

# Industrial detectors

## Optical detection - UniVario IR flame detector

### FMX5000 IR



**Part no.:** 907481

Triple IR flame detector for the detection of typical fires. Including 3 channel optic test monitoring all functional characteristics of detector. Designed for use in rough industrial environments. Equipped for operation as a conventional detector. Expansion to a detector with Loop AP protocol via KMX5000 AP communication module. New uniform optics.

### Technical specifications

Detection method	3 IR Sensors
Sensitivity class	adjustable x (50 m (164 ft)) 1, 2, 3
Viewing angle	90°
Operating voltage	7.6 V - 30 V DC
Quiescent current	2,3 mA
Alarm current	approx. 15 mA
Alarm indication	1 red LED
Normal operation indication	1 green LED, flashing
Fault indication current	approx. 15 mA
Fault indication	1 yellow LED
Operating temperature	-40 °C to +80 °C (-40 °F to +176 °F)
IP rating (EN 60529)	IP 66/67
Enclosure material	Diecast aluminum
Relative humidity	max. 95% no condensation
Specification according to	EN 54 Part 10
Weight	820 g (1.8 lbs)
Dimensions	100 x 50 mm (dia. x H) 3.9 x 2 inch (dia. x H)

### Product features

- High degree of immunity against false alarms, e.g. from hot surfaces or sunlight
- A microcontroller monitors the functionality and analyses the recorded data. Faults can be indicated on the detector or on a separate line
- Service interface, history memory
- Connection of remote indicator possible
- 3-channel optic test

### Optional accessories

Remote indicator LMX5000	908499
Weather protection MX5000 complete	910134
Relay module KMX5000 RK	906361
KMX5000 AP communication module	905883

### Not included in delivery

UniVario Base	
Bracket MX5000	904757
Terminating resistor 1.8 K / 0.5 W	675235

### Connection / mounting

Connection cable standard detector	2-wire
Additional fault line connection	2-wire
External indication	2-wire
Recommended cable	JY (St) Y 2x2x0.8 mm (0.03 inch)
Conductor cross-section	max. 2.5 mm <sup>2</sup> (AWG 13)

Brand	Designation	Order no.	Approvals / marking
Minimax	FMX5000 IR MX	922838	G 209141                      0786-CPR-20784
	FMX5000 IR MX SF (silicone-free)	922814	

312-330\_001 / A105 / 2020-Aug-25 / en  
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# Industrial detectors

## Optical detection - UniVario IR flame detector

### FMX5000 IR HR



**Part no.:** 909404

Triple IR flame detector for the detection of typical fires. Including 3 channel optic test monitoring all functional characteristics of detector. Variant HR (high resistance) designed for use in highly rough industrial environments such as chemical industry. Designed for operation as a conventional detector. Expansion to a detector with Loop AP protocol via KMX5000 AP communication module.

### Technical specifications

Detection method	3 IR Sensors
Sensitivity class	adjustable x (50 m (164 ft)) 1, 2, 3
Viewing angle	90°
Operating voltage	7.6 V - 30 V DC
Quiescent current	2.3 mA
Alarm current	approx. 15 mA
Alarm indication	1 red LED
Normal operation indication	1 green LED, flashing
Fault indication current	approx. 15 mA
Fault indication	1 yellow LED
Operating temperature	-40 °C to +80 °C (-40 °F to +176 °F)
IP rating (EN 60529)	IP 66/67
Enclosure material	Diecast aluminum
Relative humidity	max. 95% no condensation
Specification according to	EN 54 Part 10
Weight	820 g (1.8 lbs)
Dimensions	100 x 50 mm (dia. x H) 3.9 x 2 inch (dia. x H)

### Product features

- High degree of immunity against false alarms, e.g. from hot surfaces or sunlight
- A microcontroller monitors the functionality and analyses the recorded data. Faults can be indicated on the detector or on a separate line
- Service interface, history memory
- Connection of remote indicator possible
- 3-channel optic test
- Use in atmospheres containing sulphur and hydrochloric acid

