

# CERTIFICATE OF CONFORMITY

## 1. HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS

2. **Certificate No:** FM23CA0004X
3. **Equipment:** Combustible, Oxygen Depletion, and Toxic Gas Detectors  
(Type Reference and Name) Ultima X Series
4. **Name of Listing Company:** MSA Innovation LLC dba MSA - The Safety Company
5. **Address of Listing Company:** 1000 Cranberry Woods Drive,  
Cranberry Township, Pennsylvania 16066, USA

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

3027754C dated 30<sup>th</sup> January 2007

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

FM 6340:2004, CSA C22.2 No. 0.4:1982 (R1999), CSA C22.2 No. 0.5:1982, CSA C22.2 No. 30:R2007, CSA C22.2 No. 94:1991 (R2011), CSA C22.2 No. 152:2003, CSA C22.2 No. 213:2017, CSA C22.2 No. 60079-0:2019, CSA C22.2 No. 60079-11:2014, CSA C22.2 No. 60079-29-1:2017, CSA C22.2 No. 60529:2005, CSA C22.2 No. 61010-1:2004

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:**



J.E. Marquedant  
VP, Manager - Electrical Systems

21 November 2023

Date

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

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### 12. Description of Equipment:

The Ultima X Series is a fixed combustible or oxygen gas detector. It is suitable for outdoor and indoor applications. The device is able to detect and alert users to potentially dangerous levels of combustible hydrocarbon gas. The device is a standalone unit with a 4 to 20 mA output.

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 Canadian Certification Scheme.

### 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
30 June 2008	Original Issue.
26 January 2023	<u>Supplement 4:</u> Report Reference: – RR235529 dated 26 <sup>th</sup> January 2023. Description of the Change: 1) Documentation updates. 2) Minor updates to the listings specific to <i>Sensors XE</i> and <i>XIR</i> 3) Issuance of FM23CA0004
21 November 2023	<u>Supplement 5:</u> Report Reference: PR464190 dated 21 November 2023. Description of the Change(s): 1. Documentation Updates; minor label modifications were required as part of the standards update. 2. Minor changes to the electronics in the sensor enclosures, covering combustible (catalytic bead), toxic (electrochemical), oxygen, and oxygen solvent types; no changes to electronics in the transmitter/controller enclosure; qualification of updated A-UltX-Sens-a-b-c, Ultima XE Sensors—combustible (catalytic bead), toxic (electrochemical), and oxygen (electrochemical), oxygen solvent (electrochemical) per SK3098-1540 drawing. 3. Updates to CSA No. 30, CSA C22.2 No. 213, CSA C22.2 No. 60079-0/CSA

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Date	Description
	C22.2 No. 60079-11 (replaced CSA No. 157), and CSA C22.2 No. 60079-29-1 standards

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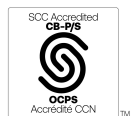
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# **ANNEX**

## **Ultima X**

### **Equipment Ratings:**

Explosionproof for Class I, Division 1, Groups A, B, C, and D  
Intrinsically safe connections to Class I, Division 1, Groups A, B, C, and D  
Nonincendive with Nonincendive Field Wiring for installation in Class I, Division 2, Groups A, B, C and D  
Type 4X/IP66

### **Markings:**

Class I, Division 1, Groups A, B, C, and D  
IS Class I, Division 1, Groups A, B, C, and D  
Class I, Division 2, Groups A, B, C and D  
Type 4X/IP66

### **Description of Equipment:**

The Ultima X Series is a fixed combustible or oxygen gas detector. It is suitable for outdoor and indoor applications. The device is able to detect and alert users to potentially dangerous levels of combustible hydrocarbon gas. The device is a standalone unit with a 4 to 20 mA output.

### **Toxic GAS DETECTORS, Fixed**

Stationary Single Channel 4-20 mA electrochemical toxic Gas Detector. The Ultima X Gas Detector consists of an Ultima X Control Unit and an Ultima XE Detector Head. There are two variations of the Ultima X Control Unit, Ultima XE Main (with Display) and Ultima XL (without Display). The Ultima XE Main and Ultima XL Control Unit have an optional XP Port with I.S. barrier for HART communication. The Control Units are also provided with an optional HART Module. The Ultima XE Main Control Unit optional XP Port with I.S. barrier is either integral to the Control Unit or remote to the Control Unit. The XP Port with I.S. barrier provides intrinsically safe connections. The XP Port with I.S. barrier provides a lead seal for the explosion proof enclosure permitting the user to interface with the control unit while powered and functioning.

The Ultima XE Sensor is an electrochemical toxic Sensor. The Sensor mounts remotely or integrally via a 3/4 NPT or M25 connection to the Control Unit. The Control Unit communicates to the Sensors via a proprietary protocol. The Sensors may be remotely connected up to 100 ft away from the Control Unit. All configurations of the systems are suitable for installation in Class I, Division 1, Groups A, B, C, and D Hazardous (Classified) Locations, indoor and outdoor (Type 4X/IP66) and have intrinsically safe connections to Class I, Division 1, Groups A, B, C, and D Hazardous (Classified) Locations in accordance with Entity requirements and Control Drawing SK3098-1057 when installed with the intrinsically safe barrier. All configurations of the systems are also Nonincendive with Nonincendive Field Wiring for installation in Class I, Division 2, Groups A, B, C and D Hazardous Locations when installed per control drawing SK3098-1108. The Ultima XE Sensor may be connected to any junction box with an internal volume of less than 40.04 cubic inches which has been identified, as defined within the National Electrical Code, for its intended area of installation.

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The Ultima XE Main Control Units provide the following: a two-digit measurement display with infrared control functions and alarm indication, a 4-20mA measurement signal with optional HART communication, an optional XP Port with I.S. barrier, optional LEDs which indicate alarm and trouble conditions and optional relay contacts; 1 for trouble and 3 for alarm set points. The electrical ratings for the entire system, DC input, are 8-30VDC 10 watts maximum. The electrical ratings for the entire system, AC input, are 110-240VAC, 50/60 Hz, 15 watts maximum. The relay contact ratings are 5A at 250VAC or 30VDC. The Ultima XL Control Units provide the following: a 4-20mA measurement signal with HART communication, an optional XP Port with I.S. barrier, an LED which indicates alarm and trouble conditions. The operating temperature range of the system is -40°C to +60°C and the electrical ratings for the entire system is 8-30VDC 600mA maximum. The non I.S. connections on the HART Module are 30VDC max, 1 amp.

