UniVario WMX5000 Heat Detector
The New Industrial Standard

Product
The WMX5000 industrial heat detector detects a rise in temperature from a fire.
Dramatic increases in temperature are also detected, resulting in early fire detection.
The A1, A2, B and C response classes and the S and R indices according to the EN 54-5 can be configured on the WMX5000 as required.
A microprocessor is included to analyze the data.
Constantly monitored alarm sensor.
The housing is rugged and specifically designed for challenging industrial environments.
Stainless steel heat sensor.
A quick release mounting attachment makes the WMX5000 well suited for installation on ducts.

WMX5000 heat detectors are designed to detect open flames which cause a sharp increase in temperature, e.g.:
- flammable liquids and gases
- highly flammable plastics
It is designed to be used in outdoor and in indoor industrial environments.
Potential areas of use:
- Production halls
- Painting facilities
- Transformers
- Printing presses
- Incinerating plants
- Machine tools
- Channel monitoring
- Process industry
They can be used in ex-zones 2 and 22.

Advantages
Microprocessor-controlled monitoring of the heat sensor, software and hardware.
Early fire detection with low risk of false alarms.
Application-specific configuration of signal processing.
Supervising typical disturbance variables using intelligent evaluation algorithms.
High electromagnetic tolerance.
Different installation options.
High degree of protection (IP 67), oil-tight impact and vibration-resistant.
Optional upgrades:
- Communication module for use as a ring bus detector
- Relay module with floating contacts for disturbance and alarm
Comprehensive service options.
Stainless steel sensor.
The UniVario WMX5000 is an innovative and intelligent fire detector. Due to its modular design, it can be tailored to meet the unique demands of individual applications based on a uniform platform.

As the first heat detector suitable for industrial use, the UniVario WMX5000 can be integrated into an Apollo bus system. Individual alarm identification and parameterization is made possible due to the optional UniVario KMX5000 AP communication module.

The large power supply and an optional module UniVario KMX5000 RK with relay contacts enable the stand-alone mode and application in different danger alarm or control units.

Because it requires minimal energy, ultra thin cables can be used and multiple sensors can be placed along one line.

Converting from limit mode to ring bus mode is achieved by simply installing a communication module – there is no need to switch cables.

The threshold temperatures range from 32 °F (0 °C) to 194 °F (90 °C). The response class and differential and statical response can be programmed according to your needs.

Accessible connections and a standard clamp simplify installation of all products.

A service unit is available to simplify configuration, diagnosis, function checks and data archiving.

### Technical Data

<table>
<thead>
<tr>
<th>Type</th>
<th>Features</th>
<th>Response threshold</th>
<th>Temperature range of operation</th>
<th>Type of protection</th>
<th>External display</th>
<th>Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>UniVario WMX5000</td>
<td>Sensor monitored function, Alarm/disturbance and function LED, Optional upgrades: Communication module, Relay module, Can be configured according to your needs Service interface Data storage Power supply 7.6 V to 30 V DC</td>
<td>Response classes according to EN 54-5 A1, A2, B, C, D*, Indices according to EN 54-5 S, R Adjustable between the alarm temperatures of 32 °F (0 °C) and 194 °F (90 °C) and 221 °F* (105 °C*) with service unit</td>
<td>- 4 °F to 176 °F - 20 °C to +80 °C</td>
<td>IP 67</td>
<td>Can be connected</td>
<td>VdS G207090 EN 54-5 class A1, A1S, A1R, A2, B, C ATEX zone 2/22 FM approval</td>
</tr>
</tbody>
</table>

*Only the WMX5000 with single-hole installation

Subject to technical modifications

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![Diagram](image-url)
UniVario WMX5000 Heat Detector FS
Heat Detector for High Temperature Ranges

Product

WMX5000 FS heat detectors detect a rise in temperature resulting from a fire and are specially designed for high temperature ranges of up to 1562 °F (850 °C).

In addition to a maximum temperature reading, a quick increase in temperature can also be detected, resulting in early fire detection.

Detection is carried out by a protruding sensor under constant monitoring.

A microprocessor monitors the sensor and analyzes the data.

All response classes and indices according to EN 54-5 can be configured on the WMX5000 FS as required.

