

CERTIFICATE OF CONFORMITY



Member of the FM Global Group

1. HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS

2. Certificate No: **FM22US0084X**
3. Equipment:
(Type Reference and Name) **UniVario FMX5000 Flame Detector
UniVario FMX5000 Ex Flame Detector
UniVario WMX5000 Heat Detector
UniVario WMX5000 Ex Heat Detector**
4. Name of Listing Company: **Minimax GmbH**
5. Address of Listing Company: **Postfach 1260,
Industriestraße 10/12, D-23840 Bad Oldesloe,
Germany**

6. The examination and test results are recorded in confidential report number:

3048879 dated 14th May 2014

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM 3600:2022, FM 3610:2021, FM 3810:2021, ANSI/UL 60079-0:2020, ANSI/UL 60079-11:2018,
ANSI/IEC 60529:2004, ANSI/UL 61010-1:2012

8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

10. Equipment Ratings:

See Annex

11. The marking of the equipment shall include:

See Annex

Certificate issued by:

9 June 2023

J.E. Marquedant
VP, Manager - Electrical Systems

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

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12. Description of Equipment:

See Annex

13. Specific Conditions of Use:

See Annex

14. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
14 May 2014	Original Issue.
9 June 2023	<u>Supplement 1:</u> Report Reference: PR463721 dated 9 June 2023. Description of the Change(s): <ul style="list-style-type: none">◦ Update certificate to new style certificate◦ Update minimum operating ambient temperature from -20°C to -40°C◦ Addition of stainless steel enclosures that is designated by ST in the model code, with EPL Ga for Zone 0 for Gas and same Dust Rating as non-ST models◦ Change to O-ring material◦ Update maximum surface temperature for Zone dust rating to add T105°C at maximum ambient of 80°C◦ Add dust layer depth of T₂₀₀ for Dust marks◦ Correct T code for Gas to T6...T4◦ Corrected Zone marking for Ex products form Zone 1 to Zone 0 for ST variants

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ANNEX

UniVario FMX5000 IR Ex Flame Detector

Equipment Ratings

Intrinsically Safe for Class I, II, III, Division 1, Groups A, B, C, D, E, F, and G, Temperature Class T6...T4 with Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912311; Intrinsically Safe for Zone 1, AEx ia IIC T6...T4 Gb with Ta = -40°C to +80°C for T4 with Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912311; Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C, Entity, in accordance with drawing 912311; and Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C, Entity, in accordance with drawing 912311 hazardous (Classified) locations, IP65.

Markings

Class I, II, III, Division 1, Groups A, B, C, D, E, F, G; T6...T4; Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65

Zone 1, AEx ia IIC T6...T4 Gb Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65

Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C ; IP65

Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C ; IP65

Refer to drawing 912311

Description of Equipment

The UniVario FMX5000 IR Ex Flame Detector is used to detect IR light radiating from open flames. The flame detector senses flames with their typical spectrum in optical wavelength and frequency. A regular self-test is carried out to monitor the detectors key functions. This includes a test of the optical channels via an integrated infrared emitter. The detector consists of a painted aluminum enclosure with a special infrared window and optional accessories for mounting can be fitted onto the detector body. The detector window is monitored for optical integrity in the IR spectral range. The detector is designed to detect open flames that can be caused by combustibles of solid or liquid material. The external connection is done by terminals. A 2-wire interface is used to supply the detector and send an alarm indication to the fire alarm panel; optionally a second 2-wire interface can be used to send a fault indication to the fire panel. The detector can be equipped with an optional communication module type KMX5000 AP Ex that transfers serial data of the detector's status via the supply circuitry.