The following accessories are Approved for use with the Ultima X Series Gas Detectors: "Ultima" Controller, "Ultima" Calibrator, Weatherguard (environmental guard) P/N 10028904 for Ultima XE sensor

The Ultima Controller and Ultima Calibrator are Intrinsically Safe for use in Class I, Division 1, Groups A, B, C and D Hazardous Locations, T3C, Ta = +40°C.

Entity parameters:

$V_{max} = 30V$ ,  $I_{max} = 100mA$ , Ci = 0, Li = 0

### Control Unit

#### A-UltimaX-XP - a - b - c - d - e - f - g - h - i - j - k - l - m , Ultima X Series

a = Model: E or L

b = Gas Code: 11, 12, 15, 16, 17 or 25.

c = Configuration: any alpha numeric code that represents stainless steel enclosure with the 3/4 inch NPT threads or M25 Metric threads

d = Sensor Output: 1, 2, 3, or 4

e = Sensor Mounting Style: N, S, or D

f = Relays and LEDs: 0, 1, or 2

g = Display Language/Features: 0, S, or H

h = Optional Power Supply: 0, 1, 2, 3, or 4.

i = Gas Sample Selection: 0 or 1

j = Integrated Accessories: 0 or 1

k = Installation Hardware: Any number indicating how the product is mounted.

l = Manuals: Any number indicating how the manual is supplied.

m = Custom: 0, CB, CC, CF, or T

### Sensor

#### A-UltX - Sens - a - b - c, Ultima XE Sensor

a = Gas Type: 11, 12, 15, 16, 17 or 25.

b = Enclosure Type: 1

c = Custom: 0, CB, CC, CF, T, G

External Power Supplies - 10053967 (11W), 10053966 (15W)

**Specifications - The manufacturer's specifications are as follow;**

Operating Temperature:	H2S: 0°C to +40°C, CO: -30°C to +50°C
Relative Humidity:	15 to 95% RH
Supply Parameters:	8-30 Vdc, 24 Vdc (Nominal), 10 watts maximum 110/240 Vac, 50/60 Hz, 15 watts maximum
Measurement Signal:	4-20mA

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

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Calibration:	Infrared or HART
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### Specific Conditions of Use:

- 1) Upon installation of the Ultima XL Control Unit, the label shall be permanently marked to show the type of explosion protection used for the installation.
- 2) The Ultima XE Sensor, Ultima XI Sensor and Ultima XIR shall be interconnected with an UltimaX Control Unit for compliance with 60079-29-1.
- 3) The Ultima XI Sensor shall be connected directly to a junction box or instrument suitable for the area of installation to provide protection for the flying leads.
- 4) The Ultima XE Sensor and the Ultima XIR Sensor shall be connected directly to an Ultima X Series Control Unit or remote junction box.
- 5) The flamepaths of the equipment are not intended to be repaired. Consult the manufacturer if repair of the flamepath joints is necessary.
- 6) Refer to the manufacturer's instructions to reduce the potential of an electrostatic charging hazard on the equipment enclosure

## Ultima X Gas Detector

### Description of Equipment:

The Ultima X Series is a fixed combustible or oxygen gas detector. It is suitable for outdoor and indoor applications. The device is able to detect and alert users to potentially dangerous levels of combustible hydrocarbon gas. The device is a standalone unit with a 4 to 20 mA output.

Stationary Single Channel 4-20 mA Oxygen Depletion Gas Detector. The Ultima X Gas Detector consists of an Ultima X Control Unit with an Ultima XE Detector Head. There are two variations of the Ultima X Control Unit, Ultima XE Main (with Display) and Ultima XL (without Display). The Ultima XE Main and Ultima XL Control Unit have an optional XP Port with I.S. barrier for HART communication. The Control Units are also provided with an optional HART Module. The Ultima XE Main Control Unit optional XP Port with I.S. barrier is either integral to the Control Unit or remote to the Control Unit. The XP Port with I.S. barrier provides intrinsically safe connections. The XP Port with I.S. barrier provides a lead seal for the explosion proof enclosure permitting the user to interface with the control unit while powered and functioning.

### Specific Conditions of Use:

1. Upon installation of the Ultima XL Control Unit, the label shall be permanently marked to show the type of explosion protection used for the installation.
2. The Ultima XE Sensor, Ultima XI Sensor and Ultima XIR shall be interconnected with an UltimaX Control Unit for compliance with 60079-29-1.
3. The Ultima XI Sensor shall be connected directly to a junction box or instrument suitable for the area of installation to provide protection for the flying leads.
4. The Ultima XE Sensor and the Ultima XIR Sensor shall be connected directly to an Ultima X Series Control Unit or remote junction box.

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5. The flamepaths of the equipment are not intended to be repaired. Consult the manufacturer if repair of the flamepath joints is necessary.
6. Refer to the manufacturer's instructions to reduce the potential of an electrostatic charging hazard on the equipment enclosure

### **Ultima X Gas Detector...**

#### **Description of Equipment:**

Stationary Single Channel 4-20 mA Combustible Gas Detector. The Ultima X Gas Detector consists of an Ultima X Control Unit and an Ultima XE Detector Head or Ultima XIR Detector Head. There are two variations of the Ultima X Control Unit, Ultima XE Main (with Display) and Ultima XL (without Display). The Ultima XE Main and Ultima XL Control Unit have an optional XP Port with I.S. barrier for HART communication. The Control Units are also provided with an optional HART Module. The Ultima XE Main Control Unit optional XP Port with I.S. barrier is either integral to the Control Unit or remote to the Control Unit. The XP Port with I.S. barrier provides intrinsically safe connections. The XP Port with I.S. barrier provides a lead seal for the explosion proof enclosure permitting the user to interface with the control unit while powered and functioning.

