushing MX5000 Impulse



In combination with the Impulse air flushing unit, this air flushing inset serves to prevent dirt on the optics and reflector of UniVario flame detectors. The impulse operation reduces energy costs considerably.

### Console MX5000



Thanks to the MX5000 console, fire or heat detectors of the UniVario model range can be installed outside the areas to be monitored (e.g. ventilation and air conditioning ducts, machine tools, containers or silos).

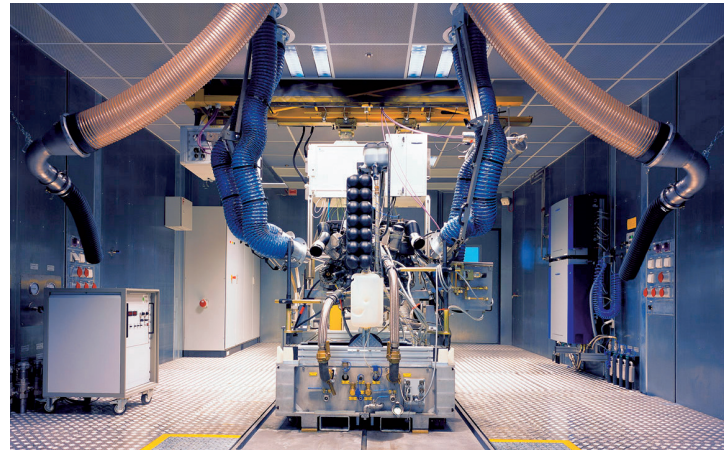




## Applications | Versatile and almost boundless

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 installation conditions on site.

| Typical Applications   | FMX5000 UV | FMX5000 IR | WMX5000 | WMX5000 FS | YMX5000 FMX |
|--|------------|------------|---------|------------|-------------|
| Exhaust gas ducts and ventilation ducts                      |            |            |         | ●          | ●           |
| Fuel storage/chemical storage                                |            | ●          |         |            | ●           |
| Chemical production  |            | ●          |         | ●          | ●           |
| Chip/semi-conductor production (silane)                      | ●          |            |         | ●          | ●           |
| Printing companies, printing machines                        | ●          | ●          | ●       |            | ●           |
| Aircraft 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 electromagnetic tolerance.

- **High level of operational safety**

High degree of protection (IP 67/NEMA 6), oil-tight, impact and vibration resistant, microcontroller 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 temperatures can be gradually adjusted (WMX5000 and WMX5000 FS), use in explosion-hazardous areas.

- **Adapts easily to changing operating conditions**

Signal processing can be configured to suit the application, highly modular (single base for different detector types, different communication modules), optional temperature display, inexpensive fire alarm wiring can be used. 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 technology, analogue 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 standards, MOE, ATEX, IECEx, NEC.



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