UniVario FMX5000 IR Ex Flame Detector

Entity Parameters: Ui= 28V, Ii= 100mA, Pi = 1.2W, Ci =360pF, Li = 960nH

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UniVario FMX5000 IR Ex ST Flame Detector

Equipment Ratings

Intrinsically Safe for Class I, II, III, Division 1, Groups A, B, C, D, E, F, and G, Temperature Class T6...T4 with Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6, Entity in accordance with drawing 912311; Intrinsically Safe for Zone 0, AEx ia IIC T6...T4 Ga with Ta = -40°C to +80°C for T4 with Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912311; Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C, Entity, in accordance with drawing 912311; Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C, Entity, in accordance with drawing 912311 hazardous (Classified) locations, IP65.

Markings

Class I, II, III, Division 1, Groups A, B, C, D, E, F, G; T6...T4; Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65
Zone 0, AEx ia IIC T6...T4 Ga Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65
Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C ; IP65
Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C ; IP65
Refer to drawing 912311

Description of Equipment

The UniVario FMX5000 IR Ex ST Flame Detector is used to detect IR light radiating from open flames. The flame detector senses flames with their typical spectrum in optical wavelength and frequency. A regular self-test is carried out to monitor the detectors key functions. This includes a test of the optical channels via an integrated infrared emitter. The detector consists of a stainless steel enclosure with a special infrared window and optional accessories for mounting can be fitted onto the detector body. The detector window is monitored for optical integrity in the IR spectral range. The detector is designed to detect open flames that can be caused by combustibles of solid or liquid material. The external connection is done by terminals. A 2-wire interface is used to supply the detector and send an alarm indication to the fire panel; optionally a second 2-wire interface can be used to send a fault indication to the fire panel. The detector can be equipped with an optional communication module type KMX5000 AP Ex that transfers serial data of the detector's status via the supply circuitry.

UniVario FMX5000 IR Ex ST Flame Detector
Entity Parameters: Ui= 28V, Ii= 100mA, Pi = 1.2W, Ci =360pF, Li = 960nH

UniVario WMX5000 Ex Heat Detector

Equipment Ratings

Intrinsically Safe for Class I, II, III, Division 1, Groups A, B, C, D, E, F, and G, Temperature Class T6...T4 with Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912150; Intrinsically Safe for

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Zone 1, AEx ia IIC T6...T4 Gb with Ta = -40°C to +80°C for T4 with Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912150; Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C, Entity, in accordance with drawing 912150; and Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C, Entity, in accordance with drawing 912150 hazardous (Classified) locations, IP65.

Markings

Class I, II, III, Division 1, Groups A, B, C, D, E, F, G; T6...T4; Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65

Zone 1, AEx ia IIC T6...T4 Gb Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65

Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C ; IP65

Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C ; IP65

Refer to drawing 912150

Description of Equipment

The UniVario WMX5000 Ex Heat Detector is used to detect open fires with fast heat development. The detector consists of a painted aluminum enclosure and a temperature sensor encapsulated in a stainless steel cap which protrude from the enclosure. The detector has an alarm feature that can be selected between 0°C (32°F) and 105°C (221°F). The external connection is done by terminals. A 2-wire interface is used to supply the detector and send an alarm indication to the fire alarm panel; optionally a second 2-wire interface can be used to send a fault indication to the fire alarm panel. The detector can be equipped with an optional communication module type KMX5000 AP Ex that transfers serial data of the detector's status via the supply circuitry.

UniVario WMX5000 Ex. Heat Detector.

Entity Parameters: U_i = 28V, I_i = 100mA, P_i = 1.2W, C_i = 360pF, L_i = 960nH

Specific Conditions of Use

1. The maximum permitted operating temperature of the UniVario WMX5000 Ex is 80°C with a T4 temperature code and 40°C with a T6 temperature code. To avoid the effects of process temperature and other thermal effects care shall be taken to ensure the "Enclosure Temperature" does not exceed 80°C with a T4 temperature code and 40°C with a T6 temperature code.