#### **Specific Conditions of Use:**

- 1) Upon installation of the Ultima XL Control Unit, the label shall be permanently marked to show the type of explosion protection used for the installation.
- 2) The Ultima XE Sensor, Ultima XI Sensor and Ultima XIR shall be interconnected with an UltimaX Control Unit for compliance with 60079-29-1.
- 3) The Ultima XI Sensor shall be connected directly to a junction box or instrument suitable for the area of installation to provide protection for the flying leads.
- 4) The Ultima XE Sensor and the Ultima XIR Sensor shall be connected directly to an Ultima X Series Control Unit or remote junction box.
- 5) The flamepaths of the equipment are not intended to be repaired. Consult the manufacturer if repair of the flamepath joints is necessary.
- 6) Refer to the manufacturer's instructions to reduce the potential of an electrostatic charging hazard on the equipment enclosure

### **Ultima XE**

#### **Equipment Ratings:**

Explosionproof for Class I, Division 1, Groups A, B, C, and D  
Nonincendive with Nonincendive field wiring for installation in Class I, Division 2, Groups A, B, C  
Intrinsically Safe for use in Class I, Division 1, Groups A, B, C and D

#### **Markings:**

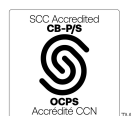
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Class I, Division 1, Groups A, B, C, and D

Class I, Division 2, Groups A, B, C

IS Class I, Division 1, Groups A, B, C and D T3C Ta = -20°C to +40°C

### Description of Equipment:

The Ultima X Series is a fixed combustible or oxygen gas detector. It is suitable for outdoor and indoor applications. The device is able to detect and alert users to potentially dangerous levels of combustible hydrocarbon gas. The device is a standalone unit with a 4 to 20 mA output.

### Toxic GAS DETECTORS, Fixed

Stationary multi-channel 4-20 mA Toxic Gas Detector. The Ultima XE Main with X3 technology Gas Detector consists of an Ultima XE main with X3 technology Control Unit with any combination of three Detector Heads. The Detector Heads can be an Ultima XE Detector Head (Toxic, combustible or oxygen depletion). The Ultima XE Combustible Detector Head is either a Catalytic Combustible Gas Detector Head or an electrochemical Oxygen Depletion or toxic Gas Detector Head. The Detector Heads mount remotely or integrally via a 3/4 NPT or M25 connections to the Control Unit. The Control Unit communicates to the Detector Heads via a proprietary protocol. The Detector Heads may be remotely connected up to 100 ft away from the Control Unit when powered by the Control Unit or up to 3000 ft away from the Control Unit with boost board option when powered by AC Power Supply, input rated 120/240 V AC, 5 W max or DC Power Supply, input rated 9-30 V dc, 5 W max.

All configurations of the systems are suitable for installation in Class I, Division 1, Groups A, B, C, and D, The Ultima XE main with X3 technology Control Units are also Nonincendive with Nonincendive field wiring for installation in Class I, Division 2, Groups A, B, C, and D Hazardous Locations when installed per control drawing SK3098-1108. The operating temperature range of the systems is -40°C to +60°C and the electrical ratings for the entire system is 7-30VDC, 10 watts maximum. The relay contact ratings are 5A at 250VAC or 30VDC.

The following accessories are Approved for use with the Ultima X Series Gas Detectors: "Ultima" Controller, "Ultima" Calibrator, Weatherguard (environmental guard) P/N 10028904 for Ultima XE sensor

The Ultima Controller and Ultima Calibrator are Intrinsically Safe for use in Class I, Division 1, Groups A, B, C and D Hazardous (Classified) Locations, T3C, Ta = -20°C to +40°C.

Entity parameters:

$V_{max} = 30V$ ,  $I_{max} = 100mA$ ,  $C_i = 0$ ,  $L_i = 0$

### Control Unit

#### **A-Ultima X3-a-b-c-d-e-f-g-h-i-j-k-l-m-n-o-p-q-r Ultima XE Main with X3 Technology**

a = Model: E

b = Enclosure Type: any alpha numeric code that represents the 3/4 inch NPT threads or M25 Metric threads

c = Sensor Output: M

d = Relay/LED option: 0, 1, 2 and 3.

e = Connection for external Power Supply Option: 0 = None; 3 = 12 VDC external, 4 = 24 VDC external. Note, external power supplies not FM Approved.

f = Language option: 0

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- g = Hardware/Software option: 0
- h = Signal Boost option: 0 or 1
- i\* = Gas type sensor 1: 11, 12, 15, 16, 17 or 25.
- j = Sensor 1 mounting/power: 0, 1, 2 or 3
- k = A number indicating how the product is mounted.
- L\* = Gas type sensor 2: 11, 12, 15, 16, 17 or 25.
- m = Sensor 2 mounting/power: 0, 1, 2 or 3
- n = A number indicating how the product is mounted.
- o\* = Gas type sensor 3: 11, 12, 15, 16, 17 or 25.
- P = Sensor 3 mounting/power: 0, 1, 2 or 3
- q = A number indicating how the product is mounted.
- r = Custom: 0, CB, CC, CF, or T
- \* One of the three gas sensor types shall be either: 11, 12, 15, 16, 17 or 25.

### Sensor

#### A-UltX - Sens - a - b - c, Ultima XE Sensor

- a = Gas Type: 11, 12, 15, 16, 17 or 25.
- b = Enclosure Type: 1
- c = Custom: 0, CB, CC, CF, T or G

### Specifications - The manufacturer's specifications are as follow:

Operating Temperature:	H2S: 0°C to +40°C, CO: -30°C to +50°C
Relative Humidity:	15 to 95% RH
Supply Parameters:	7-30 Vdc, 24 Vdc (Nominal), 10 watts maximum.
Measurement Signal:	4-20mA
Calibration:	Infrared

### Specific Conditions of Use:

- 1) Upon installation of the Ultima XL Control Unit, the label shall be permanently marked to show the type of explosion protection used for the installation.
- 2) The Ultima XE Sensor, Ultima XI Sensor and Ultima XIR shall be interconnected with an UltimaX Control Unit for compliance with 60079-29-1.
- 3) The Ultima XI Sensor shall be connected directly to a junction box or instrument suitable for the area of installation to provide protection for the flying leads.
- 4) The Ultima XE Sensor and the Ultima XIR Sensor shall be connected directly to an Ultima X Series Control Unit or remote junction box.
- 5) The flamepaths of the equipment are not intended to be repaired. Consult the manufacturer if repair of the flamepath joints is necessary.

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6) Refer to the manufacturer's instructions to reduce the potential of an electrostatic charging hazard on the equipment enclosure

### **Ultima XE**

#### **Description of Equipment:**

The Ultima X Series is a fixed combustible or oxygen gas detector. It is suitable for outdoor and indoor applications. The device is able to detect and alert users to potentially dangerous levels of combustible hydrocarbon gas. The device is a standalone unit with a 4 to 20 mA output.