### Optional accessories

Remote indicator LMX5000	908499
Weather protection MX5000 complete	910134
KMX5000 AP communication module	905883
Relay module KMX5000 RK	906361

### Not included in delivery

Base UniVario MX5000 HR	926553
Bracket MX5000 HR	909359
Terminating resistor 1.8 K / 0.5 W	675235

### Connection / mounting

Connection cable standard detector	2-wire
Additional fault line connection	2-wire
External indication	2-wire
Recommended cable	JY (St) Y 2x2x0.8 mm (0.03 inch)

Brand	Designation	Order no.	Approvals / marking
Minimax	FMX5000 IR HR MX	924439	G 209141                      0786-CPR-20784

312-330\_002 / A107 / 2021-July-05 / en  
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## Industrial detectors

### Optical detection - UniVario IR flame detector, Ex

#### UniVario FMX5000 IR 3GD



#### Part no.: 909481

Triple IR flame detector for the detection of typical fires. Including 3 channel optic test monitoring all functionalities of detector. ATEX-approved for category 3, Gas and Dust, suitable for use in Ex zones 2 and 22. The detector must not be connected with a safety barrier and a blue fire alarm cable. Designed for use in rough industrial environments. Equipped for operation as a conventional detector. Expansion to a detector with Loop AP protocol via KMX5000 AP communication module. New uniform optics.

#### Technical specifications

Detection method	3 IR Sensors
Sensitivity class	adjustable x (50 m (164 ft)) 1, 2, 3
Viewing angle	90°
Operating voltage	7.6 V - 30 V DC
Quiescent current	2.3 mA
Alarm current	approx. 15 mA
Alarm indication	1 LED red
Fault indication current	approx. 15 mA
Fault indication	1 LED yellow
Operating temperature	-40 °C to +80 °C (-40 °F to +176 °F)
IP rating (EN 60529)	IP 66/67
Enclosure material	Diecast aluminum
Relative humidity	max. 95% no condensation
Specification according to	EN 54 Part 10
Weight	820 g (1.8 lbs)
Dimensions	100 x 50 mm (dia. x H) 3.9 x 2 inch (dia. x H)

#### Product features

- High degree of immunity against false alarms, e.g. from hot surfaces or sunlight
- A microcontroller monitors the functionality and analyses the recorded data. Faults can be indicated on the detector or on a separate line
- Service interface, history memory
- Connection of remote indicator possible
- 3-channel optic test
- For use in Ex zones 2 and 22, ATEX category 3 Gas/Dust

#### Optional accessories

Parallel indicator LMX5000	908499
KMX5000 AP communication module	905883
Weather protection MX5000 complete	910134
Relay module KMX5000 RK 3GD	925999

#### Not included in delivery

UniVario base	
Bracket MX5000	904757
Terminating resistor 1.8 K / 0.5 W	675235

#### Approvals / marking

Type examination certificate: BVS 11 ATEX E135  
 Ex conformity Russia in acc. with TP TC 012/2011  
 Ex approval in acc. with NEC 500/505

#### Connection / mounting

Connection cable standard detector	2-wire
Additional fault line connection	2-wire
External indication	2-wire
Recommended cable	JY (St) Y 2x2x0.8 mm (0.03 inch)
Conductor cross-section	max. 2.5 mm <sup>2</sup> (AWG 13)

Brand	Designation	Order no.	Approvals / marking
Minimax	FMX5000 IR 3GD MX	924418	
	FMX5000 IR 3GD MX SF (silicone-free)	924419	

312-340\_001 / A107 / 2020-Nov-02 / en  
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## Industrial detectors

## Optical detection - UniVario IR flame detector, Ex

## FMX5000 IR Ex



## Product features

- High degree of immunity against false alarms, e.g. from hot surfaces or sunlight
- A microcontroller monitors the functionality and analyses the recorded data. Faults can be indicated on the detector or on a separate line
- Service interface, history memory
- Connection of remote indicator possible
- 3-channel optic test
- For use in Ex zones 1, 2, 20, 21 and 22, ATEX category 2 Gas/1, 2 Dust