UniVario WMX5000 Ex ST Heat Detector

Equipment Ratings

Intrinsically Safe for Class I, II, III, Division 1, Groups A, B, C, D, E, F, and G, Temperature Class T6...T4 with Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912150; Intrinsically Safe for Zone 0, AEx ia IIC T6...T4 Ga with Ta = -40°C to +80°C for T4 with Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912150; Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C, Entity, in accordance with drawing 912150; and Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C, Entity, in accordance with drawing 912150 hazardous (Classified) locations, IP65.

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Markings

Class I, II, III, Division 1, Groups A, B, C, D, E, F, G; T6...T4; Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65

Zone 0, AEx ia IIC T6...T4 Ga Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65

Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C ; IP65

Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C ; IP65

Refer to drawing 912150

Description of Equipment

The UniVario WMX5000 Ex ST Heat Detector is used to detect open fires with fast heat development. The detector consists of a stainless-steel enclosure and a temperature sensor encapsulated in a stainless steel cap which protrude from the enclosure. The detector has an alarm feature that can be selected between 0°C (32°F) and 105°C (221°F). The external connection is done by terminals. A 2-wire interface is used to supply the detector and send an alarm indication to the fire alarm panel; optionally a second 2-wire interface can be used to send a fault indication to the fire alarm panel. The detector can be equipped with an optional communication module type KMX5000 AP Ex that transfers serial data of the detector's status via the supply circuitry.

UniVario WMX5000 Ex ST. Heat Detector.

Entity Parameters: Ui = 28V, Ii = 100mA, Pi = 1.2W, Ci = 360pF, Li = 960nH

Specific Conditions of Use

1. The maximum permitted operating temperature of the UniVario WMX5000 Ex ST is 80°C with a T4 temperature code and 40°C with a T6 temperature code. To avoid the effects of process temperature and other thermal effects care shall be taken to ensure the "Enclosure Temperature" does not exceed 80°C with a T4 temperature code and 40°C with a T6 temperature code.

UniVario WMX5000 FS Ex Heat Detector

Equipment Ratings

Intrinsically Safe for Class I, II, III, Division 1, Groups A, B, C, D, E, F, and G, Temperature Class T6...T4 with Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912176; Intrinsically Safe for Zone 1, AEx ia IIC T6...T4 Gb with Ta = -40°C to +80°C for T4 with Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912176; Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C, Entity, in accordance with drawing 912176; and Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C, Entity, in accordance with drawing 912176 hazardous (Classified) locations, IP65.

Markings

Class I, II, III, Division 1, Groups A, B, C, D, E, F, G; T6...T4; Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65

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Zone 1, AEx ia IIC T6...T4 Gb Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65
Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C ; IP65
Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C ; IP65
Refer to drawing 912176

Description of Equipment

The UniVario WMX5000 FS Ex Heat Detector is a high temperature heat detector used to detect open fires with fast heat development. The detector consists of a painted aluminum enclosure. The detector includes a temperature sensor encapsulated in a stainless-steel rod which protrudes from the enclosure. The steel rod is available in lengths up to 1500mm. External connection is done via a terminal 2-wire connection. The 2-wire supply circuit is used to supply the detector and send alarm indication to the fire alarm panel; optionally a second 2-wire interface can be used to send a fault indication to the fire alarm panel. The detector is specifically designed for use in object protection, such as monitoring of exhaust ducts or test benches, especially suited for high temperature application. The heat detectors can be equipped with an optional communication model type KMX5000 AP Ex that transfers serial data of the detector's status via the supply circuitry e.g. to a superior fire-detection system.

UniVario WMX5000 FS Ex a. Heat Detector.

a = rod length = blank, L200, L400 or L600

Entity Parameters:

Ui = 28V, Ii = 100mA, Pi = 1.2W, Ci = 360pF, Li = 960nH

Specific Conditions of Use

1. The maximum permitted operating temperature of the UniVario WMX5000 FS Ex Heat Detectors is 80°C with a T4 temperature code and 40°C with a T6 temperature code. To avoid the effects of process temperature and other thermal effects care shall be taken to ensure the "Enclosure Temperature" does not exceed 80°C with a T4 temperature code and 40°C with a T6 temperature code.