#### **Specific Conditions of Use:**

- 1) The Ultima XE Sensor, Ultima XI Sensor and Ultima XIR shall be interconnected with an UltimaX Control Unit for compliance with 60079-29-1.
- 2) The Ultima XI Sensor shall be connected directly to a junction box or instrument suitable for the area of installation to provide protection for the flying leads.
- 3) The Ultima XE Sensor and the Ultima XIR Sensor shall be connected directly to an Ultima X Series Control Unit or remote junction box.

### **Ultima XE Gas Detector**

#### **Equipment Ratings:**

Explosionproof for Class I, Division, Groups A, B, C, and D  
Nonincendive with Nonincendive field wiring for installation in Class I, Division 2, Groups A, B, C, and D  
Intrinsically Safe for use in Class I, Division 1, Groups A, B, C and D

#### **Markings:**

Class I, Division, Groups A, B, C, and D  
Class I, Division 2, Groups A, B, C, and D  
IS Class I, Division 1, Groups A, B, C and D T3C Ta = -20°C to +40°C

#### **Description of Equipment:**

The Ultima X Series is a fixed combustible or oxygen gas detector. It is suitable for outdoor and indoor applications. The device is able to detect and alert users to potentially dangerous levels of combustible hydrocarbon gas. The device is a standalone unit with a 4 to 20 mA output.

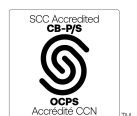
Stationary multi-Channel 4-20 mA Oxygen Depletion Gas Detector. The Ultima XE main with X3 technology Gas Detector consists of an Ultima XE main with X3 technology Control Unit with any combination of three Detector Heads. The Detector Heads can be either an Ultima XE Detector Head (combustible or oxygen depletion) or Ultima XIR Detector Head. The Ultima XE Detector Head is either a Catalytic Combustible Gas Detector Head or an electrochemical Oxygen Depletion Gas Detector Head. The Ultima XIR Detector Head is an Infrared Combustible Gas

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Detector Head. The Detector Heads mount remotely or integrally via a ¾ NPT or M25 connections to the Control Unit. The Control Unit communicates to the Detector Heads via a proprietary protocol. The Detector Heads may be remotely connect up to 100 ft away from the Control Unit or up to 3000 ft away from the Control Unit with boost board option when powered by AC Power Supply, input rated 120/240 V AC, 5 W max or DC Power Supply, input rated 9-30 V dc, 5 W max.

All configurations of the systems are suitable for installation in Class I, Division, Groups A, B, C, and D. The Ultima XE main with X3 technology Control Units are also Nonincendive with Nonincendive field wiring for installation in Class I, Division 2, Groups A, B, C, and D Hazardous (Classified) Locations when installed per control drawing SK3098-1108. The operating temperature range of the systems is -40°C to +60°C and the electrical ratings for the entire system is 7-30VDC, 10 watts maximum. The relay contact ratings are 5A at 250VAC or 30VDC.

The following accessories are Approved for use with the Ultima X Series: "Ultima" Controller, "Ultima" Calibrator, Weatherguard (environmental guard) P/N 10028904 for the Ultima XE sensor or 10041265 for the Ultima XIR sensor.

The Ultima Controller and Ultima Calibrator are Intrinsically Safe for use in Class I, Division 1, Groups A, B, C and D Hazardous (Classified) Locations, T3C, Ta = -20°C to +40°C.

Nonincendive Field wiring parameters:

$V_{max}= 30V$ ,  $I_{max}= 100mA$ ,  $C_i= 0$ ,  $L_i= 0$

### Control Unit

#### **A-Ultima X3-a-b-c-d-e-f-g-h-i-j-k-l-m-n-o-p-q-r Ultima XE Main with X3 Technology**

a = Model: E

b = Enclosure Type: any alpha numeric code that represents the ¾ inch NPT threads or M25 Metric threads

c = Sensor Output: M

d = Relay/LED option: 0, 1, 2 and 3.

e = Connection for external Power Supply Option: : 0, 3 or 4

f = Language option: 0

g = Hardware/Software option: 0

h = Signal Boost option: 0 or 1

i\* = Gas type sensor 1: 13, 14, 31, 32, 33, 38 or 39.

j = Sensor 1 mounting/power: 0, 1, 2 or 3

k = A number indicating how the product is mounted.

L\* = Gas type sensor 2: 13, 14, 31, 32, 33, 38 or 39.

m = Sensor 2 mounting/power: 0, 1, 2 or 3

n = A number indicating how the product is mounted.

o\* = Gas type sensor 3: 13,14, 31, 32, 33, 38 or 39.

P = Sensor 3 mounting/power: 0, 1, 2 or 3

q = A number indicating how the product is mounted.

r = Custom: 0 or T

\*One of the three gas sensor types shall be either Sensor Type: 13 or 14

### Sensors

#### **A-UltX-Sens-a-b-c, Ultima XIR Sensor**

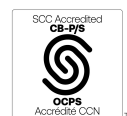
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a = Gas Type: 38 or 39  
b = Enclosure Type: 2 or 3  
c = Custom: 0, CB, CC, CF, T, or G

### **A-UltX-Sens-a-b-c, Ultima XE Sensor**

a = Gas Type: 13, 14, 31, 32, or 33  
b = Enclosure Type: 1  
c = Custom: 0, CB, CC, CF, T, or G

### **Specifications - The manufacturer's specifications are as follows:**

Operating Temperature:	-40°C to +60°C
Relative Humidity:	10 to 90% RH
Supply Voltage:	7-30 Vdc, 24 Vdc (Nominal), 10 watts maximum
Measurement Signal:	4-20 mA
Calibration:	infrared

### **Specific Conditions of Use:**

- 1) Upon installation of the Ultima XL Control Unit, the label shall be permanently marked to show the type of explosion protection used for the installation.
- 2) The Ultima XE Sensor, Ultima XI Sensor and Ultima XIR shall be interconnected with an UltimaX Control Unit for compliance with 60079-29-1.
- 3) The Ultima XI Sensor shall be connected directly to a junction box or instrument suitable for the area of installation to provide protection for the flying leads.
- 4) The Ultima XE Sensor and the Ultima XIR Sensor shall be connected directly to an Ultima X Series Control Unit or remote junction box.
- 5) The flamepaths of the equipment are not intended to be repaired. Consult the manufacturer if repair of the flamepath joints is necessary.
- 6) Refer to the manufacturer's instructions to reduce the potential of an electrostatic charging hazard on the equipment enclosure