## Technical specifications

Detection method	3 IR Sensors
Sensitivity class	adjustable x (50 m (164 ft)) 1, 2, 3
Viewing angle	90°
Operating voltage	7.6 V - 30 V DC
Quiescent current	4.5 mA
Alarm current	approx. 15 mA
Alarm indication	1 LED red
Fault indication current	approx. 15 mA
Fault indication	1 LED yellow
Operating temperature	-40 °C to +80 °C (-40 °F to +176 °F)
IP rating (EN 60529)	IP 66/67
Enclosure material	Diecast aluminum
Relative humidity	max. 95% no condensation
Specification according to	EN 54 Part 10
Weight	860 g (1.9 lbs)
Dimensions	100 x 50 mm (dia. x H) 3.9 x 2 inch (dia. x H)

## Part no.: 911674

Triple IR flame detector for the detection of typical fires. Including 3 channel optic test monitoring all functionalities of detector. ATEX and IECEx approved for category 2 Gas and 1, 2 Dust, suitable for use in Ex zones 1, 2, 20, 21 and 22. The detectors must be connected via a safety barrier. Designed for use in tough industrial environments. Equipped for operation as a conventional detector. Extension to a detector with Loop AP protocol via the KMX5000 AP Ex. communication module.

## Optional accessories

Safety barrier IS conventional 9 V	923991
Safety barrier IS addressable 24 V	901324
KMX5000 AP Ex communication module	912086
Weather protection MX5000 complete	910134
Silicone-free design	

## Not included in delivery

UniVario base	
Bracket MX5000	904757
Terminating resistor 1.8 K / 0.5 W	675235

## Connection / mounting

Connection cable standard detector	2-wire
Additional fault line connection	2-wire
External indication	2-wire
Recommended cable	JE-Y (St) Y 2x2x0.8 mm (0.03 inch)
Conductor cross-section	max. 2.5 mm <sup>2</sup> (AWG 13)

## Approvals / marking

Type examination certificate: BVS 12 ATEX E088  
 IECEx conformity: IECEx BVS 12.0056  
 Ex conformity Russia in acc. with TP TC 012/2011  
 Ex approval in acc. with NEC 500/505



G 209141



0786-CPR-20784



## FMX5000 IR Ex CN

## Part no.: 923147

Version China  
 Otherwise like part no. 911674

## Approvals / marking



# Industrial detectors

## Optical detection - UniVario UV flame detector

### FMX5000 UV



**Part no.:** 904702

UV flame detector for the detection of typical fires. Including UV optic test monitoring all functional characteristics of detector. Designed for use in rough industrial environments and for operation as a conventional detector. Expansion to a detector with Loop AP protocol via KMX5000 AP communication module.

### Product features

- High degree of immunity against false alarms, such as storm, lightning or strong sunlight
- A microcontroller monitors the functionality and analyses the recorded data. Faults can be indicated on the detector or on a separate line
- Service interface, history memory
- Connection of remote indicator possible

### Optional accessories

Remote indicator	908499
Weather protection MX5000 complete	910134
KMX5000 AP communication module	905883
Relay module KMX5000 RK	906361

### Not included in delivery

UniVario base	
Bracket MX5000	904757
Terminating resistor 1.8 K / 0.5 W	675235

### Technical specifications

Detection method	UV sensor
Sensitivity class	1
Viewing angle	90 °
Operating voltage	7.6 V - 30 V DC
Quiescent current	approx. 0.25 mA
Alarm current	approx. 15 mA
Alarm indication	1 red LED
Normal operation indication	1 green LED, flashing
Fault indication current	approx. 15 mA
Fault indication	1 yellow LED
Operating temperature	-40 °C to +80 °C (-40 °F to +176 °F)
IP rating (EN 60529)	IP 66/67
Enclosure material	Diecast aluminum
Relative humidity	max. 95% no condensation
Specification according to	EN 54/10
Weight	820 g (1.8 lbs)
Dimensions	100 x 50 mm (dia.xH) 3.9 x 2 inch (dia.xH)

### Spare part

Basket guard	904284
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### Connection / mounting