The casing is very rugged and specially designed for application in heavy industrial environments.

Stainless steel heat sensor.

LCD display can be connected if necessary.

Application

WMX5000 FS heat detectors are designed to detect open flames which cause a quick increase in temperature, e.g.:
- flammable liquids and gases
- highly flammable solids

Designed for use in heavy industrial environments with high temperatures.

Potential areas of application:
- Exhaust gas ducts
- Engine test blocks
- Machine tools
- Fibreboard presses
- Chemical production
- Drying systems

They can be used in ex-zones 2 and 22.

Advantages

- Heat detector for a wide range of applications in the industrial field with a response temperature of up to 1562 °F (850 °C).
- Microprocessor-controlled monitoring of the heat sensor, software and hardware.
- Early fire detection with low risk of false alarms.
- Application-specific configuration of signal processing.
- Supervising typical disturbance variables using intelligent evaluation algorithms.
- High electromagnetic tolerance.
- Different installation options.
- Protruding heat sensor for flexible installation.
- High degree of protection (IP 67), oil-tight, impact and vibration-resistant.
- Optional upgrades:
  - Communication module for use as a ring bus detector
  - Relay module with floating contacts for disturbance and alarm
- Comprehensive service options.
The UniVario WMX5000 FS is an innovative, intelligent fire detector which, due to its modular concept, can be tailored to meet the unique demands of individual applications based on a uniform platform.

As the first high-temperature heat detector suitable for industrial use, the UniVario WMX5000 FS can be integrated into an Apollo bus system because of the optional UniVario KMX5000 AP communication module. Individual alarm identification and parameterization is therefore possible.

The large range of power supply and an optional module with relay contacts enable the stand-alone mode and application in different danger alarm or control units.

Because it requires minimal energy, ultra thin cables can be used and multiple sensors can be placed along one line.

Converting from limit mode to ring bus mode is achieved by installing a communication module – there is no need to switch cables.

The protruding thermoelectric alarm sensor can be mounted flexibly or as a sensor rod.

The threshold temperatures and differential response can be configured according to specific requirements.

The optional LCD display simplifies the function checks and monitoring operating conditions.

A service device to simplify configuration, diagnosis, function checks and data archiving is available.

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WMX5000 FS response behaviour at the threshold temperature of 435 °C

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WMX5000 FS response behaviour

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WMX5000 FS response behaviour

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Sample application of a heat detector which can be adjusted to meet the requirements of a customer.

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WMX5000 FS response behaviour

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WMX5000 FS response behaviour

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The 3 channel flame detector FMX5000 IR evaluates the IR range of the optical spectrum.

FMX5000 IR flame detectors meet the highest sensitivity class 1 in accordance with EN 54-10.

Fire-specific signals are digitally processed by the microcontroller preventing false alarms (e.g. lightning).

The detector window is monitored for optical integrity in the IR spectral range. All 3 sensors are monitored separately.

The integrated microcontroller monitors the function of the detector. Faults are displayed on the detector and a signal is sent to the fire control panel.

Heavy-duty industrial housing for rough industrial applications.

FMX5000 IR flame detectors are designed to detect open flames that can be caused by the combustion of solid or liquid materials (e.g. plastics, wood, gases, oil products, etc.).

Typical applications include:
- Tank farm monitoring
- Heating and coal-fired power plants
- Motor test benches
- Large industrial plants
- Airplane and helicopter hangars
- Chemical storages and chemical production plants
- Fuel stores
- Pump stations
- Print shops
- Wood product industry

Monitoring of the function of window, sensor, soft- and hardware controlled by microcontroller.

3 channel infrared analysis with the highest response sensitivity.

Triple optical test monitors full function.

High resistance to interference, due to intelligent evaluation algorithms.

Application parameter is set via DIP switch or service device.

Special oil-tight, chemical-resistant and silicone-free versions available.

Optional upgrades:
- Communication module for use as a ring bus participant
- Relay module with floating contacts for disturbance and alarm

Various installation adapters available.

Comprehensive service options.
As the first flame detector suitable for industrial use, the UniVario FMX5000 IR can be integrated into an Apollo bus system, due to the optional UniVario KMX5000 AP communication module. This makes individual alarm identification and parameterisation possible.