## **Ultima XE Main with X3 Technology Gas Detector**

### **Equipment Ratings:**

Explosionproof for Class I, Division 1, Groups A, B, C, and D  
XIR sensors: Explosionproof for Class I, Division 1, Groups B, C, and D.  
Nonincendive with Nonincendive field wiring for installation in Class I, Division 2, Groups A, B, C, and D  
Intrinsically Safe for use in Class I, Division 1, Groups A, B, C and D

### **Markings:**

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Class I, Division 1, Groups A, B, C, and D  
XIR sensors: Class I, Division 1, Groups B, C, and D.  
Class I, Division 2, Groups A, B, C, and D  
IS Class I, Division 1, Groups A, B, C and D T3C Ta = -20°C to +40°C

### Description of Equipment:

The Ultima X Series is a fixed combustible or oxygen gas detector. It is suitable for outdoor and indoor applications. The device is able to detect and alert users to potentially dangerous levels of combustible hydrocarbon gas. The device is a standalone unit with a 4 to 20 mA output.

Stationary multi-channel 4-20 mA Combustible Gas Detector. The Ultima XE Main with X3 technology Gas Detector consists of an Ultima XE main with X3 technology Control Unit with any combination of three Detector Heads. The Detector Heads can be either an Ultima XE Detector Head (combustible or oxygen depletion) or Ultima XIR Detector Head. The Ultima XE Combustible Detector Head is either a Catalytic Combustible Gas Detector Head or an electrochemical Oxygen Depletion Gas Detector Head. The Ultima XIR Detector Head is an Infrared Combustible Gas Detector Head. The Detector Heads mount remotely or integrally via a 3/4 NPT or M25 connections to the Control Unit. The Control Unit communicates to the Detector Heads via a proprietary protocol. The Detector Heads may be remotely connected up to 100 ft away from the Control Unit when powered by the Control Unit or up to 3000 ft away from the Control Unit with boost board option when powered by AC Power Supply, input rated 120/240 V AC, 5 W max or DC Power Supply, input rated 9-30 V dc, 5 W max.

All configurations of the systems which do not include the Ultima XIR are suitable for installation in Class I, Division 1, Groups A, B, C, and D. The Ultima XE main with X3 technology Control Units are also Nonincendive with Nonincendive field wiring for installation in Class I, Division 2, Groups A, B, C, and D Hazardous (Classified) Locations when installed per control drawing SK3098-1108. Configurations of the systems which include the Ultima XIR are suitable for installation in Class I, Division 1, Groups B, C, and D. The operating temperature range of the systems is -40°C to +60°C and the electrical ratings for the entire system is 7-30VDC, 10 watts maximum. The relay contact ratings are 5A at 250VAC or 30VDC. In addition, the apparatus complies with CSA-C22.2 No. 152-M1984 Performance Requirements for Combustible Gas Detectors.

The following accessories are Approved for use with the Ultima X Series: "Ultima" Controller, "Ultima" Calibrator, Weatherguard (environmental guard) P/N 10028904 for the Ultima XE sensor or 10041265 for the Ultima XIR sensor.

The Ultima Controller and Ultima Calibrator are Intrinsically Safe for use in Class I, Division 1, Groups A, B, C and D Hazardous (Classified) Locations, T3C, Ta = -20°C to +40°C.

Nonincendive Field wiring parameters:  
 $V_{max} = 30V$ ,  $I_{max} = 100mA$ ,  $C_i = 0$ ,  $L_i = 0$

### Control Unit

**A-Ultima X3-a-b-c-d-e-f-g-h-i-j-k-l-m-n-o-p-q-r Ultima XE Main with X3 Technology**

a = Model: E

b = Enclosure Type: any alpha numeric code that represents the 3/4 inch NPT threads or M25 Metric threads

c = Sensor Output: M

d = Relay/LED option: 0, 1, 2 and 3.

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

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e = Connection for external Power Supply Option: 0 = None; 3 = 12 VDC external, 4 = 24 VDC external. Note, external power supplies not FM Approved.

f = Language option: 0

g = Hardware/Software option: 0

h = Signal Boost option: 0 or 1

i\* = Gas type sensor 1: 13, 14, 31, 32, 33, 38 or 39.

j = Sensor 1 mounting/power: 0, 1, 2 or 3

k = A number indicating how the product is mounted.

L\* = Gas type sensor 2: 13, 14, 31, 32, 33, 38 or 39.

m = Sensor 2 mounting/power: 0, 1, 2 or 3

n = A number indicating how the product is mounted.

o\* = Gas type sensor 3: 13, 14, 31, 32, 33, 38 or 39.

P = Sensor 3 mounting/power: 0, 1, 2 or 3

q = A number indicating how the product is mounted.

r = Custom: 0, CB, CC, CF or T

\*One of the three gas sensor types shall be either: 31, 32, 33, 38 or 39

### Sensors

#### **A-UltX-Sens-a-b-c, Ultima XIR Sensor**

a = Gas Type: 38 or 39

b = Enclosure Type: 2 or 3

c = Custom: 0, CB, CC, CF, T or G

#### **A-UltX-Sens-a-b-c, Ultima XE Sensor**

a = Gas Type: 13, 14, 31, 32, or 33

b = Enclosure Type: 1

c = Custom: 0, CB, CC, CF, T or G

### Specifications - The manufacturer's specifications are as follows:

Operating Temperature:	-40°C to +60°C
Relative Humidity:	10 to 90% RH
Supply Voltage:	7-30 Vdc, 24 Vdc (Nominal), 10 watts maximum
Measurement Signal:	4-20 mA
Calibration:	infrared

### Specific Conditions of Use:

- 1) Upon installation of the Ultima XL Control Unit, the label shall be permanently marked to show the type of explosion protection used for the installation.
- 2) The Ultima XE Sensor, Ultima XI Sensor and Ultima XIR shall be interconnected with an UltimaX Control Unit for compliance with 60079-29-1.