Connection cable standard detector	2-wire
Additional fault line connection	2-wire
External indication	2-wire
Recommended cable	JY (St) Y 2x2x0.8 mm (0.03 inch)
Conductor cross-section	max. 2.5 mm <sup>2</sup> (AWG 13)

312-310\_001 / A107 / 2021-Oct-15 / en  
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Brand	Designation	Order no.	Approvals / marking
Minimax	FMX5000 UV MX	926628	G 206132                      0786-CPR-20286
	FMX5000 UV MX SF (silicone free)	926629	



# Industrial detectors

## Optical detection - UniVario UV flame detector, Ex

### FMX5000 UV 3GD



Part no.: 907267

UV flame detector for detection of typical fires. Designed for use in harsh industrial environments. Fitted for use as a conventional detector. The FMX5000 UV 3GD UV flame detectors are Atex approved for Category 3 gas and dust and are intended for use in Ex Zones 2 and 22. Expansion to a detector with Loop AP protocol via the KMX5000 AP communications module. The flame detector features a built-in optical channel function test.

### Product features

- High degree of immunity against false alarms, such as storm, lightning or strong sunlight
- Function monitoring and evaluation of measured values by microcontroller, faults can be displayed on the detector or a separate line
- Service interface, history memory
- Connection of external display possible
- Use in Ex Zones 2 and 22 Atex Category 3 gas/dust

### Optional accessories

Remote indicator LMX5000	908499
KMX5000 AP communication module	905883
Relay module KMX5000 RK 3GD	925999
Weather protection MX5000 complete	910134

### Not included in delivery

UniVario MX5000 base	
Bracket MX5000	904757
Terminating resistor 1,8 K / 0,5 W	675235

### Technical specifications

Detection method	UV-Sensor
Sensitivity class	1
Viewing angle	90°
Operating voltage	7.6 V - 30 V DC
Quiescent current	approx. 0.25 mA
Alarm current	approx. 15 mA
Alarm indication	1 LED red
Fault indication current	approx. 15 mA
Fault indication	1 LED yellow
Operating temperature	-40 °C to +80 °C (-40 °F to +176 °F)
IP rating (EN 60529)	IP 66/67
Enclosure material	Diecast aluminum
Relative humidity	max. 95% no condensation
Specification according to	EN 54 Part 10
Weight	820 g (1.8 lbs)
Dimensions	100 x 50 mm (dia. x H) 3.9 x 2 inch (dia. x H)

### Connection / mounting

Connection cable standard detector	2-wire
Additional fault line connection	2-wire
Remote indication	2-wire
Recommended cable	JY (St) Y 2x2x0.8 mm (0.03 inch)
Conductor cross-section	max. 2.5 mm <sup>2</sup> (AWG 13)

### Approvals / marking

EC type approval certificate: BVS 11 ATEX E137  
 Ex conformity Russia in acc. with TP TC 012/2011  
 Ex approval in acc. with NEC 500/505

312-320\_001 / A107 / 2021-Oct-15 / en  
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Brand	Designation	Order no.	Approvals / marking
Minimax	FMX5000 UV 3GD MX	929193	G 206132                      0786-CPR-20286
	FMX5000 UV 3GD MX SF (silicone-free)	929194	

## Industrial detectors

### UniVario Detector accessories

#### Air shield MX5000 pulse



#### Part no.: 919551

The air shield pulse is only intended for use with UniVario flame detectors. In combination with the pulse air purging unit the air shield pulse is preventing contamination on the lens and the reflector of the detector. Only use in dry dusty or powder-containing environments. By the pulse mode, the energy costs are significantly reduced.