A separate cable connection port makes installation and maintenance easy and inexpensive.

The large range of power supply and an optional module with relay contacts enables the stand-alone mode and application in different danger alarm or control units.

Because the FMX5000 IR requires minimal energy, smaller cross section cables can be used and multiple sensors can be operated on one detection line.

Converting from conventional type to ring bus mode is achieved by simply installing a communication module – there’s no need to switch cables.

The new, innovative housing design is extremely robust, seawater-resistant and has an IP 67 rating. The FMX5000 IR is made for the most extreme industrial application environments.

Due to measures taken on the housing and safety-oriented electronic design, the FMX5000 IR flame detector exceeds modern EMC requirements.

Failure signals are registered at central position via a separate current increasing line.

A service device to simplify configuration, diagnosis, function checks and data archiving is available.

Analysis of internal history memory by using the UniVarioView service software.

### Technical Data

<table>
<thead>
<tr>
<th>Type</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>UniVario FMX5000 IR</td>
<td>Alarm/disturbance and function LED</td>
</tr>
<tr>
<td></td>
<td>Optional extras:</td>
</tr>
<tr>
<td></td>
<td>- Communication module</td>
</tr>
<tr>
<td></td>
<td>- Relay module</td>
</tr>
<tr>
<td></td>
<td>Can be configured according to your needs</td>
</tr>
<tr>
<td></td>
<td>Service interface</td>
</tr>
<tr>
<td></td>
<td>Data storage</td>
</tr>
<tr>
<td></td>
<td>Power supply 7.6 V to 30 V DC</td>
</tr>
<tr>
<td>Spectral sensitivity</td>
<td>185 nm to 260 nm</td>
</tr>
<tr>
<td>Temperature range of operation</td>
<td>- 4 °F to 176 °F</td>
</tr>
<tr>
<td></td>
<td>- 20 °C to +80 °C</td>
</tr>
<tr>
<td>Type of protection</td>
<td>IP 67</td>
</tr>
<tr>
<td>External display</td>
<td>Optional</td>
</tr>
<tr>
<td>Approval</td>
<td>EN 54-10 class 1</td>
</tr>
<tr>
<td></td>
<td>VdS G209141</td>
</tr>
<tr>
<td></td>
<td>FM 3036782</td>
</tr>
<tr>
<td>Monitoring surface (VdS)</td>
<td>rel. to risk m²</td>
</tr>
<tr>
<td></td>
<td>max. 7,273 ft. sq. (676 m²)</td>
</tr>
<tr>
<td>Room height</td>
<td>max. 147 ft. (45m)</td>
</tr>
</tbody>
</table>

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UniVario Flame Detector FMX5000 UV
The Watchful Eye

- The FMX5000 UV flame detector evaluates the UV range of the optical spectrum.
- FMX5000 UV flame detectors meet the highest sensitivity (class 1) in accordance with EN 54-10.
- Fire-specific signals are digitally processed by the microcontroller preventing false alarms (e.g. lightning).
- The detector window is monitored for optical integrity in the UV spectral range.
- The integrated microcontroller monitors the function of the detector. Faults are displayed on the detector and a signal is sent to the fire control panel.
- Heavy-duty industrial housing for rough industrial applications.

+ Monitoring of the function of window, sensor, software and hardware controlled by microcontroller.
+ Maximum response sensitivity.
+ High resistance to interference, due to evaluation algorithms.
+ Application parameter is set via DIP switch or service device.
+ Specific customer evaluation algorithms possible for special applications.
+ Special oil-tight, chemical-resistant and silicone-free versions available.
+ Optional upgrades:
  - Communication module for use as a ring bus participant
  - Relay module with floating contacts for disturbance and alarm
+ Various installation adapters available.
+ Comprehensive service options.
As the first flame detector suitable for industrial use, the UniVario FMX5000 UV can be integrated into an Apollo bus system, due to the optional UniVario KMX5000 AP communication module. This makes individual alarm identification and parameterization possible.

A separate cable connection port makes installation and maintenance easy and inexpensive.

The large range of power supply and an optional module with relay contacts enable the stand-alone mode and application in different danger alarm or control units.

Because the FMX5000 requires minimal energy, ultra thin cables can be used and multiple sensors can be placed along one line.