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

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- 3) The Ultima XI Sensor shall be connected directly to a junction box or instrument suitable for the area of installation to provide protection for the flying leads.
- 4) The Ultima XE Sensor and the Ultima XIR Sensor shall be connected directly to an Ultima X Series Control Unit or remote junction box.
- 5) The flamepaths of the equipment are not intended to be repaired. Consult the manufacturer if repair of the flamepath joints is necessary.
- 6) Refer to the manufacturer's instructions to reduce the potential of an electrostatic charging hazard on the equipment enclosure

### Ultima XE Sensor

#### Equipment Ratings:

Explosionproof for Class I, Division 1, Groups A, B, C, and D  
Intrinsically safe connections to Class I, Division 1, Groups A, B, C, and D  
Nonincendive with Nonincendive Field Wiring for installation in Class I, Division 2, Groups A, B, C and D  
Intrinsically Safe for use in Class I, Division 1, Groups A, B, C and D T3C Ta = -20°C to +40°C  
Type 4X/ IP66

#### Markings:

Class I, Division 1, Groups A, B, C, and D  
IS Class I, Division 1, Groups A, B, C, and D  
Class I, Division 2, Groups A, B, C and D  
IS Class I, Division 1, Groups A, B, C and D T3C Ta = -20°C to +40°C  
Type 4X/ IP66

#### Description of Equipment:

The Ultima X Series is a fixed combustible or oxygen gas detector. It is suitable for outdoor and indoor applications. The device is able to detect and alert users to potentially dangerous levels of combustible hydrocarbon gas. The device is a standalone unit with a 4 to 20 mA output.

The Ultima XE Sensor is an Electrochemical Oxygen Depletion Gas Sensor. The Sensor mounts remotely or integrally via a 3/4 NPT or M25 connection to the Control Unit. The Control Unit communicates to the Sensor via a proprietary protocol. The Sensor may be remotely connected up to 100 ft away from the Control Unit. All configurations of the systems are suitable for installation in Class I, Division 1, Groups A, B, C, and D Hazardous Locations, indoor and outdoor (Type 4X/IP66) and have intrinsically safe connections to Class I, Division 1, Groups A, B, C, and D Hazardous Locations in accordance with Entity requirements and Control Drawing SK3098-1057 when installed with the intrinsically safe barrier. All configurations of the systems are also Nonincendive with Nonincendive Field Wiring for installation in Class I, Division 2, Groups A, B, C and D Hazardous Locations when installed per control drawing SK3098-1108. The Ultima XE Detector Heads monitor 0-10% O<sub>2</sub> or 0-21% O<sub>2</sub> gas-in-air atmospheres.

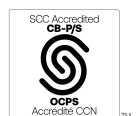
The Ultima XE Main Control Units provide the following: a two-digit measurement display with infrared control functions and alarm indication, a 4-20mA measurement signal with optional HART communication, an optional XP Port with I.S. barrier, optional LEDs which indicate alarm and trouble conditions and optional relay contacts; 1 for trouble and 3 for

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alarm set points. The electrical ratings for the entire system, DC input, are 8-30VDC 10 watts maximum. The electrical ratings for the entire system, AC input, are 110-240VAC, 50/60 Hz, 15 watts maximum. The relay contact ratings are 5A at 250VAC or 30VDC. The Ultima XL Control Units provide the following: a 4-20mA measurement signal with HART communication, an optional XP Port with I.S. barrier, an LED which indicates alarm and trouble conditions. The operating temperature range of the systems is -40°C to +60°C and the electrical ratings for the entire system is 8-30VDC 600mA maximum. The non I.S. connections on the HART Module are 30VDC max, 1 amp.

The following accessories are Approved for use with the Ultima X Series Gas Detectors: "Ultima" Controller, "Ultima" Calibrator, Weatherguard (environmental guard) P/N 10028904 for Ultima XE sensor  
The Ultima Controller and Ultima Calibrator are Intrinsically Safe for use in Class I, Division 1, Groups A, B, C and D Hazardous Locations, T3C, Ta = -20°C to +40°C.

Nonincendive Field wiring parameters:  
 $V_{max} = 30V$ ,  $I_{max} = 100mA$ ,  $C_i = 0$ ,  $L_i = 0$

### Control Unit

#### **A-UltimaX - a - b - c - d - e - f - g - h - i - j - k - l - m - n, Ultima XE Main**

a = Model: E or L  
b = Gas Type: 13 or 14  
c = Sensor Output: E or H  
d = Enclosure Type: any alpha numeric code that represents stainless steel enclosure with the 3/4 inch NPT threads or M25 Metric threads  
e = Sensor Mounting Style: S or D.  
f = Gas Sample Selection method: 0 or 3  
g = Relay/LED option: 0, 1, 2, or 3  
h = Language/Software: 0, H, or S  
i = Power Supply Option: 0, 1, 2, 3, or 4  
j = Gas Type: 00  
k = Gas Type: 00  
l = Calibration Options: 0, 1, 2, 3, or 5  
m = Installation Hardware: Any number indicating how the product is mounted.  
n = Custom: 0 or T

#### **A-UltimaX-XP - a - b - c - d - e - f - g - h - i - j - k - l - m, Ultima X Series**

a = Model: E or L  
b = Gas Code: 13 or 14  
c = Configuration: F or D2  
d = Sensor Output: 1, 2, 3, or 4  
e = Sensor Mounting Style: S or D  
f = Relays and LEDs: 0, 1, or 2  
g = Display Language/Features: 0, S, or H  
h = Optional Power Supply: 0, 1, 2, 3, or 4.  
i = Gas Sample Selection: 0 or 1  
j = Integrated Accessories: 0 or 1  
k = Installation Hardware: Any number indicating how the product is mounted.