UniVario WMX5000 FS Ex ST Heat Detector

Equipment Ratings

Intrinsically Safe for Class I, II, III, Division 1, Groups A, B, C, D, E, F, and G, Temperature Class T6...T4 with Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912176; Intrinsically Safe for Zone 0, AEx ia IIC T6...T4 Ga with Ta = -40°C to +80°C for T4 with Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912176; Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C, Entity, in accordance with drawing 912176; and Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C, Entity, in accordance with drawing 912176 hazardous (Classified) locations, IP65.

Markings

Class I, II, III, Division 1, Groups A, B, C, D, E, F, G; T6...T4; Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65

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Zone 0, AEx ia IIC T6...T4 Ga Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65
Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C ; IP65
Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C ; IP65
Refer to drawing 912176

Description of Equipment

The UniVario WMX5000 FS Ex ST Heat Detector is a high temperature heat detector used to detect open fires with fast heat development. The detector consists of a stainless-steel enclosure. The detector includes a temperature sensor encapsulated in a stainless-steel rod which protrudes from the enclosure. The steel rod is available in lengths up to 1500mm . External connection is done via a terminal 2-wire connection. The 2-wire supply circuit is used to supply the detector and send alarm indication to the fire alarm panel; optionally a second 2-wire interface can be used to send a fault indication to the fire alarm panel. The detector is specifically designed for use in object protection, such as monitoring of exhaust ducts or test benches, especially suited for high temperature application. The heat detectors can be equipped with an optional communication model type KMX5000 AP Ex that transfers serial data of the detector's status via the supply circuitry e.g. to a superior fire-detection system.

UniVario WMX5000 FS Ex ST a. Heat Detector.

a = rod length = blank, L200, L400 or L600

Entity Parameters:

Ui = 28V, Ii = 100mA, Pi = 1.2W, Ci = 360pF, Li = 960nH

Specific Conditions of Use

1. The maximum permitted operating temperature of the UniVario WMX5000 FS Ex ST Heat Detectors is 80°C with a T4 temperature code and 40°C with a T6 temperature code. To avoid the effects of process temperature and other thermal effects care shall be taken to ensure the "Enclosure Temperature" does not exceed 80°C with a T4 temperature code and 40°C with a T6 temperature code.

UniVario WMX5000 FS Flex Ex Heat Detector

Equipment Ratings

Intrinsically Safe for Class I, II, III, Division 1, Groups A, B, C, D, E, F, and G, Temperature Class T6...T4 with Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912176; Intrinsically Safe for Zone 1, AEx ia IIC T6...T4 Gb with Ta = -40°C to +80°C for T4 with Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912176; Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C, Entity, in accordance with drawing 912176; and Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C, Entity, in accordance with drawing 912176 hazardous (Classified) locations, IP65.

Markings

Class I, II, III, Division 1, Groups A, B, C, D, E, F, G; T6...T4; Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65

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Zone 1, AEx ia IIC T6...T4 Gb Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65
Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C ; IP65
Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C ; IP65
Refer to drawing 912176

Description of Equipment

The UniVario WMX5000 FS Flex Ex Heat Detector is a high temperature heat detectors used to detect open fires with fast heat development. The detector consists of a painted aluminum enclosure and a temperature sensor encapsulated in a flexible hose which protrudes from the enclosure. The flexible hose is available in lengths up to 9000mm. External connection is done via a terminal 2-wire connection. The 2-wire supply circuit is used to supply the detector and send alarm indication to the fire alarm panel; optionally a second 2-wire interface can be used to send a fault indication to the fire alarm panel. The detector is specifically designed for use in object protection, such as monitoring of exhaust ducts or test benches, especially suited for high temperature application. The heat detector can be equipped with an optional communication model type KMX5000 AP Ex that transfers serial data of the detector's status via the supply circuitry e.g. to a superior fire-detection system.