Converting from limit mode to ring bus mode is achieved by simply installing a communication module – there is no need to switch cables.

The new, innovative housing design is extremely robust, seawater-resistant and has an IP 67 rating. The FMX5000 UV is made for the most extreme industrial application environments.

Due to measures taken on the housing and safety-oriented electronic design, the FMX5000 UV flame detector exceeds modern EMC requirements.

Failure signals are registered at a central position via a separate current increasing line.

### Technical data

<table>
<thead>
<tr>
<th>Type</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>UniVario FMX5000 UV</td>
<td>Alarm/disturbance and function LED</td>
</tr>
<tr>
<td></td>
<td>Optional upgrades:</td>
</tr>
<tr>
<td></td>
<td>– Communication module</td>
</tr>
<tr>
<td></td>
<td>– Relay module</td>
</tr>
<tr>
<td></td>
<td>Can be configured according to your needs</td>
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<tr>
<td></td>
<td>Service interface</td>
</tr>
<tr>
<td></td>
<td>Data storage</td>
</tr>
<tr>
<td></td>
<td>Power supply 7.6 V to 30 V DC</td>
</tr>
</tbody>
</table>

| | Spectral sensitivity | Temperature range of operation | Type of protection | External display | Approval | Monitoring surface (VdS) rel. to risk m² |
| | 185 nm to 260 nm | -4 °F to 176 °F | IP 67 | Can be connected | VdS G206132 EN 54-10 class 1 FM 3030815 | max. 7,273 ft. sq. (676 m²) Room height max. 147 Ft. (45 m) |
The UniVario KMX5000 RK Relay Module

**Product**

- Directly integrated into the detector base without need for any separate cabling.
- Retrofitting possible at any time.
- Large supply voltage range.
- Large conductor sizes.

**Application**

- Integration in all UniVario detectors.

**Advantages**

- One potential-free contact each for fault messages and fire alarm.

**Typical areas of application:**
- stand-alone operation
- hazard alert systems
- fire detection systems
- use in combination with building management systems
- integration in machine tool controls
- processing industry
- wind energy plant
Application with Relay Module

Relay Module KMX5000 RK
Communication module for the operation of UniVario detectors either in fire detection systems or independent of them.

Potential-free contacts for alarm and fault signals allow installation either as a stand-alone detector, within fire detection systems/hazard alert systems or as part of building management systems.

The KMX5000 RK communication module is made to fit into the base of the UniVario MX5000 detector.

### Product Features

- Potential-free change-over contacts for alarm and fault signalling
- Integration into the base of the UniVario detectors

### Materials Provided

- KMX5000 RK relay module
- Short-circuiting bridge
- Fastening material

### Connection/Installation

- Cross-section of connecting cable
- min. 0.5 mm²
- max. 2.5 mm²

### Technical data

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection</td>
<td>6-pole flex conductor</td>
</tr>
<tr>
<td>Operating Voltage</td>
<td>24 V (14 V – 29 V) DC</td>
</tr>
<tr>
<td>Operating current only KMX5000 RK (without detector current):</td>
<td>approx. 20 mA at 24 V approx. 30 mA at 24 V approx. 7 mA at 24 V</td>
</tr>
<tr>
<td>Voltage load contacts</td>
<td>max. 60 V DC, 25 V AC</td>
</tr>
<tr>
<td>Current load contacts</td>
<td>max. 1 A</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-4 ºF to 176 ºF (~ -20 ºC to + 80 ºC)</td>
</tr>
<tr>
<td>Relative humidity (IEC721-3-3)</td>
<td>5 to 85 % – no condensation</td>
</tr>
<tr>
<td>Specification to</td>
<td>EN 54 part 18</td>
</tr>
<tr>
<td>Weight</td>
<td>1.76 oz. (50 g)</td>
</tr>
<tr>
<td>Dimensions in Inches</td>
<td>2.52 x 0.94 x 2.24 (L x W x H)</td>
</tr>
</tbody>
</table>

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Minimax USA LLC
4030 E. Quenton Drive Suite 112
Mesa, AZ 85215
Tel. 888.882.0191
Fax 480.553.5701
sales@minimaxfp.com
www.minimaxusa.com

No. S 89201

UniVario_02/05/2011