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l = Manuals: Any number indicating how the manual is supplied.  
m = Custom: 0, T, CC, or CF

### Sensors

#### A-UltX - Sens - a - b - c, Ultima XE Sensor

a = Gas Type: 13 or 14

b = Enclosure Type: 1

c = Custom: 0, T, CC, CF or G

**External Power Supplies-** 10053967 (11W), 10053966 (15W)

#### Specifications - The manufacturer's specifications are as follow:

Operating Temperature:	-40°C to +60°C
Relative Humidity:	10 to 90% RH
Supply Parameters:	8-30 Vdc, 24 Vdc (Nominal), 10 watts maximum 110/240 Vac, 50/60 Hz, 15 watts maximum
Measurement Signal:	4-20mA
Calibration:	Infrared or HART

#### Specific Conditions of Use:

- 1) Upon installation of the Ultima XL Control Unit, the label shall be permanently marked to show the type of explosion protection used for the installation.
- 2) The Ultima XE Sensor, Ultima XI Sensor and Ultima XIR shall be interconnected with an UltimaX Control Unit for compliance with 60079-29-1.
- 3) The Ultima XI Sensor shall be connected directly to a junction box or instrument suitable for the area of installation to provide protection for the flying leads.
- 4) The Ultima XE Sensor and the Ultima XIR Sensor shall be connected directly to an Ultima X Series Control Unit or remote junction box.
- 5) The flamepaths of the equipment are not intended to be repaired. Consult the manufacturer if repair of the flamepath joints is necessary.
- 6) Refer to the manufacturer's instructions to reduce the potential of an electrostatic charging hazard on the equipment enclosure

### Ultima XE, Ultima XIR...

#### Equipment Ratings:

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Explosionproof for Class I, Division 1, Groups A, B, C, and D  
Intrinsically safe connections to Class I, Division 1, Groups A, B, C, and D  
Nonincendive with Nonincendive Field Wiring for installation in Class I, Division 2, Groups A, B, C and D  
XIR sensor: Explosionproof for Class I, Division 1, Groups B, C, and D

### **Markings:**

Class I, Division 1, Groups A, B, C, and D  
IS Class I, Division 1, Groups A, B, C, and D  
Class I, Division 2, Groups A, B, C and D  
XIR sensor: Class I, Division 1, Groups B, C, and D

### **Description of Equipment:**

The Ultima X Series is a fixed combustible or oxygen gas detector. It is suitable for outdoor and indoor applications. The device is able to detect and alert users to potentially dangerous levels of combustible hydrocarbon gas. The device is a standalone unit with a 4 to 20 mA output.

The Ultima XE Sensor is a Catalytic Combustible Gas Sensor. The Ultima XIR Sensor is an Infrared Combustible Gas Sensor. The Sensors mount remotely or integrally via a 3/4 NPT or M25 connection to the Control Unit. The Control Unit communicates to the Sensors via a proprietary protocol. The Sensors may be remotely connected up to 100 ft away from the Control Unit.

All configurations of the systems which do not include the Ultima XIR are suitable for installation in Class I, Division 1, Groups A, B, C, and D Hazardous Locations, indoor and outdoor (Type 4X/IP66) and have intrinsically safe connections to Class I, Division 1, Groups A, B, C, and D Hazardous Locations in accordance with Entity requirements and Control Drawing SK3098-1057 when installed with the intrinsically safe barrier. All configurations of the systems are also Nonincendive with Nonincendive Field Wiring for installation in Class I, Division 2, Groups A, B, C and D Hazardous Locations when installed per control drawing SK3098-1108.

Configurations of the systems which include the Ultima XIR are suitable for installation in Class I, Division 1, Groups B, C, and D Hazardous Locations, indoor and outdoor (Type 4X/IP66) and have intrinsically safe connections to Class I, Division 1, Groups A, B, C, and D Hazardous Locations in accordance with Entity requirements and Control Drawing SK3098-1057 when installed with the intrinsically safe barrier. All configurations of the systems are also Nonincendive with Nonincendive Field Wiring for installation in Class I, Division 2, Groups A, B, C and D Hazardous Locations when installed per control drawing SK3098-1108.

The Ultima XE Sensor and Ultima XIR Sensor may be connected to any junction box with an internal volume of less than 40.04 cubic inches which has been identified, as defined within the National Electrical Code, for its intended area of installation. The Ultima XE Sensor and Ultima XIR Sensor monitor 0-100% LEL methane or propane gas-in-air atmospheres.

### **Specific Conditions of Use:**

1) Upon installation of the Ultima XL Control Unit, the label shall be permanently marked to show the type of explosion protection used for the installation.

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

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- 2) The Ultima XE Sensor, Ultima XI Sensor and Ultima XIR shall be interconnected with an UltimaX Control Unit for compliance with 60079-29-1.
- 3) The Ultima XI Sensor shall be connected directly to a junction box or instrument suitable for the area of installation to provide protection for the flying leads.
- 4) The Ultima XE Sensor and the Ultima XIR Sensor shall be connected directly to an Ultima X Series Control Unit or remote junction box.
- 5) The flamepaths of the equipment are not intended to be repaired. Consult the manufacturer if repair of the flamepath joints is necessary.
- 6) Refer to the manufacturer's instructions to reduce the potential of an electrostatic charging hazard on the equipment enclosure

### Ultima XE...

#### Equipment Ratings:

Intrinsically Safe for use in Class I, Division 1, Groups A, B, C and D

#### Markings:

IS Class I, Division 1, Groups A, B, C and D T3C Ta = -20°C to +40°C

#### Description of Equipment:

The Ultima X Series is a fixed combustible or oxygen gas detector. It is suitable for outdoor and indoor applications. The device is able to detect and alert users to potentially dangerous levels of combustible hydrocarbon gas. The device is a standalone unit with a 4 to 20 mA output.

The Ultima XE Main Control Units provide the following: a two-digit measurement display with infrared control functions and alarm indication, a 4-20mA measurement signal with optional HART communication, an optional XP Port with I.S. barrier, optional LEDs which indicate alarm and trouble conditions and optional relay contacts; 1 for trouble and 3 for alarm set points. The electrical ratings for the entire system, DC input, are 8-30VDC 10 watts maximum. The electrical ratings for the entire system, AC input, are 110-240VAC, 50/60 Hz, 15 watts maximum. The relay contact ratings are 5A at 250VAC or 30VDC. The Ultima XL Control Units provide the following: a 4-20mA measurement signal with HART communication, an optional XP Port with I.S. barrier, an LED which indicates alarm and trouble conditions. The operating temperature range of the systems is -40°C to +60°C and the electrical ratings for the entire system is 8-30VDC 600mA maximum. The non I.S. connections on the HART Module are 30VDC max, 1 amp. In addition, the apparatus complies with CSA-C22.2 No. 152-M1984 Performance Requirements for Combustible Gas Detectors.

The following accessories are Approved for use with the Ultima X Series Gas Detectors: "Ultima" Controller, "Ultima" Calibrator, Weatherguard (environmental guard) P/N 10028904 for Ultima XE sensor or 10041265 for the Ultima XIR sensor.