#### Included in delivery

Air shield pulse with gland G1/4"-8 (8 mm hose), without detector

#### Not included in delivery

Pulse air purging unit	919510
Hose 8x6 PA FL	845956
Hose 8x6 PUN ANTISTAT (Ex)	919560
optional:	
Gland G1/4"-6 (6 mm hose)	918669
Hose 6x4 PUN	914329
Hose 6x4 PUN ANTISTAT (Ex)	919559

#### Technical specifications

Material	Aluminium
Compressed air operation	0.1 MPa to 0.5 MPa (14.5 psi to 72.5 psi)
Flow rate	depending on the setting
Hose connection	8 mm (0.31 inch)
Weight	0.47 kg (1.0 lbs)

#### Note

Image presentation air shield complete mounted to detector

#### Pulse air purging unit



#### Part no.: 919510

The pulse purging unit is used for optical flame and spark detectors. The unit supplies air purging attachments with compressed air. The unit ensures short compressed air blasts by a time-controlled magnetic valve. The cleaning effect of the air purging attachment is increased. The consumption of compressed air is decreased. Only dry dust and powdery soiling can be removed effectively.

#### Not included in delivery

<b>Compressed air inlet:</b>	
Fitting IQSG-G1/2"-8 (8 mm hose)	919554
Coupling connector NW7,2 G1/2"	919555
Hose 8x6 PA FL	845956
Hose 8x6 PUN ANTISTAT (Ex)	919560

#### Compressed air outlet:

Fitting IQSG-G1/2"-8 (8 mm hose)	919554
Coupling connector IQSLV2-G1/2"-8 (8 mm hose)	919556
Coupling connector IQSLV3-G1/2"-8 (8 mm hose)	919557
Coupling connector IQSLV4-G1/2"-8 (8 mm hose)	919558

#### Approvals / marking



#### Technical specifications

Material	Aluminium
Compressed air at the inlet	min. 0.5 MPa, max. 1.0 MPa (5 bar to 10 bar)
Compressed air at the outlet	min. 0.1 MPa, max. 0.5 MPa (1 bar to 5 bar), adjustable
Purity classes of compressed air according to ISO 8573-1:	
Class oil aerosol content	1 - 2
Class humidity	4
Class solid particle content	1 - 2
Connectable air purging attachment	max. 4
Ambient temperature	0 °C to +50 °C (+32 °F to +122 °F)
Power supply	230 V AC, 10 W
Hose connection	8 mm (0.31 inch)
Weight	4.3 kg (9.5 lbs)

# Industrial detectors

## UniVario Detector accessories

### Pulse air purging unit 24 V



Part no.: 922988

The pulse purging unit is used for optical flame and spark detectors. The unit supplies air purging attachments with compressed air. The unit ensures short compressed air blasts by a time-controlled magnetic valve. The cleaning effect of the air purging attachment is increased. The consumption of compressed air is decreased. Only dry dust and powdery soiling can be removed effectively. The pulse control of the solenoid valve is performed by external 24 V power supply.

### Technical specifications

Material	Aluminum
Compressed air at the inlet	min. 0.5 MPa, max. 1.0 MPa (5 bar to 10 bar)
Compressed air at the outlet	min. 0.1 MPa, max. 0.5 MPa (1 bar to 5 bar), adjustable
Purity classes of compressed air according to ISO 8573-1:	
Class oil aerosol content	1 - 2
Class humidity	4
Class solid particle content	1 - 2
Connectable air purging attachment	max. 4
Ambient temperature	0 °C to +50 °C (+32 °F to +122 °F)
Power supply solenoid valve	24 V DC, 8 W
Hose connection	8 mm (0.31 inch)
Weight	4.6 kg (10.1 lbs)

### Not included in delivery

<b>Compressed air inlet:</b>	
Fitting IQSG-G1/2"-8 (8 mm hose)	919554
Coupling connector NW7,2 G1/2"	919555
Hose 8x6 PA FL	845956
Hose 8x6 PUN ANTISTAT (Ex)	919560

<b>Compressed air outlet:</b>	
Fitting IQSG-G1/2"-8 (8 mm hose)	919554
Coupling connector IQSLV2-G1/2"-8 (8 mm hose)	919556
Coupling connector IQSLV3-G1/2"-8 (8 mm hose)	919557
Coupling connector IQSLV4-G1/2"-8 (8 mm hose)	919558

### Approvals / marking



312-810\_008 / A03 / 2019-Feb-03 / en  
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