UniVario WMX5000 FS Flex Ex a. Heat Detector.
a = flexible hose length = blank, L2000, L6000 or L9000
Entity Parameters:
Ui = 28V, Ii = 100mA, Pi = 1.2W, Ci = 360pF, Li = 960nH

Specific Conditions of Use

1. The maximum permitted operating temperature of the UniVario WMX5000 FS Flex Ex Heat Detectors is 80°C with a T4 temperature code and 40°C with a T6 temperature code. To avoid the effects of process temperature and other thermal effects care shall be taken to ensure the "Enclosure Temperature" does not exceed 80°C with a T4 temperature code and 40°C with a T6 temperature code.

UniVario WMX5000 FS Flex Ex ST Heat Detector

Equipment Ratings

Intrinsically Safe for Class I, II, III, Division 1, Groups A, B, C, D, E, F, and G, Temperature Class T6...T4 with Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912176; Intrinsically Safe for Zone 0, AEx ia IIC T6...T4 Ga with Ta = -40°C to +80°C for T4 with Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912176; Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C, Entity, in accordance with drawing 912176; Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C, Entity, in accordance with drawing 912176 hazardous (Classified) locations, IP65.

Markings

Class I, II, III, Division 1, Groups A, B, C, D, E, F, G; T6...T4; Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65

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Zone 0, AEx ia IIC T6...T4 Ga Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65
Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C ; IP65
Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C ; IP65
Refer to drawing 912176

Description of Equipment

The UniVario WMX5000 FS Flex Ex ST Heat Detector is a high temperature heat detectors used to detect open fires with fast heat development. The detector consists of a stainless-steel enclosure and a temperature sensor encapsulated in a flexible hose which protrudes from the enclosure. The flexible hose is available in lengths up to 9000mm. External connection is done via a terminal 2-wire connection. The 2-wire supply circuit is used to supply the detector and send alarm indication to the fire alarm panel; optionally a second 2-wire interface can be used to send a fault indication to the fire alarm panel. The detector is specifically designed for use in object protection, such as monitoring of exhaust ducts or test benches, especially suited for high temperature application. The heat detector can be equipped with an optional communication model type KMX5000 AP Ex that transfers serial data of the detector's status via the supply circuitry e.g. to a superior fire-detection system.

UniVario WMX5000 FS Flex Ex ST a. Heat Detector.
a = flexible hose length = blank, L2000, L6000 or L9000
Entity Parameters:
Ui = 28V, Ii = 100mA, Pi = 1.2W, Ci = 360pF, Li = 960nH

Specific Conditions of Use

1. The maximum permitted operating temperature of the UniVario WMX5000 FS Flex Ex ST Heat Detectors is 80°C with a T4 temperature code and 40°C with a T6 temperature code. To avoid the effects of process temperature and other thermal effects care shall be taken to ensure the "Enclosure Temperature" does not exceed 80°C with a T4 temperature code and 40°C with a T6 temperature code.

UniVario WMX5000 Einloch Ex Heat Detector

Equipment Ratings

Intrinsically Safe for Class I, II, III, Division 1, Groups A, B, C, D, E, F, and G, Temperature Class T6...T4 with Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912150; Intrinsically Safe for Zone 1, AEx ia IIC T6...T4 Gb with Ta = -40°C to +80°C for T4 with Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912150; Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C, Entity, in accordance with drawing 912150; and Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C, Entity, in accordance with drawing 912150 hazardous (Classified) locations, IP65.