The Ultima Controller and Ultima Calibrator are Intrinsically Safe for use in Class I, Division 1, Groups A, B, C and D Hazardous Locations, T3C, Ta = -20°C to +40°C.

Nonincendive Field wiring parameters:

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

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FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA

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## SCHEDULE

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$V_{\max} = 30V$ ,  $I_{\max} = 100mA$ ,  $C_i = 0$ ,  $L_i = 0$

### Control Unit

#### **A-UltimaX - a - b - c - d - e - f - g - h - i - j - k - l - m - n, Ultima XE Main**

a = Model: E or L

b = Gas Type: 31, 32, 33, 38, or 39

c = Sensor Output: E or H

d = Enclosure Type: any alpha numeric code that represents stainless steel enclosure with the 3/4 inch NPT threads or M25 Metric threads

e = Sensor Mounting Style: S or D.

f = Gas Sample Selection method: 0 or 3

g = Relay/LED option: 0, 1, 2, or 3

h = Language/Software: 0, H, or S

i = Power Supply Option: 0, 1, 2, 3, or 4

j = Gas Type: 00

k = Gas Type: 00

l = Calibration Options: 0, 1, 2, 3, or 5

m = Installation Hardware: Any number indicating how the product is mounted.

n = Custom: 0 or T

\

#### **A-UltimaX-XP - a - b - c - d - e - f - g - h - i - j - k - l - m, Ultima X Series**

a = Model: E or L

b = Gas Code: 31, 32, 33, 38, or 39

c = Configuration: F or D2

d = Sensor Output: 1, 2, 3, or 4

e = Sensor Mounting Style: N, S or D

f = Relays and LEDs: 0, 1, or 2

g = Display Language/Features: 0, S, or H

h = Optional Power Supply: 0, 1, 2, 3, or 4.

i = Gas Sample Selection: 0 or 1

j = Integrated Accessories: 0 or 1

k = Installation Hardware: Any number indicating how the product is mounted.

l = Manuals: Any number indicating how the manual is supplied.

m = Custom: 0, T, CC, or CF

### Sensors

#### **A-UltX - Sens - a - b - c, Ultima XIR Sensor**

a = Gas Type: 38 or 39

b = Enclosure Type: 2 or 3

c = Custom: 0, T, CC, CF, or G

#### **A-UltX - Sens - a - b - c, Ultima XE Sensor**

a = Gas Type: 31, 32, or 33

b = Enclosure Type: 1

c = Custom: 0, T, CC, CF, or G

**External Power Supplies-** 10053967 (11W), 10053966 (15W)

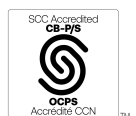
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## SCHEDULE

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### Specifications - The manufacturer's specifications are as follow;

Operating Temperature:	-40°C to +60°C
Relative Humidity:	10 to 90% RH
Supply Parameters:	8-30 Vdc, 24 Vdc (Nominal), 10 watts maximum 110/240 Vac, 50/60 Hz, 15 watts maximum
Measurement Signal:	4-20 mA
Calibration:	Infrared or HART

### Specific Conditions of Use:

- 1) Upon installation of the Ultima XL Control Unit, the label shall be permanently marked to show the type of explosion protection used for the installation.
- 2) The Ultima XE Sensor, Ultima XI Sensor and Ultima XIR shall be interconnected with an UltimaX Control Unit for compliance with 60079-29-1.
- 3) The Ultima XI Sensor shall be connected directly to a junction box or instrument suitable for the area of installation to provide protection for the flying leads.
- 4) The Ultima XE Sensor and the Ultima XIR Sensor shall be connected directly to an Ultima X Series Control Unit or remote junction box.
- 5) The flamepaths of the equipment are not intended to be repaired. Consult the manufacturer if repair of the flamepath joints is necessary.
- 6) Refer to the manufacturer's instructions to reduce the potential of an electrostatic charging hazard on the equipment enclosure

## Ultima XI Gas Monitor

### Equipment Ratings:

Explosionproof for installation in Class I, Division 1, Groups B, C and D  
Type 4X/IP66

### Markings:

Class I, Division 1, Groups B, C and D  
Class I, Division 2, Groups A, B, C and D  
Type 4X/IP66

### Description of Equipment:

The Ultima X Series is a fixed combustible or oxygen gas detector. It is suitable for outdoor and indoor applications. The device is able to detect and alert users to potentially dangerous levels of combustible hydrocarbon gas. The device is a standalone unit with a 4 to 20 mA output.

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

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## **SCHEDULE**

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Stationary 4-20mA Stand-Alone Combustible Gas Detector Head. The Ultima XI Gas Monitor is Explosionproof for installation in Class I, Division 1, Groups B, C and D; Class I, Division 2, Groups A, B, C and D Hazardous (Classified) Locations. Suitable for indoor and outdoor (Type 4X/IP66). The Ultima XI monitors 0-100% LEL methane or propane gas-in-air atmospheres. The instrument provides a 4-20 mA measurement signal. The Ultima XI is an Infrared Combustible Gas Detector Sensor. The operating temperature range for the sensor is -40°C to +60°C the electrical ratings are 7-30 VDC, 800 mA max. In addition, the apparatus complies with CSA-C22.2 No. 152-M1984 Performance Requirements for Combustible Gas Detectors.

The following accessories are Approved for use with the Ultima XI Gas Monitor: Weatherguard (environmental guard) P/N 10041265.

### **Specific Conditions of Use:**

- 1) Upon installation of the Ultima XL Control Unit, the label shall be permanently marked to show the type of explosion protection used for the installation.
- 2) The Ultima XE Sensor, Ultima XI Sensor and Ultima XIR shall be interconnected with an UltimaX Control Unit for compliance with 60079-29-1.
- 3) The Ultima XI Sensor shall be connected directly to a junction box or instrument suitable for the area of installation to provide protection for the flying leads.
- 4) The Ultima XE Sensor and the Ultima XIR Sensor shall be connected directly to an Ultima X Series Control Unit or remote junction box.
- 5) The flamepaths of the equipment are not intended to be repaired. Consult the manufacturer if repair of the flamepath joints is necessary.
- 6) Refer to the manufacturer's instructions to reduce the potential of an electrostatic charging hazard on the equipment enclosure

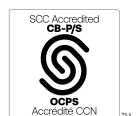
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