Markings

Class I, II, III, Division 1, Groups A, B, C, D, E, F, G; T6...T4; Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65

To verify the availability of the Approved product, please refer to www.approvalguide.com

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Zone 1, AEx ia IIC T6...T4 Gb Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65
Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C ; IP65
Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C ; IP65
Refer to drawing 912150

Description of Equipment

The UniVario WMX5000 Einloch Ex Heat Detector is used to detect open fires with fast heat development. The detector consists of a painted aluminum enclosure and a temperature sensor encapsulated in a stainless steel cap which protrude from the enclosure. The temperature sensor is provided with a mounting nut to mount it to a housing or duct. The detector has an alarm feature that can be selected between 0°C (32°F) and 105°C (221°F). The external connection is done by terminals. A 2-wire interface is used to supply the detectors and send an alarm indication to the fire alarm panel; optionally a second 2-wire interface can be used to send a fault indication to the fire alarm panel. The detector can be equipped with an optional communication module type KMX5000 AP Ex that transfers serial data of the detector's status via the supply circuitry. The WMX5000 Einloch Ex is specifically designed for use in object protection, such as dryer and ventilating ducts for the detection of fires with rapid rise in temperature.

UniVario WMX5000 Einloch Ex. Heat Detector

Entity Parameters: Ui = 28V, Ii = 100mA, Pi = 1.2W, Ci = 360pF, Li = 960nH

Specific Conditions of Use

1. The maximum permitted operating temperature of the UniVario WMX5000 Einloch Ex is 80°C with a T4 temperature code and 40°C with a T6 temperature code. To avoid the effects of process temperature and other thermal effects care shall be taken to ensure the "Enclosure Temperature" does not exceed 80°C with a T4 temperature code and 40°C with a T6 temperature code.

UniVario WMX5000 Einloch Ex ST Heat Detector

Equipment Ratings

Intrinsically Safe for Class I, II, III, Division 1, Groups A, B, C, D, E, F, and G, Temperature Class T6...T4 with Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912150; Intrinsically Safe for Zone 0, AEx ia IIC T6...T4 Ga with Ta = -40°C to +80°C for T4 with Ta = -40°C to +40°C for T6, Entity, in accordance with drawing 912150; Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C, Entity, in accordance with drawing 912150; and Intrinsically Safe for Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C, Entity, in accordance with drawing 912150 hazardous (Classified) locations, IP65.

Markings

Class I, II, III, Division 1, Groups A, B, C, D, E, F, G; T6...T4; Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65

Zone 0, AEx ia IIC T6...T4 Ga Ta = -40°C to +80°C for T4 and Ta = -40°C to +40°C for T6; IP65

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Zone 20, AEx ia IIIC T₂₀₀95°C Da Ta = -40°C to +70°C ; IP65
Zone 20, AEx ia IIIC T₂₀₀105°C Da Ta = -40°C to +80°C ; IP65
Refer to drawing 912150

Description of Equipment

The UniVario WMX5000 Einloch Ex ST Heat Detector is used to detect open fires with fast heat development. The detector consists of a stainless-steel enclosure and a temperature sensor encapsulated in a stainless steel cap which protrude from the enclosure. The temperature sensor is provided with a mounting nut to mount it to a housing or duct. The detector has an alarm feature that can be selected between 0°C (32°F) and 105°C (221°F). The external connection is done by terminals. A 2-wire interface is used to supply the detectors and send an alarm indication to the fire alarm panel; optionally a second 2-wire interface can be used to send a fault indication to the fire alarm panel. The detector can be equipped with an optional communication module type KMX5000 AP Ex that transfers serial data of the detector's status via the supply circuitry. The WMX5000 Einloch Ex ST is specifically designed for use in object protection, such as dryer and ventilating ducts for the detection of fires with rapid rise in temperature.

UniVario WMX5000 Einloch Ex ST. Heat Detector.

Entity Parameters: U_i = 28V, I_i = 100mA, P_i = 1.2W, C_i = 360pF, L_i = 960nH

Specific Conditions of Use

1. The maximum permitted operating temperature of the UniVario WMX5000 Einloch Ex ST is 80°C with a T4 temperature code and 40°C with a T6 temperature code. To avoid the effects of process temperature and other thermal effects care shall be taken to ensure the "Enclosure Temperature" does not exceed 80°C with a T4 temperature code and 40°C with a T6 temperature code.

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